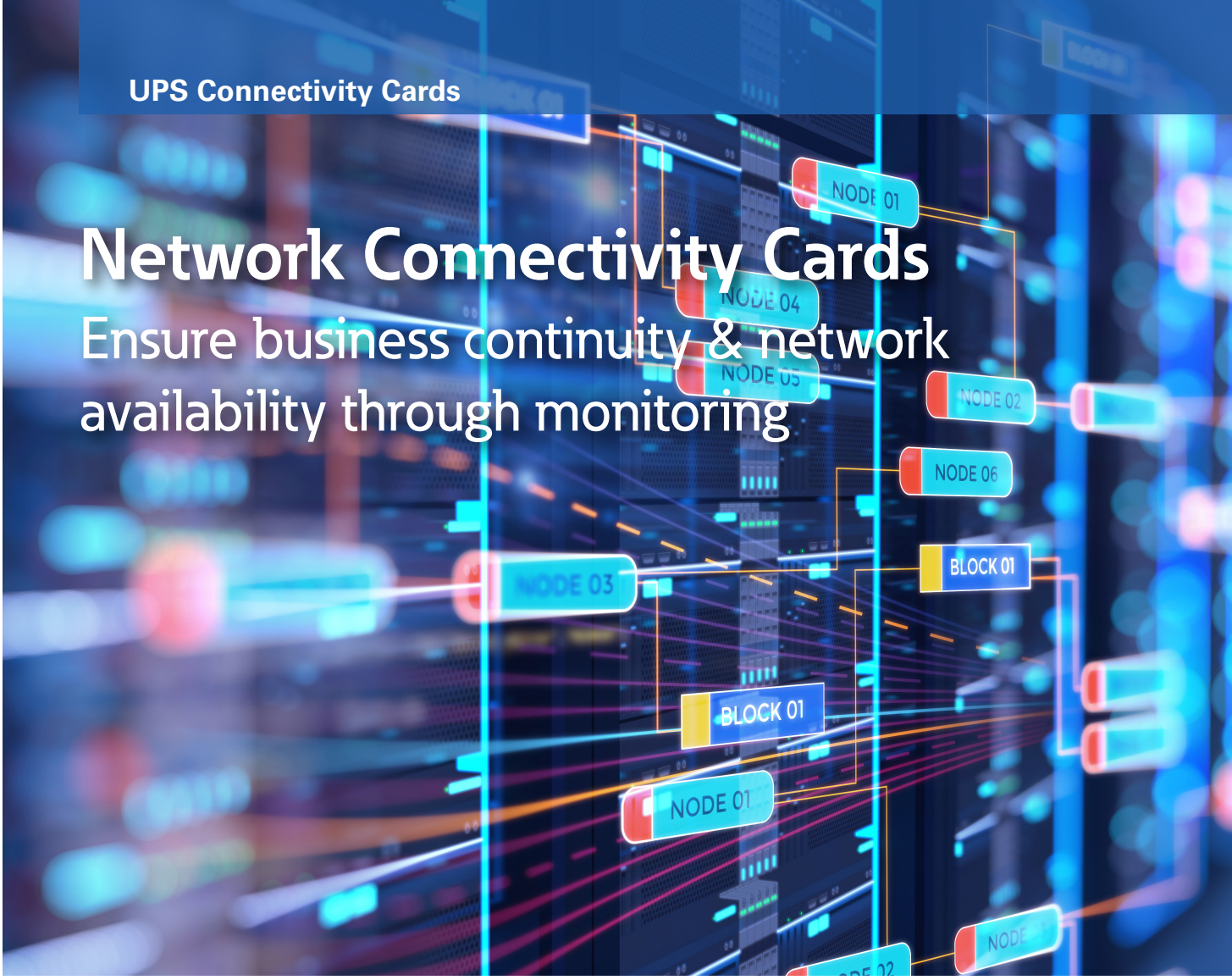


Network Connectivity Cards

Ensure business continuity & network availability through monitoring

Eaton's full range of network connectivity devices enables you to remotely monitor and manage your power quality equipment.

From outlet group energy consumption reports to temperature and humidity readings, connectivity devices give you full control of your IT environment from offsite. This high level of awareness and control allows you to take full advantage of helping ensure business continuity.

EATON

Powering Business Worldwide

Why a Network card?

Network cards allow for secure monitoring and control of an individual UPS by connecting it directly to the network.

