python_ics Documentation

Release 910.10

David Rebbe

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Contents

Intrepid Control Systems, Inc. open source Python module for interfacing to Intrepid hardware. Basic knowledge of using and installing Python modules is assumed. Please see https://docs.python.org/3/installing/index.html for documentation on how to install Python modules.

This module is essentially just a wrapper around icsneo40.dll. For more documentation please visit neoVI DLL Documentation under https://intrepidcs.com/support/support-resources/

CHAPTER 1

Whats New?

v903+ is a new release that implements features that break existing API in some areas.

1.1 ISO 15765-2

old naming conventions have been updated to reflex closer to the actual codebase.

```
# Old:
tx_msg = ics.CmISO157652TxMessage()
rx_msg = ics.CmISO157652RxMessage()

# New:
tx_msg = ics.st_cm_iso157652_tx_message.st_cm_iso157652_tx_message()
rx_msg = ics.st_cm_iso157652_rx_message.st_cm_iso157652_rx_message()
```

`ics.st_cm_iso157652_tx_message.st_cm_iso157652_tx_message()` data structure is now a ctypes.c_ubytes array instead of a python list.

```
# Old:
msg.data = [x for x in range(number_of_bytes)]

# New:
my_data = [x for x in range(number_of_bytes)]
msg.data = (ctypes.c_ubyte*len(msg.data))(*my_data)

>>> msg.data
<ics.structures.st_cm_iso157652_tx_message.c_ubyte_Array_4096 object at␣
↪0x0000023E534BE940>
```

1.2 Settings

v903 and up have converted over to a new auto generation of `icsnVC40.h`. This enables faster support for newer Intrepid devices and less error prone. With this switch we have moved to using `ics.s_device_settings`.

```
# Old behavior:
device = ics.open_device()
settings = ics.get_device_settings(device)
# settings is a Vcan3Settings type
settings.can1.Baudrate = 1
ics.set_device_settings(device, settings)

# New behavior
device = ics.open_device()
settings = ics.get_device_settings(device)
# settings is a s_device_settings type
settings.vcan3.can1.Baudrate = 1
ics.set_device_settings(device, settings)
```

1.3 PyInstaller

Due to the added complexity underneath when building PyInstaller `hidden_imports.py` should be used now in your spec script:

```
# -*- mode: python ; coding: utf-8 -*-

import ics

block_cipher = None


a = Analysis(['test.py'],
             pathex=['.'],
             binaries=[],
             datas=[],
             hiddenimports=ics.hiddenimports.hidden_imports,
             hookspath=[],
             runtime_hooks=[],
             excludes=[],
             win_no_prefer_redirects=False,
             win_private_assemblies=False,
             cipher=block_cipher,
             noarchive=False)
pyz = PYZ(a.pure, a.zipped_data,
             cipher=block_cipher)
exe = EXE(pyz,
          a.scripts,
          [],
          exclude_binaries=True,
          name='test',
          debug=False,
          bootloader_ignore_signals=False,
          strip=False,
          upx=True,
```

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```
          console=True )
coll = COLLECT(exe,
               a.binaries,
               a.zipfiles,
               a.datas,
               strip=False,
               upx=True,
               upx_exclude=[],
               name='test')
```

CHAPTER 2

Versioning Information

Minor differences can occur between different icsnVC40.h versions. These differences are usually just structures and constant differences. Below is a list of how the python_ics version correlates to the icsnVC40.h version:

2.1 v903

Starting with 903, python_ics module will now match official upstream version releases.

```
pip install 'python_ics>=5.0,<904.0' --force-reinstall
```

Note: Refer to platform specific installation if not on Windows

2.2 Older Versions:

- **v802** `pip install 'python_ics>=2.0,<3.0' --force-reinstall`

  Note: Refer to platform specific installation if not on Windows
- **v803** `pip install 'python_ics>=3.0,<4.0' --force-reinstall`

  Note: Refer to platform specific installation if not on Windows
- **v900** `pip install 'python_ics>=4.0,<5.0' --force-reinstall`

  Note: Refer to platform specific installation if not on Windows

CHAPTER 3

Installation on Windows

PyPi provides binary packages for Windows. You can simply install the python_ics module by running the following command:

```
pip install python_ics
```

Note: pip.exe is usually located under the Scripts directory under the Python installation directory.

3.1 Building from source

Building from source on windows is not usually need so it won't really be covered here in detail. As a starting point you'll need to match the compiler version used to build the official Python binaries (MSVC). If the build environment is setup correctly, you should be able to run `python setup.py build` like usual.

3.2 Intrepid icsneo40 Library

python_ics module looks for `icsneo40.dll` in the normal windows DLL search paths. The module will throw an exception if its not found.

CHAPTER 4

Installation on Linux

python_ics does not provide binaries for linux distributions so we will have to compile from source. This can be easily achieved by utilzing Python's PIP. First we need to make sure we have some base packages installed.

4.1 Fedora Dependencies (FC28)

```
sudo dnf install redhat-rpm-config gcc g++ python3-devel clang
clang-tools-extra
```

4.2 Debian/Ubuntu Dependencies

```
sudo apt install build-essential python-dev clang-format
```

4.3 libicsneo library

The legacy version of libicsneo library (`libicsneolegacy.so`) is required, see the specific repo for details: https://github.com/intrepidcs/libicsneo

4.4 Others (Required dependencies)

- GCC
- G++
- Python Development packages (We Need to link to Python.h)
- Clang (llvm)
- clang-format

4.5 Installation

After dependencies are installed we can run the following pip command:

```
pip install python_ics
```

> **Note:** A lot of distributions have Python 2 and 3 installed side by side. As of this writing without a version suffix the commands still default to version 2 of the Python binaries. In order to utilize the Python 3 binaries you must append a 3 after the binary names (python3 and pip3 instead of just python and pip).

CHAPTER 5

Getting Started

Please see https://github.com/intrepidcs/python_ics/tree/master/examples for simple examples on how to use this module. Most function documentation has a simple example on how its intended to be used. Every function was designed to be as close as possible to it's C counterpart unless it was deemed to make the function more pythonic in nature.

For those experienced with the C API `ics.open_device` (`icsneoOpenNeoDevice()`) behavior has been changed the most (no parameters makes it auto utilize `ics.find_devices` (`icsneoFindNeoDevices()`) and open the first device). Also since python is a object oriented language the module utilizes this and auto cleans up device handles when going out of scope so there is usually no need to call `ics.close_device()`.

CHAPTER 6

Examples

Examples can be found at https://github.com/intrepidcs/python_ics/tree/master/examples

For extra information on data structures and underlying functionality, please visit neoVI DLL Documentation under https://intrepidcs.com/support/support-resources/

6.1 Opening a device

The `open_device_example.py` example shows how to successfully open and close an Intrepid device.

6.2 Transmitting and Receiving a CAN message

The following examples show how to interact with CAN messages on an Intrepid device.

- `transmit_can_example.py`: Basic example showing how to transmit and receive standard CAN frame
- `transmit_can_xtd_example.py`: Builds off of the CAN example and adds extended Arbitration ID attributes
- `canfd_transmit_example.py`: Bare minimum example on how to transmit over CANFD.

6.3 ISO 15765-2 Example

The `iso15765_example.py` example shows how to setup basic ISO 15765-2 receive filters and transmitting an ISO 15765-2 message.

After opening an Intrepid device `ics.iso15765_enable_networks` should be called to enable ISO 15765-2.

Receive filtering can be established by passing a custom `ics.CmISO157652RxMessage()` to `ics.iso15765_receive_message()`.

Similarly transmitting an ISO 15765-2 frame can be accomplished by passing a custom `ics.CmISO157652TxMessage()` to `ics.iso15765_transmit_message()`.

6.4 Missing an example?

Need an example on something that isn't covered here? Please submit an issue on github or feel free to send over a Pull Request of your own.

CHAPTER 7

Module Documentation

Python C Code module for interfacing to the icsneo40 dynamic library. Code tries to respect PEP 8 (http://python.org/dev/peps/pep-0008). Function naming convention does not follow the tradition c style icsneo40 naming convention as pyics module name acts as the namespace (icsneo portion of the function) and function names are suppose to be lowercase with underscores instead of mixedCase like icsneo API.

C API can be mimiced almost identically by doing the following:

```
>>> import ics as icsneo
>>> devices = icsneo.FindNeoDevices()
>>> for device in devices:
...     print(device.Name, device.SerialNumber)
...
neoVI FIRE 59886
```

Recommended *Python* way by doing the following:

```
>>> import ics
>>> devices = ics.find_devices()
>>> for device in devices:
...     print(device.Name, device.SerialNumber)
...
neoVI FIRE 59886
```

It should be noted that *ics.ics.NeoDevice* is used a little bit differently than the C API. *ics.ics.NeoDevice* contains two extra members: *ics.ics.NeoDevice.AutoHandleClose* and ics.ics.NeoDevice._Handle

The handle normally returned from *icsneoOpenNeoDevice()* is stored inside _Handle and setting AutoHandleClose to True (Default) will automatically close the handle when the *ics.ics.NeoDevice* goes out of scope.

Installation:

pip install python_ics

https://pypi.python.org/pypi/python-ics

exception ics.ics.**ArgumentError**
Bases: Exception

exception ics.ics.**RuntimeError**
Bases: Exception

class ics.ics.**NeoDevice**
Bases: object

NeoDevice object

AutoHandleClose
When NeoDevice is freed the handle will automatically be closed, if true.

DeviceType

Handle

IsOpen
This contains the handle returned from icsneoOpenDevice() API. If uncertain, don't use this.

MaxAllowedClients

Name
String describing DeviceType, extension to Python api only.

NumberOfClients

SerialNumber

class ics.ics.**SpyMessage**
Bases: object

SpyMessage object

AckBytes

ArbIDOrHeader

Data

DescriptionID
Not Used

ExtraDataPtr

ExtraDataPtrEnabled

MessagePieceID
Not Used

MiscData

NetworkID
This value is used to identify which network this message was received on.

NetworkID2
This value is used to identify which network this message was received on.

NodeID
Not Used

NumberBytesData
Holds the number of bytes in the Data(1 to 8) array or the number of bytes in a CAN remote frame (The DLC).

NumberBytesHeader
Used for J1850/ISO messages. It indicates how many bytes are stored in the Header(1 to 4) array.

Protocol
Valid values are SPY_PROTOCOL_CAN, SPY_PROTOCOL_J1850VPW, and SPY_PROTOCOL_ISO9141.

StatusBitField

StatusBitField2

StatusBitField3

StatusBitField4

TimeHardware
Hardware time stamp. The TimeStamp is reset on device open

TimeHardware2
Hardware time stamp. The TimeStamp is reset on device open

TimeStampHardwareID
This is an identifier of what type of hardware timestamp is used. Since neoVI's timestamp is always the same, this doesn't change.

TimeStampSystemID
This is an identifier of what type of system timestamp is used. Since WIN32 neoVI's timestamp is always the same, from the timeGetTime API, this doesn't change.

TimeSystem
TimeSystem is loaded with the value received from the timeGetTime call in the WIN32 multimedia API.

TimeSystem2
TimeSystem is loaded with the value received from the timeGetTime call in the WIN32 multimedia API.

noExtraDataPtrCleanup
Tells Python to not clean up ExtraDataPtrMemory, If this is enabled. Ignore, if unsure.

class ics.ics.**SpyMessageJ1850**
Bases: object

SpyMessageJ1850 object

AckBytes

Data

DescriptionID
Not Used

ExtraDataPtr

ExtraDataPtrEnabled

Header

MessagePieceID
Not Used

MiscData

NetworkID
This value is used to identify which network this message was received on.

NetworkID2
This value is used to identify which network this message was received on.

NodeID
Not Used

NumberBytesData
Holds the number of bytes in the Data(1 to 8) array or the number of bytes in a CAN remote frame (The DLC).

NumberBytesHeader
Used for J1850/ISO messages. It indicates how many bytes are stored in the Header(1 to 4) array.

Protocol
Valid values are SPY_PROTOCOL_CAN, SPY_PROTOCOL_J1850VPW, and SPY_PROTOCOL_ISO9141.

StatusBitField

StatusBitField2

StatusBitField3

StatusBitField4

TimeHardware
Hardware time stamp. The TimeStamp is reset on device open

TimeHardware2
Hardware time stamp. The TimeStamp is reset on device open

TimeStampHardwareID
This is an identifier of what type of hardware timestamp is used. Since neoVI's timestamp is always the same, this doesn't change.

TimeStampSystemID
This is an identifier of what type of system timestamp is used. Since WIN32 neoVI's timestamp is always the same, from the timeGetTime API, this doesn't change.

TimeSystem
TimeSystem is loaded with the value received from the timeGetTime call in the WIN32 multimedia API.

TimeSystem2
TimeSystem is loaded with the value received from the timeGetTime call in the WIN32 multimedia API.

noExtraDataPtrCleanup
Tells Python to not clean up ExtraDataPtrMemory, If this is enabled. Ignore, if unsure.

ics.ics.**ClosePort**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.close_device()* method.

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ics.ics.**EnableBusVoltageMonitor**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.enable_bus_voltage_monitor()* method.

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ics.ics.**EnableDOIPLine**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.enable_doip_line()* method.

ics.ics.**EnableNetworkCom**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.enable_network_com()* method.

ics.ics.**FindNeoDevices**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.find_devices()* method.

ics.ics.**FirmwareUpdateRequired**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.firmware_update_required()* method.

ics.ics.**ForceFirmwareUpdate**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.force_firmware_update()* method.

ics.ics.**GenericAPIGetStatus**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.generic_api_get_status()* method.

ics.ics.**GenericAPIReadData**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.generic_api_read_data()* method.

ics.ics.**GenericAPISendCommand**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.generic_api_send_command()* method.

ics.ics.**GetActiveVNETChannel**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_active_vnet_channel()* method.

ics.ics.**GetBackupPowerEnabled**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_backup_power_enabled()* method.

ics.ics.**GetBackupPowerReady**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_backup_power_ready()* method.

ics.ics.**GetBusVoltage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_bus_voltage()* method.

ics.ics.**GetDLLFirmwareInfo**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_dll_firmware_info()* method.

ics.ics.**GetDLLVersion**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_dll_version()* method.

ics.ics.**GetDeviceSettings**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_device_settings()* method.

ics.ics.**GetDeviceStatus**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_device_status()* method.

ics.ics.**GetErrorMessages**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_error_messages()* method.

ics.ics.**GetHWFirmwareInfo**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_hw_firmware_info()* method.

ics.ics.**GetLastAPIError**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_last_api_error()* method.

ics.ics.**GetMessages**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_messages()* method.

ics.ics.**GetPCBSerialNumber**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_pcb_serial_number()* method.

ics.ics.**GetPerformanceParameters**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_performance_parameters()* method.

ics.ics.**GetRTC**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_rtc()* method.

ics.ics.**GetSerialNumber**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_serial_number()* method.

ics.ics.**GetTimeStampForMsg**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_timestamp_for_msg()*

method.

ics.ics.**ISO15765_DisableNetworks**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_disable_networks()* method.

ics.ics.**ISO15765_EnableNetworks**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_enable_networks()* method.

ics.ics.**ISO15765_ReceiveMessage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_receive_message()* method.

ics.ics.**ISO15765_TransmitMessage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_transmit_message()* method.

ics.ics.**IsDeviceFeatureSupported**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.is_device_feature_supported()* method.

ics.ics.**LoadDefaultSettings**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.load_default_settings()* method.

ics.ics.**OpenNeoDevice**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.open_device()* method.

ics.ics.**ReadJupiterFirmware**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.read_jupiter_firmware()* method.

ics.ics.**ReadSDCard**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.read_sdcard()* method.

ics.ics.**RequestDiskDetails**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_disk_details()* method.

ics.ics.**RequestDiskFormat**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.disk_format()* method.

ics.ics.**RequestDiskFormatCancel**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.disk_format_cancel()* method.

ics.ics.**RequestDiskFormatProgress**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_disk_format_progress()* method.

ics.ics.**RequestEnterSleepMode**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.request_enter_sleep_mode()* method.

ics.ics.**ScriptClear**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_clear()* method.

ics.ics.**ScriptGetFBlockStatus**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_get_fblock_status()* method.

ics.ics.**ScriptGetScriptStatus**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_get_status()* method.

ics.ics.**ScriptGetScriptStatusEx**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_script_status()* method.

ics.ics.**ScriptLoad**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_load()* method.

ics.ics.**ScriptReadAppSignal**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_read_app_signal()* method.

ics.ics.**ScriptReadRxMessage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_read_rx_message()* method.

ics.ics.**ScriptReadTxMessage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_read_tx_message()* method.

ics.ics.**ScriptStart**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_start()* method.

ics.ics.**ScriptStartFBlock**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_start_fblock()* method.

ics.ics.**ScriptStop**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_stop()* method.

ics.ics.**ScriptStopFBlock**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_stop_fblock()* method.

ics.ics.**ScriptWriteAppSignal**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_write_app_signal()* method.

ics.ics.**ScriptWriteRxMessage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_write_rx_message()* method.

ics.ics.**ScriptWriteTxMessage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_write_tx_message()* method.

ics.ics.**SetActiveVNETChannel**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_active_vnet_channel()* method.

ics.ics.**SetBackupPowerEnabled**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_backup_power_enabled()* method.

ics.ics.**SetBitRate**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_bit_rate()* method.

ics.ics.**SetBitRateEx**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_bit_rate_ex()* method.

ics.ics.**SetContext**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_context()* method.

ics.ics.**SetDeviceSettings**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_device_settings()* method.

ics.ics.**SetFDBitRate**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_fd_bit_rate()* method.

ics.ics.**SetLedProperty**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_led_property()* method.

ics.ics.**SetRTC**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_rtc()* method.

ics.ics.**SetReflashDisplayCallback**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_reflash_callback()* method.

ics.ics.**StartDHCPServer**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.start_dhcp_server()* method.

ics.ics.**StopDHCPServer**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.stop_dhcp_server()* method.

ics.ics.**TxMessages**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.transmit_messages()* method.

ics.ics.**UartGetBaudrate**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_get_baudrate()* method.

ics.ics.**UartRead**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_read()* method.

ics.ics.**UartSetBaudrate**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_set_baudrate()* method.

ics.ics.**UartWrite**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_write()* method.

ics.ics.**ValidateHObject**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.validate_hobject()* method.

ics.ics.**WriteJupiterFirmware**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.write_jupiter_firmware()* method.

ics.ics.**WriteSDCard**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.write_sdcard()* method.

---

ics.ics.**base36enc**(*serial*)
Converts a decimal serial number to base36.

Args: serial (int): serial number.

Raises: *ics.ics.RuntimeError*

Returns: Str: Serial Number

```
>>> ics.base36enc(device.SerialNumber)
CY0024
```

ics.ics.**close_device**(*device*)
Closes the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Error Count (int)

```
>>> for device in ics.find_devices():
...     ics.open_device(device)
...     # Do something with the device...
...     ics.close_device(device)
...
```

Note: *ics.ics.NeoDevice* will automatically close the device when it goes out of scope.

---

ics.ics.**coremini_clear**(*device*, *location*)
Clears the CoreMini into the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

location (int): Accepts *ics.ics.SCRIPT_LOCATION_FLASH_MEM*, *ics.ics.SCRIPT_LOCATION_SDCARD*, or *ics.ics.SCRIPT_LOCATION_VCAN3_MEM*

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> device = ics.open_device()
>>> ics.coremini_clear(device, ics.SCRIPT_LOCATION_SDCARD)
```

ics.ics.**coremini_get_fblock_status**(*device*, *index*)
Gets the status of a Coremini Function Block at *index* on *device*.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

index (int): Index of the function block.

Raises: *ics.ics.RuntimeError*

Returns: None on Success.

```
>>> device = ics.open_device()
>>> ics.coremini_get_fblock_status(device, 1)
True
```

ics.ics.**coremini_get_status**(*device*)
Gets the status of the CoreMini in the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: True if running, otherwise False.

```
>>> device = ics.open_device()
>>> ics.coremini_get_status(device)
>>>
```

ics.ics.**coremini_load**(*device*, *coremini*, *location*)
Loads the CoreMini into the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

coremini (str/tuple): Use string to load from file, Use Tuple if file data.

location (int): Accepts *ics.ics.SCRIPT_LOCATION_FLASH_MEM*, *ics.ics.SCRIPT_LOCATION_SDCARD*, or *ics.ics.SCRIPT_LOCATION_VCAN3_MEM*

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> device = ics.open_device()
>>> ics.coremini_load(device, 'cmvspy.vs3cmb', ics.SCRIPT_LOCATION_SDCARD)
```

ics.ics.**coremini_read_app_signal**(*device*, *index*)
Gets the value of a Coremini application signal at *index* on *device*.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

index (int): Index of the application signal.

Raises: *ics.ics.RuntimeError*

Returns: float on Success.

```
>>> device = ics.open_device()
>>> ics.coremini_read_app_signal(device, 1)
52
```

ics.ics.**coremini_read_rx_message**(*device*, *index*, *j1850=False*)
Gets the value of a Coremini Message at *index* on *device*.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

index (int): Index of the application signal.

j1850 (bool): Use *ics.ics.SpyMessageJ1850* instead.

Raises: *ics.ics.RuntimeError*

Returns: *ics.ics.SpyMessage* Success.

```
>>> device = ics.open_device()
>>> msg = ics.coremini_read_tx_message(device, 0)
```

ics.ics.**coremini_read_tx_message**(*device*, *index*, *j1850=False*)
Gets the value of a Coremini Message at *index* on *device*.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

index (int): Index of the application signal.

j1850 (bool): Use *ics.ics.SpyMessageJ1850* instead.

Raises: *ics.ics.RuntimeError*

Returns: *ics.ics.SpyMessage* Success.

```
>>> device = ics.open_device()
>>> msg = ics.coremini_read_tx_message(device, 0)
```

ics.ics.**coremini_start**(*device*, *location*)
Starts the CoreMini into the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

location (int): Accepts *ics.ics.SCRIPT_LOCATION_FLASH_MEM*, *ics.ics.SCRIPT_LOCATION_SDCARD*, or *ics.ics.SCRIPT_LOCATION_VCAN3_MEM*

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> device = ics.open_device()
>>> ics.coremini_start(device, ics.SCRIPT_LOCATION_SDCARD)
```

ics.ics.**coremini_start_fblock**(*device*, *index*)
Starts a Coremini Function Block at *index* on *device*.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

index (int): Index of the function block.

Raises: *ics.ics.RuntimeError*

Returns: None on Success.

```
>>> device = ics.open_device()
>>> ics.coremini_start_fblock(device, 1)
```

ics.ics.**coremini_stop**(*device*)
Stops the CoreMini into the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> device = ics.open_device()
>>> ics.coremini_stop(device)
```

ics.ics.**coremini_stop_fblock**(*device*, *index*)
Stops a Coremini Function Block at *index* on *device*.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

index (int): Index of the function block.

Raises: *ics.ics.RuntimeError*

Returns: None on Success.

```
>>> device = ics.open_device()
>>> ics.coremini_stop_fblock(device, 1)
```

ics.ics.**coremini_write_app_signal**(*device*, *index*, *value*)
Sets the value of a Coremini application signal at *index* on *device*.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

index (int): Index of the application signal.

value (float): New value of the application signal.

Raises: *ics.ics.RuntimeError*

Returns: None on Success.

