

SNMP Network Interface User's Guide



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4200-055 R4.0

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1 General Description

The Simple Network Management Protocol SNMP is used for communicating with an MPM or BDS via network. The Telnet interface, available with Windows 2000 and XP, sets up the Alber compatible network card in the MPM or BDS Controller for SNMP.

This manual describes the Telnet interface and the menu items available when connecting via a Telnet session to the network card.

2 Before Starting The Telnet Interface

All network card settings can be set via the Telnet session but some information needs to be gathered and confirmed in the BMDM software program before starting the Telnet Interface. To use the BMDM program, refer to the applicable *BMDM User's Guide*;

- ◆ PN 4200-004 or
- ◆ PN 4200-056 SQL version.

Before setting up the BMDM program and running the Telnet interface, obtain the following information from your network administrator:

- ◆ IP Address
- ◆ Network Port
- ◆ Sub Netmask
- ◆ Gateway

Start the BMDM program by clicking on the BMDM icon.




Figure 1. BMDM Icon

Go to Setup on the Main Menu Bar, Setup and select System from the drop-down menu.



Figure 2. BMDM Setup System

Type the password and click .

The default password is: alber .

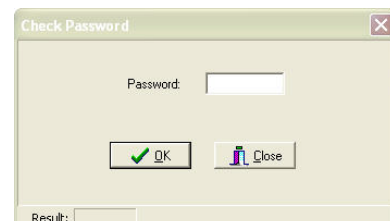


Figure 3. Enter Password

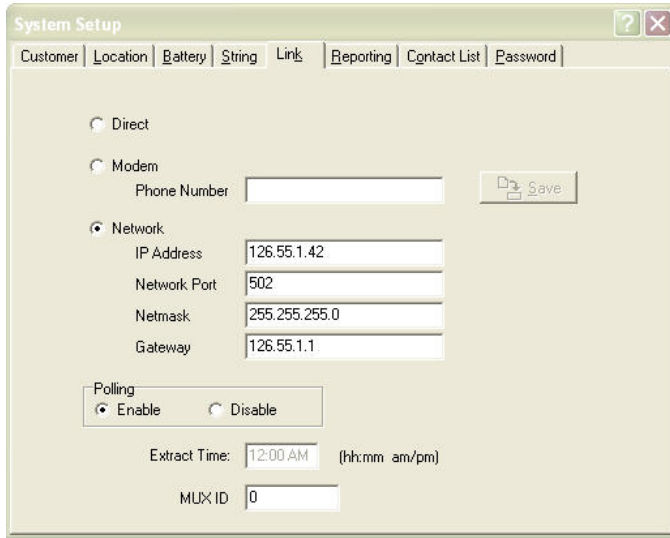


Figure 4. system Setup Window Link Tab Open

Open the Link tab in the System Setup window and make sure the

1. IP Address,
2. Network Port,
3. Netmask, and
4. Gateway

have been set and saved in the network cards using the BMDM program before continuing.

3 Starting The Telnet Interface

To open the Telnet interface, close all programs, then access the Command Prompt From the Start Menu.

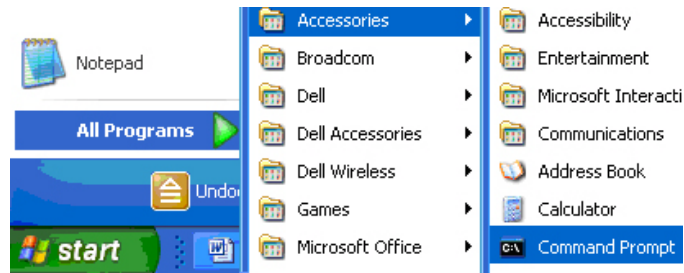


Figure 5. Start Menu Accessories Command Prompt

To access the Telnet connection.

Type the word telnet followed by the IP address (###.##.##) of the monitor and then type 9999; as example, "telnet 456.12.1.88 9999."

Press Enter on the keyboard.

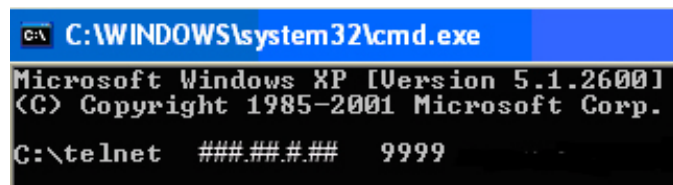


Figure 6. Command Prompt

The Albercorp SNMP Agent within the Network Interface Card displays.

Press Enter for Setup Mode.

NOTE:
If enter is not pressed within 5 seconds, the connection will be disconnected.