This connectivity is the conduit for your device's data and information, providing status, alerts and remote capabilities. The notification features keep you informed of problems as they occur, avoiding shutdown in the event of an extended power outage, always keeping your business information safe.

Network card types:

Cloud

Access your UPS anytime from anywhere with Brightlayer Remote Monitoring.

IT-based

SNMP/MQTT cards connect UPSs to the network via Ethernet, provide you with a complete UPS monitoring, control and shutdown solutions in a networked IT environment. You can control it using your standard web browser.

Industrial protocols

Provide real-time management of UPSs by connecting to any Building Management System using Modbus TCP, RTU, and BACNet.

Relay

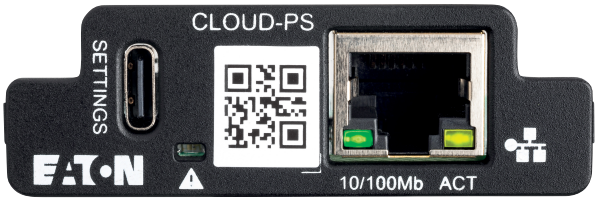
Provides the signal to your device through open or closed contacts.

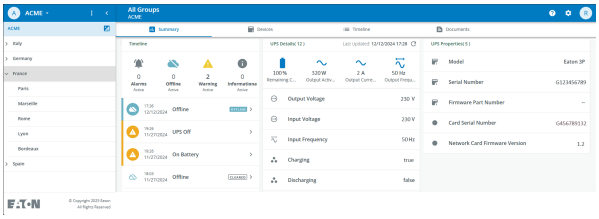
Environmental monitoring probe

Enables you to collect temperature, humidity and external probes dry contact states in rack enclosures and monitor environmental data remotely using Eaton's power monitoring solutions or a standard web browser.

Brightlayer Remote Monitoring and CLOUD-PS

Stay protected with Eaton's Cloud-Connected UPS solutions





In today's connected world, ensuring continuous operation and quick response to power issues is crucial. Eaton's cloud-connected UPS systems offer advanced features that provide real-time visibility and control over your power infrastructure, ensuring your organization stays connected and operational, no matter where you are.

Key features of Eaton's Cloud-Connected UPS systems

- **Remote monitoring:** Continuous, real-time monitoring of the UPS status, ensuring quick responses to potential issues
- **Remote access:** Access UPS information from anywhere, providing increased flexibility and convenience
- **Operational continuity:** Keep critical systems running and minimize downtime
- **Simplified management:** Manage multiple UPS units remotely, reducing the need for on-site support
- **Cost reduction:** Lower repair and replacement costs with proactive management

Function	Cloud connectivity
Catalog number	CLOUD-PS
Hardware compatibility	3P Ellipse
UPS slot type	Pico-slot
Network & Protocol support	IPv4, NTP, MQTT(s), DHCP, CLI, USB
Common connectors	Ethernet 10/100, USB-C for Configuration
Supported software	Brightlayer Cloud Remote Monitoring
Cloud Local language support	English, French, German, Italian, Spanish
Operating temperature	32 to 104° F (0 to 40° C)
Operating humidity	90% RH max. without condensation
Dimensions (H x W x D)	0.79 x 2.52 x 2.6 in. (20.4 x 64 x 66.4 mm)
Weight	0.09lbs (0.04Kg)
Regulatory	Same as UPS

Benefits of Cloud-Connected UPS systems

- **Higher availability:** Enhanced operational efficiency and customer experience
- **Proactive maintenance:** Extend the life of UPS devices with proactive maintenance and firmware updates
- **Advanced power conditioning:** Improve the reliability and performance of connected devices

Flexible licensing options

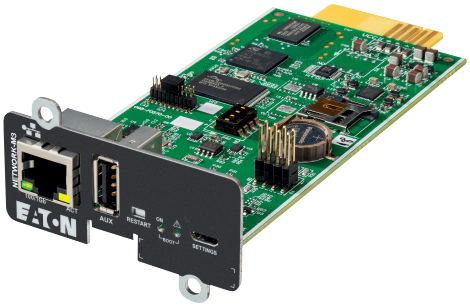
When you purchase the CLOUD-PS communication card, you receive a 1-year trial Advanced subscription and a 2-years Essential subscription. After the initial period, you can choose from the following licensing plans:

	Essentials	Advanced
Web/mobile app	●	●
Remote monitoring	●	●
UPS Alarm	●	●
Fleet Management (Site localization, tree view and sorting ...)		●
Multi organization management	Single	Multiple
UPS locator		●
UPS trends		●
Dashboard customization		●
Card firmware upgrades	●	●
Additional user creation		●

This flexible licensing ensures that your organization remains connected and operational with the level of service that best suits your needs.

