

OpenDevice(String portName)

Description Open USG device and recognize USG device signal with the designated serial port

Parameter portName - Opened serial port name is Ex:COM1

Return String
"0" device is successfully opened
"-1" device can not be successfully opened

Example Connect USG device by COM1 port
OpenDevice("COM1")

Exception**UnauthorizedAccessException**

Access is denied to the port.

- or -

The current process, or another process on the system, already has the specified COM port open either by a SerialPort instance or in unmanaged code.

ArgumentException

The port name does not begin with "COM".

- or -

The file type of the port is not supported.

IOException

The port is in an invalid state.

- or -

An attempt to set the state of the underlying port failed. For example, the parameters passed from this SerialPort object were invalid.

InvalidOperationException

The specified port on the current instance of the SerialPort is already open.

-or-

The specified port is not open.

ArgumentNullException

str is Nothing.

TimeoutException

The operation did not complete before the time-out period ended.

- or -

No bytes were read.

OpenDevice(String portName, Integer readTimeout, Integer WriteTimeout)

Description Open USG device and recognize USG device signal with the designated serial port. Set read timeout and write timeout at the same time.

Parameter portName - Opened serial port name is Ex:COM1
readTimeout - Set read timeout (ms)
writeTimeout - Set write timeout (ms)

Return String
"0" device is successfully opened
"-1" device can not be successfully opened

Example Connect USG device by COM1 port and set read timeout as 3000 ms and write timeout as 5000 ms.
OpenDevice("COM1", 3000, 5000)

Exception**UnauthorizedAccessException**

Access is denied to the port.

- or -

The current process, or another process on the system, already has the specified COM port open either by a SerialPort instance or in unmanaged code.

ArgumentException

The port name does not begin with "COM".

- or -

The file type of the port is not supported.

IOException

The port is in an invalid state.

- or -

An attempt to set the state of the underlying port failed. For example, the parameters passed from this SerialPort object were invalid.

InvalidOperationException

The specified port on the current instance of the SerialPort is already open.

-or-

The specified port is not open.

ArgumentNullException

str is Nothing.

TimeoutException

The operation did not complete before the time-out period ended.

- or -

No bytes were read.

CloseDevice()

Description Close opened USG device and serial port.

Parameter None

Return None

Example Connect USG device by COM1 port and open device.
CloseDevice()

Exception

IOException

The port is in an invalid state.

- or -

An attempt to set the state of the underlying port failed. For example, the parameters passed from this SerialPort object were invalid.

Initial()

Description Initialize USG device, set frequency (based upon USG device model number) and input power level as 0 dbm.

| | |
|----------|----------|
| USG-LF44 | 34.5 MHz |
| USG-0103 | 100 MHz |
| USG-0818 | 800 MHz |
| USG-2030 | 2000 MHz |
| USG-3044 | 3000 MHz |

Parameter None

Return String
"0" successful execution
"-1" device not supporting
"-2" write-in/read-out failure

Example Initialize USG device.
Initial()

Exception

InvalidOperationException

The specified port is not open.

ArgumentNullException

str is Nothing.

TimeoutException

The operation did not complete before the time-out period ended.

SetFreq (Double freq)

Description Set USG device frequency.

| | |
|----------|---------------------|
| USG-LF44 | 34.5 MHz~ 4400 MHz |
| USG-0103 | 100 MHz ~ 300 MHz |
| USG-0818 | 800 MHz ~ 1800 MHz |
| USG-2030 | 2000 MHz ~ 3000 MHz |
| USG-3044 | 3000 MHz ~ 4400MHz |

Parameter freq - frequency (MHz)

Frequency only read to two decimal places. Third decimal place and afterwards will be neglected.

Return

String

"0" successful execution

"-1" device not supporting

"-2" Device frequency is out of device support range.

"-3" write-in/read-out failure

Example

Set USG device frequency.

SetFreq(1500.55)

Exception

InvalidOperationException

The specified port is not open.

ArgumentNullException

str is Nothing.

TimeoutException

The operation did not complete before the time-out period ended.

SetPowerLevel (Double powerLevel)

Description Set USG power level.
0 dbm ~ -30dbm

Parameter powerLevel - powerLevel (dbm)
Power level will not take decimal input. Neglect all decimal places.

Return String
"0" successful execution
"-1" device not supporting
"-2" Device frequency is out of device support range.
"-3" write-in/read-out failure

Example Set USG device power level.
SetPowerLevel(-20)

Exception**InvalidOperationException**

The specified port is not open.

ArgumentNullException

str is Nothing.

TimeoutException

The operation did not complete before the time-out period ended.



GetModel()

Description Send back USG device string to recognize USG device model number.

Parameter None

Return String

| | |
|-----------------|-----------------------------------|
| "GWINSTEK-LF44" | USG-LF44 |
| "GWINSTEK-0103" | USG-0103 |
| "GWINSTEK-0818" | USG-0818 |
| "GWINSTEK-2030" | USG-2030 |
| "GWINSTEK-3044" | USG-3044 |
| "" | Doesn't support this device model |

Example Obtain USG device model number.
GetModel()

Exception

InvalidOperationException

The specified port is not open.

ArgumentNullException

str is Nothing.

TimeoutException

The operation did not complete before the time-out period ended.

- or -

No bytes were read.

SetHandleExceptionSelf()

Description Whether to set function as exception? By default is False that is no exception.

Parameter Boolean
True : For exception, programmers handle exception.
False : For no exception, function handles exception situation.

Return None

Example Set function exception.
SetHandleExceptionSelf(True)

Exception None