```
>>> device = ics.open_device()
>>> ics.coremini_write_app_signal(device, 1, 52)
>>>
```

ics.ics.**coremini_write_rx_message**(*device*, *index*, *TODO*)
TODO

ics.ics.**coremini_write_tx_message**(*device*, *index*, *msg*)
TODO

ics.ics.**create_neovi_radio_message**(*Relay1*, *Relay2*, *Relay3*, *Relay4*, *Relay5*, *LED6*, *LED5*, *MSB_report_rate*, *LSB_report_rate*, *analog_change_report_rate*, *relay_timeout*)
Python API only. Generates data bytes for use with neoVI RADI/O CAN Messages

Kwargs: Relay1 (boolean): Enable/Disable Relay1

Relay2 (boolean): Enable/Disable Relay2

Relay3 (boolean): Enable/Disable Relay3

Relay4 (boolean): Enable/Disable Relay4

Relay5 (boolean): Enable/Disable Relay5

LED5 (boolean): Enable/Disable LED5

LED6 (boolean): Enable/Disable LED6

MSB_report_rate (int): MSB Report Rate in ms (0-255)

LSB_report_rate (int): LSB Report Rate in ms (0-255)

analog_change_report_rate (int): Analog change report rate

relay_timeout (int): Relay Timeout (0-255)*255ms

Returns:

Tuple of data bytes for use with *ics.ics.SpyMessage*

Raises: *ics.ics.RuntimeError*

```
>>> msg = ics.SpyMessage()
>>> msg.Data = ics.create_neovi_radio_message(Relay1=True, Relay4=False,␣
↪LED6=True, MSB_report_rate=10)
>>> msg.Data
(65, 10, 0, 0, 0)
```

ics.ics.**disk_format**(*device*)
Starts disk formatting on the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> d = ics.open_device()
>>> details = ics.get_disk_details(d)
>>> details. = ics.get_disk_details(d)
>>> ics.disk_format(d, details)
>>>
```

ics.ics.**disk_format_cancel**(*device*)
Cancel in progress disk formatting on the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> d = ics.open_device()
>>> ics.disk_format(d, details)
>>> ics.disk_format_cancel(d)
>>>
```

ics.ics.**enable_bus_voltage_monitor**(*device*, *enable*, *reserved*)
Enable or disable bus voltage monitoring.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

enable (bool): int

reserved (int): int: Optional. Should be set to zero. Don't set, if unsure.

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> d = ics.open_device()
>>> status = ics.enable_bus_voltage_monitor(d, 1)
>>>
```

ics.ics.**enable_doip_line**(*device*, *enable*)
Activate or De-activate DOIP Line.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

enable (bool): bool

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> d = ics.open_device()
>>> status = ics.enable_doip_line(d, True)
>>>
```

ics.ics.**enable_network_com**(*device*, *enable*, *net_id*)
Enable or disable network communication.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

enable (bool): bool

net_id (int): int: Optional. If left blank, disables/enables all networks.

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> d = ics.open_device()
>>> status = ics.enable_network_com(d, True)
>>>
```

ics.ics.**find_devices**(*device_type=ics.ics.NEODEVICE_ALL*)
Finds all connected devices and returns a tuple of *ics.ics.NeoDevice* for use in *ics.ics.open_device()*

Args: device_type (int): Accepts ics.ics.NEODEVICE_* Macros

New in 3.0 (803):

device_types (List/Tuple): Accepts a Container of ics.ics.NEODEVICE_* Macros

network_id (int): OptionsFindNeoEx.CANOptions.iNetworkID. Usually ics.NETID_CAN, if needed

Raises: *ics.ics.RuntimeError*

Returns: Tuple of *ics.ics.NeoDevice* for use in *ics.ics.open_device()*

```
>>> for device in ics.find_devices():
...     print(device.Name, device.SerialNumber)
...
neoVI FIRE 59886
```

New in 3.0 (803):

```
>>> for device in ics.find_devices([ics.NEODEVICE_FIRE, ics.NEODEVICE_VCAN3]):
...     print(device.Name, device.SerialNumber)
...
neoVI FIRE 59886
```

ics.ics.**firmware_update_required**(*device*)
Determines if the device firmware needs flashing.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Boolean: True on success, False on failure.

```
>>> ics.force_firmware_update(device)
True
```

ics.ics.**force_firmware_update**(*device*)
Forces the device to flash firmware.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Boolean: True on success, False on failure.

```
>>> ics.force_firmware_update(device)
True
```

ics.ics.**generic_api_get_status**(*device*, *api_index*, *instance_index*)
Reads data in a generic way.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

api_index (int): api_index.

instance_index (int): instance_index.

Raises: *ics.ics.RuntimeError*

Returns: tuple of (int): (functionIndex, callbackError, finishedProcessing)

ics.ics.**generic_api_read_data**()
ics.ics.generic_api_send_command(device, api_index, instance_index, length)

Reads data in a generic way.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

api_index (int): api_index.

instance_index (int): instance_index.

function_index (int): function_index.

length (int): Length of the data to read.

Raises: *ics.ics.RuntimeError*

Returns: tuple of (functionError, data)

ics.ics.**generic_api_send_command**(*device*, *api_index*, *instance_index*, *function_index*, *data*)
Sends a command in a generic way.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

api_index (int): api_index.

instance_index (int): instance_index.

function_index (int): function_index.

data (bytes): Data to be passed in.

Raises: *ics.ics.RuntimeError*

Returns: functionError (int): functionError.

ics.ics.**get_active_vnet_channel**(*device*)
Gets active vnet channel for the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Int: Returns active vnet channel.

ics.ics.**get_backup_power_enabled**(*device*)
Returns the device backup power enabled for the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Boolean: True on success, False on failure.

ics.ics.**get_backup_power_ready**(*device*)
Returns the device backup power is ready for the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Boolean: True on success, False on failure.

ics.ics.**get_bus_voltage**(*device*, *reserved*)
Reads bus voltage. (*ics.ics.enable_bus_voltage_monitor*) needs to be called first.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

reserved (int): int: Optional. Should be set to zero. Don't set, if unsure.

Raises: *ics.ics.RuntimeError*

Returns: Int: value returned is in mV.

```
>>> import ics
>>> d = ics.open_device()
>>> status = ics.enable_bus_voltage_monitor(d, 1)
>>> ics.get_bus_voltage(d)
12000
>>>
```

ics.ics.**get_device_settings**(*device*, *device_type*, *vnet_slot*)
Gets the settings in the device. vnet_slot defaults to ics.ics.PlasmaIonVnetChannelMain

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

device_type (EDeviceSettingsType): Optional: Overrides default device setings type. Defaults to '-1'

vnet_slot (PlasmaIonVnetChannelMain): Optional: Defaults to PlasmaIonVnetChannelMain, Used only for PLASMA/ION Devices.

Raises: *ics.ics.RuntimeError*

Returns: ics.ics.device_settings

```
>>> d = ics.open_device()
>>> d.Name
'neoVI ION'
>>> d.SerialNumber
404444
>>> s = ics.get_device_settings(d)
>>> s.DeviceSettingType
2
>>> s.cyan
```

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```
<ics.CyanSettings object at 0x01E61B40>
>>> s.cyan.canfd1.FDMode
4
>>> s2.cyan
<ics.CyanSettings object at 0x02B113C8>
>>> s2 = ics.get_device_settings(d, -1, ics.PlasmaIonVnetChannelA)
>>> s2.DeviceSettingType
2
>>> s2.cyan.canfd1.FDMode
4
```

ics.ics.**get_device_status**(*device*)

Returns the device status.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: (ics.ics.ics_device_status).

```
>>> import ics
>>> d = ics.open_device()
>>> status = ics.get_device_status(d)
>>> status.fire2Status.ethernetActivationLineEnabled
0
```

ics.ics.**get_disk_details**(*device*)

Returns the device disk details.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: (ics.ics.srad_gigalog_disk_details).

```
>>> import ics
>>> d = ics.open_device()
>>> details = ics.get_disk_details(d)
>>> details.structure.options
>>>
```

ics.ics.**get_disk_format_progress**(*device*)

Returns the device disk formatting progress.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: (ics.ics.srad_gigalog_disk_format_progress).

```
>>> import ics
>>> d = ics.open_device()
>>> d = ics.disk_format(d, details)
>>> progress = ics.get_disk_format_progress(d)
>>> progress.sectorsRemaining
>>>
```

ics.ics.**get_dll_firmware_info**(*device*)

Returns the DLL firmware info for the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: (ics.ics.st_api_firmware_info)

```
>>> device = ics.open_device()
>>> info = ics.get_dll_firmware_info(device)
>>> info.iAppMajor
7
>>> info.iAppMinor
55
>>>
```

ics.ics.**get_dll_version**(*device*)
Gets the DLL version.

Args: None

Raises: *ics.ics.RuntimeError*

Returns: Int: DLL Version

```
>>> ics.get_dll_version()
700
```

ics.ics.**get_error_messages**(*device*[, *j1850*, *timeout*])
Gets the error message(s) on the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: list of tuple`s. :class:`tuple contents: (error_number, description_short, description_long, severity, restart_needed)

```
>>> device = ics.open_device()
>>> errors = ics.get_error_messages(device)
```

ics.ics.**get_hw_firmware_info**(*device*)
Returns the device firmware info for the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: (ics.ics.st_api_firmware_info)

```
>>> device = ics.open_device()
>>> info = ics.get_hw_firmware_info(device)
>>> info.iAppMajor
7
>>> info.iAppMinor
55
>>>
```

ics.ics.**get_last_api_error**(*device*)
Gets the error message from the last API call.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Tuple: (error, description short, description long, severity, restart needed)

```
>>> device = ics.open_device()
>>> try:
...     msg = ics.coremini_read_tx_message(device, 0)
... except ics.RuntimeError as ex:
...     print(ex)
...     print(ics.get_last_api_error(device))
...
Error: coremini_read_tx_message(): icsneoScriptReadTxMessage() Failed
(224, 'Invalid Message Index for script.', 'Invalid Message Index for script.
↪', 16, 0)
```

ics.ics.**get_library_path**()

ics.ics.**get_messages**(*device*[, *j1850*, *timeout*])
Gets the message(s) on the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

j1850 (`bool`): Return *ics.ics.SpyMessageJ1850* instead.

timeout (`float`): Optional timeout to wait for messages in seconds (0.1 = 100ms).

Raises: *ics.ics.RuntimeError*

Returns: `tuple` of two items. First item is a `tuple` of *ics.ics.SpyMessage* and second is the error count.

```
>>> device = ics.open_device()
>>> messages, errors = ics.get_messages(device)
>>> len(messages)
14
>>> hex(messages[0].ArbIDOrHeader)
'0x160'
>>> messages[0].Data
(36, 11, 11, 177, 37, 3, 11, 199)
>>> errors
0
```

ics.ics.**get_pcb_serial_number**(*device*)
Gets the unique PCB serial number of the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: (`str`): PCB Serial Number

```
>>> import ics
>>> d = ics.open_device()
>>> pcb_sn = ics.get_pcb_serial_number(d)
>>>
```

ics.ics.**get_performance_parameters**(*device*)
Gets the Performance Parameters on *device*.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Tuple on Success: (buffer count, buffer max, overflow count, reserved, reserved, reserved, reserved, reserved)

```
>>> device = ics.open_device()
>>> ics.get_performance_parameters(device)
(0, 24576, 0, 0, 0, 0, 0, 0)
```

ics.ics.**get_rtc**(*device*)
Gets the Real-Time Clock of the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Tuple: (datetime.datetime object, offset in seconds)

```
>>> device = ics.open_device()
>>> ics.get_rtc(device)
(datetime.datetime(2014, 9, 10, 17, 45, 45), 3)
```

ics.ics.**get_script_status**()
Accepts a ics.ics.NeoDevice, exception on error. Returns a list of values of what ulParameters would hold

ics.ics.**get_serial_number**(*device*)
Gets the serial number out of the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Int: Serial Number Version

```
>>> ics.get_serial_number(device)
53123
```

ics.ics.**get_timestamp_for_msg**(*device*, *msg*)
Calculates the timestamp for a message.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

msg (*ics.ics.SpyMessage*): *ics.ics.SpyMessage*

Raises: *ics.ics.RuntimeError*

Returns: Float: Timestamp for the message.

```
>>> import ics
>>> d = ics.open_device()
>>> msgs, error_count = ics.get_messages(d)
>>> ics.get_timestamp_for_msg(d, msgs[0])
354577568.9145524
```

ics.ics.**icsneoClosePort**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.close_device()* method.

ics.ics.**icsneoEnableBusVoltageMonitor**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.enable_bus_voltage_monitor()* method.

ics.ics.**icsneoEnableDOIPLine**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.enable_doip_line()* method.

ics.ics.**icsneoEnableNetworkCom**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.enable_network_com()* method.

ics.ics.**icsneoFindNeoDevices**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.find_devices()* method.

ics.ics.**icsneoFirmwareUpdateRequired**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.firmware_update_required()* method.

ics.ics.**icsneoForceFirmwareUpdate**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.force_firmware_update()* method.

ics.ics.**icsneoGenericAPIGetStatus**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.generic_api_get_status()* method.

ics.ics.**icsneoGenericAPIReadData**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.generic_api_read_data()* method.

ics.ics.**icsneoGenericAPISendCommand**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.generic_api_send_command()* method.

ics.ics.**icsneoGetActiveVNETChannel**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_active_vnet_channel()* method.

ics.ics.**icsneoGetBackupPowerEnabled**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_backup_power_enabled()* method.

ics.ics.**icsneoGetBackupPowerReady**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_backup_power_ready()* method.

ics.ics.**icsneoGetBusVoltage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_bus_voltage()* method.

ics.ics.**icsneoGetDLLFirmwareInfo**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_dll_firmware_info()* method.

ics.ics.**icsneoGetDLLVersion**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_dll_version()* method.

ics.ics.**icsneoGetDeviceSettings**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_device_settings()* method.

ics.ics.**icsneoGetDeviceStatus**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_device_status()* method.

ics.ics.**icsneoGetErrorMessages**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_error_messages()* method.

ics.ics.**icsneoGetHWFirmwareInfo**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_hw_firmware_info()* method.

ics.ics.**icsneoGetLastAPIError**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_last_api_error()* method.

ics.ics.**icsneoGetMessages**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_messages()* method.

ics.ics.**icsneoGetPCBSerialNumber**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_pcb_serial_number()* method.

ics.ics.**icsneoGetPerformanceParameters**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_performance_parameters()* method.

ics.ics.**icsneoGetRTC**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_rtc()* method.

ics.ics.**icsneoGetSerialNumber**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_serial_number()* method.

ics.ics.**icsneoGetTimeStampForMsg**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_timestamp_for_msg()* method.

ics.ics.**icsneoISO15765_DisableNetworks**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_disable_networks()* method.

ics.ics.**icsneoISO15765_EnableNetworks**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_enable_networks()* method.

ics.ics.**icsneoISO15765_ReceiveMessage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_receive_message()* method.

ics.ics.**icsneoISO15765_TransmitMessage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_transmit_message()* method.

ics.ics.**icsneoIsDeviceFeatureSupported**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.is_device_feature_supported()* method.

ics.ics.**icsneoLoadDefaultSettings**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.load_default_settings()* method.

ics.ics.**icsneoOpenNeoDevice**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.open_device()* method.

ics.ics.**icsneoReadJupiterFirmware**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.read_jupiter_firmware()* method.

ics.ics.**icsneoReadSDCard**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.read_sdcard()* method.

ics.ics.**icsneoRequestDiskDetails**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_disk_details()* method.

ics.ics.**icsneoRequestDiskFormat**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.disk_format()* method.

ics.ics.**icsneoRequestDiskFormatCancel**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.disk_format_cancel()* method.

ics.ics.**icsneoRequestDiskFormatProgress**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_disk_format_progress()* method.

ics.ics.**icsneoRequestEnterSleepMode**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.request_enter_sleep_mode()* method.

ics.ics.**icsneoScriptClear**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_clear()* method.

ics.ics.**icsneoScriptGetFBlockStatus**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_get_fblock_status()* method.

ics.ics.**icsneoScriptGetScriptStatus**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_get_status()* method.

ics.ics.**icsneoScriptGetScriptStatusEx**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.get_script_status()* method.

ics.ics.**icsneoScriptLoad**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_load()* method.

ics.ics.**icsneoScriptReadAppSignal**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_read_app_signal()* method.

ics.ics.**icsneoScriptReadRxMessage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_read_rx_message()* method.

ics.ics.**icsneoScriptReadTxMessage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_read_tx_message()* method.

ics.ics.**icsneoScriptStart**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_start()* method.

ics.ics.**icsneoScriptStartFBlock**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_start_fblock()* method.

ics.ics.**icsneoScriptStop**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_stop()* method.

ics.ics.**icsneoScriptStopFBlock**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_stop_fblock()* method.

ics.ics.**icsneoScriptWriteAppSignal**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_write_app_signal()* method.

ics.ics.**icsneoScriptWriteRxMessage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_write_rx_message()* method.

ics.ics.**icsneoScriptWriteTxMessage**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_write_tx_message()* method.

ics.ics.**icsneoSetActiveVNETChannel**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_active_vnet_channel()* method.

ics.ics.**icsneoSetBackupPowerEnabled**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_backup_power_enabled()*

method.

ics.ics.**icsneoSetBitRate**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_bit_rate()* method.

ics.ics.**icsneoSetBitRateEx**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_bit_rate_ex()* method.

ics.ics.**icsneoSetContext**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_context()* method.

ics.ics.**icsneoSetDeviceSettings**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_device_settings()* method.

ics.ics.**icsneoSetFDBitRate**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_fd_bit_rate()* method.

ics.ics.**icsneoSetLedProperty**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_led_property()* method.

ics.ics.**icsneoSetRTC**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_rtc()* method.

ics.ics.**icsneoSetReflashDisplayCallbacks**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.set_reflash_callback()* method.

ics.ics.**icsneoStartDHCPServer**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.start_dhcp_server()* method.

ics.ics.**icsneoStopDHCPServer**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.stop_dhcp_server()* method.

ics.ics.**icsneoTxMessages**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.transmit_messages()* method.

ics.ics.**icsneoUartGetBaudrate**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_get_baudrate()* method.

ics.ics.**icsneoUartRead**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_read()* method.

ics.ics.**icsneoUartSetBaudrate**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_set_baudrate()* method.

ics.ics.**icsneoUartWrite**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_write()* method.

ics.ics.**icsneoValidateHObject**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.validate_hobject()* method.

ics.ics.**icsneoWriteJupiterFirmware**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.write_jupiter_firmware()*

method.

---

ics.ics.**icsneoWriteSDCard**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.write_sdcard()* method.

---

ics.ics.**icsneowBMSManagerReset**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.wbms_manager_reset()* method.

---

ics.ics.**icsneowBMSManagerWriteLock**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.wbms_manager_write_lock()* method.

---

ics.ics.**is_device_feature_supported**(*device*, *feature*)
Polls firmware in device to see if the feature is supported. As of 908 only ValueCAN4-2EL, ValueCAN4-4 and ValueCAN4-Industrial are supported.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

enable (DeviceFeature): DeviceFeature

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> from ics.structures.device_feature import DeviceFeature
>>> d = ics.open_device()
>>> supported = ics.is_device_feature_supported(d, DeviceFeature.
↪networkTerminationDWCAN01)
>>>
```

ics.ics.**iso15765_disable_networks**(*device*)
Disables ISO15765 networks.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: None

ics.ics.**iso15765_enable_networks**(*device*, *networks*)
Enables ISO15765 networks.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: None

ics.ics.**iso15765_receive_message**(*device*, *netid*, *rx_msg*)
Setup rx ISO15765 Message.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

prx_msg (ics.ics.st_cm_iso157652_rx_message): ics.ics.st_cm_iso157652_rx_message

Raises: *ics.ics.RuntimeError*

Returns: Boolean: True on success, False on failure.

ics.ics.**iso15765_transmit_message**(*device*, *ulNetworkID*, *pMsg*, *ulBlockingTimeout*)
Transmits an ISO15765 Message.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

pMsg (ics.ics.st_cm_iso157652_tx_message): ics.ics.st_cm_iso157652_tx_message

Raises: *ics.ics.RuntimeError*

Returns: Boolean: True on success, False on failure.

ics.ics.**load_default_settings**(*device*)
Load the default settings in the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> device = ics.open_device()
>>> ics.load_default_settings(device)
>>>
```

ics.ics.**open_device**(*device*)
Opens the device. *device* can be omitted to return a *ics.ics.NeoDevice* of the first free availible device, a *ics.ics.NeoDevice*, or a serial number of the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

device (int): Serial Number of the device

network_ids (List/Tuple): This is an array of number IDs which specify the NetworkID parameter of each network. This allows you to assign a custom network ID to each network. Normally, you will assign consecutive IDs to each of the networks. See NetworkIDList for a list of current network ID's. You may also set this parameter to NULL (zero) and the default network ID's will be used.

config_read (int): Specifies whether the DLL should read the neoVI's device configuration before enabling the device. It is recommended that this value be set to 1.

options (int): DEVICE_OPTION_* defines

network_id (int): OptionsFindNeoEx.CANOptions.iNetworkID. Usually ics.NETID_CAN, if needed

use_server (int): Defaults to False, Setting to True allows opening the same device more than once.

Raises: *ics.ics.RuntimeError*

Returns: If *ics.ics.NeoDevice* is passed as a parameter, None. If serial number is passed as a parameter, a *ics.ics.NeoDevice* will be returned. If *device* parameter is omitted, a *ics.ics.NeoDevice* will be returned with the first availible free device.

```
>>> for device in ics.find_devices():
...     ics.open_device(device)
...
```

Note: *ics.ics.NeoDevice* will automatically close the device when it goes out of scope.

ics.ics.**override_library_name**(*new_name*)
Overrides the default search for loading the icsneo40 library

Args: name: Absolute path or relative path including filename.

Raises: *ics.ics.RuntimeError*

Returns: None

```
>>> import ics
>>> ics.find_devices()
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
ics.RuntimeError: Error: find_devices(): Failed to open library: 'icsneo40.dll
↪' with error code: #126
>>> ics.override_library_name(r"C:\Windows\SysWOW64\icsneo40-different.dll")
>>> ics.find_devices()
(<ics.NeoDevice object at 0x00284C50>, <ics.NeoDevice object at 0x007C9A10>)
```

ics.ics.**read_jupiter_firmware**(*device*, *size*[, *vnetChannel*])
Reads firmware binary from a RAD-Jupiter. If not sure, don't use this method

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

size (`int`): `int`: size of the bytes to read of the firmware binary.

vnetChannel (`int`): `int`: Optional. Don't set, if unsure.

Raises: *ics.ics.RuntimeError*

Returns: None

ics.ics.**read_sdcard**()
icsneoReadSDCard(), Accepts a ics.ics.NeoDevice and sector index. Returns a bytearray of 512 bytes max. Exception on error.

ics.ics.**request_enter_sleep_mode**(*device*, *timeout_ms*, *mode*, *reserved_zero*)
Signal neoVI to immediete go to sleep. Currently only supported by FIREVNET/PLASMA. If using over USB this will likely return true but never cause PLASMA to sleep since USB insertion keeps it alive. This API allows Android/Linux applications to invoke power management.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

timeout_ms (int): 16bit word for how long to wait on idle bus before going to sleep. If caller does not want to change it pass in 65535 (0xFFFF) and it will stay whatever it was set to in explorer/coremini.

mode (int): 16bit word for power mode to enter. If caller does not want to change it pass in 65535 (0xFFFF) and it will stay whatever it was set to in explorer/coremini. If it is zero then neoVI will do 'normal sleep'. 0 - power mode off but calling this function will do 'normal sleep'. 1 - normal sleep. 2 - instant sleep. 3 - comatose sleep.

reserved_zero (int): Reserved, Keep as zero.

Raises: *ics.ics.RuntimeError*

Returns: Boolean: True on success, False on failure.

```
>>> ics.request_enter_sleep_mode(device, 1, 0)
True
```

ics.ics.**set_active_vnet_channel**(*device*, *channel*)
Sets active vnet channel for the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Boolean: True on success, False on failure.

ics.ics.**set_backup_power_enabled**(*device*, *enable*)
Sets the device backup power enabled for the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Boolean: True on success, False on failure.

ics.ics.**set_bit_rate**(*device*, *BitRate*, *NetworkID*)
Specifies bit rate setting. Valid values depend on the network specified.

For the networks NETID_HSCAN, NETID_MSCAN, NETID_SWCAN, NETID_FIRE_HSCAN2, NETID_HSCAN3, NETID_LSFTCAN, valid bit rates are 2000, 33333, 50000, 62500, 83333, 100000, 125000, 250000, 500000, 800000, 1000000

For the networks NETID_LIN, NETID_ISO2, NETID_FIRE_LIN2, NETID_FIRE_LIN3, NETID_FIRE_LIN4, valid bit rates are

For the network NETID_FIRE_CGI valid bit rates are 625000 and 115200

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Int: None.

ics.ics.**set_bit_rate_ex**(*device*, *BitRate*, *NetworkID*, *iOptions*)
Sets the bitrate for a given Network ID on the device with extended options.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Int: None.

ics.ics.**set_context**(*device*)
Sets the "context" of how icsneoFindNeoDevices(Ex) and icsneoOpenNeoDevice(Ex) function. If the context is 0 (null) than icsneoFindNeoDevices(Ex) will be system wide, searching USB and other supported computer interfaces. icsneoFindNeoDevices can then be used to connect to devices found in this manner. If the context is a handle to connected CAN tool than icsneoFindNeoDevices(Ex) will search a specific CAN bus for supported IntrepidCS CAN Nodes. Again icsneoOpenNeoDevice(Ex) would be used create logical connections to found CAN Nodes.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Boolean: True on success, False on failure.

