SNMP-1000-B1: Intelligent SNMP/HTTP Remote System Manager Startup Manual

Packing List

SNMP-1000-E1B1:
- One SNMP/HTTP system manager kernel board mounted on a PCI/ISA carrier board
- One 6-pin to 8-pin cable for CPU card connection
- One 2-pin cable for watchdog timer detection
- One bracket for use on ISA slot
- Three thermal sensor board with cable sets
- One 9-pin to 9-pin modem cable
- One SNMP-1000-B1 startup manual
- One CD containing utility program, SNMP MIB file and user's manual (in pdf format)

SNMP-1000-E2B1:
- One SNMP/HTTP system manager kernel board mounted on a carrier board for chassis
- One 6-pin to 8-pin cable for CPU card connection
- One 2-pin cable for watchdog timer detection
- One 9-pin to 12-pin serial port cable for COM2 of CPU card
- One RJ-45 cable with bracket for external LAN connection
- One 9-pin to 9-pin modem cable
- One SNMP-1000-B1 startup manual
- One CD containing utility program, SNMP MIB file and user's manual (in pdf format)

SNMP-1000-LCD:
- One message display module
- One 8-pin cable for SNMP connection

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

Note 1: *For detailed contents of the SNMP-1000-B1 please refer to the enclosed CD-ROM or disk (in PDF format).*

Note 2: *Acrobat Reader is required to view any PDF file. Acrobat Reader can be downloaded at: www.adobe.com/Prodindex/acrobat/readstep.html (Acrobat is a trademark of Adobe.)*

For more information on this and other Advantech products, please visit our website at:
http://www.advantech.com
For technical support and service, please visit our support website at:
http://service.advantech.com.tw/eservice/
This manual is for the SNMP-1000-B1.

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Specifications

Hardware Specification

- **CPU:** 80188 compatible 20 MHz
- Onboard 512KB Flash ROM and 512KB SRAM
- Onboard 10/100 Mbps Ethernet adapter
- 1 RS-232 serial port up to 9600 baud rate
- 1 SM bus interface for PC system healthy status monitoring
- 1 SM bus interface for up to 8 external temperature sensors
- 9 fan tachometer inputs (7 inputs for SNMP-1000-E2B1)
- 1 on-board temperature sensor
- 1 LCM message display interface
- Detect time-out signal of system watchdog timer
- 4 power good signals(SNMP-1000-E1B1)
- 8 digital inputs (SNMP-1000-E1B1)
- 4 digital outputs (SNMP-1000-E1B1)

Dimensions

- **Kernel module (SNMP-1000-E1B1):** 40.5 mm X 93 mm
- **PCI/ISA carrier module (SNMP-1000-E2B1):** 175 mm x 107 mm
- **Carrier board for chassis (SNMP-1000-E2B1):** 55 x 115 mm

Sensor Input Specification

- **Voltage Inputs:** +5V_{DC}, -5V_{DC}, 5VSB, +3.3V_{DC}, +12 V_{DC}, -12 V_{DC}
- **Temperature Sensors:** LM75 digital temperature sensor, I2C interface, -30 ~ +125°C (-22 ~ 257°F)
- **Fan Speed Monitor:** Up to 9 fans, 700 ~ 10000 RPM
- **Power Good / Digital Input:** High: > 2.4 V_{DC}, Low: < 0.8 V_{DC}

System Status Monitoring and Management

- Real-time healthy status monitoring: Provides realtime status display in HTTP/Java graphical format
- History log graphic display and data down load
- Alarm event log

Alarm Notification

- **E-mail:** Can set up to 4 addresses to receive e-mails
- Alarm message display on the optional LCD display module
- **SNMP trap:** Notify up to 8 SNMP administrators
- **Pager notification:** Dial out through external modem to send message to up to 8 pagers.
- Audible alarm sound

Supported Protocols

• TCP, UDP, IP, ICMP, DHCP, BOOTP, ARP, SNMP, HTTP, Telnet

Management Functions

• Web-based remote configure, control and monitor
• Remote reset, power down and power up.
• Remote digital output signal control
• Remote message display control
• Firmware upgrade from serial port and Ethernet port
• Modem dial in (console mode only)

LCD Message Display Module with Keys

• **LCD module:** 2 rows, 16 characters, with backlight
• **Dimension:** 147 mm X 42 mm
• **5 Keys:** Up, down, enter, escape, alarm sound off

Optional Backup Battery

• **Charge time:** 3 hr
• **Battery type:** Li-Ion
• **Battery capacity:** 1800 mA-H (full charged, for 45~50 minutes operation, depending on the output used)
• **Battery life:** 1 year @ 20° C, 80% capacity after 500 cycles of charge and discharge

