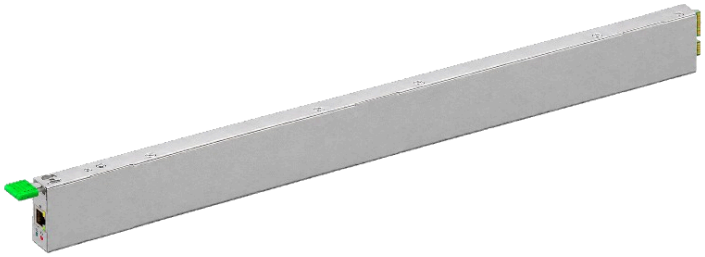
XTREME POWER CONVERSION **PMC**

Power Monitoring Controller // Ethernet and Redfish management for XPC DC power shelves



Standards-Based Monitoring for Every Shelf

The PMC is the hot-pluggable controller in every XPC DC power and battery shelf. It collects telemetry, alarms and inventory from up to six modules and presents them to the rack management network over DMTF Redfish.

A gigabit Ethernet port connects each shelf directly to the top-of-rack switch. A built-in web interface, settable thresholds, event subscriptions and on-demand waveform capture come standard.

Security is built into the hardware: a hardware root of trust, signed firmware with anti-rollback, role-based access and a full audit log.

USED IN

AX8-110 | AX8E-110 | DX8-90 | AX5-33

One PMC per shelf. The same controller, interface and software across XPC DC products.

PRODUCT SNAPSHOT

- DMTF Redfish over HTTPS, with built-in web interface
- 1 × 10/100/1000BASE-T RJ45 to the top-of-rack switch
- Monitors up to six PSU or battery modules per shelf
- Powered by the shelf or by PoE; logs stay readable on PoE
- Hot-pluggable without interrupting shelf power
- Firmware updates for the PMC and modules through Redfish

FEATURES

Per-Module Telemetry
Input and output voltage, current and power, fan speeds and temperatures

Waveform Capture
On-demand capture of six internal signals for diagnostics

Thresholds and Events
Settable on every sensor, with Redfish event subscriptions

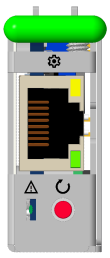
Secure by Design
Hardware root of trust and signed firmware with automatic recovery

Rack Power Reporting
1-second average, peak and minimum

Role-Based Access
Four roles and a complete audit log

FRONT PANEL

Latch: green insertion and extraction handle; seats the card-edge connector.
RJ45: gigabit Ethernet management port with PoE input; link and activity indicators.
Status LED: blue for power, amber for an active fault or service condition.
Reset: recessed button; hold to clear a fault, hold longer to restart the network connection.

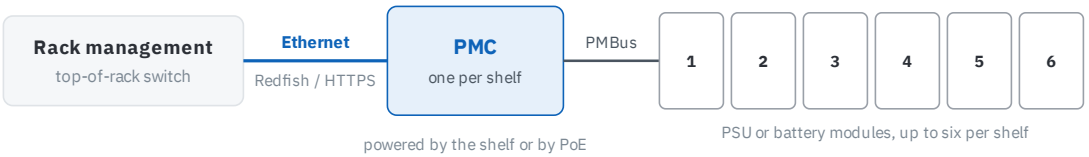


SPECIFICATIONS

For more information, visit **www.xpcc.com**

SPECIFICATION		PMC
MANAGEMENT	Interface	DMTF Redfish over HTTPS, with built-in web interface; plaintext HTTP disabled
	Network port	1 × 10/100/1000BASE-T RJ45, to the top-of-rack management switch
	Addressing	Static IPv4 or DHCP
	Events and reports	Redfish event subscriptions; scheduled metric reports; optional UDP telemetry stream
MONITORING	Managed modules	Up to six PSU or battery modules per shelf
	Per-module readings	Input and output voltage, current and power; fan speeds; hotspot, inlet and outlet temperatures
	Shelf readings	Output load, average output current, current share; busbar clip temperatures on busbar shelves
	Rack power	1-second average, with peak and minimum
	Thresholds	Settable on every sensor, with caution and critical events
	Inventory	Product name, part and serial numbers, manufacturing date, hardware and firmware versions, asset tag
	Logging	System, security and audit logs; module black-box data where supported; oldest entries overwritten when full
CONTROL	Module actions	Per-module on, off and restart; shelf-wide on or off; latched fault reset
	Redundancy	Settable minimum number of available modules per shelf; shelf reports degraded below it
	Battery test	State-of-health test, one battery module at a time
	Waveform capture	On-demand capture of bulk capacitor voltage, DC output voltage and current, AC input voltage and current
	Locate	Module locate indicator, set remotely
FIRMWARE & SECURITY	Firmware update	PMC and module firmware through Redfish; modules updated one at a time without interrupting shelf power
	Root of trust	Hardware root of trust; signed firmware with anti-rollback; automatic recovery to a known-good image
	Access control	Administrator, Operator, ReadOnly and ServiceOperator roles; every change recorded in the audit log
	Certificates	Unique device certificate; customer CA-signed HTTPS certificates supported
	Service access	SSH disabled by default; enabled only for authorized maintenance
ELECTRICAL	Power input	50 VDC from the shelf, or IEEE 802.3af PoE (Class 3) on the management port; 8 W maximum
	Power loss	On PoE, logs and inventory remain readable if the shelf loses power
	Hot plug	Insert or remove without interrupting shelf power
MECHANICAL	Format	Card-edge module, blind-mate, latch-retained; front panel shown on page 1
ENVIRONMENTAL	Operating temperature	–5 to +45°C inlet; operates within the host shelf's limits
	Humidity	10 to 90%, non-condensing
	Altitude	3050 m (10,000 ft)
	Cooling	Fanless; cooled by shelf airflow
	Compliance	Qualified as part of the host shelf; RoHS, REACH

HOW THE PMC CONNECTS



Each shelf connects to the management network through its own PMC.
Power conversion, battery operation and protection stay inside each module; the PMC monitors and coordinates.

PRELIMINARY. Specifications subject to change. Product not yet in production.

XPC USA / Denver, CO / dcsales@xpcc.com
www.xpcc.com

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PRELIMINARY