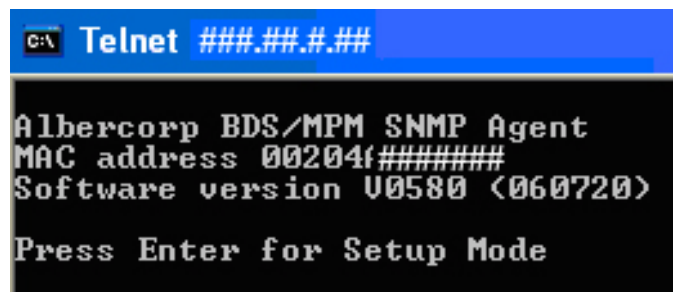


Figure 7. SNMP Agent Setup Mode

```

C:\WINNT\system32\cmd.exe - telnet 66.184.133.189 9999

Albercorp BDS/MPM SNMP Agent
Serial Number 00000000 MAC address 00000A00AA00
Software version U0580 (<050218>)

Press Enter for Setup Mode

*** basic parameters
Hardware: Ethernet Autodetect
IP addr 00.000.000.000, gateway 00.000.000.000,netmask 000.000.000.000

Application version 1.21.003D

***** Channel 1 *****
Baudrate 09600, I/F Mode 4C, Flow 81

Change Setup :   0 Network configuration
                  1 Serial port configuration
                  3 Port assignments
                  4 Trap interval
                  5 Trap recipients
                  6 SNMP community strings
                  7 Monitor type
                  8 Number of strings
                  9 Set comm factory defaults
                 10 SNMP polling enabled
                 11 SNMP polling delay
                 88 Exit without save
                 99 Save and exit

                                Your choice ? 88

```

Figure 8. Telnet Session Change Setup Menu

4 Menu Item Descriptions

This chapter describes the Telnet session menu items and the default values for each item.

0	Network configuration	Specifies the network parameters, including the IP address, network port, sub netmask, and gateway.
1	Serial port configuration	Specifies serial port configuration items, including speed, data bits, parity, stop bits, and flow control.
3	Port assignments	Specifies the Modbus and Web server ports.
4	Trap interval	When an alarm condition exists and one or more SNMP trap recipients have been specified, the firmware sends a trap at regular intervals.
5	Trap recipients	Allows specifying of up to three IP addresses as SNMP trap recipients.
6	SNMP community strings	Specifies the community strings for read-only and read-write access.
7	Monitor type	Specifies the community strings for read-only and read-write access
8	Number of strings	Specifies the number of strings being monitored.

9	Set comm factory defaults	Select this item to reset network and serial parameters to factory defaults.
10	SNMP polling enabled	Enables or disables SNMP polling.
11	SNMP polling delay	Sets a delay, in milliseconds, between SNMP polls.
88	Exit without save	This selection exits without saving changes made during the setup session and does not reboot the network card.
99	Save and exit	Select this item to save changes in the nonvolatile memory, exit, and reboot the network card.

0: Network Configuration

Network Configuration specifies the network parameters, including the IP address, network port, sub netmask, and gateway.

A Netmask defines the number of bits taken from the IP address that are assigned for the host section: Class A: 24 bits. Class B: 16 bits. Class C: 8 bits.

The unit prompts for the number of host bits to be entered, then calculates the Netmask.



NOTE:

Examples of Standard IP Network Netmasks:

A 24 255.0.0.0

B 16 255.255.0.0

C 8 255.255.255.0

Setting the Telnet configuration password prevents unauthorized access to the setup menu via a Telnet connection to port 9999. The password must have 4 characters.

```

c:\ Telnet 126.55.1.46

Albercorp BDS/MPM SNMP Agent
MAC address 00204A83A301
Software version 00580 (060720)

Press Enter for Setup Mode

*** basic parameters
Hardware: Ethernet TPI
IP addr 126.55.1.46, no gateway set, netmask 255.0.0.0

Application version 1.30.001

***** Channel 1 *****
Baudrate 09600, I/F Mode 4C, Flow 00

Change Setup : 0 Network configuration
                1 Serial port configuration
                3 Port assignments
                4 Trap interval
                5 Trap recipients
                6 SNMP community strings
                7 Monitor type
                8 Number of strings
                9 Set comm factory defaults
               10 SNMP polling enabled
               11 SNMP polling delay
               88 Exit without save
               99 Save and exit
IP Address : (126) .(055) .(001) .(046)           Your choice ? 0
Set Gateway IP Address (N) ?
Netmask: Number of Bits for Host Part (0=default) (24)
Change telnet config password (N) ? _

```

Figure 9. Telnet Config Password

**CAUTION:**

If you lose the password, you will have to return the network card to Alber to have the password cleared.

```

[Default] IP Address: (000) .(000) .(000) .(000)
          Gateway IP Address: (000) .(000) .(000) .(000)
          Netmask: Number of Bits for Host Part (0)
          Password (N)

```

1: Serial Port Configuration

This item specifies serial port configuration items, including speed, data bits, parity, stop bits, and flow control.