Power Consumption

• 5 V @ 550 mA

Caution: The SNMP-1000-B1 is provided with a battery-powered Real-time Clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to manufacturer's instructions

Environmental Specifications

• **Storage temperature:** -20 ~ 70° C (4° F ~ 158° F)
• **Operating temperature:** 0 ~ 60° C (32° F ~ 140° F)
• **Relative humidity:** 5 ~ 95% RH non-condensing

Notice: Only Advantech's new full-sized CPU cards and industrial ATX motherboard can be monitored, including PCA-6002, PCA-6003, PCA-6004, PCA-6005, PCA-6181, PCA-6183, PCA-6184, PCA-6185, PCA-6186, PCA-6187, PCA-6188, PCA-6277 (rev. B), AIMB-740, AIMB-741, AIMB-742, AIMB-744 and newer.

The following CPU cards cannot be monitored: PCA-6155V, PCA-6168, PCA-6175, PCA-6176, PCA-6178, PCA-6179, PCA-6180, PCA-6275, PCA-6276, PCA-6277 (rev. A), PCA-6278, PCA-6359, and earlier

Jumpers and Connectors

Jumpers

Label	Function
J1	External Buzzer Connector

Connectors

Label	Function
CN1	External Power Connector
CN2	10/100Base-T LAN Connector
CN3	System SMBus Connector
CN4	Temperature Sensor Connector
CN5	10/100Base-T LAN Connector
CN7	Temperature Sensor Connector
CN8	RS-232 Connector
CN9	RS-232 D-SUB Serial Port
CN10	LCM Message Display Connector
CN11	Kernel Board Connector
CN12	Kernel Board Connector
CN13	Backplane Voltage Input Connector
CN14	Digital Input Connector (DI1~DI8)
CN15	Digital Output Connector (DO1~DO4)
CN16	Power Good Input Connector
CN17	Alarm Reset Connector
CN18	LED Indicator Connector
CN19	CPU Card Interface Connector
CN20	Chassis and Watchdog Timer Connector
CN21	Power Good Input Connector
CN22	Power Good Input Connector
CN23	Power Good Input Connector
CN24	Power Good Input Connector
CN26	External HDD LED Connector
BT1	External Backup Battery Connector
MCN1	Kernel Module Interface
MCN2	Kernel Module Interface
MJ1	Bypass Password Protection Connector
MSW1	Test Mode & Normal Mode Switch
FAN1	FAN Connector
FAN2	FAN Connector
FAN3	FAN Connector
FAN4	FAN Connector
FAN5	FAN Connector
FAN6	FAN Connector
FAN7	FAN Connector
FAN8	FAN Connector
FAN9	FAN Connector

Getting Started

Configuring the SNMP-1000-B1

Before using your SNMP-1000-B1 SNMP/HTTP intelligent system manager, you need to configure it by using a PC. You can configure it from the serial port by using a PC with terminal emulator software such as Hyperterminal of Windows 98/NT. You can also configure it from the Ethernet port by using Telnet or using a browser such as Netscape Communicator™ or Microsoft Internet Explorer™. Some

parameters can only be set through the serial port due to security reasons.

A setup software utility can be found in the utility CDROM shipped with the SNMP-1000-B1. It helps you to set up a number of the SNMP-1000 system managers with same configuration. You can save current configuration to a file and copy it to other modules.

Before you can configure your SNMP-1000-B1 module, you need first install your SNMP-1000-B1 and power it up. Connect it to a network through its LAN port, or connect its serial port to your PC using a "null modem" cable with reversed Tx & Rx signals at one end. This cable is available from Advantech. (Part number: 1700091801)

When all the cables are well-connected, you can power up the SNMP-1000-B1. A green LED on the kernel module indicates that 5V power is supplied to SNMP-1000-B1. Then it starts a self-testing procedure. It takes around 5 seconds, then it is ready to work.

Configuring through the serial port

The configuration example below if for Windows Hyperterminal (Windows95/98/ME/NT/2000/XP).

1. Start Hyperterminal by clicking on "Accessories" program group.

2. Enter a name and choose an icon for the connection.

3. In the "Connect using" box, select "Direct to COMx."

Here "x" is the number of COM ports you are using to connect to the SNMP-1000-B1.

4. Set the serial port of your PC to "9600 bps," "8 data bits," "No parity," and "1 stop bit with no flow control."

5. Press the "Enter" key on your PC, then the SNMP-1000-B1 will prompt you to enter administrator user name and password. The default administrator user name is "advantech" and password is "admin."