```
>>> ics.set_context(device)
True
```

ics.ics.**set_device_settings**(*device*, *settings*, *save_to_eeprom*, *vnet_slot*)
Sets the settings in the device. vnet_slot defaults to ics.ics.PlasmaIonVnetChannelMain

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

settings (ics.ics.device_settings): ics.ics.device_settings

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> d = ics.open_device()
>>> d.Name
'neoVI ION'
>>> d.SerialNumber
404444
>>> s = ics.get_device_settings(d, ics.PlasmaIonVnetChannelA) # Get Slave␣
↪settings, channel selection not needed if not a Plasma/Ion
>>> s.DeviceSettingType
2
>>> s.cyan.can_switch_mode
1
>>> s.cyan.can_switch_mode = 2
>>> ics.set_device_settings(d, s, True, ics.PlasmaIonVnetChannelA)
>>>
```

ics.ics.**set_fd_bit_rate**(*device*, *BitRate*, *NetworkID*)
Sets the FD bitrate for a given Network ID on the device..

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

Raises: *ics.ics.RuntimeError*

Returns: Int: None.

ics.ics.**set_led_property**(*device*, *led*, *prop*, *value*)
Sets the LED property on the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

led (int): Index or position of the LED

prop (int): Property of the LED

value (int): Value of the LED Property

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> d = ics.open_device()
>>> ics.set_led_property(d, TODO, TODO, TODO)
>>>
```

ics.ics.**set_reflash_callback**(*callback*)
Sets the reflash display callback.

Args: callback (function): Must be a callable Python function (*def callback(msg, progress)*)

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> def callback(msg, progress):
...     print(msg, progress)
```

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```
...
>>> ics.set_reflash_callback(callback)
>>>
```

ics.ics.**set_rtc**(*device*[, *time*])
Sets the Real-Time Clock of the device.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

time (datetime.datetime): Optional. Sets to current time, if omitted.

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> device = ics.open_device()
>>> ics.set_rtc(device)
```

ics.ics.**start_dhcp_server**(*device*, *network_id*, *device_ip_address*, *subnet_mask*, *gateway*, *start_address*, *end_address*, *overwrite_dhcp_settings*, *lease_time*, *reserved*)
Starts a DHCP Server.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

network_id (int): NetworkID

device_ip_address (str): Device IP Address

subnet_mask (str): Subnet Mask

gateway (str): Gateway

start_address (str): Start Address

end_address (str): End Address

overwrite_dhcp_settings (bool): Overwrite DHCP Settings

lease_time (int): Lease time

reserved (int): (Optional) Reserved, set to 0

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> d = ics.open_device()
>>> ics.start_dhcp_server(d, TODO)
>>>
```

ics.ics.**stop_dhcp_server**(*device*, *network_id*)
Stops the DHCP Server

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

network_id (int): NetworkID

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> d = ics.open_device()
>>> ics.stop_dhcp_server(d, TODO)
>>>
```

ics.ics.**transmit_messages**(*device*, *messages*)
Transmits message(s) on the device. *messages* can be a tuple of *ics.ics.SpyMessage*

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

messages (*ics.ics.SpyMessage*): *ics.ics.SpyMessage*

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> device = ics.open_device()
>>> msg = ics.SpyMessage()
>>> msg.ArbIDOrHeader = 0xFF
>>> msg.NetworkID = ics.NETID_HSCAN
>>> msg.Data = (0,1,2,3,4,5,6,7)
>>> ics.transmit_messages(device, msg)
>>>
```

ics.ics.**uart_get_baudrate**(*device*, *port*)
Gets the UART baudrate on the given port.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

port (ics.ics.structures.e_uart_port_t.e_uart_port_t): ics.ics.structures.e_uart_port_t.e_uart_port_t

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> from ics.structures.e_uart_port_t import e_uart_port_t
>>> d = ics.open_device()
>>> baudrate = ics.uart_set_baudrate(d, e_uart_port_t.eUART0)
>>>
```

ics.ics.**uart_read**(*device*, *port*, *bytes_to_read*, *flags*)
Reads UART on the given port.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

port (ics.ics.structures.e_uart_port_t.e_uart_port_t): ics.ics.structures.e_uart_port_t.e_uart_port_t

bytes_to_read (int): Optional. How many bytes to read from the UART, 256 if omitted.

flags (int): Optional. Flags to be used. Don't use if unsure.

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> from ics.structures.e_uart_port_t import e_uart_port_t
>>> d = ics.open_device()
>>> data = ics.uart_read(d, e_uart_port_t.eUART0)
```

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```
>>> print(f"Read {len(data)} bytes: {data}")
>>>
```

ics.ics.**uart_set_baudrate**(*device*, *port*, *baudrate*)
Sets the UART baudrate on the given port.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

port (ics.ics.structures.e_uart_port_t.e_uart_port_t): ics.ics.structures.e_uart_port_t.e_uart_port_t

baudrate (int): Baudrate of the UART to set.

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> from ics.structures.e_uart_port_t import e_uart_port_t
>>> d = ics.open_device()
>>> ics.uart_set_baudrate(d, e_uart_port_t.eUART0, 115200)
>>> print(f"Read {len(data)} bytes: {data}")
>>>
```

ics.ics.**uart_write**(*device*, *port*, *data*, *flags*)
Writes UART on the given port

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

port (ics.ics.structures.e_uart_port_t.e_uart_port_t): ics.ics.structures.e_uart_port_t.e_uart_port_t

data (:class:‘bytes): :class:‘bytes

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> from ics.structures.e_uart_port_t import e_uart_port_t
>>> d = ics.open_device()
>>> ics.uart_write(d, e_uart_port_t.eUART0, b'my uart data goes here')
>>>
```

ics.ics.**validate_hobject**(*device*)
Validates the handle is valid for a *device*. Handles are only valid when the device is open.

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

or:

device (int): c style integer handle to the device.

Raises: *ics.ics.RuntimeError*

Returns: Boolean: True if valid, false otherwise.

```
>>> device = ics.open_device()
>>> ics.validate_hobject(device)
1
>>> ics.validate_hobject(device._Handle)
1
```

ics.ics.**wBMSManagerReset**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.wbms_manager_reset()* method.

ics.ics.**wBMSManagerWriteLock**()

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.wbms_manager_write_lock()* method.

ics.ics.**wbms_manager_reset**(*device*, *manager*)
Resets the manager

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

manager (ics.ics.structures.ew_bms_manager_port_t.ew_bms_manager_port_t): ics.ics.structures.ew_bms_manager_port_t.ew_bms_manager_port_t

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> from ics.structures.ew_bms_manager_port_t import ew_bms_manager_port_t
>>> d = ics.open_device()
>>> ics.wbms_manager_reset(d, ew_bms_manager_port_t.eManagerPortA.value)
>>>
```

ics.ics.**wbms_manager_write_lock**(*device*, *manager*, *lock_state*)
Sets the lock state on the manager

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

manager (ics.ics.structures.ew_bms_manager_port_t.ew_bms_manager_port_t): ics.ics.structures.ew_bms_manager_port_t.ew_bms_manager_port_t

lock_state (ics.ics.structures.ew_bms_manager_lock_state_t.ew_bms_manager_lock_state_t): ics.ics.structures.ew_bms_manager_lock_state_t.ew_bms_manager_lock_state_t

Raises: *ics.ics.RuntimeError*

Returns: None.

