

The Phoenix Broadband Technologies PBT-PA-1 **PowerAgent** is a special purpose status monitoring agent that allows a Cable TV network power supply to be remotely monitored and controlled using a cable modem.

The **PowerAgent** interfaces to the cable modem via an ethernet connection, and to the monitored power supply via a flexible and configurable interface. The **PowerAgent** has two separate monitoring interfaces built-in: A multi-wire analog/digital interface for use with legacy power supplies made by Alpha Technologies and others, and an RS-485 serial interface for use with newer generation power supplies that support the ANSI/SCTE 25-3 2002 (HMS-022) serial monitoring standard.

The **PowerAgent** obtains its operating power from the monitored supply's 60-90 VAC output and generates a 12VDC nominal voltage that powers the companion cable modem, thus eliminating the need for a separate modem power unit.

The **PowerAgent** has a built-in SNMP proxy, a built-in web server, and a built-in SMTP mail client. The SNMP proxy supports SNMP standard and HMS MIBs making the **PowerAgent** compatible with virtually any management system. HMS traps are generated based on alarm conditions defined using the HMS property MIB. The built-in web server allows the status of the monitored supply to be analyzed from anywhere in the network using a common web browser. This eliminates the need for expensive client application software licenses. Web-based monitoring is read-only as a security precaution. The built-in SMTP mail client can be set up to send alarm messages to email addresses or to a mobile phone when an alarm occurs.

The **PowerAgent** is completely downloadable over the network, facilitating firmware upgrades and feature enhancements as they become available. The unit also contains a special "Watchdog timer" that monitors the cable modem and automatically resets it in case of a modem "hang" situation.

The **PowerAgent** is compatible with several popular brands of UPS power supplies merely by using the correct interface wire harness, and in some cases downloading new firmware to the unit.

More technical information about the technology built into the **PowerAgent** can be found in the PBT-NA-1 **nanoAgent™** datasheet. Contact Phoenix Broadband Technologies for more information.



Features:

- Allows a DOCSIS modem to monitor network UPS power supplies
- Built-in SNMP proxy agent implements SCTE/HMS monitoring standards
- No special software licenses or expensive controllers required
- Built-in web server allows convenient read-only monitoring from any computer on the network
- Built-in SMTP mail client sends alarm messages to email addresses or to a mobile phone.
- Fully downloadable operating firmware
- Provides power to cable modem, eliminating extra power module
- Built-in "watchdog timer" resets cable modem in event of a modem "hang"
- Versions available for legacy as well as new generation supplies



Monitoring Interfaces:

- Multi-wire analog/digital (software defined functionality)
- SCTE/HMS-022 serial interface

Measurements: (Alpha XM-2 example):

Analog Readings:

- AC output voltage; 1ea.
- AC output current; 2 ea.
- Total battery DC voltage; 1ea.
- Mains AC voltage; 1ea.

Digital Status:

- Cabinet tamper (ext switch required)
- Inverter standby status.
- Inverter run time counter.
- AC output failure
- AC input failure

Power:

- AC input voltage 45-105 VAC, square-wave, 50/60Hz.
- AC input power 14 watts max, including cable modem
- Cable Modem Power 12VDC nominal; 1.0 A max.

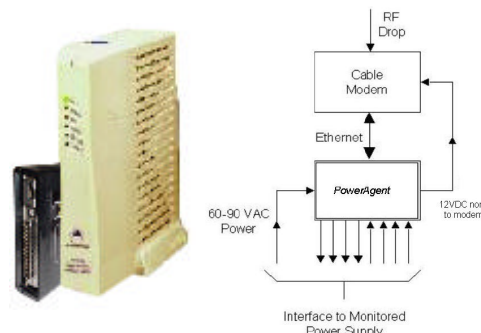
Environmental:

- Temperature -40C to +60C
- Humidity 0 to 95%; non-condensing

Mechanical:

- Size 3.25"W x 5.25"L x 1.20"H
- Construction Molded plastic
- Weight 0.6 lb nominal

Preliminary data subject to change.
Rev 1.6



SNMP Information:

The following HMS and SNMP standard MIBs are implemented in the Proxy Agent:

- ANSI/SCTE 36 2002 SCTE Root MIB
- ANSI/SCTE 37 2002 SCTE Tree MIB
- ANSI/SCTE 37 2002 HMS HFC Outside Plant MIB
- ANSI/SCTE 38-1 2002 HMS Property MIB
- ANSI/SCTE 38-2 2002 HMS Alarm MIB
- ANSI/SCTE 38-3 2002 HMS Common MIB
- ANSI/SCTE 38-4 2002 HMS Power Supply MIB
- ANSI/SCTE 38-7 2002 HMS TIB MIB.
- SNMP MIB2

The HMS MIBs are available at "<http://www.scte.org/standards>."

See the following PBT documents for more information:

- **netIntellAgents™** Product Overview
- PBT-NA-1 **nanoAgent™** datasheet