**CAUTION:**

Do not change these settings; if you do, the network card will not be able to communicate with the BDS or MPM. Data bits, parity, and stop bits are encoded into the I/F mode, described in the Lantronix manual.

[Default] Baud rate (09600)
I/F Mode (4C)
Flow (81)

The above configuration specifies 9600, 8, N, 1.

3: Port Assignments

This specifies the Modbus and Web server ports. Although the Web server port can be assigned, it is not used at this time.

[Default] Modbus Port (502)
Web server port (80)

4: Trap Interval

When an alarm condition exists and one or more SNMP trap recipients have been specified, the firmware sends a trap at regular intervals. This menu item lets you specify the number of minutes between traps (0 to 32,767).

[Default] Trap interval (min) (0)

5: Trap Recipients

This lets you specify up to three IP addresses as SNMP trap recipients. Setting the IP's to 0 removes trap recipients.

[Default] Recipient 1: (000) .(000) .(000) .(000)
Recipient 2: (000) .(000) .(000) .(000)
Recipient 3: (000) .(000) .(000) .(000)

6: SNMP Community Strings

This menu item specifies the community strings for read-only and read-write access.

[Default] SNMP community name for read (public)
SNMP community name for write (private)

7: Monitor Type

This item specifies the type of monitor, BDS or MPM. If you select MPM, the item prompts for the Modbus Unit ID. This is not needed for the BDS, because the Modbus Unit ID corresponds to the string number.

[Default] Monitor type (0=BDS, 1=MPM) (0)

8: Number of Strings

This specifies the number of strings being monitored. This can be 1 to 6 strings for BDS-40, 1 to 8 for the BDS-256, and 1 to 4 for the MPM-100.

[Default] Number of strings (1)

9: Set Comm Factory Defaults

Select this item to reset network and serial parameters to factory defaults.

10: SNMP Polling Enabled

This item enables or disables SNMP polling. Normally, polling is enabled, so the firmware can obtain fresh values for the SNMP variables at regular intervals. At times, however, you may need to disable polling in order to eliminate serial port traffic. For example, disable polling when upgrading the firmware in the network card or battery monitor.

[Default] Polling enabled (N)

11: SNMP Polling Delay

This item sets a delay, in milliseconds, between SNMP polls. This provides a break when there is no serial activity. A larger number increases the length of the break at the expense of not updating the SNMP variables as often.

[Default] Polling delay (ms) (5000)

88: Exit Without Save

This selection exits without saving changes made during the setup session and does not reboot the network card.

99: Save and Exit

Select this item to save changes in the nonvolatile memory, exit, and reboot the network card.

5 Status Lights

Four status LEDs are located on the network card installed in the BDS or MPM.

Green (1) - When lit, this indicates the network card is idle.

Flashing indicates the card is connected to the network and active.

Red (3) - Flashes when no network connection can be made. The network card is in standby. Flashing occurs for 30 seconds after power up. During that time, you cannot connect to the card, and you must wait until flashing stops.

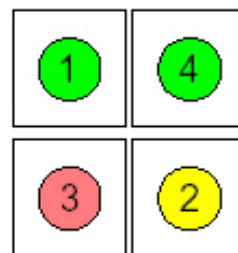


Figure 10. LEDs

Green (4) - When lit, this indicates the network port is connected to the network.

Yellow (2) - Not used.

6 Upgrading the Network Card Firmware

Before upgrading the firmware in the SNMP network card, SNMP polling must be stopped.

6.1 Disable The SNMP Option Via A Telnet Session

Access the Command Prompt From the Start Menu.

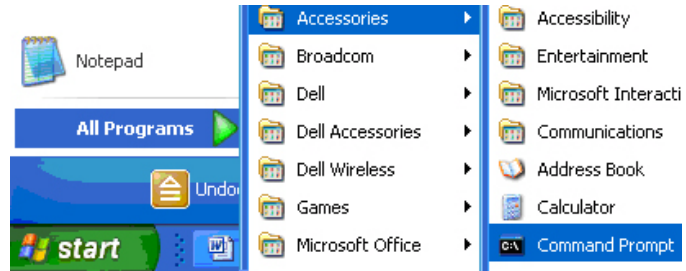


Figure 11. Start Menu Accessories Command Prompt

To access the Telnet connection.

Type the word telnet followed by the IP address (###.###.###) of the monitor and then type 9999; as example, "telnet 456.12.1.88 9999."

Press Enter on the keyboard.

The Albercorp SNMP Agent within the Network Interface Card displays.

Press Enter for Setup Mode.