```
>>> import ics
>>> from ics.structures.ew_bms_manager_port_t import ew_bms_manager_port_t
>>> from ics.structures.ew_bms_manager_lock_state_t import ew_bms_manager_
↪lock_state_t
>>> d = ics.open_device()
>>> ics.wbms_manager_write_lock(d, ew_bms_manager_port_t.eManagerPortA.value,␣
↪ew_bms_manager_lock_state_t.eLockManager.value)
>>>
```

ics.ics.**write_jupiter_firmware**(*device*, *bytes*[, *vnetChannel*])
Writes firmware binary to a RAD-Jupiter. If not sure, don't use this method

Args: device (*ics.ics.NeoDevice*): *ics.ics.NeoDevice*

bytes (`bytes`): `bytes`: bytes of the firmware binary.

vnetChannel (`int`): `int`: Optional. Don't set, if unsure.

Raises: *ics.ics.RuntimeError*

Returns: None

ics.ics.**write_sdcard**()
icsneoReadSDCard(), Accepts a ics.ics.NeoDevice, sector index, and a bytearray of 512 bytes. Exception on error.

CHAPTER 8

Module Functions

`ics.ISO15765_DisableNetworks`

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_disable_networks()* method.

`ics.ISO15765_EnableNetworks`

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_enable_networks()* method.

`ics.ISO15765_ReceiveMessage`

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_receive_message()* method.

`ics.ISO15765_TransmitMessage`

Note: Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_transmit_message()* method.

`ics.close_device`(device)	Closes the device.
`ics.coremini_clear`(device, location)	Clears the CoreMini into the device.

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Table 1 – continued from previous page

ics.coremini_get_fblock_status(device, index)	Gets the status of a Coremini Function Block at *index* on *device*.
ics.coremini_get_status(device)	Gets the status of the CoreMini in the device.
ics.coremini_load(device, coremini, location)	Loads the CoreMini into the device.
ics.coremini_read_app_signal(device, index)	Gets the value of a Coremini application signal at *index* on *device*.
ics.coremini_read_rx_message(device, index)	Gets the value of a Coremini Message at *index* on *device*.
ics.coremini_read_tx_message(device, index)	Gets the value of a Coremini Message at *index* on *device*.
ics.coremini_start(device, location)	Starts the CoreMini into the device.
ics.coremini_start_fblock(device, index)	Starts a Coremini Function Block at *index* on *device*.
ics.coremini_stop(device)	Stops the CoreMini into the device.
ics.coremini_stop_fblock(device, index)	Stops a Coremini Function Block at *index* on *device*.
ics.coremini_write_app_signal(device, index, ...)	Sets the value of a Coremini application signal at *index* on *device*.
ics.coremini_write_rx_message(device, index, ...)	TODO
ics.coremini_write_tx_message(device, index, msg)	TODO
ics.create_neovi_radio_message(Relay1, ...)	Python API only.
ics.disk_format(device)	Starts disk formatting on the device.
ics.disk_format_cancel(device)	Cancel in progress disk formatting on the device.
ics.enable_bus_voltage_monitor(device, ...)	Enable or disable bus voltage monitoring.
ics.enable_doip_line(device, enable)	Activate or De-activate DOIP Line.
ics.enable_network_com(device, enable, net_id)	Enable or disable network communication.
ics.find_devices([device_type])	Finds all connected devices and returns a tuple of *ics.ics.NeoDevice* for use in *ics.ics.open_device()*
ics.firmware_update_required(device)	Determines if the device firmware needs flashing.
ics.force_firmware_update(device)	Forces the device to flash firmware.
ics.generic_api_get_status(device, ...)	Reads data in a generic way.
ics.generic_api_read_data	ics.ics.generic_api_send_command(device, api_index, instance_index, length)
ics.generic_api_send_command(device, ...)	Sends a command in a generic way.
ics.get_active_vnet_channel(device)	Gets active vnet channel for the device.
ics.get_backup_power_enabled(device)	Returns the device backup power enabled for the device.
ics.get_backup_power_ready(device)	Returns the device backup power is ready for the device.
ics.get_bus_voltage(device, reserved)	Reads bus voltage.
ics.get_device_settings(device, device_type, ...)	Gets the settings in the device.
ics.get_device_status(device)	Returns the device status.
ics.get_disk_details(device)	Returns the device disk details.
ics.get_disk_format_progress(device)	Returns the device disk formatting progress.
ics.get_dll_firmware_info(device)	Returns the DLL firmware info for the device.
ics.get_dll_version(device)	Gets the DLL version.
ics.get_error_messages(device[, j1850, timeout])	Gets the error message(s) on the device.

Continued on next page

Table 1 – continued from previous page

ics.get_hw_firmware_info(device)	Returns the device firmware info for the device.
ics.get_last_api_error(device)	Gets the error message from the last API call.
ics.get_library_path	
ics.get_messages(device[, j1850, timeout])	Gets the message(s) on the device.
ics.get_pcb_serial_number(device)	Gets the unique PCB serial number of the device.
ics.get_performance_parameters(device)	Gets the Performance Parameters on *device*.
ics.get_rtc(device)	Gets the Real-Time Clock of the device.
ics.get_script_status	Accepts a ics.ics.NeoDevice, exception on error.
ics.get_serial_number(device)	Gets the serial number out of the device.
ics.get_timestamp_for_msg(device, msg)	Calculates the timestamp for a message.
ics.is_device_feature_supported(device, feature)	Polls firmware in device to see if the feature is supported.
ics.iso15765_disable_networks(device)	Disables ISO15765 networks.
ics.iso15765_enable_networks(device, networks)	Enables ISO15765 networks.
ics.iso15765_receive_message(device, netid, ...)	Setup rx ISO15765 Message.
ics.iso15765_transmit_message(device, ...)	Transmits an ISO15765 Message.
ics.load_default_settings(device)	Load the default settings in the device.
ics.open_device(device)	Opens the device.
ics.override_library_name(new_name)	Overrides the default search for loading the icsneo40 library
ics.read_jupiter_firmware(device, size, ...)	Reads firmware binary from a RAD-Jupiter.
ics.read_sdcard	icsneoReadSDCard(), Accepts a ics.ics.NeoDevice and sector index.
ics.request_enter_sleep_mode(device, ...)	Signal neoVI to immediete go to sleep.
ics.set_active_vnet_channel(device, channel)	Sets active vnet channel for the device.
ics.set_backup_power_enabled(device, enable)	Sets the device backup power enabled for the device.
ics.set_bit_rate(device, BitRate, NetworkID)	Specifies bit rate setting.
ics.set_bit_rate_ex(device, BitRate, ...)	Sets the bitrate for a given Network ID on the device with extended options.
ics.set_context(device)	Sets the "context" of how icsneoFindNeoDevices(Ex) and icsneoOpenNeoDevice(Ex) function.
ics.set_device_settings(device, settings, ...)	Sets the settings in the device.
ics.set_fd_bit_rate(device, BitRate, NetworkID)	Sets the FD bitrate for a given Network ID on the device..
ics.set_led_property(device, led, prop, value)	Sets the LED property on the device.
ics.set_reflash_callback(callback)	Sets the reflash display callback.
ics.set_rtc(device[, time])	Sets the Real-Time Clock of the device.
ics.start_dhcp_server(device, network_id, ...)	Starts a DHCP Server.
ics.stop_dhcp_server(device, network_id)	Stops the DHCP Server
ics.transmit_messages(device, messages)	Transmits message(s) on the device.
ics.uart_get_baudrate(device, port)	Gets the UART baudrate on the given port.
ics.uart_read(device, port, bytes_to_read, flags)	Reads UART on the given port.
ics.uart_set_baudrate(device, port, baudrate)	Sets the UART baudrate on the given port.
ics.uart_write(device, port, data, flags)	Writes UART on the given port
ics.validate_hobject(device)	Validates the handle is valid for a *device*.

Continued on next page

Table 1 – continued from previous page

ics.wbms_manager_reset(device, manager)	Resets the manager
ics.wbms_manager_write_lock(device, manager, ...)	Sets the lock state on the manager
ics.write_jupiter_firmware(device, bytes, ...)	Writes firmware binary to a RAD-Jupiter.
ics.write_sdcard	icsneoReadSDCard(), Accepts a ics.ics.NeoDevice, sector index, and a bytearray of 512 bytes.
ics.ClosePort	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.close_device()* method.
ics.EnableBusVoltageMonitor	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.enable_bus_voltage_monitor()* method.
ics.EnableDOIPLine	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.enable_doip_line()* method.
ics.EnableNetworkCom	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.enable_network_com()* method.
ics.FindNeoDevices	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.find_devices()* method.
ics.FirmwareUpdateRequired	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.firmware_update_required()* method.

Continued on next page

Table 1 – continued from previous page

ics.ForceFirmwareUpdate	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.force_firmware_update()* method.
ics.GenericAPIGetStatus	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.generic_api_get_status()* method.
ics.GenericAPIReadData	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.generic_api_read_data()* method.
ics.GenericAPISendCommand	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.generic_api_send_command()* method.
ics.GetActiveVNETChannel	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_active_vnet_channel()* method.
ics.GetBackupPowerEnabled	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_backup_power_enabled()* method.
ics.GetBackupPowerReady	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_backup_power_ready()* method.

Continued on next page

Table 1 – continued from previous page

ics.GetBusVoltage	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_bus_voltage()* method.
ics.GetDLLFirmwareInfo	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_dll_firmware_info()* method.
ics.GetDLLVersion	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_dll_version()* method.
ics.GetDeviceSettings	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_device_settings()* method.
ics.GetDeviceStatus	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_device_status()* method.
ics.GetErrorMessages	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_error_messages()* method.
ics.GetHWFirmwareInfo	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_hw_firmware_info()* method.

Continued on next page

Table 1 – continued from previous page

ics.GetLastAPIError	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_last_api_error()* method.
ics.GetMessages	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_messages()* method.
ics.GetPCBSerialNumber	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_pcb_serial_number()* method.
ics.GetPerformanceParameters	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_performance_parameters()* method.
ics.GetRTC	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_rtc()* method.
ics.GetSerialNumber	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_serial_number()* method.
ics.GetTimeStampForMsg	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_timestamp_for_msg()* method.

Continued on next page

Table 1 – continued from previous page

ics.IsDeviceFeatureSupported	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.is_device_feature_supported()* method.
ics.LoadDefaultSettings	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.load_default_settings()* method.
ics.OpenNeoDevice	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.open_device()* method.
ics.ReadJupiterFirmware	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.read_jupiter_firmware()* method.
ics.ReadSDCard	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.read_sdcard()* method.
ics.RequestDiskDetails	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_disk_details()* method.
ics.RequestDiskFormat	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.disk_format()* method.
ics.RequestDiskFormatCancel	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.disk_format_cancel()* method.

Continued on next page

Table 1 – continued from previous page

ics.RequestDiskFormatProgress	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_disk_format_progress()* method.
ics.RequestEnterSleepMode	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.request_enter_sleep_mode()* method.
ics.ScriptClear	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_clear()* method.
ics.ScriptGetFBlockStatus	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_get_fblock_status()* method.
ics.ScriptGetScriptStatus	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_get_status()* method.
ics.ScriptGetScriptStatusEx	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_script_status()* method.
ics.ScriptLoad	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_load()* method.

Continued on next page

Table 1 – continued from previous page

ics.ScriptReadAppSignal	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_read_app_signal()* method.
ics.ScriptReadRxMessage	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_read_rx_message()* method.
ics.ScriptReadTxMessage	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_read_tx_message()* method.
ics.ScriptStart	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_start()* method.
ics.ScriptStartFBlock	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_start_fblock()* method.
ics.ScriptStop	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_stop()* method.
ics.ScriptStopFBlock	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_stop_fblock()* method.

Continued on next page

Table 1 – continued from previous page

ics.ScriptWriteAppSignal	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_write_app_signal()* method.
ics.ScriptWriteRxMessage	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_write_rx_message()* method.
ics.ScriptWriteTxMessage	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_write_tx_message()* method.
ics.SetActiveVNETChannel	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_active_vnet_channel()* method.
ics.SetBackupPowerEnabled	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_backup_power_enabled()* method.
ics.SetBitRate	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_bit_rate()* method.
ics.SetBitRateEx	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_bit_rate_ex()* method.

Continued on next page

Table 1 – continued from previous page

ics.SetContext	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_context()* method.
ics.SetDeviceSettings	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_device_settings()* method.
ics.SetFDBitRate	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_fd_bit_rate()* method.
ics.SetLedProperty	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_led_property()* method.
ics.SetRTC	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_rtc()* method.
ics.SetReflashDisplayCallback	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_reflash_callback()* method.
ics.StartDHCPServer	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.start_dhcp_server()* method.
ics.StopDHCPServer	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.stop_dhcp_server()* method.

Continued on next page

Table 1 – continued from previous page

ics.TxMessages	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.transmit_messages()* method.
ics.UartGetBaudrate	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_get_baudrate()* method.
ics.UartRead	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_read()* method.
ics.UartSetBaudrate	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_set_baudrate()* method.
ics.UartWrite	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_write()* method.
ics.ValidateHObject	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.validate_hobject()* method.
ics.WriteJupiterFirmware	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.write_jupiter_firmware()* method.
ics.WriteSDCard	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.write_sdcard()* method.
ics.base36enc(serial)	Converts a decimal serial number to base36.

Continued on next page

Table 1 – continued from previous page

ics.wBMSManagerReset	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.wbms_manager_reset()* method.
ics.wBMSManagerWriteLock	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.wbms_manager_write_lock()* method.
ics.icsneoClosePort	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.close_device()* method.
ics.icsneoEnableBusVoltageMonitor	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.enable_bus_voltage_monitor()* method.
ics.icsneoEnableDOIPLine	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.enable_doip_line()* method.
ics.icsneoEnableNetworkCom	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.enable_network_com()* method.
ics.icsneoFindNeoDevices	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.find_devices()* method.

Continued on next page

Table 1 – continued from previous page

ics.icsneoFirmwareUpdateRequired	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.firmware_update_required()* method.
ics.icsneoForceFirmwareUpdate	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.force_firmware_update()* method.
ics.icsneoGenericAPIGetStatus	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.generic_api_get_status()* method.
ics.icsneoGenericAPIReadData	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.generic_api_read_data()* method.
ics.icsneoGenericAPISendCommand	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.generic_api_send_command()* method.
ics.icsneoGetActiveVNETChannel	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_active_vnet_channel()* method.
ics.icsneoGetBackupPowerEnabled	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_backup_power_enabled()* method.

Continued on next page

Table 1 – continued from previous page

ics.icsneoGetBackupPowerReady	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_backup_power_ready()* method.
ics.icsneoGetBusVoltage	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_bus_voltage()* method.
ics.icsneoGetDLLFirmwareInfo	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_dll_firmware_info()* method.
ics.icsneoGetDLLVersion	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_dll_version()* method.
ics.icsneoGetDeviceSettings	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_device_settings()* method.
ics.icsneoGetDeviceStatus	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_device_status()* method.
ics.icsneoGetErrorMessages	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_error_messages()* method.

Continued on next page

Table 1 – continued from previous page

ics.icsneoGetHWFirmwareInfo	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_hw_firmware_info()* method.
ics.icsneoGetLastAPIError	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_last_api_error()* method.
ics.icsneoGetMessages	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_messages()* method.
ics.icsneoGetPCBSerialNumber	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_pcb_serial_number()* method.
ics.icsneoGetPerformanceParameters	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_performance_parameters()* method.
ics.icsneoGetRTC	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_rtc()* method.
ics.icsneoGetSerialNumber	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_serial_number()* method.

Continued on next page

Table 1 – continued from previous page

ics.icsneoGetTimeStampForMsg	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_timestamp_for_msg()* method.
ics.icsneoISO15765_DisableNetworks	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_disable_networks()* method.
ics.icsneoISO15765_EnableNetworks	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_enable_networks()* method.
ics.icsneoISO15765_ReceiveMessage	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_receive_message()* method.
ics.icsneoISO15765_TransmitMessage	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.iso15765_transmit_message()* method.
ics.icsneoIsDeviceFeatureSupported	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.is_device_feature_supported()* method.
ics.icsneoLoadDefaultSettings	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.load_default_settings()* method.

Continued on next page

Table 1 – continued from previous page

ics.icsneoOpenNeoDevice	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.open_device()* method.
ics.icsneoReadJupiterFirmware	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.read_jupiter_firmware()* method.
ics.icsneoReadSDCard	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.read_sdcard()* method.
ics.icsneoRequestDiskDetails	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_disk_details()* method.
ics.icsneoRequestDiskFormat	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.disk_format()* method.
ics.icsneoRequestDiskFormatCancel	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.disk_format_cancel()* method.
ics.icsneoRequestDiskFormatProgress	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_disk_format_progress()* method.
ics.icsneoRequestEnterSleepMode	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.request_enter_sleep_mode()* method.

Continued on next page

Table 1 – continued from previous page

ics.icsneoScriptClear	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_clear()* method.
ics.icsneoScriptGetFBlockStatus	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_get_fblock_status()* method.
ics.icsneoScriptGetScriptStatus	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_get_status()* method.
ics.icsneoScriptGetScriptStatusEx	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.get_script_status()* method.
ics.icsneoScriptLoad	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_load()* method.
ics.icsneoScriptReadAppSignal	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_read_app_signal()* method.
ics.icsneoScriptReadRxMessage	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_read_rx_message()* method.

Continued on next page

Table 1 – continued from previous page

ics.icsneoScriptReadTxMessage	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_read_tx_message()* method.
ics.icsneoScriptStart	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_start()* method.
ics.icsneoScriptStartFBlock	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_start_fblock()* method.
ics.icsneoScriptStop	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_stop()* method.
ics.icsneoScriptStopFBlock	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_stop_fblock()* method.
ics.icsneoScriptWriteAppSignal	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_write_app_signal()* method.
ics.icsneoScriptWriteRxMessage	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_write_rx_message()* method.

Continued on next page

Table 1 – continued from previous page

ics.icsneoScriptWriteTxMessage	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.coremini_write_tx_message()* method.
ics.icsneoSetActiveVNETChannel	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_active_vnet_channel()* method.
ics.icsneoSetBackupPowerEnabled	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_backup_power_enabled()* method.
ics.icsneoSetBitRate	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_bit_rate()* method.
ics.icsneoSetBitRateEx	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_bit_rate_ex()* method.
ics.icsneoSetContext	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_context()* method.
ics.icsneoSetDeviceSettings	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_device_settings()* method.
ics.icsneoSetFDBitRate	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_fd_bit_rate()* method.

Continued on next page

Table 1 – continued from previous page

ics.icsneoSetLedProperty	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_led_property()* method.
ics.icsneoSetRTC	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_rtc()* method.
ics.icsneoSetReflashDisplayCallbacks	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.set_reflash_callback()* method.
ics.icsneoStartDHCPServer	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.start_dhcp_server()* method.
ics.icsneoStopDHCPServer	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.stop_dhcp_server()* method.
ics.icsneoTxMessages	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.transmit_messages()* method.
ics.icsneoUartGetBaudrate	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_get_baudrate()* method.
ics.icsneoUartRead	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_read()* method.

Continued on next page

Table 1 – continued from previous page

ics.icsneoUartSetBaudrate	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_set_baudrate()* method.
ics.icsneoUartWrite	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.uart_write()* method.
ics.icsneoValidateHObject	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.validate_hobject()* method.
ics.icsneoWriteJupiterFirmware	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.write_jupiter_firmware()* method.
ics.icsneoWriteSDCard	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.write_sdcard()* method.
ics.icsneowBMSManagerReset	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.wbms_manager_reset()* method.
ics.icsneowBMSManagerWriteLock	**Note:** Compatibility Function: Identical to PEP8 compliant *ics.ics.wbms_manager_write_lock()* method.

CHAPTER 9

Module Structures

class ics.structures.a2_b_monitor_settings.**a2_b_monitor_settings**

downstreamChannelOffset
Structure/Union member

flags
Structure/Union member

nodeType
Structure/Union member

reserved
Structure/Union member

tdmMode
Structure/Union member

upstreamChannelOffset
Structure/Union member

class ics.structures.a2_b_node_type.**a2_b_node_type**
A ctypes-compatible IntEnum superclass.

a2bNodeTypeMaster = 1

a2bNodeTypeMonitor = 0

a2bNodeTypeSlave = 2

from_param = <bound method a2_b_node_type.from_param of <enum 'a2_b_node_type'>>

class ics.structures.a2_btdm_mode.**a2_btdm_mode**
A ctypes-compatible IntEnum superclass.

from_param = <bound method a2_btdm_mode.from_param of <enum 'a2_btdm_mode'>>

tdmModeTDM12 = 3

tdmModeTDM16 = 4

tdmModeTDM2 = 0

tdmModeTDM20 = 5

tdmModeTDM24 = 6

tdmModeTDM32 = 7

tdmModeTDM4 = 1

tdmModeTDM8 = 2

class ics.structures.can_settings.**can_settings**

BRP
Structure/Union member

Baudrate
Structure/Union member

Mode
Structure/Union member

SetBaudrate
Structure/Union member

TqProp
Structure/Union member

TqSeg1
Structure/Union member

TqSeg2
Structure/Union member

TqSync
Structure/Union member

auto_baud
Structure/Union member

innerFrameDelay25us
Structure/Union member

transceiver_mode
Structure/Union member

class ics.structures.canfd_settings.**canfd_settings**

FDBRP
Structure/Union member

FDBaudrate
Structure/Union member

FDMode
Structure/Union member

FDTDC
Structure/Union member

FDTqProp
Structure/Union member

FDTqSeg1
Structure/Union member

FDTqSeg2
Structure/Union member

FDTqSync
Structure/Union member

reserved
Structure/Union member

class ics.structures.canterm_settings.**canterm_settings**

reserved
Structure/Union member

term_enabled
Structure/Union member

term_network
Structure/Union member

class ics.structures.clock_quality_.**clock_quality_**

clock_accuracy
Structure/Union member

clock_class
Structure/Union member

offset_scaled_log_variance
Structure/Union member

class ics.structures.device_feature.**device_feature**
A ctypes-compatible IntEnum superclass.

NUM_VALID_DEVICE_FEATURES = 16

from_param = <bound method device_feature.from_param of <enum 'device_feature'>>

networkDWCAN01 = 0

networkDWCAN02 = 1

networkDWCAN03 = 2

networkDWCAN04 = 3

networkDWCAN05 = 4

networkDWCAN06 = 5

networkDWCAN07 = 6

networkDWCAN08 = 7

networkTerminationDWCAN01 = 8

networkTerminationDWCAN02 = 9

networkTerminationDWCAN03 = 10

networkTerminationDWCAN04 = 11

networkTerminationDWCAN05 = 12

networkTerminationDWCAN06 = 13

networkTerminationDWCAN07 = 14

networkTerminationDWCAN08 = 15

supportedFeatureMax = 65535

class ics.structures.disk_settings.**disk_settings**

disk_enables
Structure/Union member

disk_format
Structure/Union member

disk_layout
Structure/Union member

rsvd
Structure/Union member

class ics.structures.e_device_settings_type.**e_device_settings_type**
A ctypes-compatible IntEnum superclass.

DeviceCANHUBSettingsType = 19

DeviceCMProbeSettingsType = 22

DeviceECU_AVBSettingsType = 9

DeviceEEVBSettingsType = 15

DeviceEtherBadgeSettingsType = 30

DeviceFire2SettingsType = 2

DeviceFire3SettingsType = 28

DeviceFireSettingsType = 0

DeviceFireVnetSettingsType = 1

DeviceFlexVnetzSettingsType = 18

DeviceIEVBSettingsType = 20

DeviceNeoECU12SettingsType = 17

DeviceOBD2LCSettingsType = 33

DeviceOBD2ProSettingsType = 23

DeviceOBD2SimSettingsType = 21

DeviceRADA2BSettingsType = 31

DeviceRADBMSSettingsType = 34

DeviceRADEpsilonSettingsType = 32

DeviceRADGalaxySettingsType = 4

DeviceRADGigalogSettingsType = 13

DeviceRADGigastarSettingsType = 26

DeviceRADJupiterSettingsType = 27

DeviceRADMoon2SettingsType = 11

DeviceRADPlutoSettingsType = 12

DeviceRADPlutoSwitchSettingsType = 25

DeviceRADStar2SettingsType = 5

DeviceRADSuperMoonSettingsType = 10

DeviceRadMoonDuoSettingsType = 29

DeviceRedSettingsType = 24

DeviceSettingsNone = 4294967295

DeviceSettingsTypeMax = 35

DeviceVCAN3SettingsType = 3

DeviceVCAN412SettingsType = 7

DeviceVCAN4IndSettingsType = 16

DeviceVCAN4SettingsType = 6

DeviceVCANRFSettingsType = 14

DeviceVividCANSettingsType = 8

from_param = <bound method e_device_settings_type.from_param of <enum 'e_device_set

class ics.structures.e_disk_format.**e_disk_format**

A ctypes-compatible IntEnum superclass.

DiskFormatFAT32 = 1

DiskFormatUnknown = 0

DiskFormatexFAT = 2

from_param = <bound method e_disk_format.from_param of <enum 'e_disk_format'>>

class ics.structures.e_disk_layout.**e_disk_layout**

A ctypes-compatible IntEnum superclass.

DiskLayoutIndividual = 4

DiskLayoutRAID0 = 1

DiskLayoutRAID1 = 2

DiskLayoutRAID5 = 3

DiskLayoutSpanned = 0

from_param = <bound method e_disk_layout.from_param of <enum 'e_disk_layout'>>

class ics.structures.e_generic_api_options.**e_generic_api_options**

A ctypes-compatible IntEnum superclass.

eADI_WIL_API = 1

eGENERIC_API = 0

from_param = <bound method e_generic_api_options.from_param of <enum 'e_generic_api

class ics.structures.e_gptp_port.**e_gptp_port**
A ctypes-compatible IntEnum superclass.

ePortDisabled = 0

ePortOpEth1 = 1

ePortOpEth10 = 10

ePortOpEth11 = 11

ePortOpEth12 = 12

ePortOpEth2 = 2

ePortOpEth3 = 3

ePortOpEth4 = 4

ePortOpEth5 = 5

ePortOpEth6 = 6

ePortOpEth7 = 7

ePortOpEth8 = 8

ePortOpEth9 = 9

ePortStdEth1 = 13

ePortStdEth2 = 14

from_param = <bound method e_gptp_port.from_param of <enum 'e_gptp_port'>>

class ics.structures.e_gptp_role.**e_gptp_role**
A ctypes-compatible IntEnum superclass.

eRoleDisabled = 0

eRoleMaster = 2

eRolePassive = 1

eRoleSlave = 3

from_param = <bound method e_gptp_role.from_param of <enum 'e_gptp_role'>>

class ics.structures.e_plasma_ion_vnet_channel_t.**e_plasma_ion_vnet_channel_t**
A ctypes-compatible IntEnum superclass.

PlasmaIonVnetChannelA = 1

PlasmaIonVnetChannelB = 2

PlasmaIonVnetChannelMain = 0

eFpgaStatusResp = 4

eSoftCore = 3

from_param = <bound method e_plasma_ion_vnet_channel_t.from_param of <enum 'e_plasm

class ics.structures.e_uart_port_t.**e_uart_port_t**
A ctypes-compatible IntEnum superclass.

eUART0 = 0

eUART1 = 1

from_param = <bound method e_uart_port_t.from_param of <enum 'e_uart_port_t'>>

class ics.structures.ethernet10_g_settings.**ethernet10_g_settings**

flags
Structure/Union member

gateway
Structure/Union member

ip_addr
Structure/Union member

link_speed
Structure/Union member

netmask
Structure/Union member

rsvd2
Structure/Union member

class ics.structures.ethernet_network_status_t.**ethernet_network_status_t**

linkFullDuplex
Structure/Union member

linkMode
Structure/Union member

linkSpeed
Structure/Union member

linkStatus
Structure/Union member

networkId
Structure/Union member

class ics.structures.ethernet_settings.**ethernet_settings**

auto_neg
Structure/Union member

duplex
Structure/Union member

led_mode
Structure/Union member

link_speed
Structure/Union member

rsvd
Structure/Union member

class ics.structures.ethernet_settings2.**ethernet_settings2**

flags
Structure/Union member

gateway
Structure/Union member

ip_addr
Structure/Union member

link_speed
Structure/Union member

netmask
Structure/Union member

rsvd
Structure/Union member

class ics.structures.ew_bms_instance_t.**ew_bms_instance_t**
A ctypes-compatible IntEnum superclass.

ewBMSInstance0 = 0

