

# Eaton UPS Connectivity Cards: Mini-Slot family

When you combine Eaton® UPSs with Mini-Slot connectivity cards, you can monitor, manage and remotely shutdown UPSs across the network.

For more information on the Mini-Slot family of connectivity cards, please visit [powerquality.eaton.com](http://powerquality.eaton.com).



## Network Card-MS

The Eaton Network Card-MS Web/SNMP Card allows you to connect your Eaton UPS directly to the Ethernet network and the Internet, supporting real-time monitoring and control of UPSs across the network via a standard Web browser, SNMP-compliant network management system or power management software.

### Features

- Provides versatile support through HTTP, SNMP, SMTP, Telnet, SSL and SSH compatibility
- Enables remote management of a UPS or rebooting of protected devices over SNMP/Web
- Customizable actions including automatic shutdown in the event of an extended power failure
- Data and event logging
- Receive email/SMS notification of alerts
- Compatible with SNMPv3 and IPv6



## Network and MODBUS Card-MS

The Eaton Network and MODBUS Card-MS provides continuous, reliable and accurate remote monitoring of a UPS system through a Building Management System (BMS) or Industrial Automation System (IAS). Enabling data to be integrated from the UPS into a wide variety of management systems, the use of the card allows for supervision of equipment from any network monitoring system using SNMP and traps, or any web browser.

### Features

- Facilitates UPS supervision across the network
- Customizable actions including shutdown in the event of an extended power failure
- Data and event logging
- Receive email/SMS notification of alerts
- Temperature/Humidity monitoring through Environment Sensor
- Easy deployment on large installed base



## Relay Card-MS

The Eaton Relay Card-MS enables automatic shutdown and network monitoring of UPS system status through a connected computer. A dedicated adapter that provides the essential dry-contact interface between your Eaton UPS and any relay-connected computer as well as a variety of industrial applications, the Relay Card-MS is compatible with all Eaton UPSs that have a Mini-Slot.



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## Technical Specifications

Network - MS & MODBUS - MS	
<b>Protocol support</b>	Fast ETHERNET, 10/100 Mbps, autonegotiation, HTTP 1.1, SNMP V1, SNMP V3, NTP, TFTP, SMTP, BOOTP/DHCP IPv6 Telnet, CLI, SSH, ARP
<b>UPS slot type</b>	Mini-Slot
<b>Network support</b>	Ethernet 10/100BaseT
<b>Temperature and humidity monitoring</b>	Yes
<b>Software support</b>	Intelligent Power® Software Suite, NetWatch, PowerVision, MultiView, any SNMP compliant Network Management System (NMS)
<b>Supported MIB</b>	MIB II - Standard IETF UPS MIB (RFC 1628) - Eaton Pulsar (ex MGE) MIB - Eaton Powerware (PowerMib)
<b>O/S supported for shutdown</b>	Microsoft Windows, UNIX, Linux, NetWare, Macintosh and SuSE (check <a href="http://powerquality.eaton.com">powerquality.eaton.com</a> for a detailed list of systems supported)
<b>Local language support</b>	English, French, German, Italian, Spanish, Chinese Simplified, Chinese Traditional, Japanese, Russian, Korean, Czech
<b>Operating temperature</b>	32 to 104° F
<b>Operating humidity</b>	90% RH max. without condensation
<b>Power input</b>	5 V - 12 V
<b>Current consumption</b>	300mA max.
<b>Dimensions (HxWxD, in)</b>	5.2 x 2.6 x 1.7
<b>Weight (oz)</b>	2.5
<b>Regulatory</b>	Same as UPS

Relay Card - MS	
<b>Supply voltage</b>	5 V +/- 5%
<b>Supply current (all relays activated)</b>	150 mA max.
<b>Supply current (all relays deactivated)</b>	15 mA max.
<b>Relay contacts (output)</b>	
<b>Double insulation (optocoupler)</b>	>4000V DC
<b>Max. contact resistance</b>	75 mOhm
<b>Max. switching voltage</b>	<40 V AC or <50 V DC
<b>Max. switching current</b>	1 A max (eg. for five contacts, 200 mA max. for each contact)
<b>Max. switching power</b>	40 W
<b>UPS slot type</b>	Mini-Slot

## MODBUS - MS

Functions	Parameters	Default values	Possible values
JBUS/MODBUS	Baud rate	9600 baud	1200, 2400, 4800, 9600, 19200 without parity, even parity
	Parity	Without parity	even, odd, none
	Slave number	1	1 to FF (hexadecimal)
	Communication	RS232	RS232, RS485 half duplex (w/ or w/o term.), RS485 full duplex (w/ or w/o term.)

### Compatibility of Mini-Slot cards with Eaton UPSs

#### Network Card-MS

Works with: 5130, 5PX, 9130, 9135, Evolution, Evolution S, EX, MX, MX Frame, EX RT, 9E

#### Network and MODBUS Card-MS

Works with: 9130, 9135, EX, MX, MX Frame, EX RT, 9E

#### Relay Card-MS

Works with: 5130, 5PX, 9135, Evolution, Evolution S, EX, MX, MX Frame, EX RT

### 5PX UPS rear view with Network Card-MS



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