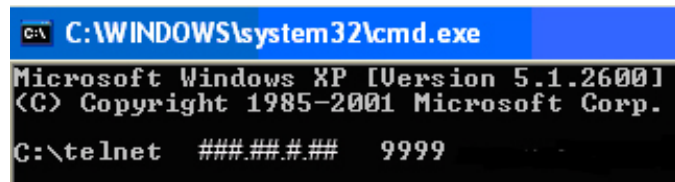


Figure 12. Command Prompt



NOTE:

If enter is not pressed within 5 seconds, the connection will be disconnected.

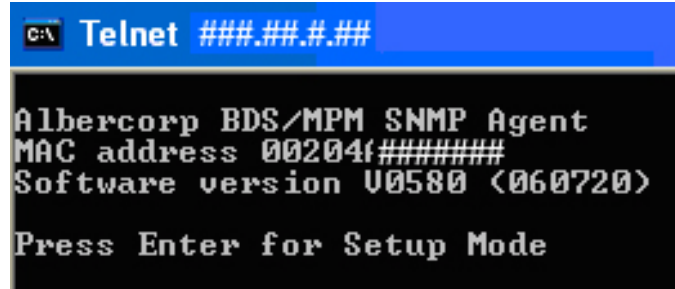


Figure 13. SNMP Agent Setup Mode

- ◆ When the SNMP Agent Options Menu displays.
- ◆ Type in the number 10 next to Your choice ?
- ◆ Press Enter.
- ◆ If Polling enabled return is already marked <N>, then STOP, hit enter and type 99 to Save and exit.

```

c:\ Telnet ###.##.###
Albercorp BDS/MPM SNMP Agent
MAC address 00:###.##.###
Software version V0580 (060720)

Press Enter for Setup Mode

*** basic parameters
Hardware: Ethernet TPI
IP addr ###.##.### , no gateway set,netmask 255.0.0.0
Application version 1.30.001

***** Channel 1 *****
Baudrate 09600, I/F Mode 4C, Flow 00

Change Setup : 0 Network configuration
                1 Serial port configuration
                3 Port assignments
                4 Trap interval
                5 Trap recipients
                6 SNMP community strings
                7 Monitor type
                8 Number of strings
                9 Set comm factory defaults
                10 SNMP polling enabled
                11 SNMP polling delay
                88 Exit without save
                99 Save and exit
Polling enabled <N> ?
Your choice ? 10
  
```

Figure 14. Polling Is Not Enabled <N>

If Polling enabled returns a <Y>, then type <N> and press Enter to disable polling.

```

Telnet ###.##.###
Change Setup : 0 Network configuration
                1 Serial port configuration
                3 Port assignments
                4 Trap interval
                5 Trap recipients
                6 SNMP community strings
                7 Monitor type
                8 Number of strings
                9 Set comm factory defaults
                10 SNMP polling enabled
                11 SNMP polling delay
                88 Exit without save
                99 Save and exit
Polling enabled <Y> ?
Your choice ? 10
  
```

Figure 15. Polling Is Enabled <Y>

- ◆ Verify that the SNMP Polling is disabled by typing 10 next to Your choice ?
- ◆ If Polling enabled return is marked <N>, then STOP.
- ◆ Press enter.
- ◆ Type 99 to Save and exit.

```

*** basic parameters
Hardware: Ethernet TPI
IP addr ###.##.##      no gateway set,netmask 255.0.0.0

Application version 1.30.001

***** Channel 1 *****
Baudrate 09600, I/F Mode 4C, Flow 00

Change Setup :    0 Network configuration
                  1 Serial port configuration
                  3 Port assignments
                  4 Trap interval
                  5 Trap recipients
                  6 SNMP community strings
                  7 Monitor type
                  8 Number of strings
                  9 Set comm factory defaults
                 10 SNMP polling enabled
                 11 SNMP polling delay
                 88 Exit without save
                 99 Save and exit
Polling enabled <N> ?
Your choice ? 99
    
```

Figure 16. Verify Polling Is Disabled

Wait at least 30 seconds for communication to resume.

6.2 Upgrade The Card

To upgrade the firmware, first make sure the `##_##_##_rom` file is in the same folder from which you are running the command, then type:

For 100 Mbps cards:

```
TFTP <space> -i <space> IP address <space> PUT <space> m1.rom <space> 3M
```

or

For 10 Mbps cards:

```
TFTP <space> -i <space> IP address <space> PUT <space> m1.rom <space> 4D
```

Wait at least 30 seconds for communication to resume. To resume polling, from the Telnet menu, select item 10 and select Y for polling. Select 99 to save and exit.

 **NOTE:**

`##_##_##_rom` = `version_build_location.rom` ex. `1_32_3M.rom`.

`3M` may be replaced with `4D` in 10 Mbps cards in the filename.