ewBMSInstance1 = 1

from_param = <bound method ew_bms_instance_t.from_param of <enum 'ew_bms_instance_t

class ics.structures.ew_bms_manager_lock_state_t.**ew_bms_manager_lock_state_t**
A ctypes-compatible IntEnum superclass.

eLockManager = 0

eUnlockManager = 1

from_param = <bound method ew_bms_manager_lock_state_t.from_param of <enum 'ew_bms_

class ics.structures.ew_bms_manager_port_t.**ew_bms_manager_port_t**
A ctypes-compatible IntEnum superclass.

eManagerPortA = 0

eManagerPortB = 1

from_param = <bound method ew_bms_manager_port_t.from_param of <enum 'ew_bms_manage

class ics.structures.extended_response_code.**extended_response_code**
A ctypes-compatible IntEnum superclass.

EXTENDED_RESPONSE_INVALID_COMMAND = -1

EXTENDED_RESPONSE_INVALID_PARAMETER = -5

EXTENDED_RESPONSE_INVALID_STATE = -2

EXTENDED_RESPONSE_OK = 0

EXTENDED_RESPONSE_OPERATION_FAILED = -3

EXTENDED_RESPONSE_OPERATION_PENDING = -4

from_param = <bound method extended_response_code.from_param of <enum 'extended_res

class ics.structures.extended_response_generic.**extended_response_generic**

commandType
Structure/Union member

returnCode
Structure/Union member

class ics.structures.fire3_linux_settings.**fire3_linux_settings**

allowBoot
Structure/Union member

ethConfigurationPort
Structure/Union member

reserved
Structure/Union member

useExternalWifiAntenna
Structure/Union member

class ics.structures.flex_vnet_mode.**flex_vnet_mode**
A ctypes-compatible IntEnum superclass.

flexVnetModeColdStart = 4

flexVnetModeDisabled = 0

flexVnetModeOneDual = 2

flexVnetModeOneSingle = 1

flexVnetModeTwoSingle = 3

from_param = <bound method flex_vnet_mode.from_param of <enum 'flex_vnet_mode'>>

class ics.structures.generic_api_data.**generic_api_data**

api
Structure/Union member

bData
Structure/Union member

length
Structure/Union member

class ics.structures.generic_api_selector.**generic_api_selector**

apiIndex
Structure/Union member

functionID
Structure/Union member

instance
Structure/Union member

class ics.structures.generic_api_status.**generic_api_status**

api
Structure/Union member

calbackError
Structure/Union member

finishedProcessing
Structure/Union member

functionError
Structure/Union member

class ics.structures.get_component_versions.**get_component_versions**

reserved
Structure/Union member

class ics.structures.get_component_versions_response.**get_component_versions_response**

numVersions
Structure/Union member

versions
Structure/Union member

class ics.structures.get_supported_features_response.**get_supported_features_response**

cmdVersion
Structure/Union member

featureBitfields
Structure/Union member

numValidBits
Structure/Union member

class ics.structures.global_settings.**global_settings**

Nameless46561
Structure/Union member

canhub
Structure/Union member

chksum
Structure/Union member

cmprobe
Structure/Union member

cyan
Structure/Union member

ecu
Structure/Union member

eevb
Structure/Union member

epsilon
Structure/Union member

etherBadge
Structure/Union member

fire
Structure/Union member

fire3
Structure/Union member

firevnet
Structure/Union member

flexvnetz
Structure/Union member

ievb
Structure/Union member

jupiter
Structure/Union member

len
Structure/Union member

neoecu12
Structure/Union member

neoecu_avb
Structure/Union member

neoobd2_sim
Structure/Union member

obd2lc
Structure/Union member

obd2pro
Structure/Union member

pendant
Structure/Union member

pluto
Structure/Union member

rad_a2b
Structure/Union member

rad_bms
Structure/Union member

radgalaxy
Structure/Union member

radgigalog
Structure/Union member

radgigastar
Structure/Union member

radmoon2
Structure/Union member

radmoonduo
Structure/Union member

radstar2
Structure/Union member

radsupermoon
Structure/Union member

red
Structure/Union member

vcan3
Structure/Union member

vcan4
Structure/Union member

vcan412
Structure/Union member

vcan4_12
Structure/Union member

vcan4_ind
Structure/Union member

vcanrf
Structure/Union member

version
Structure/Union member

vividcan
Structure/Union member

class ics.structures.gptp_status.**gptp_status**

as_capable
Structure/Union member

current_time
Structure/Union member

gm_priority
Structure/Union member

is_sync
Structure/Union member

is_syntonized
Structure/Union member

link_delay_ns
Structure/Union member

link_status
Structure/Union member

ms_offset_ns
Structure/Union member

reserved
Structure/Union member

selected_role
Structure/Union member

class ics.structures.hw_eth_settings.**hw_eth_settings**

General_Settings
Structure/Union member

class ics.structures.ics_device_status.**ics_device_status**

fire2Status
Structure/Union member

fire3Status
Structure/Union member

flexVnetzStatus
Structure/Union member

jupiterStatus
Structure/Union member

obd2proStatus
Structure/Union member

plutoStatus
Structure/Union member

radBMSStatus
Structure/Union member

radMoonDuoStatus
Structure/Union member

vcan4Status
Structure/Union member

vcan4indStatus
Structure/Union member

class ics.structures.ics_fire2_device_status.**ics_fire2_device_status**

backupPowerEnabled
Structure/Union member

backupPowerGood
Structure/Union member

ethernetActivationLineEnabled
Structure/Union member

ethernetStatus
Structure/Union member

usbHostPowerEnabled
Structure/Union member

class ics.structures.ics_fire2_vnet_device_status.**ics_fire2_vnet_device_status**

ethernetActivationLineEnabled
Structure/Union member

ethernetStatus
Structure/Union member

unused
Structure/Union member

class ics.structures.ics_fire3_device_status.**ics_fire3_device_status**

ethernetActivationLineEnabled
Structure/Union member

ethernetStatus
Structure/Union member

unused
Structure/Union member

class ics.structures.ics_flex_vnetz_device_status.**ics_flex_vnetz_device_status**

ethernetActivationLineEnabled
Structure/Union member

ethernetStatus
Structure/Union member

unused
Structure/Union member

class ics.structures.ics_obd2_pro_device_status.**ics_obd2_pro_device_status**

ethernetStatus
Structure/Union member

class ics.structures.ics_rad_bms_device_status.**ics_rad_bms_device_status**

ethernetStatus
Structure/Union member

class ics.structures.ics_rad_epsilon_device_status.**ics_rad_epsilon_device_status**

ethernetStatus
Structure/Union member

class ics.structures.ics_rad_jupiter_device_status.**ics_rad_jupiter_device_status**

ethernetStatus
Structure/Union member

class ics.structures.ics_rad_moon_duo_device_status.**ics_rad_moon_duo_device_status**

ethernetStatus
Structure/Union member

class ics.structures.ics_rad_pluto_device_status.**ics_rad_pluto_device_status**

ethernetStatus
Structure/Union member

class ics.structures.ics_spy_message_flex_ray.**ics_spy_message_flex_ray**

AckBytes
Structure/Union member

ArbIDOrHeader
Structure/Union member

Data
Structure/Union member

DescriptionID
Structure/Union member

ExtraDataPtr
Structure/Union member

ExtraDataPtrEnabled
Structure/Union member

MessagePieceID
Structure/Union member

MiscData
Structure/Union member

Nameless61974
Structure/Union member

Nameless7100
Structure/Union member

NetworkID
Structure/Union member

NetworkID2
Structure/Union member

NodeID
Structure/Union member

NumberBytesData
Structure/Union member

NumberBytesHeader
Structure/Union member

Protocol
Structure/Union member

Reserved
Structure/Union member

StatusBitField
Structure/Union member

StatusBitField2
Structure/Union member

StatusBitField3
Structure/Union member

StatusBitField4
Structure/Union member

TimeHardware
Structure/Union member

TimeHardware2
Structure/Union member

TimeStampHardwareID
Structure/Union member

TimeStampSystemID
Structure/Union member

TimeSystem
Structure/Union member

TimeSystem2
Structure/Union member

chA
Structure/Union member

chB
Structure/Union member

cycle
Structure/Union member

dynamic
Structure/Union member

fcrc0
Structure/Union member

fcrc1
Structure/Union member

fcrc2
Structure/Union member

frame_len_12_5ns
Structure/Union member

frame_reserved
Structure/Union member

hcrc_lsbs
Structure/Union member

hcrc_msbs
Structure/Union member

id
Structure/Union member

null_frame
Structure/Union member

payload_preamble
Structure/Union member

res1
Structure/Union member

res2
Structure/Union member

startup
Structure/Union member

sync
Structure/Union member

tss_len_12_5ns
Structure/Union member

class ics.structures.ics_spy_message_long.**ics_spy_message_long**

AckBytes
Structure/Union member

ArbIDOrHeader
Structure/Union member

DataLsb
Structure/Union member

DataMsb
Structure/Union member

DescriptionID
Structure/Union member

ExtraDataPtr
Structure/Union member

ExtraDataPtrEnabled
Structure/Union member

MessagePieceID
Structure/Union member

MiscData
Structure/Union member

Nameless65087
Structure/Union member

NetworkID
Structure/Union member

NetworkID2
Structure/Union member

NodeID
Structure/Union member

NumberBytesData
Structure/Union member

NumberBytesHeader
Structure/Union member

Protocol
Structure/Union member

Reserved
Structure/Union member

StatusBitField
Structure/Union member

StatusBitField2
Structure/Union member

StatusBitField3
Structure/Union member

StatusBitField4
Structure/Union member

TimeHardware
Structure/Union member

TimeHardware2
Structure/Union member

TimeStampHardwareID
Structure/Union member

TimeStampSystemID
Structure/Union member

TimeSystem
Structure/Union member

TimeSystem2
Structure/Union member

class ics.structures.ics_spy_message_vsb.**ics_spy_message_vsb**

AckBytes
Structure/Union member

ArbIDOrHeader
Structure/Union member

Data
Structure/Union member

DescriptionID
Structure/Union member

ExtraDataPtr
Structure/Union member

ExtraDataPtrEnabled
Structure/Union member

MessagePieceID
Structure/Union member

MiscData
Structure/Union member

Nameless18906
Structure/Union member

NetworkID
Structure/Union member

NetworkID2
Structure/Union member

NodeID
Structure/Union member

NumberBytesData
Structure/Union member

NumberBytesHeader
Structure/Union member

Protocol
Structure/Union member

Reserved
Structure/Union member

StatusBitField
Structure/Union member

StatusBitField2
Structure/Union member

StatusBitField3
Structure/Union member

StatusBitField4
Structure/Union member

TimeHardware
Structure/Union member

TimeHardware2
Structure/Union member

TimeStampHardwareID
Structure/Union member

TimeStampSystemID
Structure/Union member

TimeSystem
Structure/Union member

TimeSystem2
Structure/Union member

class ics.structures.ics_vcan4_device_status.**ics_vcan4_device_status**

ethernetActivationLineEnabled
Structure/Union member

ethernetStatus
Structure/Union member

unused
Structure/Union member

class ics.structures.ics_vcan4_industrial_device_status.**ics_vcan4_industrial_device_st**

ethernetStatus
Structure/Union member

class ics.structures.iso15765_2015_tx_message.**iso15765_2015_tx_message**

Nameless59426
Structure/Union member

blockSize
Structure/Union member

data
Structure/Union member

ext_address_enable
Structure/Union member

extendedAddress
Structure/Union member

fc_ext_address_enable
Structure/Union member

fc_id
Structure/Union member

fc_id_29_bit_enable
Structure/Union member

fc_id_mask
Structure/Union member

flags
Structure/Union member

flowControlExtendedAddress
Structure/Union member

fs_timeout
Structure/Union member

fs_wait
Structure/Union member

id
Structure/Union member

id_29_bit_enable
Structure/Union member

isBRSEnabled
Structure/Union member

iscanFD
Structure/Union member

num_bytes
Structure/Union member

overrideBlockSize
Structure/Union member

overrideSTmin
Structure/Union member

padding
Structure/Union member

paddingEnable
Structure/Union member

stMin
Structure/Union member

tx_dl
Structure/Union member

tx_index
Structure/Union member

vs_netid
Structure/Union member

class ics.structures.iso9141_keyword2000_init_step.**iso9141_keyword2000_init_step**

k
Structure/Union member

l
Structure/Union member

time_500us
Structure/Union member

class ics.structures.iso9141_keyword2000_settings.**iso9141_keyword2000_settings**

Baudrate
Structure/Union member

brgh
Structure/Union member

chksum_enabled
Structure/Union member

init_step_count
Structure/Union member

init_steps
Structure/Union member

p2_500us
Structure/Union member

p3_500us
Structure/Union member

p4_500us
Structure/Union member

spbrg
Structure/Union member

class ics.structures.j1708_settings.**j1708_settings**

enable_convert_mode
Structure/Union member

class ics.structures.lin_settings.**lin_settings**

Baudrate
Structure/Union member

MasterResistor
Structure/Union member

Mode
Structure/Union member

brgh
Structure/Union member

numBitsDelay
Structure/Union member

spbrg
Structure/Union member

class ics.structures.logger_settings.**logger_settings**

extraction_timeout
Structure/Union member

rsvd
Structure/Union member

class ics.structures.ndis_adapter_information.**ndis_adapter_information**

EthernetPinConfig
Structure/Union member

Status
Structure/Union member

bIPV4_Address
Structure/Union member

bIPV6_Address
Structure/Union member

bMAC_Address
Structure/Union member

szDeviceName
Structure/Union member

szName
Structure/Union member

class ics.structures.op_eth_general_settings.**op_eth_general_settings**

Nameless19471
Structure/Union member

flags
Structure/Union member

reserved0
Structure/Union member

tapPair0
Structure/Union member

tapPair1
Structure/Union member

tapPair2
Structure/Union member

tapPair3
Structure/Union member

tapPair4
Structure/Union member

tapPair5
Structure/Union member

uFlags
Structure/Union member

ucInterfaceType
Structure/Union member

class ics.structures.op_eth_link_mode.**op_eth_link_mode**
A ctypes-compatible IntEnum superclass.

OPETH_LINK_AUTO = 0

OPETH_LINK_MASTER = 1

OPETH_LINK_SLAVE = 2

from_param = <bound method op_eth_link_mode.from_param of <enum 'op_eth_link_mode'>

class ics.structures.op_eth_settings.**op_eth_settings**

Nameless14996
Structure/Union member

link_spd
Structure/Union member

mac_addr1
Structure/Union member

mac_addr2
Structure/Union member

mac_spoofing_en
Structure/Union member

mac_spoofing_isDstOrSrc
Structure/Union member

preemption_en
Structure/Union member

q2112_phy_mode
Structure/Union member

reserved
Structure/Union member

reserved0
Structure/Union member

ucConfigMode
Structure/Union member

class ics.structures.port_identity.**port_identity**

clock_identity
Structure/Union member

port_number
Structure/Union member

class ics.structures.priority_vector.**priority_vector**

port_number
Structure/Union member

portid
Structure/Union member

steps_removed
Structure/Union member

sysid
Structure/Union member

class ics.structures.rad_moon_duo_converter_settings.**rad_moon_duo_converter_settings**

converter1Mode
Structure/Union member

ipAddress
Structure/Union member

ipGateway
Structure/Union member

ipMask
Structure/Union member

linkMode0
Structure/Union member

linkMode1
Structure/Union member

class ics.structures.rad_reporting_settings.**rad_reporting_settings**

fan_speed_interval_ms
Structure/Union member

flags
Structure/Union member

gps_interval_ms
Structure/Union member

io_interval_ms
Structure/Union member

rsvd
Structure/Union member

serdes_interval_ms
Structure/Union member

temp_interval_ms
Structure/Union member

class ics.structures.s_cm_probe_settings.**s_cm_probe_settings**

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

class ics.structures.s_cyan_settings.**s_cyan_settings**

ain_sample_period
Structure/Union member

ain_threshold
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

can3
Structure/Union member

can4
Structure/Union member

can5
Structure/Union member

can6
Structure/Union member

can7
Structure/Union member

can8
Structure/Union member

can_switch_mode
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

canfd3
Structure/Union member

canfd4
Structure/Union member

canfd5
Structure/Union member

canfd6
Structure/Union member

canfd7
Structure/Union member

canfd8
Structure/Union member

digitalIoThresholdEnable
Structure/Union member

digitalIoThresholdTicks
Structure/Union member

disk
Structure/Union member

ethernet
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

idle_wakeup_network_enables_1
Structure/Union member

idle_wakeup_network_enables_2
Structure/Union member

idle_wakeup_network_enables_3
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings_1
Structure/Union member

iso9141_kwp_settings_2
Structure/Union member

iso9141_kwp_settings_3
Structure/Union member

iso9141_kwp_settings_4
Structure/Union member

iso_9141_kwp_enable_reserved
Structure/Union member

iso_msg_termination_1
Structure/Union member

iso_msg_termination_2
Structure/Union member

iso_msg_termination_3
Structure/Union member

iso_msg_termination_4
Structure/Union member

iso_parity_1
Structure/Union member

iso_parity_2
Structure/Union member

iso_parity_3
Structure/Union member

iso_parity_4
Structure/Union member

lin1
Structure/Union member

lin2
Structure/Union member

lin3
Structure/Union member

lin4
Structure/Union member

lin5
Structure/Union member

lin6
Structure/Union member

lsftcan1
Structure/Union member

lsftcan2
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

slaveVnetA
Structure/Union member

slaveVnetB
Structure/Union member

swcan1
Structure/Union member

swcan2
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

timeSync
Structure/Union member

class ics.structures.s_device_settings.**s_device_settings**

DeviceSettingType
Structure/Union member

Settings
Structure/Union member

class ics.structures.s_disk_details.**s_disk_details**

status
Structure/Union member

structure
Structure/Union member

class ics.structures.s_disk_format_progress.**s_disk_format_progress**

sectorsRemaining
Structure/Union member

state
Structure/Union member

class ics.structures.s_disk_status.**s_disk_status**

bytesPerSector
Structure/Union member

sectors
Structure/Union member

status
Structure/Union member

class ics.structures.s_disk_structure.**s_disk_structure**

options
Structure/Union member

settings
Structure/Union member

class ics.structures.s_ether_badge_settings.**s_ether_badge_settings**

ain_sample_period
Structure/Union member

ain_threshold
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

ethernet
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_enable_reserved
Structure/Union member

iso9141_kwp_settings
Structure/Union member

iso_msg_termination
Structure/Union member

iso_parity
Structure/Union member

iso_tester_pullup_enable
Structure/Union member

lin1
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

class ics.structures.s_ext_sub_cmd_comm.**s_ext_sub_cmd_comm**

extension
Structure/Union member

header
Structure/Union member

class ics.structures.s_ext_sub_cmd_hdr.**s_ext_sub_cmd_hdr**

command
Structure/Union member

length
Structure/Union member

class ics.structures.s_extended_data_flash_header.**s_extended_data_flash_header**

chksum
Structure/Union member

len
Structure/Union member

version
Structure/Union member

class ics.structures.s_fire3_settings.**s_fire3_settings**

ain_threshold
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

can3
Structure/Union member

can4
Structure/Union member

can5
Structure/Union member

can6
Structure/Union member

can7
Structure/Union member

can8
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

canfd3
Structure/Union member

canfd4
Structure/Union member

canfd5
Structure/Union member

canfd6
Structure/Union member

canfd7
Structure/Union member

canfd8
Structure/Union member

digitalIoThresholdEnable
Structure/Union member

digitalIoThresholdTicks
Structure/Union member

disk
Structure/Union member

ethernet2_1
Structure/Union member

ethernet2_2
Structure/Union member

ethernet_1
Structure/Union member

ethernet_2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings_1
Structure/Union member

iso9141_kwp_settings_2
Structure/Union member

iso_msg_termination_1
Structure/Union member

iso_msg_termination_2
Structure/Union member

iso_parity_1
Structure/Union member

iso_parity_2
Structure/Union member

lin1
Structure/Union member

lin2
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

os_settings
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

reserved
Structure/Union member

slaveVnetA
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

timeSync
Structure/Union member

class ics.structures.s_fire_settings.**s_fire_settings**

ain_sample_period
Structure/Union member

ain_threshold
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

can3
Structure/Union member

can4
Structure/Union member

cgi_baud
Structure/Union member

cgi_chksum_enable
Structure/Union member

cgi_enable_reserved
Structure/Union member

cgi_rx_ifs_bit_times
Structure/Union member

cgi_tx_ifs_bit_times
Structure/Union member

fast_init_network_enables_1
Structure/Union member

fast_init_network_enables_2
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_enable_reserved
Structure/Union member

iso9141_kwp_settings
Structure/Union member

iso9141_kwp_settings_2
Structure/Union member

iso9141_kwp_settings_3
Structure/Union member

iso9141_kwp_settings_4
Structure/Union member

iso_msg_termination
Structure/Union member

iso_msg_termination_2
Structure/Union member

iso_msg_termination_3
Structure/Union member

iso_msg_termination_4
Structure/Union member

iso_parity
Structure/Union member

iso_parity_2
Structure/Union member

iso_parity_3
Structure/Union member

iso_parity_4
Structure/Union member

iso_tester_pullup_enable
Structure/Union member

lin1
Structure/Union member

lin2
Structure/Union member

lin3
Structure/Union member

lin4
Structure/Union member

lsftcan
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

neoMostGateway
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

perf_en
Structure/Union member

pwm_man_timeout
Structure/Union member

pwr_man_enable
Structure/Union member

swcan
Structure/Union member

text_api
Structure/Union member

uart
Structure/Union member

uart2
Structure/Union member

vnetBits
Structure/Union member

class ics.structures.s_fire_vnet_settings.**s_fire_vnet_settings**

ain_sample_period
Structure/Union member

ain_threshold
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

can3
Structure/Union member

can4
Structure/Union member

can5
Structure/Union member

can6
Structure/Union member

cgi_baud
Structure/Union member

cgi_chksum_enable
Structure/Union member

cgi_enable_reserved
Structure/Union member

cgi_rx_ifs_bit_times
Structure/Union member

cgi_tx_ifs_bit_times
Structure/Union member

fast_init_network_enables_1
Structure/Union member

fast_init_network_enables_2
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_enable_reserved
Structure/Union member

iso9141_kwp_settings
Structure/Union member

iso9141_kwp_settings_2
Structure/Union member

iso9141_kwp_settings_3
Structure/Union member

iso9141_kwp_settings_4
Structure/Union member

iso_msg_termination
Structure/Union member

iso_msg_termination_2
Structure/Union member

iso_msg_termination_3
Structure/Union member

iso_msg_termination_4
Structure/Union member

iso_parity
Structure/Union member

iso_parity_2
Structure/Union member

iso_parity_3
Structure/Union member

iso_parity_4
Structure/Union member

iso_tester_pullup_enable
Structure/Union member

lin1
Structure/Union member

lin2
Structure/Union member

lin3
Structure/Union member

lin4
Structure/Union member

lin5
Structure/Union member

lsftcan
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

neoMostGateway
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

perf_en
Structure/Union member

pwm_man_timeout
Structure/Union member

pwr_man_enable
Structure/Union member

swcan
Structure/Union member

swcan2
Structure/Union member

text_api
Structure/Union member

uart
Structure/Union member

uart2
Structure/Union member

vnetBits
Structure/Union member

class ics.structures.s_flex_vnetz_settings.**s_flex_vnetz_settings**

can1
Structure/Union member

can2
Structure/Union member

can3
Structure/Union member

can4
Structure/Union member

can5
Structure/Union member

can6
Structure/Union member

can7
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

canfd3
Structure/Union member

canfd4
Structure/Union member

canfd5
Structure/Union member

canfd6
Structure/Union member

canfd7
Structure/Union member

disk
Structure/Union member

ethernet
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

flex_mode
Structure/Union member

flex_termination
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

misc_io_on_report_events
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

slaveVnetA
Structure/Union member

slaveVnetB
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

timeSync
Structure/Union member

class ics.structures.s_jupiter_ptp_params_s.**s_jupiter_ptp_params_s**

gPTPportRole
Structure/Union member

initLogPDelayReqInterval
Structure/Union member

initLogSyncInterval
Structure/Union member

neighborPropDelay
Structure/Union member

operationLogPDelayReqInterval
Structure/Union member

operationLogSyncInterval
Structure/Union member

class ics.structures.s_neo_ecu12_settings.**s_neo_ecu12_settings**

ain_sample_period
Structure/Union member

ain_threshold
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

can_switch_mode
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

ecu_id
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings
Structure/Union member

iso_9141_kwp_enable_reserved
Structure/Union member

iso_msg_termination
Structure/Union member

iso_parity
Structure/Union member

lin1
Structure/Union member

lsftcan1
Structure/Union member

lsftcan2
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

reserved_field
Structure/Union member

swcan1
Structure/Union member

swcan2
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

class ics.structures.s_neo_most_gateway_settings.**s_neo_most_gateway_settings**

Config
Structure/Union member

netId
Structure/Union member

zero0
Structure/Union member

class ics.structures.s_pendant_settings.**s_pendant_settings**

ain_sample_period
Structure/Union member

ain_threshold
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

ecu_id
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings
Structure/Union member

iso9141_kwp_settings_2
Structure/Union member

iso_msg_termination
Structure/Union member

iso_msg_termination_2
Structure/Union member

iso_parity
Structure/Union member

iso_parity_2
Structure/Union member

lin1
Structure/Union member

lin2
Structure/Union member

lsftcan
Structure/Union member

lsftcan2
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

selected_network
Structure/Union member

swcan
Structure/Union member

swcan2
Structure/Union member

text_api
Structure/Union member

uart
Structure/Union member

uart2
Structure/Union member

class ics.structures.s_phy_reg_pkt.**s_phy_reg_pkt**

BusIndex
Structure/Union member

Clause45Enable
Structure/Union member

Enabled
Structure/Union member

Nameless14534
Structure/Union member

Nameless45381
Structure/Union member

WriteEnable
Structure/Union member

clause22
Structure/Union member

clause45
Structure/Union member

flags
Structure/Union member

reserved
Structure/Union member

status
Structure/Union member

version
Structure/Union member

class ics.structures.s_phy_reg_pkt_clause22_mess.**s_phy_reg_pkt_clause22_mess**

page
Structure/Union member

phyAddr
Structure/Union member

regAddr
Structure/Union member

regVal
Structure/Union member

class ics.structures.s_phy_reg_pkt_clause45_mess.**s_phy_reg_pkt_clause45_mess**

device
Structure/Union member

port
Structure/Union member

regAddr
Structure/Union member

regVal
Structure/Union member

class ics.structures.s_phy_reg_pkt_hdr.**s_phy_reg_pkt_hdr**

entryBytes
Structure/Union member

numEntries
Structure/Union member

version
Structure/Union member

class ics.structures.s_phy_reg_pkt_rw.**s_phy_reg_pkt_rw**
A ctypes-compatible IntEnum superclass.

PHYREG_BOTH = 2

PHYREG_READ = 0

PHYREG_WRITE = 1

from_param = <bound method s_phy_reg_pkt_rw.from_param of <enum 's_phy_reg_pkt_rw'>

class ics.structures.s_phy_reg_pkt_status.**s_phy_reg_pkt_status**
A ctypes-compatible IntEnum superclass.

PHYREG_FAILURE = 1

PHYREG_INVALID_MDIO_BUS_INDEX = 2

PHYREG_INVALID_PHY_ADDR = 3

PHYREG_RESERVED0 = 4

PHYREG_RESERVED1 = 5

PHYREG_RESERVED2 = 6

PHYREG_RESERVED3 = 7

PHYREG_SUCCESS = 0

from_param = <bound method s_phy_reg_pkt_status.from_param of <enum 's_phy_reg_pkt_

class ics.structures.s_pluto_avb_params_s.**s_pluto_avb_params_s**

destmeta
Structure/Union member

srcmeta
Structure/Union member

class ics.structures.s_pluto_clock_sync_params_s.**s_pluto_clock_sync_params_s**

accdevwin
Structure/Union member

asytensyen
Structure/Union member

caentmout
Structure/Union member

etssrcpcf
Structure/Union member

fullcbg
Structure/Union member

intcydur
Structure/Union member

inttosyncth
Structure/Union member

inttotentth
Structure/Union member

ipcframesy
Structure/Union member

listentmout
Structure/Union member

maxintegcy
Structure/Union member

maxtranspclk
Structure/Union member

numstbcy
Structure/Union member

numunstbcy
Structure/Union member

obvwinsz
Structure/Union member

pad1
Structure/Union member

pad2
Structure/Union member

pad3
Structure/Union member

pcfpriority
Structure/Union member

pcfsze
Structure/Union member

srcport
Structure/Union member

stabasyen
Structure/Union member

stth
Structure/Union member

sttointth
Structure/Union member

swmaster
Structure/Union member

syasyen
Structure/Union member

sydomain
Structure/Union member

sypriority
Structure/Union member

syrelen
Structure/Union member

sysyen
Structure/Union member

syth
Structure/Union member

sytostben
Structure/Union member

sytousyth
Structure/Union member

tentsyrelen
Structure/Union member

tsyth
Structure/Union member

tsytosyth
Structure/Union member

tsytousyth
Structure/Union member

unsytosyth
Structure/Union member

unsytotsyth
Structure/Union member

vlidimnmin
Structure/Union member

vlidinmax
Structure/Union member

vlidout
Structure/Union member

vlidselect
Structure/Union member

waitthsync
Structure/Union member

wfintmout
Structure/Union member

class ics.structures.s_pluto_custom_params_s.**s_pluto_custom_params_s**

ae1Select
Structure/Union member

enablePhy
Structure/Union member

mode
Structure/Union member

pad
Structure/Union member

ptpParams
Structure/Union member

speed
Structure/Union member

usbSelect
Structure/Union member

class ics.structures.s_pluto_general_params_s.**s_pluto_general_params_s**

casc_port
Structure/Union member

host_port
Structure/Union member

hostprio
Structure/Union member

ignore2stf
Structure/Union member

incl_srcpt0
Structure/Union member

incl_srcpt1
Structure/Union member

mac_flt0
Structure/Union member

mac_flt1
Structure/Union member

mac_fltres0
Structure/Union member

mac_fltres1
Structure/Union member

mirr_port
Structure/Union member

mirr_ptacu
Structure/Union member

send_meta0
Structure/Union member

send_meta1
Structure/Union member

switchid
Structure/Union member

tpid
Structure/Union member

tpid2
Structure/Union member

vllupformat
Structure/Union member

vlmarker
Structure/Union member

vlmask
Structure/Union member

class ics.structures.s_pluto_l2_address_lookup_entry_s.**s_pluto_l2_address_lookup_entry**

destports
Structure/Union member

enfport
Structure/Union member

index
Structure/Union member

learnedEntry
Structure/Union member

macaddr
Structure/Union member

pad1
Structure/Union member

pad2
Structure/Union member

pad3
Structure/Union member

vlanID
Structure/Union member

class ics.structures.s_pluto_l2_address_lookup_params_s.**s_pluto_l2_address_lookup_para**

dyn_tbsz
Structure/Union member

maxage
Structure/Union member

no_enf_hostprt
Structure/Union member

no_mgmt_learn
Structure/Union member

pad
Structure/Union member

poly
Structure/Union member

shared_learn
Structure/Union member

class ics.structures.s_pluto_l2_forwarding_entry_s.**s_pluto_l2_forwarding_entry_s**

bc_domain
Structure/Union member

fl_domain
Structure/Union member

pad
Structure/Union member

reach_port
Structure/Union member

vlan_pmap
Structure/Union member

class ics.structures.s_pluto_l2_forwarding_params_s.**s_pluto_l2_forwarding_params_s**

max_dynp
Structure/Union member

pad
Structure/Union member

part_spc
Structure/Union member

class ics.structures.s_pluto_l2_policing_s.**s_pluto_l2_policing_s**

maxlen
Structure/Union member

partition
Structure/Union member

rate
Structure/Union member

sharindx
Structure/Union member

smax
Structure/Union member

class ics.structures.s_pluto_mac_config_s.**s_pluto_mac_config_s**

base
Structure/Union member

drpdtag
Structure/Union member

drpnona664
Structure/Union member

drpuntag
Structure/Union member

