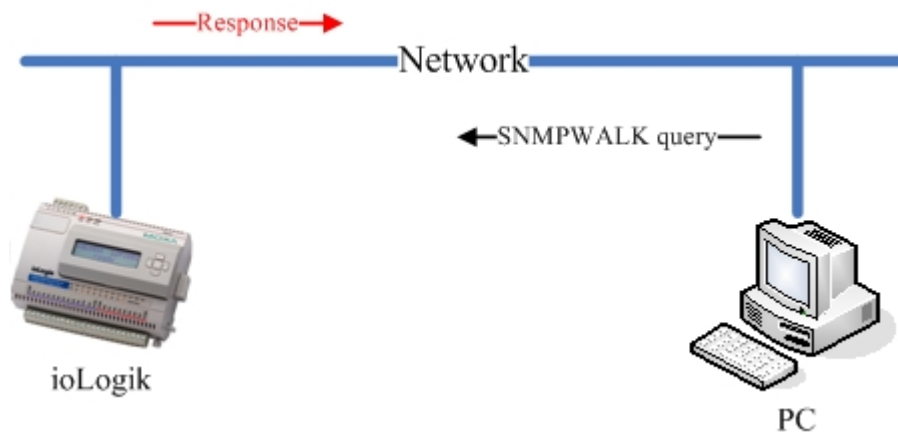


Description of ioLogik SNMP and MIB file contents

Moxa Technical Support Department

The ioLogik 4000, R2140, R2110, E2240, E2210, E2260, and E2212 come with an MIB file that can be used for SNMP queries. This Tech Note explains how to interpret the ioLogik's response to an SNMP query.

For this example, a simple architecture is used where a PC sends an SNMPWALK query to an ioLogik E2210. Since the ioLogik E2210 supports SNMP, it will respond to commercial SNMP software or simple commands such as SNMPWALK or SNMPSET.



The command syntax is as follows:

snmp command, *-parameters*, *ioLogik's IP*, *ioLogik's ID in MIB file*

For example:

```
snmpwalk -Os -c public -v 1 192.168.12.156 1.3.6.1.4.1.8691
```

The ioLogik E2210 will respond as follows:

```
enterprises.8691.10.2210.1 = INTEGER: 20
enterprises.8691.10.2210.2 = STRING: "E2210"
enterprises.8691.10.2210.3 = INTEGER: 11244
enterprises.8691.10.2210.4 = STRING: "V1.5 Build07060714"
enterprises.8691.10.2210.10.1.1.1.0 = INTEGER: 1
```

Copyright © 2007 The Moxa Group

Released on December 1, 2007

About Moxa

The Moxa Group manufactures one of the world's leading brands of device networking solutions. Products include serial boards, USB-to-serial Hubs, media converters, device servers, embedded computers, Ethernet I/O servers, terminal servers, Modbus gateways, industrial switches, and Ethernet-to-fiber converters. Our products are key components of many networking applications, including industrial automation, manufacturing, POS, and medical treatment facilities.

How to Contact Moxa

Tel: 1-714-528-6777

Web: www.moxa.com

Fax: 1-714-528-6778

Email: info@moxa.com

MOXA

This document was produced by the Moxa Technical Writing Center (TWC). Please send your comments or suggestions about this or other Moxa documents to twc@moxa.com.

```
enterprises.8691.10.2210.10.1.1.2.0 = INTEGER: 0
enterprises.8691.10.2210.10.1.1.3.0 = INTEGER: 0
enterprises.8691.10.2210.10.1.1.4.0 = INTEGER: 0
enterprises.8691.10.2210.10.1.1.5.0 = INTEGER: 100
enterprises.8691.10.2210.10.1.1.6.0 = INTEGER: 0
enterprises.8691.10.2210.10.1.1.7.0 = INTEGER: 0
...
enterprises.8691.10.2210.10.20.1.1.0 = INTEGER: 20
enterprises.8691.10.2210.10.20.1.2.0 = INTEGER: 1
enterprises.8691.10.2210.10.20.1.3.0 = INTEGER: 0
enterprises.8691.10.2210.10.20.1.4.0 = INTEGER: 0
enterprises.8691.10.2210.10.20.1.5.0 = INTEGER: 1
enterprises.8691.10.2210.10.20.1.6.0 = INTEGER: 1
enterprises.8691.10.2210.10.20.1.7.0 = INTEGER: 0
```

