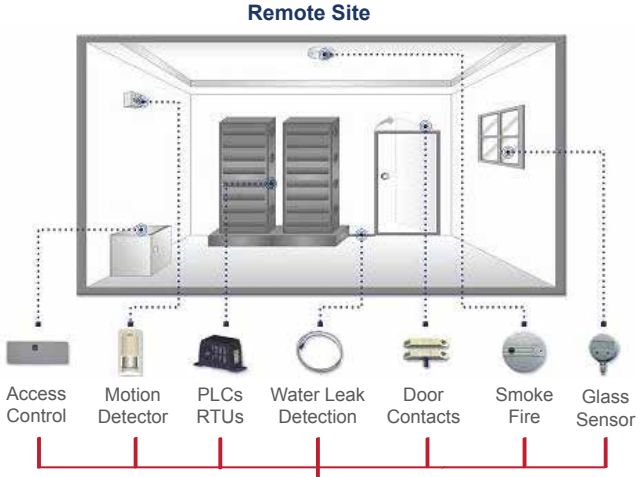
opengear

Industrial Device Server Solutions
Comprehensive Remote Monitoring and Access to Distributed Sites

Industrial Device Servers

The ACM5004-2-I industrial device servers provide a secure monitoring and control solution for managing all the IT infrastructure and edge devices in remote locations. The products feature rugged metal enclosures, captive power terminal blocks and the widest range of serial, USB or digital I/O interfaces available. Opengear also offers extended temperature models that are designed for managing equipment in utility plants, pipelines and other remote locations requiring a hardened solution.

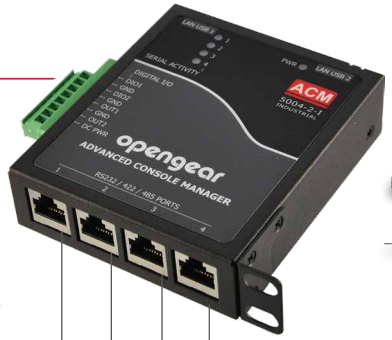
The ACM5004-2-I reduces operating costs by limiting service disruptions and providing administrators complete remote hands, including power cycling equipment. Routine upgrades and patch fixes can leave remote site equipment unresponsive that will require a truck roll. Configure and script automated recovery solutions into the ACM5004-2-1 for rapid problem resolution. Store local copies of running configurations and IOS, manage ping detect reboots and pattern match alerting to quickly recover equipment from the serial console.

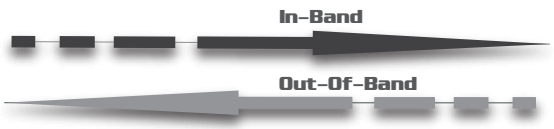


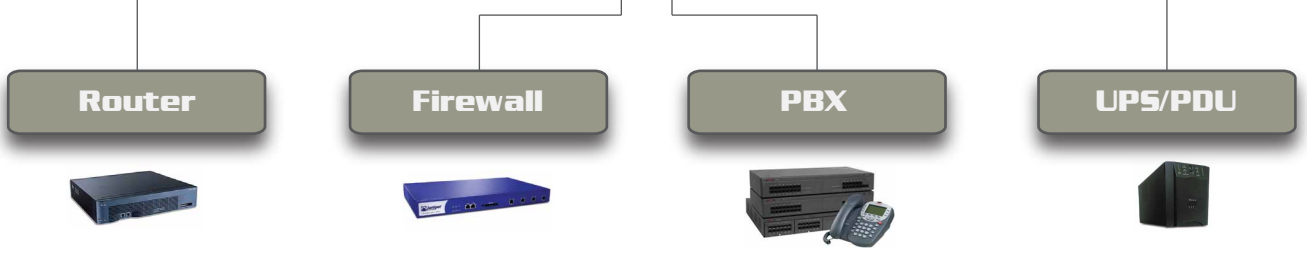
- **4 RS-232/422/485 Serial Console Ports**
  Cisco compatible pinout, manage routers, switches, firewalls
- **External USB for Flash Memory**
  TFTP server, store local running config files and IOS
- **Internal Temperature Monitor**
  Monitor ambient temperature in wiring closets, enclosures
- **4 Digital I/O's for external sensor support**
  Door contacts, Water leak detection, Smoke & Fire alarms, all closely monitored with advanced alerting mechanisms
- **High Temperature Models**
  Ambient operating temperature: -35° to 74° C (-31° to 165° F)
- **UPS and PDU Management**
  Script automatic ping detect reboots, monitor remote UPS systems, initiate graceful shutdowns and power shed devices
- **Extensive Monitoring and Alerts**
  Monitor attached devices and sensors using Solarwinds, Zenoss, Nagios, CMS6000 and trigger proactive alerts