dyn_learn
Structure/Union member

egr_mirr
Structure/Union member

egress
Structure/Union member

enabled
Structure/Union member

ifg
Structure/Union member

ing_mirr
Structure/Union member

ingress
Structure/Union member

maxage
Structure/Union member

pad
Structure/Union member

retag
Structure/Union member

speed
Structure/Union member

top
Structure/Union member

tp_delin
Structure/Union member

tp_delout
Structure/Union member

vlanid
Structure/Union member

vlanprio
Structure/Union member

class ics.structures.s_pluto_ptp_params_s.**s_pluto_ptp_params_s**

clockaccuracy
Structure/Union member

clockclass
Structure/Union member

gPTPportRole
Structure/Union member

logAnnounceInterval
Structure/Union member

logPDelayReqInterval
Structure/Union member

logSyncInterval
Structure/Union member

neighborPropDelayThresh
Structure/Union member

offset_scaled_log_variance
Structure/Union member

portEnable
Structure/Union member

priority1
Structure/Union member

priority2
Structure/Union member

profile
Structure/Union member

sys_phc_sync_interval
Structure/Union member

class ics.structures.s_pluto_retagging_entry_s.**s_pluto_retagging_entry_s**

destports
Structure/Union member

do_not_learn
Structure/Union member

egr_port
Structure/Union member

ing_port
Structure/Union member

pad
Structure/Union member

use_dest_ports
Structure/Union member

vlan_egr
Structure/Union member

vlan_ing
Structure/Union member

class ics.structures.s_pluto_switch_settings_s.**s_pluto_switch_settings_s**

flashHeader
Structure/Union member

generalParams
Structure/Union member

l2_ForwardingEntries
Structure/Union member

l2_addressLookupEntries
Structure/Union member

l2_addressLookupParams
Structure/Union member

l2_forwardingParams
Structure/Union member

l2_policing
Structure/Union member

macConfig
Structure/Union member

retagging
Structure/Union member

vlan_LookupEntries
Structure/Union member

class ics.structures.s_pluto_vl_forwarding_entry_s.**s_pluto_vl_forwarding_entry_s**

destports
Structure/Union member

partition
Structure/Union member

priority
Structure/Union member

type
Structure/Union member

class ics.structures.s_pluto_vl_forwarding_params_s.**s_pluto_vl_forwarding_params_s**

debugen
Structure/Union member

pad
Structure/Union member

partspc
Structure/Union member

class ics.structures.s_pluto_vl_lookup_entry_s.**s_pluto_vl_lookup_entry_s**

Nameless6024
Structure/Union member

vllupformat0
Structure/Union member

vllupformat1
Structure/Union member

class ics.structures.s_pluto_vl_policing_entry_s.**s_pluto_vl_policing_entry_s**

bag
Structure/Union member

jitter
Structure/Union member

maxlen
Structure/Union member

sharindx
Structure/Union member

type
Structure/Union member

class ics.structures.s_pluto_vlan_lookup_s.**s_pluto_vlan_lookup_s**

pad
Structure/Union member

tag_port
Structure/Union member

vegr_mirr
Structure/Union member

ving_mirr
Structure/Union member

vlan_bc
Structure/Union member

vlanid
Structure/Union member

vmemb_port
Structure/Union member

class ics.structures.s_rad_moon_duo_settings.**s_rad_moon_duo_settings**

converter
Structure/Union member

flags
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

class ics.structures.s_red_settings.**s_red_settings**

can1
Structure/Union member

can2
Structure/Union member

lin1
Structure/Union member

lin2
Structure/Union member

class ics.structures.s_text_api_settings.**s_text_api_settings**

can1_options
Structure/Union member

can1_rx_id
Structure/Union member

can1_tx_id
Structure/Union member

can2_options
Structure/Union member

can2_rx_id
Structure/Union member

can2_tx_id
Structure/Union member

can3_options
Structure/Union member

can3_rx_id
Structure/Union member

can3_tx_id
Structure/Union member

can4_options
Structure/Union member

can4_rx_id
Structure/Union member

can4_tx_id
Structure/Union member

network_enables
Structure/Union member

reserved
Structure/Union member

class ics.structures.s_vivid_can_settings.**s_vivid_can_settings**

can1
Structure/Union member

can_switch_mode
Structure/Union member

ecu_id
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

lsftcan1
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

swcan1
Structure/Union member

termination_enables
Structure/Union member

class ics.structures.scan_hub_settings.**scan_hub_settings**

can1
Structure/Union member

canfd1
Structure/Union member

ecu_id
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

sleep_id
Structure/Union member

termination_enables
Structure/Union member

class ics.structures.scan_sleep_id.**scan_sleep_id**

id
Structure/Union member

word
Structure/Union member

class ics.structures.secu_avb_settings.**secu_avb_settings**

can1
Structure/Union member

can2
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

class ics.structures.secu_settings.**secu_settings**

ain_sample_period
Structure/Union member

ain_threshold
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

ecu_id
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings
Structure/Union member

iso9141_kwp_settings_2
Structure/Union member

iso_msg_termination
Structure/Union member

iso_msg_termination_2
Structure/Union member

iso_parity
Structure/Union member

iso_parity_2
Structure/Union member

lin1
Structure/Union member

lin2
Structure/Union member

lsftcan
Structure/Union member

lsftcan2
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

selected_network
Structure/Union member

swcan
Structure/Union member

swcan2
Structure/Union member

text_api
Structure/Union member

uart
Structure/Union member

uart2
Structure/Union member

class ics.structures.seevb_settings.**seevb_settings**

ain_sample_period
Structure/Union member

ain_threshold
Structure/Union member

can1
Structure/Union member

ecu_id
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

rsvd
Structure/Union member

class ics.structures.serdescam_settings.**serdescam_settings**

bitPos
Structure/Union member

flags
Structure/Union member

frameSkip
Structure/Union member

mode
Structure/Union member

resHeight
Structure/Union member

resWidth
Structure/Union member

rsvd1
Structure/Union member

rsvd2
Structure/Union member

videoFormat
Structure/Union member

class ics.structures.serdesgen_settings.**serdesgen_settings**

flags
Structure/Union member

mod_id
Structure/Union member

rsvd1
Structure/Union member

rsvd2
Structure/Union member

rx_speed
Structure/Union member

tx_speed
Structure/Union member

class ics.structures.serdespoc_settings.**serdespoc_settings**

chksum
Structure/Union member

mode
Structure/Union member

rsvd
Structure/Union member

voltage
Structure/Union member

class ics.structures.sievb_settings.**sievb_settings**

ain_sample_period
Structure/Union member

ain_threshold
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

ecu_id
Structure/Union member

idle_wakeup_network_enables_1
Structure/Union member

idle_wakeup_network_enables_2
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings
Structure/Union member

iso9141_kwp_settings_2
Structure/Union member

iso_msg_termination
Structure/Union member

iso_msg_termination_2
Structure/Union member

iso_parity
Structure/Union member

iso_parity_2
Structure/Union member

iso_tester_pullup_enable
Structure/Union member

lin1
Structure/Union member

lin2
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_analog_enable_2
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

reserved_1
Structure/Union member

reserved_2
Structure/Union member

selected_network
Structure/Union member

text_api
Structure/Union member

uart
Structure/Union member

uart2
Structure/Union member

class ics.structures.sobd2_lc_settings.**sobd2_lc_settings**

can1
Structure/Union member

can2
Structure/Union member

can3
Structure/Union member

can4
Structure/Union member

can_switch_mode
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

canfd3
Structure/Union member

canfd4
Structure/Union member

disk
Structure/Union member

ethernet
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings_1
Structure/Union member

iso_msg_termination_1
Structure/Union member

iso_parity_1
Structure/Union member

lin1
Structure/Union member

misc_io_on_report_events
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

swcan1
Structure/Union member

text_api
Structure/Union member

class ics.structures.sobd2_pro_settings.**sobd2_pro_settings**

can1
Structure/Union member

can2
Structure/Union member

can3
Structure/Union member

can4
Structure/Union member

can_switch_mode
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

canfd3
Structure/Union member

canfd4
Structure/Union member

ethernet
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings_1
Structure/Union member

iso9141_kwp_settings_2
Structure/Union member

iso_msg_termination_1
Structure/Union member

iso_msg_termination_2
Structure/Union member

iso_parity_1
Structure/Union member

iso_parity_2
Structure/Union member

lin1
Structure/Union member

lin2
Structure/Union member

misc_io_analog_enable
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

swcan1
Structure/Union member

text_api
Structure/Union member

class ics.structures.sobd2_sim_settings.**sobd2_sim_settings**

ain_sample_period
Structure/Union member

ain_threshold
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

text_api
Structure/Union member

class ics.structures.software_update_command.**software_update_command**

commandData
Structure/Union member

commandSizeOrProgress
Structure/Union member

commandType
Structure/Union member

componentIdentifier
Structure/Union member

offset
Structure/Union member

class ics.structures.spy_filter_long.**spy_filter_long**

ByteDataLSB
Structure/Union member

ByteDataLength
Structure/Union member

ByteDataMSB
Structure/Union member

ByteDataMaskLSB
Structure/Union member

ByteDataMaskMSB
Structure/Union member

ExpectedLength
Structure/Union member

FrameMaster
Structure/Union member

Header
Structure/Union member

HeaderLength
Structure/Union member

HeaderMask
Structure/Union member

MiscData
Structure/Union member

MiscDataMask
Structure/Union member

NetworkID
Structure/Union member

NodeID
Structure/Union member

Status2Mask
Structure/Union member

Status2Value
Structure/Union member

StatusMask
Structure/Union member

StatusValue
Structure/Union member

bStuff2
Structure/Union member

bUseArbIdRangeFilter
Structure/Union member

class ics.structures.srad_epsilon_settings.**srad_epsilon_settings**

can1
Structure/Union member

can2
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

ethernet
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_enable_reserved
Structure/Union member

iso9141_kwp_settings
Structure/Union member

iso_msg_termination
Structure/Union member

iso_parity
Structure/Union member

iso_tester_pullup_enable
Structure/Union member

lin1
Structure/Union member

misc_io_analog_enable
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

switchSettings
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

class ics.structures.srad_epsilon_switch_settings.**srad_epsilon_switch_settings**

enablePhy
Structure/Union member

legacy
Structure/Union member

pad
Structure/Union member

phyMode
Structure/Union member

speed
Structure/Union member

spoofMacFlag
Structure/Union member

spoofedMac
Structure/Union member

class ics.structures.srad_galaxy_settings.**srad_galaxy_settings**

ain_sample_period
Structure/Union member

ain_threshold
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

can3
Structure/Union member

can4
Structure/Union member

can5
Structure/Union member

can6
Structure/Union member

can7
Structure/Union member

can8
Structure/Union member

can_switch_mode
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

canfd3
Structure/Union member

canfd4
Structure/Union member

canfd5
Structure/Union member

canfd6
Structure/Union member

canfd7
Structure/Union member

canfd8
Structure/Union member

disk
Structure/Union member

ethernet1
Structure/Union member

ethernet2
Structure/Union member

gPTP
Structure/Union member

hwComLatencyTestEn
Structure/Union member

idle_wakeup_network_enables_1
Structure/Union member

idle_wakeup_network_enables_2
Structure/Union member

idle_wakeup_network_enables_3
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings_1
Structure/Union member

iso_9141_kwp_enable_reserved
Structure/Union member

iso_msg_termination_1
Structure/Union member

iso_parity_1
Structure/Union member

lin1
Structure/Union member

logger
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

network_enables_4
Structure/Union member

opEth1
Structure/Union member

opEth10
Structure/Union member

opEth11
Structure/Union member

opEth12
Structure/Union member

opEth2
Structure/Union member

opEth3
Structure/Union member

opEth4
Structure/Union member

opEth5
Structure/Union member

opEth6
Structure/Union member

opEth7
Structure/Union member

opEth8
Structure/Union member

opEth9
Structure/Union member

opEthGen
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

reporting
Structure/Union member

swcan1
Structure/Union member

swcan2
Structure/Union member

text_api
Structure/Union member

timeSyncSettings
Structure/Union member

class ics.structures.srad_gigalog_settings.**srad_gigalog_settings**

can1
Structure/Union member

can2
Structure/Union member

can3
Structure/Union member

can4
Structure/Union member

can5
Structure/Union member

can6
Structure/Union member

can7
Structure/Union member

can8
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

canfd3
Structure/Union member

canfd4
Structure/Union member

canfd5
Structure/Union member

canfd6
Structure/Union member

canfd7
Structure/Union member

canfd8
Structure/Union member

disk
Structure/Union member

ecu_id
Structure/Union member

ethernet
Structure/Union member

ethernet10g
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

idle_wakeup_network_enables_1
Structure/Union member

idle_wakeup_network_enables_2
Structure/Union member

idle_wakeup_network_enables_3
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings_1
Structure/Union member

iso_9141_kwp_enable_reserved
Structure/Union member

iso_msg_termination_1
Structure/Union member

iso_parity_1
Structure/Union member

lin1
Structure/Union member

logger
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

network_enables_4
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

reporting
Structure/Union member

rsvd1
Structure/Union member

rsvd2
Structure/Union member

serdescam1
Structure/Union member

serdescam2
Structure/Union member

serdescam3
Structure/Union member

serdescam4
Structure/Union member

serdesgen
Structure/Union member

serdespoc
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

timeSyncSettings
Structure/Union member

class ics.structures.srad_gigastar_settings.**srad_gigastar_settings**

can1
Structure/Union member

can2
Structure/Union member

can3
Structure/Union member

can4
Structure/Union member

can5
Structure/Union member

can6
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

canfd3
Structure/Union member

canfd4
Structure/Union member

canfd5
Structure/Union member

canfd6
Structure/Union member

disk
Structure/Union member

ecu_id
Structure/Union member

ethernet1
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

gPTP
Structure/Union member

idle_wakeup_network_enables_1
Structure/Union member

idle_wakeup_network_enables_2
Structure/Union member

idle_wakeup_network_enables_3
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings_1
Structure/Union member

iso_9141_kwp_enable_reserved
Structure/Union member

iso_msg_termination_1
Structure/Union member

iso_parity_1
Structure/Union member

lin1
Structure/Union member

logger
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

network_enables_4
Structure/Union member

opEth1
Structure/Union member

opEth2
Structure/Union member

opEthGen
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

reporting
Structure/Union member

serdescam1
Structure/Union member

serdescam2
Structure/Union member

serdescam3
Structure/Union member

serdescam4
Structure/Union member

serdesgen
Structure/Union member

serdespoc
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

timeSyncSettings
Structure/Union member

class ics.structures.srad_gptp_and_tap_settings_s.**srad_gptp_and_tap_settings_s**

gPTP
Structure/Union member

tap
Structure/Union member

class ics.structures.srad_gptp_settings_s.**srad_gptp_settings_s**

clockaccuracy
Structure/Union member

clockclass
Structure/Union member

enableClockSyntonization
Structure/Union member

gPTPportRole
Structure/Union member

gptpEnabledPort
Structure/Union member

logAnnounceInterval
Structure/Union member

logPDelayReqInterval
Structure/Union member

logSyncInterval
Structure/Union member

neighborPropDelayThresh
Structure/Union member

offset_scaled_log_variance
Structure/Union member

priority1
Structure/Union member

priority2
Structure/Union member

profile
Structure/Union member

rsvd
Structure/Union member

sys_phc_sync_interval
Structure/Union member

class ics.structures.srad_jupiter_settings.**srad_jupiter_settings**

can1
Structure/Union member

can2
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

ethernet
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_enable_reserved
Structure/Union member

iso9141_kwp_settings
Structure/Union member

iso_msg_termination
Structure/Union member

iso_parity
Structure/Union member

iso_tester_pullup_enable
Structure/Union member

lin1
Structure/Union member

misc_io_analog_enable
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

switchSettings
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

class ics.structures.srad_jupiter_switch_settings.**srad_jupiter_switch_settings**

enablePhy
Structure/Union member

pad
Structure/Union member

phyMode
Structure/Union member

port7Select
Structure/Union member

port8Legacy
Structure/Union member

port8Select
Structure/Union member

port8Speed
Structure/Union member

ptpParams
Structure/Union member

spoofMacFlag
Structure/Union member

spoofedMac
Structure/Union member

class ics.structures.srad_moon2_settings.**srad_moon2_settings**

gPTP
Structure/Union member

hwComLatencyTestEn
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

opEth1
Structure/Union member

opEthGen
Structure/Union member

pc_com_mode
Structure/Union member

perf_en
Structure/Union member

text_api
Structure/Union member

timeSyncSettings
Structure/Union member

class ics.structures.srad_pluto_settings.**srad_pluto_settings**

can1
Structure/Union member

can2
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

custom
Structure/Union member

ethernet
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_enable_reserved
Structure/Union member

iso9141_kwp_settings
Structure/Union member

iso_msg_termination
Structure/Union member

iso_parity
Structure/Union member

iso_tester_pullup_enable
Structure/Union member

lin1
Structure/Union member

misc_io_analog_enable
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

class ics.structures.srad_star2_settings.**srad_star2_settings**

ain_sample_period
Structure/Union member

ain_threshold
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

can_switch_mode
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

ethernet
Structure/Union member

gPTP
Structure/Union member

hwComLatencyTestEn
Structure/Union member

idle_wakeup_network_enables_1
Structure/Union member

idle_wakeup_network_enables_2
Structure/Union member

idle_wakeup_network_enables_3
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings_1
Structure/Union member

iso_9141_kwp_enable_reserved
Structure/Union member

iso_msg_termination_1
Structure/Union member

iso_parity_1
Structure/Union member

lin1
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

opEth1
Structure/Union member

opEth2
Structure/Union member

opEthGen
Structure/Union member

pc_com_mode
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

reporting
Structure/Union member

text_api
Structure/Union member

timeSyncSettings
Structure/Union member

class ics.structures.srad_super_moon_settings.**srad_super_moon_settings**

Eth2
Structure/Union member

gPTP
Structure/Union member

hwComLatencyTestEn
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

opEth1
Structure/Union member

opEthGen
Structure/Union member

pc_com_mode
Structure/Union member

perf_en
Structure/Union member

text_api
Structure/Union member

timeSyncSettings
Structure/Union member

class ics.structures.srada2_b_settings.**srada2_b_settings**

a2b_monitor
Structure/Union member

a2b_node
Structure/Union member

can1
Structure/Union member

can2
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

disk
Structure/Union member

ethernet
Structure/Union member

flags
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iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings_1
Structure/Union member

iso_msg_termination_1
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iso_parity_1
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lin1
Structure/Union member

logger
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network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

reporting
Structure/Union member

termination_enables
Structure/Union member

timeSyncSettings
Structure/Union member

class ics.structures.sradbms_settings.**sradbms_settings**

can1
Structure/Union member

can2
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

ethernet
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

termination_enables
Structure/Union member

wil_config
Structure/Union member

class ics.structures.st_api_firmware_info.**st_api_firmware_info**

iAppMajor
Structure/Union member

iAppMinor
Structure/Union member

iBoardRevMajor
Structure/Union member

iBoardRevMinor
Structure/Union member

iBootLoaderVersionMajor
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iBootLoaderVersionMinor
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iMainFirmChkSum
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iMainFirmDateDay
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iMainFirmDateHour
Structure/Union member

iMainFirmDateMin
Structure/Union member

iMainFirmDateMonth
Structure/Union member

iMainFirmDateSecond
Structure/Union member

iMainFirmDateYear
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iMainVnetHWrevMajor
Structure/Union member

iMainVnetHWrevMinor
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iManufactureDay
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iManufactureMonth
Structure/Union member

iManufactureYear
Structure/Union member

iPhySiliconRev
Structure/Union member

iType
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class ics.structures.st_chip_versions.**st_chip_versions**

cmprobe_versions
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epsilon_versions
Structure/Union member

ether_badge_versions
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fire3_versions
Structure/Union member

fire_versions
Structure/Union member

jupiter_versions
Structure/Union member

neoecu_avb_versions
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obd2lc_versions
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obd2pro_versions
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plasma_fire_vnet
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pluto_versions
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rad_a2b_versions
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rad_moon_duo_versions
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radgalaxy_versions
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radgigalog3_versions
Structure/Union member

radgigalog_versions
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radgigastar_usbz_versions
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radgigastar_versions
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radmoon2_versions
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radmoon2_z7010_versions
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radstar2_versions
Structure/Union member

radsupermoon_versions
Structure/Union member

vcan3_versions
Structure/Union member

vcan41_versions
Structure/Union member

vcan42_versions
Structure/Union member

vcanrf_versions
Structure/Union member

vividcan_versions
Structure/Union member

class ics.structures.st_cm_iso157652_rx_message.**st_cm_iso157652_rx_message**

Nameless9252
Structure/Union member

blockSize
Structure/Union member

cf_timeout
Structure/Union member

enableFlowControlTransmission
Structure/Union member

ext_address_enable
Structure/Union member

extendedAddress
Structure/Union member

fc_ext_address_enable
Structure/Union member

fc_id
Structure/Union member

fc_id_29_bit_enable
Structure/Union member

flags
Structure/Union member

flowControlExtendedAddress
Structure/Union member

id
Structure/Union member

id_29_bit_enable
Structure/Union member

id_mask
Structure/Union member

isBRSEnabled
Structure/Union member

iscanFD
Structure/Union member

padding
Structure/Union member

paddingEnable
Structure/Union member

reserved
Structure/Union member

stMin
Structure/Union member

vs_netid
Structure/Union member

class ics.structures.st_cm_iso157652_tx_message.**st_cm_iso157652_tx_message**

Nameless32656
Structure/Union member

blockSize
Structure/Union member

data
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ext_address_enable
Structure/Union member

extendedAddress
Structure/Union member

fc_ext_address_enable
Structure/Union member

fc_id
Structure/Union member

fc_id_29_bit_enable
Structure/Union member

fc_id_mask
Structure/Union member

flags
Structure/Union member

flowControlExtendedAddress
Structure/Union member

fs_timeout
Structure/Union member

fs_wait
Structure/Union member

id
Structure/Union member

id_29_bit_enable
Structure/Union member

isBRSEnabled
Structure/Union member

iscanFD
Structure/Union member

num_bytes
Structure/Union member

overrideBlockSize
Structure/Union member

overrideSTmin
Structure/Union member

padding
Structure/Union member

paddingEnable
Structure/Union member

stMin
Structure/Union member

tx_dl
Structure/Union member

tx_index
Structure/Union member

vs_netid
Structure/Union member

class ics.structures.start_dhcp_server_command.**start_dhcp_server_command**

endAddress
Structure/Union member

gatewayAddress
Structure/Union member

leaseTime
Structure/Union member

networkId
Structure/Union member

overwrite
Structure/Union member

serverIpAddress
Structure/Union member

startAddress
Structure/Union member

subnetMask
Structure/Union member

class ics.structures.stop_dhcp_server_command.**stop_dhcp_server_command**

networkId
Structure/Union member

class ics.structures.svcan3_settings.**svcan3_settings**

can1
Structure/Union member

can2
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

class ics.structures.svcan412_settings.**svcan412_settings**

can1
Structure/Union member

can2
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

class ics.structures.svcan4_ind_settings.**svcan4_ind_settings**

can1
Structure/Union member

can2
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

ethernet
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings
Structure/Union member

iso_msg_termination
Structure/Union member

iso_parity
Structure/Union member

lin1
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

termination_enables
Structure/Union member

class ics.structures.svcan4_settings.**svcan4_settings**

can1
Structure/Union member

can2
Structure/Union member

can3
Structure/Union member

can4
Structure/Union member

canfd1
Structure/Union member

canfd2
Structure/Union member

canfd3
Structure/Union member

canfd4
Structure/Union member

ethernet
Structure/Union member

ethernet2
Structure/Union member

flags
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_settings_1
Structure/Union member

iso_9141_kwp_enable_reserved
Structure/Union member

iso_msg_termination_1
Structure/Union member

iso_parity_1
Structure/Union member

lin1
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

network_enables_3
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

termination_enables
Structure/Union member

text_api
Structure/Union member

class ics.structures.svcanrf_settings.**svcanrf_settings**

can1
Structure/Union member

can2
Structure/Union member

can3
Structure/Union member

can4
Structure/Union member

disableFwLEDs
Structure/Union member

idle_wakeup_network_enables_1
Structure/Union member

idle_wakeup_network_enables_2
Structure/Union member

iso15765_separation_time_offset
Structure/Union member

iso9141_kwp_enable_reserved
Structure/Union member

iso9141_kwp_settings
Structure/Union member

iso9141_kwp_settings_2
Structure/Union member

iso_msg_termination
Structure/Union member

iso_msg_termination_2
Structure/Union member

iso_parity
Structure/Union member

iso_parity_2
Structure/Union member

iso_tester_pullup_enable
Structure/Union member

lin1
Structure/Union member

lin2
Structure/Union member

misc_io_analog_enable
Structure/Union member

misc_io_initial_ddr
Structure/Union member

misc_io_initial_latch
Structure/Union member

misc_io_on_report_events
Structure/Union member

misc_io_report_period
Structure/Union member

network_enabled_on_boot
Structure/Union member

network_enables
Structure/Union member

network_enables_2
Structure/Union member

perf_en
Structure/Union member

pwr_man_enable
Structure/Union member

pwr_man_timeout
Structure/Union member

reservedZero
Structure/Union member

class ics.structures.swcan_settings.**swcan_settings**

BRP
Structure/Union member

Baudrate
Structure/Union member

Mode
Structure/Union member

RESERVED
Structure/Union member

SetBaudrate
Structure/Union member

TqProp
Structure/Union member

TqSeg1
Structure/Union member

TqSeg2
Structure/Union member

TqSync
Structure/Union member

auto_baud
Structure/Union member

high_speed_auto_switch
Structure/Union member

transceiver_mode
Structure/Union member

class ics.structures.swil_bridge_config.**swil_bridge_config**

config
Structure/Union member

dword
Structure/Union member

class ics.structures.system_identity.**system_identity**

clock_identity
Structure/Union member

clock_quality
Structure/Union member

priority_1
Structure/Union member

priority_2
Structure/Union member

class ics.structures.tag_options_find_neo_ex.**tag_options_find_neo_ex**

CANOptions
Structure/Union member

Reserved
Structure/Union member

class ics.structures.tag_options_open_neo_ex.**tag_options_open_neo_ex**

CANOptions
Structure/Union member

Reserved
Structure/Union member

class ics.structures.tagicsneo_vi_command.**tagicsneo_vi_command**

CommandByteLength
Structure/Union member

CommandType
Structure/Union member

Data
Structure/Union member

class ics.structures.timestamp_.**timestamp_**

nanoseconds
Structure/Union member

seconds_lsb
Structure/Union member

seconds_msb
Structure/Union member

class ics.structures.timesync_icshardware_settings.**timesync_icshardware_settings**

MasterEnable
Structure/Union member

MasterNetwork
Structure/Union member

SlaveEnable
Structure/Union member

SlaveNetwork
Structure/Union member

class ics.structures.uart_port_config.**uart_port_config**

baudrate
Structure/Union member

port
Structure/Union member

reserve
Structure/Union member

class ics.structures.uart_port_data.**uart_port_data**

bData
Structure/Union member

len
Structure/Union member

port
Structure/Union member

class ics.structures.uart_port_port_bytes.**uart_port_port_bytes**

flag
Structure/Union member

len
Structure/Union member

port
Structure/Union member

class ics.structures.uart_settings.**uart_settings**

Baudrate
Structure/Union member

Nameless2284
Structure/Union member

bOptions
Structure/Union member

brgh
Structure/Union member

flow_control
Structure/Union member

half_duplex
Structure/Union member

invert_rx
Structure/Union member

invert_tx
Structure/Union member

parity
Structure/Union member

reserved_1
Structure/Union member

reserved_bits
Structure/Union member

reserved_bits2
Structure/Union member

spbrg
Structure/Union member

stop_bits
Structure/Union member

class ics.structures.version_report.**version_report**

commitHash
Structure/Union member

componentInfo
Structure/Union member

dotVersion
Structure/Union member

expansionSlot
Structure/Union member

identifier
Structure/Union member

reserved
Structure/Union member

valid
Structure/Union member

class ics.structures.w_bms_manager_reset.**w_bms_manager_reset**

managerIndex
Structure/Union member

class ics.structures.w_bms_manager_set_lock.**w_bms_manager_set_lock**

managerIndex
Structure/Union member

setLock
Structure/Union member

CHAPTER 10

Module Variables