Eaton Gigabit Network Card for IT

Eaton's Gigabit Network Card (Network-M3) UPS connectivity device expertly blends comprehensive power management with market-leading cybersecurity.



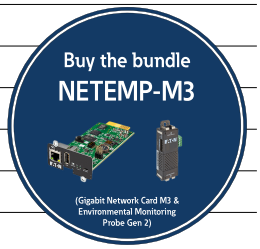
The Gigabit Network Card, the first to market with UL 2900-1 and IEC 62443-4-2 cybersecurity certifications, now features a zero-trust architecture in its M3 version. This enhancement makes it even more effective at protecting mission-critical systems in medium-sized and enterprise IT networks. Compatible with multiple Eaton power management software solutions, it allows extensive automation and remote management, shortening response times to power issues. The card provides IT managers with actionable intelligence to proactively address power problems before they cause downtime and to maximize power operation efficiency.

Details

- **Zero-trust architecture** minimizes cybersecurity vulnerabilities through hardware root of trust, enabling secure boot and a complete chain of trust.
- **Zero-touch provisioning** automatically configures network cards faster, saving time in large-scale deployments.
- **Eaton Brightlayer software** monitors and manages fleets of Gigabit Network Cards, enabling automated actions during power events, including graceful shutdown, HyperConverged infrastructure restart and reallocation of virtual machines to protect data and preserve business continuity.
- **User-configurable firewall** reduces an organization's attackable surface area and helps meet specific network/security compliance requirements.
- **REST API** allows organizations to easily integrate the network card with native systems and automate M2M interactions.

Eaton Gigabit Network Card

Function	Web/SNMP/MQTT communications
Hardware compatibility (global list)	UPS2: 5P, 5PX, 5PX G2, 5SC Rack, 9PX, 9SX, 9130, 9E, 93PS (fw 2.50->), 91PS, 91PS Monoblock, 93E 15-80 EMEA (fw 8.00.01->), 93E G2 EMEA (fw 4.0.20->), 93PX, 93T PDU: EATS16N
Network compatibility	IPv4/v6, TLSv1.2, HTTP(S)v1.1, NTP, SMTP(S), BOOTP/DHCP, SSH, SysLog(S), LDAP, AD, RADIUS
Catalog number	Network-M3
Protocol support	HTTPS1.1, MQTTS, TLS1.2, SNMPv1, SNMPv2c, SNMPv3, NTP, SMTPS, BOOTP/ DHCP, CLI, SSH, ARP and Syslog
UPS slot type	Mini-slot
Common connectors	Ethernet 10/100/1000BaseT, USB for accessories (ex: Environmental Monitoring Probe), USB configuration port
Temperature and humidity monitoring	Yes. Requires Eaton Environmental Monitoring Gen 2
Supported software	Intelligent Power Manager 2.7 and higher, Intelligent Power Protector 1.72 and higher, Brightlayer software and any SNMP compliant
Supported MIB	MIB II – Standard IETF UPS MIB (RFC 1628) – Eaton xUPS MIB
Supported browsers	Chrome, Edge
Local language support	English, French, German, Italian, Spanish, Chinese Simplified, Chinese Traditional, Japanese
Operating temperature	0 to 40° C
Operating humidity	90% RH max. without condensation
Power input	5 V – 12 V
Current consumption	500/1000mA max. depending on UPS
Dimensions (H x W x D)	41 x 66 x 135 mm
Weight	65 g
Regulatory	Same as UPS



Industrial protocols card
Eaton Industrial Gateway Card

The Industrial gateway card features the same cybersecurity protection as the Gigabit Network card and is designed for building management, industrial facilities and large data centers.

Industrial Gateway Card is compatible with the MODBUS and BacNET communications protocol.

The card enhances the protection given by the UPS by providing real-time monitoring of the UPS system and environment through a Building Management System (BMS) or Industrial Automation System (IAS). The card allows facility managers to monitor the state of the UPS, power conditions, temperature and humidity within the UPS network, enabling early warning of any threats to the system.