Note: Access through Telnet or serial port is permitted only with the "Admin User Name" and "Admin User Password" set in Control Group.

```
*********************************************************
|            [ SNMP Agent Configuration Utility Main Menu ]            |
*********************************************************
Enter User Name: advantech

Enter Password: *****
```

After entering the password, you can access the configuration menu of SNMP-1000-B1.

```
*********************************************************
|            [ SNMP Agent Configuration Utility Main Menu ]            |
*********************************************************
    1. Agent Configuration
    2. Remote Control
    3. Restart Agent
    4. Reset Configuration To Default
    5. Access Agent Command
    0. Exit

Please Enter Your Choice => 1
```

Communicating through Ethernet

To communicate with SNMP-1000-B1 through Ethernet, you need a computer with Ethernet and a TCP/IP network installed. You need to know the IP address of the SNMP-1000-B1 before you can communicate with it through the Ethernet. There are four ways to determine the IP address:

- The default IP address is 172.20.x.x where x.x are the last four digits of the Ethernet MAC address. The MAC address is labeled on the kernel module. For example, if the MAC address is 00 E0 d8 03 15 36 (hexadecimal), the IP address is then 172.20.21.54.

- You can read the IP address in console mode under "Agent Configuration".

- You can read the IP address through the LCM display if your SNMP-1000-B1 is connected to the LCM display module.

- You can find all SNMP-1000-B1s connected on the same network by using the setup utility.

Configuration using Telnet

Configuration using Telnet is basically same as using serial port connection. First, make sure your computer has a TCP/IP network and a web browser installed. In the address line type "Telnet xxx.xxx.xxx.xxx." Here xxx.xxx.xxx.xxx is the IP address of the SNMP-1000-B1. Then the SNMP-1000-B1 will prompt you to enter user name and password.

Configuration using a Web Browser

Using a web browser is the easiest way to configure the SNMP-1000-B1. Type in the URL "http://xxx.xxx.xxx.xxx." Here xxx.xxx.xxx.xxx is the IP address of the SNMP-1000-B1. Then the SNMP-1000-B1 will prompt you to enter user name and password.

Remote access through a phone line

SNMP-1000-B1's command mode can be accessed remotely through a phone line. The SNMP-1000 -B1 has to be connected to a phone line through a modem. Your PC has to be connected to a phone line through a modem too.

You can use HyperTerminal of the Windows system or other dialing software tools. Please refer to the user's manual of your dialing program for the setting details.

**FCC:** This device complies with the requirements in part 15 of the FCC rule.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

CAUTION!! Danger of explosion if battery is incorrectly replaced. The battery doesn't need to be charged. Replace only with Advantech-specified batteries.
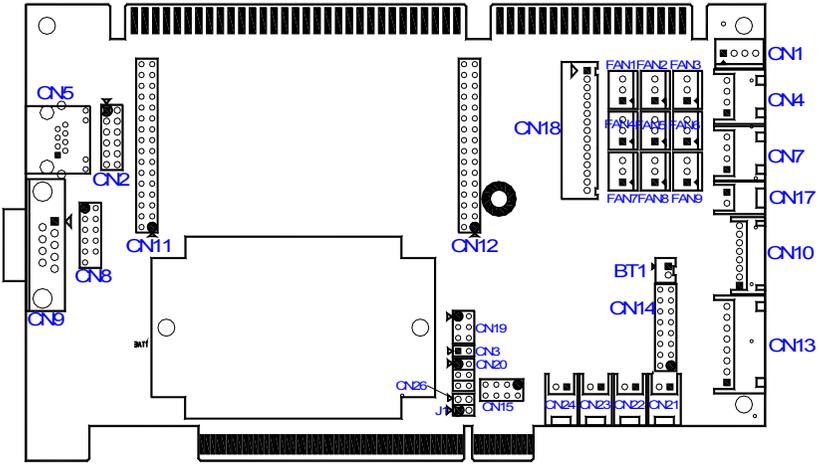
Connector locations of PCI/ISA I/O extension board
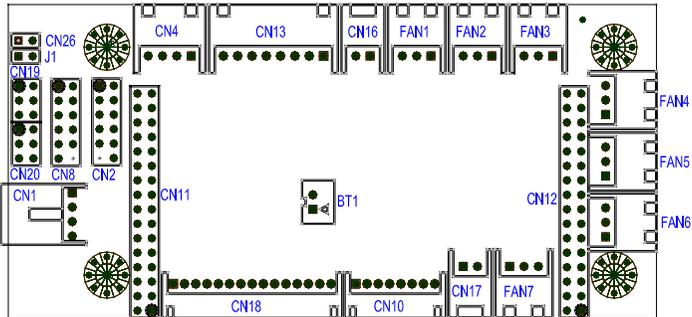
Connector locations of carrier board for IPC chassis