```
ics.ics.A2B_SETTINGS_FLAG_16BIT = 1
ics.ics.AUTO = 0
ics.ics.BPS100 = 5
ics.ics.BPS1000 = 10
ics.ics.BPS100000 = 7
ics.ics.BPS10400 = 1
ics.ics.BPS117647 = 8
ics.ics.BPS125 = 6
ics.ics.BPS20 = 0
ics.ics.BPS2000 = 12
ics.ics.BPS250 = 7
ics.ics.BPS33 = 1
ics.ics.BPS33333 = 2
ics.ics.BPS4000 = 13
ics.ics.BPS50 = 2
ics.ics.BPS500 = 8
ics.ics.BPS5000 = 0
ics.ics.BPS50000 = 3
ics.ics.BPS62 = 3
ics.ics.BPS62500 = 4
ics.ics.BPS666 = 11
ics.ics.BPS71429 = 5
```

ics.ics.**BPS800 = 9**

ics.ics.**BPS83 = 4**

ics.ics.**BPS83333 = 6**

ics.ics.**BUILD_DATETIME = Oct 27 2022 12:46:26**

ics.ics.**CANFD_BRS_ENABLED = 2**

ics.ics.**CANFD_BRS_ENABLED_ISO = 4**

ics.ics.**CANFD_ENABLED = 1**

ics.ics.**CANFD_ENABLED_ISO = 3**

ics.ics.**CANFD_SETTINGS_SIZE = 10**

ics.ics.**CANNODE_STATUS_COREMINI_IS_RUNNING = 1**

ics.ics.**CANNODE_STATUS_IN_BOOTLOADER = 2**

ics.ics.**CANTERM_SETTINGS_SIZE = 6**

ics.ics.**CAN_BPS10000 = 17**

ics.ics.**CAN_BPS5000 = 14**

ics.ics.**CAN_BPS6667 = 15**

ics.ics.**CAN_BPS8000 = 16**

ics.ics.**CAN_SETTINGS_SIZE = 12**

ics.ics.**DEVICECOUNT_FOR_EXPLORER = 42**

ics.ics.**DISABLE = 1**

ics.ics.**DISK_SETTINGS_SIZE = 14**

ics.ics.**DISK_STATUS_FLAG_INITIALIZED = 2**

ics.ics.**DISK_STATUS_FLAG_PRESENT = 1**

ics.ics.**DISK_STRUCTURE_FLAG_FULL_FORMAT = 1**

ics.ics.**ETHERNET10G_SETTINGS_SIZE = 24**

ics.ics.**ETHERNET_SETTINGS10G_FLAG_AUTO_NEG = 2**

ics.ics.**ETHERNET_SETTINGS10G_FLAG_COMM_IN_USE = -2147483648**

ics.ics.**ETHERNET_SETTINGS10G_FLAG_DEVICE_HOSTING_ENABLE = 16**

ics.ics.**ETHERNET_SETTINGS10G_FLAG_FULL_DUPLEX = 1**

ics.ics.**ETHERNET_SETTINGS10G_FLAG_RTSP_ENABLE = 8**

ics.ics.**ETHERNET_SETTINGS10G_FLAG_TCPIP_ENABLE = 4**

ics.ics.**ETHERNET_SETTINGS2_FLAG_AUTO_NEG = 2**

ics.ics.**ETHERNET_SETTINGS2_FLAG_COMM_IN_USE = 128**

ics.ics.**ETHERNET_SETTINGS2_FLAG_CONFIG_NOT_ALLOWED = 32**

ics.ics.**ETHERNET_SETTINGS2_FLAG_DEVICE_HOSTING_ENABLE = 16**

ics.ics.**ETHERNET_SETTINGS2_FLAG_FULL_DUPLEX = 1**

ics.ics.**ETHERNET_SETTINGS2_FLAG_RTSP_ENABLE = 8**

ics.ics.**ETHERNET_SETTINGS2_FLAG_TCPIP_ENABLE = 4**

ics.ics.**ETHERNET_SETTINGS2_SIZE = 16**

ics.ics.**ETHERNET_SETTINGS_SIZE = 8**

ics.ics.**EXTENDED_RESPONSE_INVALID_COMMAND = -1**

ics.ics.**EXTENDED_RESPONSE_INVALID_PARAMETER = -5**

ics.ics.**EXTENDED_RESPONSE_INVALID_STATE = -2**

ics.ics.**EXTENDED_RESPONSE_OK = 0**

ics.ics.**EXTENDED_RESPONSE_OPERATION_FAILED = -3**

ics.ics.**EXTENDED_RESPONSE_OPERATION_PENDING = -4**

ics.ics.**FAST_MODE = 3**

ics.ics.**GENERIC_API_DATA_BUFFER_SIZE = 513**

ics.ics.**GET_SUPPORTED_FEATURES_COMMAND_VERSION = 1**

ics.ics.**GLOBAL_SETTINGS_SIZE = 942**

ics.ics.**GS_VERSION = 5**

ics.ics.**HARDWARE_TIMESTAMP_ID_AVT_716 = 2**

ics.ics.**HARDWARE_TIMESTAMP_ID_AVT_717 = 5**

ics.ics.**HARDWARE_TIMESTAMP_ID_DOUBLE_SEC = 7**

ics.ics.**HARDWARE_TIMESTAMP_ID_NEORED_10NS = 10**

ics.ics.**HARDWARE_TIMESTAMP_ID_NEORED_10US = 8**

ics.ics.**HARDWARE_TIMESTAMP_ID_NEORED_25NS = 9**

ics.ics.**HARDWARE_TIMESTAMP_ID_NEOVI = 4**

ics.ics.**HARDWARE_TIMESTAMP_ID_NI_CAN = 3**

ics.ics.**HARDWARE_TIMESTAMP_ID_NONE = 0**

ics.ics.**HARDWARE_TIMESTAMP_ID_VSI = 1**

ics.ics.**HW_ETH_SETTINGS_SIZE = 20**

ics.ics.**ISO15765_2_NETWORK_HSCAN = 1**

ics.ics.**ISO15765_2_NETWORK_HSCAN2 = 4**

ics.ics.**ISO15765_2_NETWORK_HSCAN3 = 8**

ics.ics.**ISO15765_2_NETWORK_HSCAN4 = 20**

ics.ics.**ISO15765_2_NETWORK_HSCAN5 = 24**

ics.ics.**ISO15765_2_NETWORK_HSCAN6 = 28**

ics.ics.**ISO15765_2_NETWORK_HSCAN7 = 32**

ics.ics.**ISO15765_2_NETWORK_MSCAN = 2**

ics.ics.**ISO15765_2_NETWORK_SWCAN = 16**

ics.ics.**ISO15765_2_NETWORK_SWCAN2 = 36**

ics.ics.**ISO9141_KEYWORD2000_SETTINGS_SIZE = 114**

ics.ics.**ISO9141_KEYWORD2000__INIT_STEP_SIZE = 6**

ics.ics.**J1708_SETTINGS_SIZE = 2**

ics.ics.**JUPITER_PTP_ROLE_DISABLED = 0**

ics.ics.**JUPITER_PTP_ROLE_MASTER = 1**

ics.ics.**JUPITER_PTP_ROLE_SLAVE = 2**

ics.ics.**LINK_SPEED_100MBPS_FULL_DUPLEX = 3**

ics.ics.**LINK_SPEED_100MBPS_HALF_DUPLEX = 4**

ics.ics.**LINK_SPEED_10MBPS_FULL_DUPLEX = 5**

ics.ics.**LINK_SPEED_10MBPS_HALF_DUPLEX = 6**

ics.ics.**LINK_SPEED_1GBPS_FULL_DUPLEX = 1**

ics.ics.**LINK_SPEED_1GBPS_HALF_DUPLEX = 2**

ics.ics.**LINK_SPEED_AUTO_NEGOTIATION = 0**

ics.ics.**LINK_SPEED_COUNT = 7**

ics.ics.**LINUX_BOOT_ALLOWED = 1**

ics.ics.**LINUX_CONFIG_PORT_ETH_01 = 1**

ics.ics.**LINUX_CONFIG_PORT_ETH_02 = 2**

ics.ics.**LINUX_CONFIG_PORT_NONE = 0**

ics.ics.**LIN_SETTINGS_SIZE = 10**

ics.ics.**LISTEN_ALL = 7**

ics.ics.**LISTEN_ONLY = 3**

ics.ics.**LOGGER_SETTINGS_SIZE = 4**

ics.ics.**LOOPBACK = 2**

ics.ics.**MAIN_VNET = 1**

ics.ics.**MAX_NUMBYTES_PHYSETTINGS = 512**

ics.ics.**MAX_PHY_REG_PKT_ENTRIES = 128**

ics.ics.**MAX_PHY_SETTINGS_STRUCT = 128**

ics.ics.**MAX_REPORTED_VERSIONS = 16**

ics.ics.**MAX_VL_FORWARDING_ENTRIES = 1024**

ics.ics.**MAX_VL_POLICING_ENTRIES = 1024**

ics.ics.**NEODEVICE_ANY_ION = 262144**

ics.ics.**NEODEVICE_ANY_PLASMA = 4096**

ics.ics.**NEODEVICE_BLUE = 1**

ics.ics.**NEODEVICE_CMPROBE = 8388608**

ics.ics.**NEODEVICE_CT_OBD = 32768**

ics.ics.**NEODEVICE_DONT_REUSE0 = 8192**

ics.ics.**NEODEVICE_DONT_REUSE1 = 65536**

ics.ics.**NEODEVICE_DONT_REUSE2 = 131072**

ics.ics.**NEODEVICE_DONT_REUSE3 = 1048576**

ics.ics.**NEODEVICE_DW_VCAN = 4**

ics.ics.**NEODEVICE_ECU = 128**

ics.ics.**NEODEVICE_ECU22 = 27**

ics.ics.**NEODEVICE_ECUCHIP_UART = 2048**

ics.ics.**NEODEVICE_ECU_AVB = 2**

ics.ics.**NEODEVICE_EEVB = 16777216**

ics.ics.**NEODEVICE_ETHER_BADGE = 22**

ics.ics.**NEODEVICE_FIRE = 8**

ics.ics.**NEODEVICE_FIRE2 = 67108864**

ics.ics.**NEODEVICE_FIRE2_REDLINE = 21**

ics.ics.**NEODEVICE_FIRE3 = 15**

ics.ics.**NEODEVICE_FLEX = 134217728**

ics.ics.**NEODEVICE_GIGASTAR = 19**

ics.ics.**NEODEVICE_IEVB = 256**

ics.ics.**NEODEVICE_ION = 262144**

ics.ics.**NEODEVICE_NEOANALOG = 16384**

ics.ics.**NEODEVICE_NEOECU12 = 12**

ics.ics.**NEODEVICE_NEOECUCHIP = 256**

ics.ics.**NEODEVICE_NEW_DEVICE_58 = 31**

ics.ics.**NEODEVICE_NEW_DEVICE_59 = 33**

ics.ics.**NEODEVICE_OBD2_DEV = 26**

ics.ics.**NEODEVICE_OBD2_LC = 13**

ics.ics.**NEODEVICE_OBD2_PRO = 1024**

ics.ics.**NEODEVICE_OBD2_SIM = -2147483648**

ics.ics.**NEODEVICE_OBD2_SIM_DOIP = 25**

ics.ics.**NEODEVICE_PENDANT = 512**

ics.ics.**NEODEVICE_PLASMA = 4096**

ics.ics.**NEODEVICE_RADEPSILON = 24**

ics.ics.**NEODEVICE_RADEPSILON_EXPRESS = 29**

ics.ics.**NEODEVICE_RADEPSILON_T = 28**

ics.ics.**NEODEVICE_RADGALAXY = 268435456**

ics.ics.**NEODEVICE_RADGIGALOG = 6**

ics.ics.**NEODEVICE_RADIO_CANHUB = 11**

ics.ics.**NEODEVICE_RADJUPITER = 17**

ics.ics.**NEODEVICE_RADMOON2 = 5**

ics.ics.**NEODEVICE_RADMOON3 = 35**

ics.ics.**NEODEVICE_RADPLUTO = 9**

ics.ics.**NEODEVICE_RADPROXIMA = 30**

ics.ics.**NEODEVICE_RADSTAR = 524288**

ics.ics.**NEODEVICE_RADSTAR2 = 536870912**

ics.ics.**NEODEVICE_RADSUPERMOON = 3**

ics.ics.**NEODEVICE_RAD_A2B = 23**

ics.ics.**NEODEVICE_RAD_BMS = 34**

ics.ics.**NEODEVICE_RAD_MOON_DUO = 14**

ics.ics.**NEODEVICE_RED = 64**

ics.ics.**NEODEVICE_RED2 = 20**

ics.ics.**NEODEVICE_UNKNOWN = 0**

ics.ics.**NEODEVICE_VCAN3 = 16**

ics.ics.**NEODEVICE_VCAN41 = 7**

ics.ics.**NEODEVICE_VCAN42 = 4194304**

ics.ics.**NEODEVICE_VCAN42_EL = 10**

ics.ics.**NEODEVICE_VCAN44 = 2097152**

ics.ics.**NEODEVICE_VCAN4_IND = 18**

ics.ics.**NEODEVICE_VCANRF = 33554432**

ics.ics.**NEODEVICE_VIVIDCAN = 1073741824**

ics.ics.**NEOVI6_VCAN_TIMESTAMP_1 = 1e-06**

ics.ics.**NEOVI6_VCAN_TIMESTAMP_2 = 0.065536**

ics.ics.**NEOVIPRO_VCAN_TIMESTAMP_1 = 1e-06**

ics.ics.**NEOVIPRO_VCAN_TIMESTAMP_2 = 0.065536**

ics.ics.**NEOVI_3G_MAX_SETTINGS_SIZE = 942**

ics.ics.**NEOVI_COMMTYPE_FIRE_USB = 5**

ics.ics.**NEOVI_COMMTYPE_RS232 = 0**

ics.ics.**NEOVI_COMMTYPE_TCPIP = 3**

ics.ics.**NEOVI_COMMTYPE_USB_BULK = 1**

ics.ics.**NEOVI_RED_TIMESTAMP_1_10NS = 1e-08**

ics.ics.**NEOVI_RED_TIMESTAMP_1_25NS = 2.5e-08**

ics.ics.**NEOVI_RED_TIMESTAMP_2_10NS = 429.4967296**

ics.ics.**NEOVI_RED_TIMESTAMP_2_25NS = 107.3741824**

ics.ics.**NEOVI_TIMESTAMP_1 = 1.6e-06**

ics.ics.**NEOVI_TIMESTAMP_2 = 0.1048576**

ics.ics.**NEO_CFG_MPIC_HS_CAN_CNF1 = 522**

ics.ics.**NEO_CFG_MPIC_HS_CAN_CNF2 = 521**

ics.ics.**NEO_CFG_MPIC_HS_CAN_CNF3 = 520**

ics.ics.**NEO_CFG_MPIC_HS_CAN_MODE = 566**

ics.ics.**NEO_CFG_MPIC_LSFT_CAN_CNF1 = 558**

ics.ics.**NEO_CFG_MPIC_LSFT_CAN_CNF2 = 557**

ics.ics.**NEO_CFG_MPIC_LSFT_CAN_CNF3 = 556**

ics.ics.**NEO_CFG_MPIC_MS_CAN_CNF1 = 534**

ics.ics.**NEO_CFG_MPIC_MS_CAN_CNF2 = 533**

ics.ics.**NEO_CFG_MPIC_MS_CAN_CNF3 = 532**

ics.ics.**NEO_CFG_MPIC_SW_CAN_CNF1 = 546**

ics.ics.**NEO_CFG_MPIC_SW_CAN_CNF2 = 545**

ics.ics.**NEO_CFG_MPIC_SW_CAN_CNF3 = 544**

ics.ics.**NETID_3G_APP_SIGNAL_STATUS = 56**

ics.ics.**NETID_3G_FB_STATUS = 55**

ics.ics.**NETID_3G_LOGGING_OVERFLOW = 59**

ics.ics.**NETID_3G_READ_DATALINK_CM_RX_MSG = 58**

ics.ics.**NETID_3G_READ_DATALINK_CM_TX_MSG = 57**

ics.ics.**NETID_3G_READ_SETTINGS_EX = 60**

ics.ics.**NETID_3G_RESET_STATUS = 54**

ics.ics.**NETID_A2B_01 = 522**

ics.ics.**NETID_A2B_02 = 523**

ics.ics.**NETID_AUTOSAR = 515**

ics.ics.**NETID_AUX = 7**

ics.ics.**NETID_CAN_SWITCH = 526**

ics.ics.**NETID_CGI = 53**

ics.ics.**NETID_DATA_TO_HOST = 70**

ics.ics.**NETID_DEVICE = 0**

ics.ics.**NETID_DEVICE_STATUS = 513**

ics.ics.**NETID_ETHERNET = 93**

ics.ics.**NETID_ETHERNET2 = 520**

ics.ics.**NETID_ETHERNET3 = 524**

ics.ics.**NETID_ETHERNET_DAQ = 69**

ics.ics.**NETID_ETHERNET_TX_WRAP = 521**

ics.ics.**NETID_FLEXRAY = 85**

ics.ics.**NETID_FLEXRAY1A = 80**

ics.ics.**NETID_FLEXRAY1B = 81**

ics.ics.**NETID_FLEXRAY2 = 86**

ics.ics.**NETID_FLEXRAY2A = 82**

ics.ics.**NETID_FLEXRAY2B = 83**

ics.ics.**NETID_FORDSCP = 5**

ics.ics.**NETID_FORWARDED_MESSAGE = 516**

ics.ics.**NETID_GMFSA = 94**

ics.ics.**NETID_HSCAN = 1**

ics.ics.**NETID_HSCAN2 = 42**

ics.ics.**NETID_HSCAN3 = 44**

ics.ics.**NETID_HSCAN4 = 61**

ics.ics.**NETID_HSCAN5 = 62**

ics.ics.**NETID_HSCAN6 = 96**

ics.ics.**NETID_HSCAN7 = 97**

ics.ics.**NETID_HW_COM_LATENCY_TEST = 512**

ics.ics.**NETID_I2C1 = 88**

ics.ics.**NETID_I2C2 = 517**

ics.ics.**NETID_I2C3 = 518**

ics.ics.**NETID_I2C4 = 519**

ics.ics.**NETID_INVALID = 65535**

ics.ics.**NETID_ISM_LOGGER = 525**

ics.ics.**NETID_ISO = 9**

ics.ics.**NETID_ISO14230 = 15**

ics.ics.**NETID_ISO2 = 14**

ics.ics.**NETID_ISO3 = 41**

ics.ics.**NETID_ISO4 = 47**

ics.ics.**NETID_ISOPIC = 10**

ics.ics.**NETID_J1708 = 6**

ics.ics.**NETID_JVPW = 8**

ics.ics.**NETID_LIN = 16**

ics.ics.**NETID_LIN2 = 48**

ics.ics.**NETID_LIN3 = 49**

ics.ics.**NETID_LIN4 = 50**

ics.ics.**NETID_LIN5 = 84**

ics.ics.**NETID_LIN6 = 98**

ics.ics.**NETID_LSFTCAN = 4**

ics.ics.**NETID_LSFTCAN2 = 99**

ics.ics.**NETID_MAIN51 = 11**

ics.ics.**NETID_MAX = 100**

ics.ics.**NETID_MOST = 51**

ics.ics.**NETID_MOST150 = 92**

ics.ics.**NETID_MOST25 = 90**

ics.ics.**NETID_MOST50 = 91**

ics.ics.**NETID_MSCAN = 2**

ics.ics.**NETID_OP_ETHERNET1 = 17**

ics.ics.**NETID_OP_ETHERNET10 = 78**

ics.ics.**NETID_OP_ETHERNET11 = 79**

ics.ics.**NETID_OP_ETHERNET12 = 87**

ics.ics.**NETID_OP_ETHERNET2 = 18**

ics.ics.**NETID_OP_ETHERNET3 = 19**

ics.ics.**NETID_OP_ETHERNET4 = 45**

ics.ics.**NETID_OP_ETHERNET5 = 46**

ics.ics.**NETID_OP_ETHERNET6 = 73**

ics.ics.**NETID_OP_ETHERNET7 = 75**

ics.ics.**NETID_OP_ETHERNET8 = 76**

ics.ics.**NETID_OP_ETHERNET9 = 77**

ics.ics.**NETID_RED = 12**

ics.ics.**NETID_RED_APP_ERROR = 52**

ics.ics.**NETID_RED_VBAT = 74**

ics.ics.**NETID_RS232 = 63**

ics.ics.**NETID_SCI = 13**

ics.ics.**NETID_SPI1 = 72**

ics.ics.**NETID_SWCAN = 3**

ics.ics.**NETID_SWCAN2 = 68**

ics.ics.**NETID_TCP = 95**

ics.ics.**NETID_TEXTAPI_TO_HOST = 71**

ics.ics.**NETID_UART = 64**

ics.ics.**NETID_UART2 = 65**

ics.ics.**NETID_UART3 = 66**

ics.ics.**NETID_UART4 = 67**

ics.ics.**NETID_UDP = 514**

ics.ics.**NETID_WBMS = 532**

ics.ics.**NORMAL = 0**

ics.ics.**NORMAL_MODE = 2**

ics.ics.**NO_CANFD = 0**

ics.ics.**NUM_DEVICE_FEATURE_BITFIELDS = 1**

ics.ics.**NUM_VALID_DEVICE_FEATURES = 16**

ics.ics.**OPETH_FUNC_MEDIACONVERTER = 1**

ics.ics.**OPETH_FUNC_RAW_MEDIA_CONVERTER = 3**

ics.ics.**OPETH_FUNC_RAW_MEDIA_CONVERTER2 = 4**

ics.ics.**OPETH_FUNC_RAW_MEDIA_CONVERTER2_LOW_LATENCY = 5**

ics.ics.**OPETH_FUNC_TAP = 0**

ics.ics.**OPETH_FUNC_TAP_LOW_LATENCY = 2**

ics.ics.**OPETH_LINK_AUTO = 0**

ics.ics.**OPETH_LINK_MASTER = 1**

ics.ics.**OPETH_LINK_SLAVE = 2**

ics.ics.**OPETH_MAC_SPOOF_DST_ADDR = 0**

ics.ics.**OPETH_MAC_SPOOF_SRC_ADDR = 1**

ics.ics.**OP_ETH_GENERAL_SETTINGS_SIZE = 20**

ics.ics.**OP_ETH_SETTINGS_SIZE = 16**

ics.ics.**PHYREG_BOTH = 2**

ics.ics.**PHYREG_FAILURE = 1**

ics.ics.**PHYREG_INVALID_MDIO_BUS_INDEX = 2**

ics.ics.**PHYREG_INVALID_PHY_ADDR = 3**

ics.ics.**PHYREG_READ = 0**

ics.ics.**PHYREG_RESERVED0 = 4**

ics.ics.**PHYREG_RESERVED1 = 5**

ics.ics.**PHYREG_RESERVED2 = 6**

ics.ics.**PHYREG_RESERVED3 = 7**

ics.ics.**PHYREG_SUCCESS = 0**

ics.ics.**PHYREG_WRITE = 1**

ics.ics.**PHY_REG_PKT_VERSION = 1**

ics.ics.**PLASMA_SLAVE1_OFFSET = 100**

ics.ics.**PLASMA_SLAVE1_OFFSET_RANGE2 = 4608**

ics.ics.**PLASMA_SLAVE2_OFFSET = 200**

ics.ics.**PLASMA_SLAVE2_OFFSET_RANGE2 = 8704**

ics.ics.**PLASMA_SLAVE3_OFFSET_RANGE2 = 12800**

ics.ics.**PLASMA_SLAVE_NUM = 51**

ics.ics.**PLUTO_MAX_FORWARDING_ENTRIES = 13**

ics.ics.**PLUTO_MAX_L2_ADDRESS_LOOKUP = 1024**

ics.ics.**PLUTO_MAX_L2_POLICING = 45**

ics.ics.**PLUTO_MAX_MAC_CONFIG_ENTRIES = 5**

ics.ics.**PLUTO_MAX_RETAGGING_ENTRIES = 32**

ics.ics.**PLUTO_MAX_VLAN_LOOKUP = 4096**

ics.ics.**PLUTO_NUM_PORTS = 5**

ics.ics.**PLUTO_NUM_PRIORITY = 8**

ics.ics.**RADEPSILON_MAX_PHY = 18**

ics.ics.**RADJUPITER_NUM_PORTS = 8**

ics.ics.**RADMOONDUO_CONVERTER_SETTINGS_SIZE = 16**

ics.ics.**RAD_GPTP_AND_TAP_SETTINGS_SIZE = 40**

ics.ics.**RAD_GPTP_SETTINGS_SIZE = 36**

ics.ics.**RAD_REPORTING_SETTINGS_FLAG_AIN1 = 256**

ics.ics.**RAD_REPORTING_SETTINGS_FLAG_FAN_SPEED_ENABLE = 1024**

ics.ics.**RAD_REPORTING_SETTINGS_FLAG_INT_GPS_ENABLE = 4**

ics.ics.**RAD_REPORTING_SETTINGS_FLAG_MIC2_GPS_ENABLE = 2**

ics.ics.**RAD_REPORTING_SETTINGS_FLAG_MIC2_GPS_ENABLE2 = 8**

ics.ics.**RAD_REPORTING_SETTINGS_FLAG_MISC1_DIN = 16**

ics.ics.**RAD_REPORTING_SETTINGS_FLAG_MISC1_PWMIN = 64**

ics.ics.**RAD_REPORTING_SETTINGS_FLAG_MISC2_DIN = 32**

ics.ics.**RAD_REPORTING_SETTINGS_FLAG_MISC2_PWMIN = 128**

ics.ics.**RAD_REPORTING_SETTINGS_FLAG_SERDES_ENABLE = 512**

ics.ics.**RAD_REPORTING_SETTINGS_FLAG_TEMP_ENABLE = 1**

ics.ics.**RAD_REPORTING_SETTINGS_SIZE = 16**

ics.ics.**REGISTER_BY_SERIAL = 16**

ics.ics.**REPORT_ON_GPS = 15**

ics.ics.**REPORT_ON_KLINE = 9**

ics.ics.**REPORT_ON_LED1 = 7**

ics.ics.**REPORT_ON_LED2 = 8**

ics.ics.**REPORT_ON_MISC1 = 1**

ics.ics.**REPORT_ON_MISC2 = 2**

ics.ics.**REPORT_ON_MISC3 = 3**

ics.ics.**REPORT_ON_MISC3_AIN = 10**

ics.ics.**REPORT_ON_MISC4 = 4**

ics.ics.**REPORT_ON_MISC4_AIN = 11**

ics.ics.**REPORT_ON_MISC5 = 5**

ics.ics.**REPORT_ON_MISC5_AIN = 12**

ics.ics.**REPORT_ON_MISC6 = 6**

ics.ics.**REPORT_ON_MISC6_AIN = 13**

ics.ics.**REPORT_ON_PERIODIC = 0**

