

# Freescale MQX RTOS Example Guide

## Snmp Example

The document explains the Snmp example, what to expect from the example and a brief introduction to the API.

### The example

The example code demonstrates how SNMP (Simple Network Management Protocol) uses Trap command message to communicate between the manager and the agent. The example initializes MIB (Management Information Base), MIB demo table, SNMP agent with traps and then performs several operations such as send/add/remove.

The example also provides a SNMP demo that uses SNMP trap to change the counter value through the SNMP protocol.

### Example configuration

All configuration options for SNMP example are stored in file *config.h*. All configurations are done using macros. These options are:

- ENET\_IPADDR - Board IP address for IPv4 protocol. Default is 192.168.1.202.
- ENET\_IPMASK - IP mask for IPv4. Default is 255.255.255.0.
- ENET\_TRAP\_ADDR1 - Trap receiver address. Default is 192.168.1.205.
- ENET\_TRAP\_ADDR2 - Trap receiver address. Default is 192.168.1.206.
- ENET\_TRAP\_ADDR3 - Trap receiver address. Default is 192.168.1.207.
- ENET\_TRAP\_ADDR4 - Trap receiver address. Default is 192.168.1.208.
- ENET\_TRAP\_ADDR5 - Trap receiver address. Default is 192.168.1.209.
- ENET\_ENETADDR - The target's Ethernet address. Default is {0x00, 0x00, 0x5E, \_IPBN(2), \_IPBN(1), \_IPBN(0)}
- ENET\_IPGATEWAY - Gateway for IPV4 protocol. Default is 0.0.0.0.

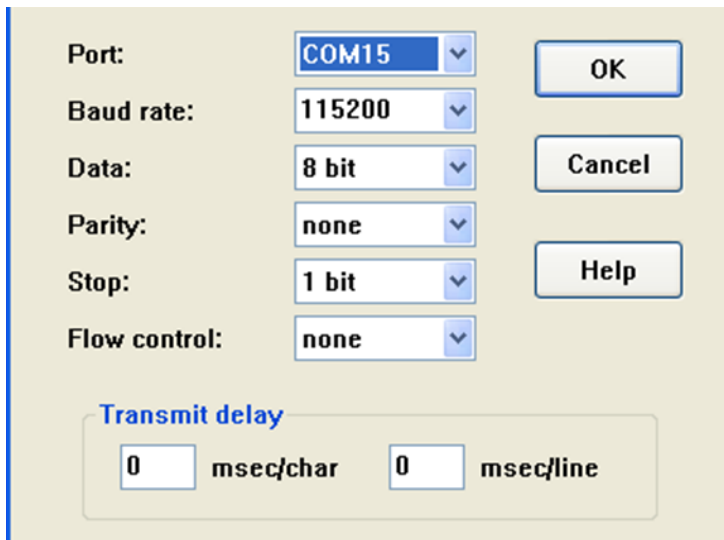
Check that the `RTCSCFG_ENABLE_IP4`, `RTCSCFG_ENABLE_SNMP` and `MQX_HAS_TIME_SLICE` macros are set to 1 in the file *user\_config.h*. Then rebuild the BSP, PSP, RTCS and SHELL projects for the target platform/IDE.

### Running the example

Connect a serial cable from the TWR-SER to the PC. Connect an Ethernet cable from the RJ45 (Ethernet) connector from the board to the RJ45 connector in the PC.

Install "iReasoning Mib Browser" on your PC

Start a terminal application on your PC and set the serial connection for 115200 baud, 8 data bits, 1 stop bit, no parity and no flow control.



A serial port configuration dialog box with a light beige background and a blue border. It contains several settings, each with a dropdown menu:

- Port: COM15
- Baud rate: 115200
- Data: 8 bit
- Parity: none
- Stop: 1 bit
- Flow control: none

Below these settings is a section titled "Transmit delay" with two input fields:

- 0 msec/char
- 0 msec/line

On the right side of the dialog, there are three buttons: "OK", "Cancel", and "Help".

After the example is loaded in board and run, the following text will appear.

```
Demo started, wait..
```

```
SNMP demo started. You can change the counter value      through the SNMP protocale.
```

```
Counter value:  
0, 1, 2, 3, 4, 5,
```

Open "iReasoning Mib Browser" and configure for it:

- Address: is IP address of the board (see in \snmp\config.h)
- OID: ".1.3.6.1.4.1.33118.1.1.1.3.0"

At "Operation" field, select "set" value. On "SNMP SET" window, select "Integer" value for "data type" field and at "Value" field, type a number -> click OK and view result on terminal

The counter value will be updated according to numeric value input via the iReasoning Mib Browser.