G304

Unmanaged 4-Port Rugged Industrial Ethernet Switch with PoE+ 3U CompactPCI Serial

- » Unmanaged 4-port rugged Ethernet switch
- » 4 Gigabit Ethernet (front) on RJ45 (M12 optional)
- » Power over Ethernet (PoE+) PSE (all ports)
- » LEDs for link and activity status
- » 1 Gigabit Ethernet on rear I/O (optional)
- » -40°C to +85°C (screened)
- » EN 50155 class TX (railways)
- » PICMG CPCI-S.0 CompactPCI Serial

Unmanaged Industrial Ethernet Switch

The G304 is an unmanaged 3U Ethernet switch implemented as a CompactPCI Serial board. It occupies one peripheral slot, using a 4 HP front panel with 4 Gigabit Ethernet ports on RJ45 connectors, and one direct Ethernet connection to the CPU card using PCI Express on P1. Options include M12 front connectors, and a P6 connector to extend the number of Ethernet channels available on the board to six.

Reliable Communication System Component

The G304 supports full-duplex and half-duplex operation with auto-negotiation, high-speed nonblocking store-andforward switching. Its built-in test mechanisms make the G304 an even more reliable component in the communication system.



In addition, the switch can act as Power over Ethernet Plus (PoE+) Power Sourcing Equipment (PSE), supplying other devices on all ports with up to 30 W (class 0, 1, 2, 3, 4) per port for power according to IEEE 802.3 Section 2 -Type 1 and 2 (formerly known as IEEE 802.3at). The maximum power available for one G304 is limited to 61.6 W, according to CPCI-S.0 specification.

Compliant to Railway Standards

The board is specifically designed for rugged mobile communication systems. It is therefore, for example, fully compliant with the EN 50155 railway standard, screened for a -40 to +85°C operation temperature and ready for coating.











Switch Key Features	 High-speed non-blocking, store-and-forward switching Port configuration: copper, 10/100 and 1000 Mbit/s Auto-negotiation / Auto MDI/MDIX crossover on all ports 8K MAC address lookup table with automatic learning and aging Port-based VLANs
Power Over Ethernet	 PSE (Power Sourcing Equipment) Supported standard: IEEE 802.3 Section 2, Type 1 and 2 Supply classes: 0, 1, 2, 3, 4 Number of powered devices: up to four (up to 61.6 W total)
Front Interfaces	 Ethernet Four RJ45 connectors, 10/100/1000BASE-T, or Four 8-pin M12 connectors, X-coded, 10/100/1000BASE-T Eight link and activity LEDs (two per channel)
Rear Interfaces	 Ethernet One Gigabit Ethernet 1000BASE-T port on CompactPCI P1, uplink One Gigabit Ethernet 10/100/1000BASE-T port on CompactPCI P6 (optional)
Backplane Standard	 Compliance with CompactPCI Serial PICMG CPCI-S.0 Specification Peripheral slot Host connection: One PCI Express x1 link, PCIe 1.x Used as Ethernet switch uplink
Electrical Specifications	 Supply voltage +12 V (-3%/+5%) Power consumption 7 W approx. (without PoE) 85 W max. (with PoE) Isolation voltage IEE802.3 (2012), Section 1; 9.7 Electrical Isolation - Environment A for 500 V (with M12 connectors), or IEE802.3 (2012), Section 1; 9.7 Electrical Isolation - Environment B for 1500 V (with RJ45 connectors)
Mechanical Specifications	 Dimensions 3U, 4 HP Weight 348 g (with M12 connectors)
Environmental Specifications	 Temperature range (operation) -40°C to +85°C (screened) Airflow: 1.0 m/s Temperature range (storage): -40°C to +85°C Cooling concept Air-cooled, or Conduction-cooled in MEN CCA frame Relative humidity (operation): max. 95% non-condensing Relative humidity (storage): max. 95% non-condensing Altitude: -300 m to +3000 m Climatic tests according to EN 68068 Shock: EN 61373 Vibration: EN 61373 Conformal coating; optional

Technical Data

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Reliability	MTBF: 1 040 974 h @ 40°C according to IEC/TR 62380 (RDF 2000)
Safety	 Flammability UL 94V-0
EMC	 EN 55022 (radio disturbance) IEC 61000-4-2 (ESD)

IEC 61000-4-4 (burst)



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Up-to-date information, documentation and ordering information: www.men.de/products/g304/

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