ics.ics.**RESISTOR_OFF = 1**

ics.ics.**RESISTOR_ON = 0**

ics.ics.**SCRIPT_LOCATION_EMMC = 6**

ics.ics.**SCRIPT_LOCATION_FLASH_MEM = 0**

ics.ics.**SCRIPT_LOCATION_INTERNAL_FLASH = 2**

ics.ics.**SCRIPT_LOCATION_SDCARD = 1**

ics.ics.**SCRIPT_LOCATION_VCAN3_MEM = 4**

ics.ics.**SCRIPT_STATUS_RUNNING = 1**

ics.ics.**SCRIPT_STATUS_STOPPED = 0**

ics.ics.**SERDESCAM_MODE_COUNT = 4**

ics.ics.**SERDESCAM_MODE_CUSTOM = 3**

ics.ics.**SERDESCAM_MODE_LOG_ONLY = 2**

ics.ics.**SERDESCAM_MODE_SPLITTER = 1**

ics.ics.**SERDESCAM_MODE_TAP_REPEATER = 0**

ics.ics.**SERDESCAM_PIXEL_BIT_POS_0 = 0**

ics.ics.**SERDESCAM_PIXEL_BIT_POS_1 = 1**

ics.ics.**SERDESCAM_PIXEL_BIT_POS_2 = 2**

ics.ics.**SERDESCAM_PIXEL_BIT_POS_3 = 3**

ics.ics.**SERDESCAM_SETTINGS_FLAG_AUTO_DET_RES_ENABLE = 4**

ics.ics.**SERDESCAM_SETTINGS_FLAG_CONFIG_ENABLE = 8**

ics.ics.**SERDESCAM_SETTINGS_FLAG_ENABLE = 1**

ics.ics.**SERDESCAM_SETTINGS_FLAG_LOGGING_ENABLE = 16**

ics.ics.**SERDESCAM_SETTINGS_FLAG_RTSP_ENABLE = 2**

ics.ics.**SERDESCAM_SETTINGS_FLAG_TX0_ENABLE = 32**

ics.ics.**SERDESCAM_SETTINGS_FLAG_TX1_ENABLE = 64**

ics.ics.**SERDESCAM_SETTINGS_FLAG_TX2_ENABLE = 128**

ics.ics.**SERDESCAM_SETTINGS_FLAG_TX3_ENABLE = 256**

ics.ics.**SERDESCAM_SETTINGS_SIZE = 32**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_BGGR_10LE_PACKED = 19**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_BGGR_12LE_PACKED = 20**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_BGGR_16BE = 22**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_BGGR_16LE = 21**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_BGGR_8 = 4**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_GBRG_10LE_PACKED = 74**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_GBRG_12LE_PACKED = 75**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_GBRG_16BE = 77**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_GBRG_16LE = 76**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_GBRG_8 = 73**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_GRBG_10LE_PACKED = 82**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_GRBG_12LE_PACKED = 83**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_GRBG_16BE = 85**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_GRBG_16LE = 84**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_GRBG_8 = 81**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_RGGB_10LE_PACKED = 66**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_RGGB_12LE_PACKED = 67**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_RGGB_16BE = 69**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_RGGB_16LE = 68**

ics.ics.**SERDESCAM_VIDEO_FORMAT_BAYER_RGGB_8 = 65**

ics.ics.**SERDESCAM_VIDEO_FORMAT_COUNT = 89**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_BAYER_BGGR_10LE_PACKED = 51**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_BAYER_BGGR_12LE_PACKED = 52**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_BAYER_BGGR_8 = 50**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_BAYER_GBRG_10LE_PACKED = 79**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_BAYER_GBRG_12LE_PACKED = 80**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_BAYER_GBRG_8 = 78**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_BAYER_GRBG_10LE_PACKED = 87**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_BAYER_GRBG_12LE_PACKED = 88**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_BAYER_GRBG_8 = 86**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_BAYER_RGGB_10LE_PACKED = 71**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_BAYER_RGGB_12LE_PACKED = 72**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_BAYER_RGGB_8 = 70**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RAW_10 = 54**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RAW_12 = 56**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RAW_14 = 58**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RAW_16 = 59**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RAW_20 = 60**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RAW_24 = 61**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RAW_30 = 62**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RAW_32 = 63**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RAW_36 = 64**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RAW_8 = 53**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RGB565 = 47**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RGB666 = 48**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_RGB888 = 49**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_UYVY_422_10LE_PACKED = 39**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_UYVY_422_12LE_PACKED = 43**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_UYVY_422_8 = 35**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_VYUY_422_10LE_PACKED = 42**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_VYUY_422_12LE_PACKED = 46**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_VYUY_422_8 = 38**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_YUYV_422_10LE_PACKED = 40**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_YUYV_422_12LE_PACKED = 44**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_YUYV_422_8 = 36**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_YVYU_422_10LE_PACKED = 41**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_YVYU_422_12LE_PACKED = 45**

ics.ics.**SERDESCAM_VIDEO_FORMAT_CSI2_YVYU_422_8 = 37**

ics.ics.**SERDESCAM_VIDEO_FORMAT_JPEG = 23**

ics.ics.**SERDESCAM_VIDEO_FORMAT_NONE = -1**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RAW_10 = 6**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RAW_12 = 7**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RAW_14 = 34**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RAW_16 = 8**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RAW_20 = 9**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RAW_24 = 10**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RAW_30 = 11**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RAW_32 = 12**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RAW_36 = 13**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RAW_8 = 5**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RGB565 = 30**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RGB666 = 31**

ics.ics.**SERDESCAM_VIDEO_FORMAT_RGB888 = 14**

ics.ics.**SERDESCAM_VIDEO_FORMAT_UYVY_422_10LE_PACKED = 15**

ics.ics.**SERDESCAM_VIDEO_FORMAT_UYVY_422_12LE_PACKED = 24**

ics.ics.**SERDESCAM_VIDEO_FORMAT_UYVY_422_8 = 0**

ics.ics.**SERDESCAM_VIDEO_FORMAT_VYUY_422_10LE_PACKED = 18**

ics.ics.**SERDESCAM_VIDEO_FORMAT_VYUY_422_12LE_PACKED = 27**

ics.ics.**SERDESCAM_VIDEO_FORMAT_VYUY_422_8 = 3**

ics.ics.**SERDESCAM_VIDEO_FORMAT_YUV422_10LE_PLANAR = 28**

ics.ics.**SERDESCAM_VIDEO_FORMAT_YUV422_16LE_PLANAR = 29**

ics.ics.**SERDESCAM_VIDEO_FORMAT_YUYV_422_10LE_PACKED = 16**

ics.ics.**SERDESCAM_VIDEO_FORMAT_YUYV_422_12LE_PACKED = 25**

ics.ics.**SERDESCAM_VIDEO_FORMAT_YUYV_422_8 = 1**

ics.ics.**SERDESCAM_VIDEO_FORMAT_YVYU_422_10LE_PACKED = 17**

ics.ics.**SERDESCAM_VIDEO_FORMAT_YVYU_422_12LE_PACKED = 26**

ics.ics.**SERDESCAM_VIDEO_FORMAT_YVYU_422_8 = 2**

ics.ics.**SERDESGEN_MOD_ID_NONE = 0**

ics.ics.**SERDESGEN_MOD_ID_UNKNOWN = -1**

ics.ics.**SERDESGEN_SETTINGS_FLAG_TX_PATGEN_ENABLE = 1**

ics.ics.**SERDESGEN_SETTINGS_SIZE = 32**

ics.ics.**SERDESPOC_SETTINGS_MODE_DISABLED = 0**

ics.ics.**SERDESPOC_SETTINGS_MODE_SERIALIZER = 2**

ics.ics.**SERDESPOC_SETTINGS_MODE_SUPPLY = 1**

ics.ics.**SERDESPOC_SETTINGS_SIZE = 10**

ics.ics.**SLAVE_VNET_A = 2**

ics.ics.**SLAVE_VNET_B = 4**

ics.ics.**SLEEP_MODE = 0**

ics.ics.**SLOW_MODE = 1**

ics.ics.**SPY_PROTOCOL_A2B = 35**

ics.ics.**SPY_PROTOCOL_AUTOSAR = 34**

ics.ics.**SPY_PROTOCOL_BEAN = 11**

ics.ics.**SPY_PROTOCOL_CAN = 1**

ics.ics.**SPY_PROTOCOL_CANFD = 30**

ics.ics.**SPY_PROTOCOL_CGI = 18**

ics.ics.**SPY_PROTOCOL_CHRYSLER_CCD = 8**

ics.ics.**SPY_PROTOCOL_CHRYSLER_JVPW = 14**

ics.ics.**SPY_PROTOCOL_CHRYSLER_SCI = 9**

ics.ics.**SPY_PROTOCOL_CUSTOM = 0**

ics.ics.**SPY_PROTOCOL_DALLAS_1WIRE = 25**

ics.ics.**SPY_PROTOCOL_ETHERNET = 29**

ics.ics.**SPY_PROTOCOL_FLEXRAY = 16**

ics.ics.**SPY_PROTOCOL_FORD_UBP = 10**

ics.ics.**SPY_PROTOCOL_GENERIC_MANCHSESTER = 26**

ics.ics.**SPY_PROTOCOL_GENERIC_UART = 22**

ics.ics.**SPY_PROTOCOL_GME_CIM_SCL_KLINE = 19**

ics.ics.**SPY_PROTOCOL_GMFSA = 31**

ics.ics.**SPY_PROTOCOL_GMLAN = 2**

ics.ics.**SPY_PROTOCOL_GM_ALDL_UART = 7**

ics.ics.**SPY_PROTOCOL_I2C = 21**

ics.ics.**SPY_PROTOCOL_ISO9141 = 5**

ics.ics.**SPY_PROTOCOL_J1708 = 13**

ics.ics.**SPY_PROTOCOL_J1850PWM = 4**

ics.ics.**SPY_PROTOCOL_J1850VPW = 3**

ics.ics.**SPY_PROTOCOL_J1939 = 15**

ics.ics.**SPY_PROTOCOL_JTAG = 23**

ics.ics.**SPY_PROTOCOL_LIN = 12**

ics.ics.**SPY_PROTOCOL_MOST = 17**

ics.ics.**SPY_PROTOCOL_SENT_PROTOCOL = 27**

ics.ics.**SPY_PROTOCOL_SPI = 20**

ics.ics.**SPY_PROTOCOL_TCP = 32**

ics.ics.**SPY_PROTOCOL_UART = 28**

ics.ics.**SPY_PROTOCOL_UDP = 33**

ics.ics.**SPY_PROTOCOL_UNIO = 24**

ics.ics.**SPY_PROTOCOL_WBMS = 36**

ics.ics.**SPY_STATUS2_CAN_HAVE_LINK_DATA = 4194304**

ics.ics.**SPY_STATUS2_CAN_ISO15765_LOGICAL_FRAME = 2097152**

ics.ics.**SPY_STATUS2_END_OF_LONG_MESSAGE = 1048576**

ics.ics.**SPY_STATUS2_ERROR_FRAME = 131072**

ics.ics.**SPY_STATUS2_ETHERNET_CRC_ERROR = 2097152**

ics.ics.**SPY_STATUS2_ETHERNET_FCS_VERIFIED = 268435456**

ics.ics.**SPY_STATUS2_ETHERNET_FRAME_TOO_SHORT = 4194304**

ics.ics.**SPY_STATUS2_ETHERNET_MANUALFCS_ENABLED = 134217728**

ics.ics.**SPY_STATUS2_ETHERNET_NO_PADDING = 16777216**

ics.ics.**SPY_STATUS2_ETHERNET_PREEMPTION_ENABLED = 33554432**

ics.ics.**SPY_STATUS2_ETHERNET_UPDATE_CHECKSUMS = 67108864**

ics.ics.**SPY_STATUS2_FLEXRAY_NO_CRC = 33554432**

ics.ics.**SPY_STATUS2_FLEXRAY_NO_HEADERCRC = 67108864**

ics.ics.**SPY_STATUS2_FLEXRAY_TX_AB = 2097152**

ics.ics.**SPY_STATUS2_FLEXRAY_TX_AB_NO_A = 4194304**

ics.ics.**SPY_STATUS2_FLEXRAY_TX_AB_NO_B = 8388608**

ics.ics.**SPY_STATUS2_FLEXRAY_TX_AB_NO_MATCH = 16777216**

ics.ics.**SPY_STATUS2_GLOBAL_CHANGE = 65536**

ics.ics.**SPY_STATUS2_HAS_VALUE = 1**

ics.ics.**SPY_STATUS2_HIGH_VOLTAGE = 4**

ics.ics.**SPY_STATUS2_I2C_DIR_READ = 8388608**

ics.ics.**SPY_STATUS2_I2C_ERR_NACK = 4194304**

ics.ics.**SPY_STATUS2_I2C_ERR_TIMEOUT = 2097152**

ics.ics.**SPY_STATUS2_I2C_NODE_FAULT = 4194304**

ics.ics.**SPY_STATUS2_ISO_FRAME_ERROR = 134217728**

ics.ics.**SPY_STATUS2_ISO_OVERFLOW_ERROR = 268435456**

ics.ics.**SPY_STATUS2_ISO_PARITY_ERROR = 536870912**

ics.ics.**SPY_STATUS2_LIN_ERR_MSG_ID_PARITY = 67108864**

ics.ics.**SPY_STATUS2_LIN_ERR_RX_BREAK_NOT_0 = 2097152**

ics.ics.**SPY_STATUS2_LIN_ERR_RX_BREAK_TOO_SHORT = 4194304**

ics.ics.**SPY_STATUS2_LIN_ERR_RX_DATA_GREATER_8 = 16777216**

ics.ics.**SPY_STATUS2_LIN_ERR_RX_SYNC_NOT_55 = 8388608**

ics.ics.**SPY_STATUS2_LIN_ERR_TX_RX_MISMATCH = 33554432**

ics.ics.**SPY_STATUS2_LIN_ID_FRAME_ERROR = 268435456**

ics.ics.**SPY_STATUS2_LIN_NO_SLAVE_DATA = -2147483648**

ics.ics.**SPY_STATUS2_LIN_SLAVE_BYTE_ERROR = 536870912**

ics.ics.**SPY_STATUS2_LIN_SYNC_FRAME_ERROR = 134217728**

ics.ics.**SPY_STATUS2_LONG_MESSAGE = 8**

ics.ics.**SPY_STATUS2_MOST_CHANGED_PAR = -2147483648**

ics.ics.**SPY_STATUS2_MOST_CONTROL_DATA = 16777216**

ics.ics.**SPY_STATUS2_MOST_I2S_DUMP = 134217728**

ics.ics.**SPY_STATUS2_MOST_LOW_LEVEL = 8388608**

ics.ics.**SPY_STATUS2_MOST_MHP_CONTROL_DATA = 67108864**

ics.ics.**SPY_STATUS2_MOST_MHP_USER_DATA = 33554432**

ics.ics.**SPY_STATUS2_MOST_MOST150 = 1073741824**

ics.ics.**SPY_STATUS2_MOST_MOST50 = 536870912**

ics.ics.**SPY_STATUS2_MOST_PACKET_DATA = 2097152**

ics.ics.**SPY_STATUS2_MOST_STATUS = 4194304**

ics.ics.**SPY_STATUS2_MOST_TOO_SHORT = 268435456**

ics.ics.**SPY_STATUS2_RX_TIMEOUT_ERROR = 1073741824**

ics.ics.**SPY_STATUS2_VALUE_IS_BOOLEAN = 2**

ics.ics.**SPY_STATUS2_WBMS_NODE_DISCONNECTED = 2097152**

ics.ics.**SPY_STATUS3_CANFD_BRS = 16**

ics.ics.**SPY_STATUS3_CANFD_ESI = 1**

ics.ics.**SPY_STATUS3_CANFD_FDF = 8**

ics.ics.**SPY_STATUS3_CANFD_IDE = 2**

ics.ics.**SPY_STATUS3_CANFD_RTR = 4**

ics.ics.**SPY_STATUS3_LIN_JUST_BREAK_SYNC = 1**

ics.ics.**SPY_STATUS3_LIN_ONLY_UPDATE_SLAVE_TABLE_ONCE = 4**

ics.ics.**SPY_STATUS3_LIN_SLAVE_DATA_TOO_SHORT = 2**

ics.ics.**SPY_STATUS_A2B_CONTROL = 524288**

ics.ics.**SPY_STATUS_A2B_MONITOR = 536870912**

ics.ics.**SPY_STATUS_A2B_SCF_VALID_WAITING = 8**

ics.ics.**SPY_STATUS_A2B_UPSTREAM = 1073741824**

ics.ics.**SPY_STATUS_ANALOG_DIGITAL_INPUT = 16777216**

ics.ics.**SPY_STATUS_AUDIO_COMMENT = 4194304**

ics.ics.**SPY_STATUS_AVSI_REC_OVERFLOW = 1048576**

ics.ics.**SPY_STATUS_BAD_MESSAGE_BIT_TIME_ERROR = 16384**

ics.ics.**SPY_STATUS_BREAK = 524288**

ics.ics.**SPY_STATUS_BUS_RECOVERED = 1024**

ics.ics.**SPY_STATUS_BUS_SHORTED_GND = 4096**

ics.ics.**SPY_STATUS_BUS_SHORTED_PLUS = 2048**

ics.ics.**SPY_STATUS_CANFD = 536870912**

ics.ics.**SPY_STATUS_CAN_BUS_OFF = 512**

ics.ics.**SPY_STATUS_CAN_ERROR_PASSIVE = 32**

ics.ics.**SPY_STATUS_CHECKSUM_ERROR = 8192**

ics.ics.**SPY_STATUS_COMM_IN_OVERFLOW = 65536**

ics.ics.**SPY_STATUS_CRC_ERROR = 16**

ics.ics.**SPY_STATUS_EXPECTED_LEN_MISMATCH = 131072**

ics.ics.**SPY_STATUS_EXTENDED = -2147483648**

ics.ics.**SPY_STATUS_FLEXRAY_PDU = 268435456**

ics.ics.**SPY_STATUS_FLEXRAY_PDU_NO_UPDATE_BIT = 8**

ics.ics.**SPY_STATUS_FLEXRAY_PDU_UPDATE_BIT_SET = 1073741824**

ics.ics.**SPY_STATUS_GLOBAL_ERR = 1**

ics.ics.**SPY_STATUS_GPS_DATA = 8388608**

ics.ics.**SPY_STATUS_HEADERCRC_ERROR = 32**

ics.ics.**SPY_STATUS_HIGH_SPEED = 1073741824**

ics.ics.**SPY_STATUS_INCOMPLETE_FRAME = 64**

ics.ics.**SPY_STATUS_INIT_MESSAGE = 536870912**

ics.ics.**SPY_STATUS_LIN_MASTER = 536870912**

ics.ics.**SPY_STATUS_LOST_ARBITRATION = 128**

ics.ics.**SPY_STATUS_MSG_NO_MATCH = 262144**

ics.ics.**SPY_STATUS_NETWORK_MESSAGE_TYPE = 67108864**

ics.ics.**SPY_STATUS_PDU = 268435456**

ics.ics.**SPY_STATUS_REMOTE_FRAME = 8**

ics.ics.**SPY_STATUS_TEST_TRIGGER = 2097152**

ics.ics.**SPY_STATUS_TEXT_COMMENT = 33554432**

ics.ics.**SPY_STATUS_TX_MSG = 2**

ics.ics.**SPY_STATUS_TX_NOMATCH = 32768**

ics.ics.**SPY_STATUS_UNDEFINED_ERROR = 256**

ics.ics.**SPY_STATUS_VSI_IFR_CRC_BIT = 268435456**

ics.ics.**SPY_STATUS_VSI_TX_UNDERRUN = 134217728**

ics.ics.**SPY_STATUS_XTD_FRAME = 4**

ics.ics.**SWCAN_AUTOSWITCH_DISABLED = 0**

ics.ics.**SWCAN_AUTOSWITCH_DISABLED_RESISTOR_ENABLED = 3**

ics.ics.**SWCAN_AUTOSWITCH_NO_RESISTOR = 1**

ics.ics.**SWCAN_AUTOSWITCH_WITH_RESISTOR = 2**

ics.ics.**SWCAN_SETTINGS_SIZE = 14**

ics.ics.**TIMESYNC_ICSHARDWARE_SETTINGS_SIZE = 4**

ics.ics.**UART_SETTINGS_SIZE = 16**

ics.ics.**USE_TQ = 1**

ics.ics.**VNETBITS_FEATURE_ANDROID_MSGS = 1**

ics.ics.**VNETBITS_FEATURE_DISABLE_USB_CHECK = 2**

ics.ics.**WIFI_ANTENNA_EXTERNAL = 1**

ics.ics.**WIFI_ANTENNA_INTERNAL = 0**

ics.ics.**WIFI_CONNECTION = 8**

Python Module Index

i

Index

A

B

C

D

E

F

G

H

I

J

M

N

O

P

Q

R

S

T

U

V

W

Z