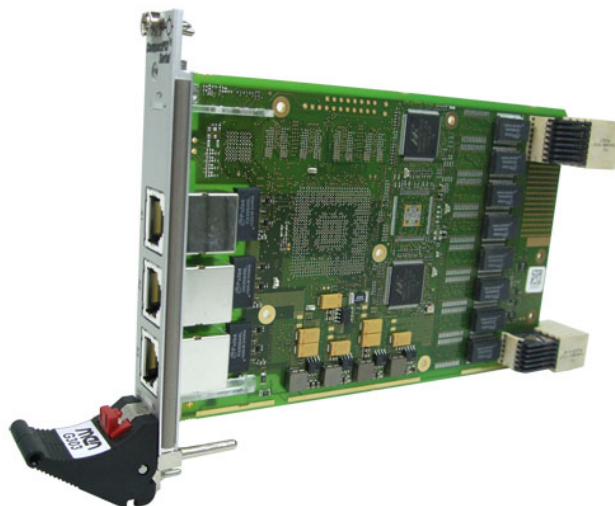


G303 – 3U CompactPCI® Serial Industrial Ethernet Switch

- **Unmanaged 16-port rugged Ethernet switch**
- **Up to 16 Gigabit Ethernet ports on rear I/O**
- **Or 3 ports on front and up to 13 ports on rear**
- **LEDs for front port and board states**
- **-40 to +85°C with qualified components**
- **EN 50155 class TX compliant (railways)**
- **PICMG CPCI-S.0 CompactPCI® Serial peripheral card**

The G303 is an unmanaged 3U Ethernet switch implemented as a CompactPCI® Serial board. It occupies one peripheral slot, using a 4 HP front panel with 3 Gigabit Ethernet ports on RJ45 or M12 connectors. The G303 either features three Ethernet ports on the front and up to 13 Ethernet ports on the rear or alternatively all 16 Ethernet ports on the rear, which is the ideal solution for conduction cooling.

The G303 supports full-duplex and half-duplex operation with auto-negotiation, high-speed non-