Details

- **Gigabit speed**: compatible with better performing, cost effective and widely deployed gigabit network switches. Compliance with Gigabit only data center networks
- **Cybersecurity** enhancements, including stronger encryption, configurable password policy and usage of CA and PKI signed certificates
- **Real-time clock** with battery backup and NTP
- **Increased memory** for improved operation and larger data storage
- **Modern user experience** with latest web technology
- **Secure SMTP** for email alerts
- **LDAP/ActiveDirectory and Radius** for centralised user authentication
- **Syslog integration**

Eaton Industrial Gateway card

Function	Web/SNMP/Modbus communications
UPS supported	5SC rack or RT, 5P, 5PX, 5PX G2 , 9SX, 9PX,9E, 93PM, 9PHD, 93PS, 91PS, 93PS Marine, 9395X
Compatible with	SNMP v1/v3 and IP v4/v6
Catalog number	INDGW-M2
Network	Gigabit ETHERNET, 10/100/1000Mb/s, auto negotiation, HTTP 1.1, SNMP V1, SNMP V3, NTP, SMTP, DHCP + BacNET
UPS slot type	Mini-Slot
Network support	Ethernet 10/100/1000BaseT
ModBus	2/4 wire RTU and TCP
Temperature and humidity monitoring	Yes, only with the Eaton Environmental Monitoring Probe Gen 2 (up to 3 sensors daisy-chained)
Software Support Network Management System (NMS)	Intelligent Power Manager 2.7 and higher, Intelligent Power Protector 1.72 and higher, Brightlayer Datacenter Software Suite and any SNMP compliant
Supported MIB	MIB II – Standard IETF UPS MID (RFC 1628) – Eaton PowerMib (XUPS.MIB) O/S supported for shutdown Microsoft Windows, UNIX, and Linux (check powerquality.eaton.com for a detailed list of systems supported)
Local language support	English, French, German, Italian, Spanish, Chinese Simplified, Chinese Traditional, Japanese
Operating temperature	0°C to 70°C
Operating humidity	5%-95%, noncondensing
Power input	5 V – 12 V
Current consumption	500/1000mA max. depending on UPS
Dimensions (H x W x D)	132 x 66 x 42 mm
Weight	70 g
Regulatory	Same as UPS

Environmental Monitoring Probe Gen2

The Environmental Monitoring Probe Gen 2, is a second-generation environmental monitoring probe.

Our latest EMP maintains all the functionality of the previous generation of sensors (temperature, humidity and dry-contact monitoring) while adding the ability to be daisy-chained (up to 3 per host), allowing multiple sensor connection to a single host.

This enhances the richness of rack level environmental data for the top, middle and bottom of the rack. Temperature, humidity, and contact status can be viewed with a Web browser through the Network user interface. Hot-swap feature simplifies installation to enable you to install the probe without turning off the power to the device or to the loads that are connected to it. The EMP monitors the status of the two user-provided contact devices and can be located 50m from the network card using standard CAT5 network cable. The probe is delivered with a screw and screw anchor, nylon fasteners, tie wraps, and magnets.

Eaton Environmental Monitoring Probe Gen 2

Product snapshot

Type	Environmental monitoring device
Compatibility	Gigabit Network Card Network-M3, Industrial Gateway-M2, Industrial Gateway-X2 UPS cards, G3 Rack PDUs and G4 Rack PDUs
Operating Temperature	0 ° C to 70 ° C with an accuracy of ± 2 ° C
Operating humidity	10% to 90% with an accuracy of ± 5%
Dimensions (L x W x H)	57 x 37 x 29 mm
Weight	34 g
Catalog number	EMPDT1H1C2

IT-based & Industrial protocols

Industrial Gateway-X2 card (Indgw-X2)

Combines the features of an SNMP agent, HTTP/ModBus and BacNET

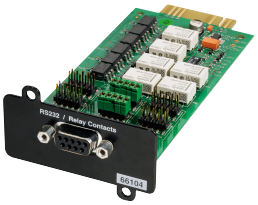
Catalog Number	INDGW-X2
Network features	IPv4/v6, TLSv1.2, HTTP(S)v1.1, NTP, SMTP(S), MQTT(S), BOOTP/DHCP, SSH, SysLog(S), LDAP, AD, RADIUS
Management protocols	SNMPv1/v3, RestAPI, Modbus TCP/RTU, BacNet/IP
Common Connectors	Ethernet 10/100/1000BaseT, USB for accessories (Environmental probe f.i.), USB configuration port
Additional connectors	Modbus RTU 2/4 wire
Connection	X-Slot
Supported Devices	BladeUPS, 9155, 9355, 9395, 9395P

Gigabit speed: compatible with better performing, cost effective and widely deployed gigabit network switches

- Compliance with Gigabit only data center networks
- Cybersecurity enhancements for UL 2900-1 and IEC 62443-4-2 certifications, including stronger encryption, configurable password policy and X.509 Public Key Infrastructure
- Real-time clock with battery backup and linkage to NTP (Network Time Protocol) server
- Increased memory for improved operation and larger data storage
- Advanced Management with RESTful API over HTTPS
- Secure SMTP for email alerts

Relay

Relay card MS (Relay-MS)



Provides communication through voltage free relays or RS-232.