4 x Digital I/O Ports
- 2 TTL level digital I/O ports. 5V max @ 20mA.
- 2 High-Voltage digital output ports (>5V to <= 30V@ 100 mA)

4 x RS-232/422/485 Serial Console Ports
- Software Selectable Serial Interfaces for devices managed via CLI
- Cisco Compatible RS232 Cabling, use straight cat5 cable to consoles







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Minimize Truck Rolls With Self Healing Solutions

Lose connectivity to a remote site? Set a ping detect reboot on a switched PDU to power cycle a locked up router or edge device. Store local copies of running configurations inside the available TFTP server on-board the ACM5004-2-I. If ever you need to field replace a router, switch or firewall you can simply flash over the last running configuration and restore connectivity.

Thanks to our flexible platform we can execute custom scrips triggered by particular events or alerts. With our early alert system, users can build alerts based on regular expressions passing through the serial stream on the console ports to watch for patterns that may indicate early stages of trouble. Common applications for pattern match alerting are threshold limits on VOIP switches, intrusion detection, PBX SMDR messages and common console errors.

Technical Specifications

Connectors:
4 software selectable RS232/422/485 serial ports (Cisco compatible RJ-45 pinout)
2 RJ-45 10/100Base-T primary Ethernet port
2 External USB-2 expansion connectors
2 TTL level digital I/O ports. 5V max @ 20mA.
2 High-Voltage digital output ports (>5V to <= 30V@ 100 mA)

Power

ACM5004-2-I: Includes Two Power Supplies both AC & DC:
48v DC | +/-36V to 72VDC (to 12V) external power converter
110-240V AC | 110-240V AC to 12V DC power adapter
externally power from +9V to 30 VDC or 9V to 24 VAC source
Screw terminal block or barrel connector
Power Consumption less than 6W

ACM5004-2-I-SDC

36-72V DC to 12V DC external power converter
Also supllied with 110-240V AC external power adapter

ACM5004-2-T

+/-36V to 72VDC (to 12V) external power converter
Also supllied with 110-240V AC external power adapter (for operations up to 50° C only)
Dimensions - 4" x 3.5" x 1 1/8" (10.2 x 8.8 x 2.8 cm)

Environmental

Humidity: 5% to 90%, Internal temperature sensor

ACM5004-2-I and ACM5004-2-I-SDC

Ambient operating temperature: 5°C to 50°C (41°F to 122°F)
Non operating storage temp: -30°C to +60°C (-20°F to +140°F)

ACM5004-2-T

Ambient operating temperature: -35° to 74° C (-31° to 165° F)
Non operating storage temp: -40° to 85° C (-40 to 185° F)

Emissions

FCC Part 15 Subpart B Class A Radiated Emissions 30MHz – 1000MHz
ICES-003 Issue 4 February 2004 Class A Radiated Emissions 30MHz – 1000MHz
AS/NZS CISPR 22: 2004 Class A Radiated Emissions 30MHz – 1000MHz
EN55022: 1998 + A1: 2000 + A2: 2003 Class A Radiated Emissions 30MHz – 1000MHz

Immunity

EN55024: 1998 +A1: 2001 +A2: 2003
IEC61000-4-2: 1995 ESD 8kV Air Discharge (Direct), 4kV Contact Discharge (Direct/Indirect)
IEC61000-4-3: 1995 Radiated Immunity 3.0V/m, 1KHz AM Sine Wave at 80%
IEC61000-4-4: 1995 EFT/Burst 1.0kV Power Lines, 0.5kV I/O Lines
IEC61000-4-5: 1995 Surge Immunity 1.0kV Common Mode, 1.0 kV Differential Mode
IEC61000-4-6: 1996 Conducted Immunity 3.0 Vrms, 80% AM Modulated (1KHz)

Isolation

Serial Port: 4 kV ESD protection on RS232 and RS422/485 transceivers
Ethernet Port: 1500 VAC isolation shielded with shield connected to chassis ground for signal integrity and ESD protection

Other Agency Approvals

UL 1950, TUV, C-Tick, RoHS compliant

CPU

250Mhz Micrel KSZ8692 ARM9 System on Chip

Memory

32MB DDR RAM, 16MB Embedded Flash, Optional xGB USB Flash

Operating System

Linux with source code access, Custom development kit (CDK)

Part Number	Description
ACM5004-2-I	RS232/422/485 with digital I/O. External AC power supply
ACM5004-2-I-SDC	-48v DC power supply, RS232/422/485, digital I/O
ACM5004-2-T	High temperature, RS232/422/485, digital I/O. Requires external power source

solarwinds TECHNOLOGY PARTNER
Zenoss Ready Partner
Nagios Technology PARTNER
CISCO PARTNER Registered
FIPS VALIDATED 140-2