To understand this response, you will need to view the MIB file using a text viewer. Part of the MIB file will show the information for the ioLogik server such as firmware version and device type, as follows:

```
MOXA-IO-E2210-MIB DEFINITIONS ::= BEGIN
  IMPORTS
    enterprises, IpAddress, OBJECT-TYPE FROM SNMPv2-SMI
    DateAndTime, TEXTUAL-CONVENTION FROM SNMPv2-TC;

  -- 1.3.6.1.4.1.8691 ←ioLogik's ID
    moxa OBJECT IDENTIFIER ::= { enterprises 8691 }

  -- 1.3.6.1.4.1.8691.10
    e2000 OBJECT IDENTIFIER ::= { moxa 10 }

  -- 1.3.6.1.4.1.8691.10.2210
    e2210 OBJECT IDENTIFIER ::= { e2000 2210 }
  -- 1.3.6.1.4.1.8691.10.2210.1
    totalChannelNumber OBJECT-TYPE
      SYNTAX INTEGER (1..20)
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "Total I/O channels."
      ::= { e2210 1 }

  -- 1.3.6.1.4.1.8691.10.2210.2
    serverModel OBJECT-TYPE
      SYNTAX OCTET STRING
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
        "The I/O server model."
      ::= { e2210 2 }

  -- 1.3.6.1.4.1.8691.10.2210.3
    systemTime OBJECT-TYPE
      SYNTAX INTEGER
      MAX-ACCESS read-only
```

```

STATUS current
DESCRIPTION
    "I/O server up time (in seconds)."
```

```
 ::= { e2210 3 }
```

```

-- 1.3.6.1.4.1.8691.10.2210.4
firmwareVersion OBJECT-TYPE
    SYNTAX OCTET STRING
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The firmware version."
```

```
 ::= { e2210 4 }
```

The remaining information is for the DI/DO channels. Information for each channel is presented in 10 parts, and each part is defined in the MIB file with SYNTAX type and range, read or write permission, status, description, and table index (**di00-Table OBJECT-TYPE**). The MIB file information for DI-00 is shown below as an example:

```

di00-Table OBJECT-TYPE
    SYNTAX          SEQUENCE OF DI00-Entry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "The di-00 channel monitor table"
    ::= { monitor_e2210 1 }
```

```

di00-Entry OBJECT-TYPE
    SYNTAX          DI00-Entry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "The di-00 channel monitor item"
    INDEX { di00-Index }
    ::= { di00-Table 1 }
```

```

DI00-Entry ::= SEQUENCE {
    di00-Index INTEGER,
    di00-Type   INTEGER,
    di00-Mode  INTEGER,
    di00-Status INTEGER,
    di00-Filter INTEGER,
    di00-Trigger INTEGER,
    di00-CntStart INTEGER
}
```

```

di00-Index OBJECT-TYPE
    SYNTAX          INTEGER (1..12)
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "The channel di-00 index."
    ::= { di00-Entry 1 }
```

```

di00-Type OBJECT-TYPE
    SYNTAX          INTEGER (0)
    MAX-ACCESS      read-only
```

STATUS current
DESCRIPTION "The channel di-00 type. 0=DI, 1=DO"
::= { di00-Entry 2 }

di00-Mode OBJECT-TYPE
SYNTAX INTEGER (0..1)
MAX-ACCESS read-write
STATUS current
DESCRIPTION "The channel di-00 mode. 0=DI, 1=Event Counter"
::= { di00-Entry 3 }

di00-Status OBJECT-TYPE
SYNTAX INTEGER (0..4294967295)
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The channel di-00 status. 0=Off, 1=On in DI mode or N=Count in counter mode"
::= { di00-Entry 4 }

di00-Filter OBJECT-TYPE
SYNTAX INTEGER (1..2000)
MAX-ACCESS read-write
STATUS current
DESCRIPTION "The channel di-00 counter filter. unit=0.5ms"
::= { di00-Entry 5 }

di00-Trigger OBJECT-TYPE
SYNTAX INTEGER (0..1)
MAX-ACCESS read-write
STATUS current
DESCRIPTION "The channel di-00 counter trigger level. 0=L2H, 1=H2L"
::= { di00-Entry 6 }

di00-CntStart OBJECT-TYPE
SYNTAX INTEGER (0..1)
MAX-ACCESS read-write
STATUS current
DESCRIPTION "The channel di-00 counter start/stop. 0=stop, 1=start"
::= { di00-Entry 7 }