- Installation in Eaton Mini-Slot Enhancement Bay
- 1 x 9-pin Dsub connector
- 1 x RS232 or 5 x Relay output / 1 x Input

Industrial relay card MS (INDRELAY-MS)

Provides communication through voltage free relays.

- Installation in Mini-Slot Enhancement Bay
- Terminal connectors, 250 VAC/5A rating
- 5 x Relay output / 1 x Inpu

X-Slot Industrial Relay Card (103003055)

Provides Form-C Relay contacts (5A @ 250V) for UPS integration into security and alarm systems. It also provides signal information for the remote monitoring device.

- SNMP, HTTP, SMTP, WAP and Telnet compatible
- Terminal block (on the card where each wire needs to be manually attached)
- 250 VAC, 30 VDC@5A, terminal block wire size range 16-24 AWG

UPS/network connectivity compatibility

		3P Ellipse	5SC	5P	5PX	5PX G2	9SX	9PX	9E	EATS16N	9PHD
	Card Slot type	Pico-Slot	Mini-Slot	Mini-Slot	Mini-Slot	Mini-Slot	Mini-Slot	Mini-Slot	Mini-Slot	Mini-Slot	Mini-Slot
	UPS # phases	1-ph	1-ph	1-ph	1-ph	1-ph	1-ph	1-ph	1-ph	N/A	3-ph
	Gigabit Network card M3		✔	✔	✔	✔	✔	✔	✔	✔	
	Gigabit Network card EOL		✔	✔	✔		✔	✔	✔		
	Industrial Gateway		✔	✔	✔	✔	✔	✔	✔		✔
	Industrial Gateway X-Slot										
	CLOUD-PS Card	✔									
	Relay Card-MS			✔	✔	✔	✔	✔	✔		
	Industrial Relay Card-MS										✔
	X-Slot Industrial Relay card										
	Environmental Monitoring Probe gen 2	Network cards M2/M3/X2, Rack PDUs G3/G4									
	Door contact sensor	EMPDT1H1C2									
	Water leak detector	EMPDT1H1C2									

93E	93GEN2	91PS	93PS	93PX	93PM	93PMGen2	93T	9395X	9355	9395	9395P	BladeUPS	9155
Mini-Slot	Mini-Slot	Mini-Slot	Mini-Slot	Mini-Slot	Mini-Slot	Mini-Slot	Mini-Slot	Mini-Slot	X-Slot	X-Slot	X-Slot	X-Slot	X-Slot
3-ph	3-ph	3-ph	3-ph	3-ph	3-ph	3-ph	3-ph	3-ph	3-ph	3-ph	3-ph	3-ph	3-ph
✔	✔	✔	✔	✔			✔						
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									✔	✔	✔	✔	✔

Reduce your cybersecurity risk

Eaton's Gigabit Network Card and Industrial Gateway Card are the first in the industry to receive UL 2900-2-2 certification, ensuring it has been reviewed and tested, and meets the benchmark of this trusted brand.

Encryption

- Only secure protocols enabled by default
- Firmware is signed and encrypted, and will not boot if tampered with
- Secure SMTP for email alerts

Password management

- Requires change of password on setup
- Configurable requirements for password complexity
- Certificate based authentication in machine to machine connections— no username/password information saved on the client machine, separate certificates for each protocol

What is UL 2900-2-2?

With more connected devices than ever, Underwriters Laboratories (UL) understands that there is increasing risk of cybercrime occurring through network connected devices. UL has developed a standardized process to assess the vulnerability of connected devices to known malware and protect business from these risks. The UL 2900- 2-2 certification is UL's global standard for connected device cybersecurity.

Products undergo extensive testing, including vulnerability assessments on network protocol. The Eaton Gigabit Network Card was assessed for SSH, SNMPv3, NTP, SMTPS,DHCP and MQTT via TLS 1.2.

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Eaton
EMEA Headquarters
Route de la Longeraie 7
1110 Morges, Switzerland
eaton.com/gigabit-network-card

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