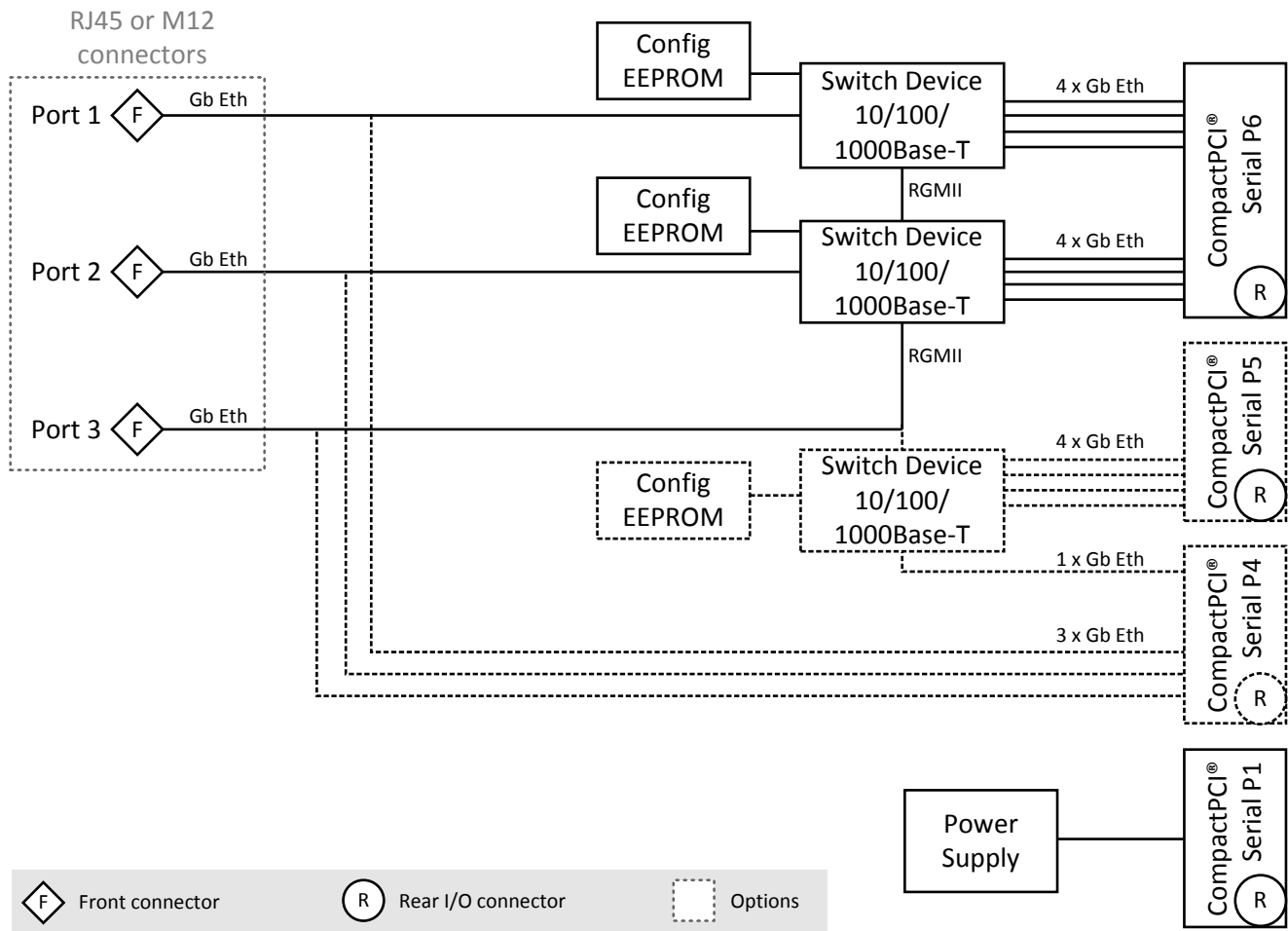


blocking store-and-forward switching, Quality of Service (QoS) support with four traffic classes IEEE 802.1p. Its built-in test mechanisms make the G303 an even more reliable component in the communication system.

By using an application-specific configuration EEPROM, the G303 can act similarly to a managed switch with fixed settings. This enables features untypical of unmanaged models like 802.1p priority and port-based priority, port-based VLAN or IEEE 802.1q VLAN IDs.

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

Diagram



Technical Data

Key Features	<ul style="list-style-type: none"> ■ High-speed non-blocking, store-and-forward switching ■ Up to three 10/100/1000Base-T ports at front panel (Electrical isolation: 1500 Vrms) ■ Up to sixteen 10/100/1000Base-T ports at rear connector (Electrical isolation: 100 Vrms) ■ Port configuration: copper, 10/100 and 1000 Mbit/s ■ Auto-negotiation / Auto MDI/MDIX crossover on all ports ■ Layer2-based Policy Control List ■ 8K MAC address lookup table with automatic learning and aging ■ Up to 4096 VLANs
Supported Protocols and Standards	<ul style="list-style-type: none"> ■ Energy Efficient Ethernet (IEEE 802.3az) ■ Ethernet flow control (IEEE 802.3x) ■ Link aggregation LACP / EtherChannel (IEEE 802.3ad, 2005) ■ Priority-based switching, Quality of Service/DiffServ, tagged frames, Layer2-based 801.1Q VLAN-ID packet routing (IEEE 802.1p) ■ Port-based authentication on registered MAC Address Lists ■ VLAN/port-based VLANs GVRP/MVRP (IEEE 802.1Q Rev D5.0, 2005)
Front I/O	<ul style="list-style-type: none"> ■ Three Ethernet ports on RJ45 or M12 connectors ■ Six link and activity Ethernet status LEDs (2 per channel)
Rear I/O	<ul style="list-style-type: none"> ■ Up to 16 Ethernet links
CompactPCI® Serial	<ul style="list-style-type: none"> ■ Compliance with CompactPCI® Serial PICMG CPCI-S.0 Specification ■ System or Peripheral slot
Electrical Specifications	<ul style="list-style-type: none"> ■ Supply voltage/power consumption <ul style="list-style-type: none"> □ +12 V (+/-10%), approx. 13 W max.
Mechanical Specifications	<ul style="list-style-type: none"> ■ Dimensions: conforming to CompactPCI® Serial specification for 3U boards ■ Front panel: 4HP with ejector ■ Weight: 156 g (with RJ45 connectors)/tbd g (with M12 connectors)
Environmental Specifications	<ul style="list-style-type: none"> ■ Temperature range (operation): <ul style="list-style-type: none"> □ -40..+85°C (qualified) □ Airflow: 1.0 m/s ■ Temperature range (storage): -40..+85°C ■ Relative humidity (operation): max. 95% non-condensing ■ Relative humidity (storage): max. 95% non-condensing ■ Altitude: -300 m to +3000 m ■ Shock: 50 m/s², 30 ms (EN 61373) ■ Vibration (function): 1 m/s², 5 Hz - 150 Hz (EN 61373) ■ Vibration (lifetime): 7.9 m/s², 5 Hz - 150 Hz (EN 61373) ■ Conformal coating on request ■ Climatic tests according to EN 68068 ■ Fully EN 50155-compliant (Power Interruption Class 2, Temperature Class Tx)
MTBF	<ul style="list-style-type: none"> ■ 887 895 h @ 40°C according to IEC/TR 62380 (RDF 2000)
Safety	<ul style="list-style-type: none"> ■ Flammability <ul style="list-style-type: none"> □ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers
EMC Conformity	<ul style="list-style-type: none"> ■ EN 55022 (radio disturbance) ■ EN61000-4-2 (ESD Immunity) ■ IEC 61000-4-4 (burst)

Configuration & Options

Options

Ethernet Switch	<ul style="list-style-type: none"> ■ Managed version G302
Front Connectors	<ul style="list-style-type: none"> ■ RJ45 connectors or M12 connectors
Front I/O, Rear I/O	<ul style="list-style-type: none"> ■ Flexible combination of front and rear ports <ul style="list-style-type: none"> □ Three ports on front and up to 13 ports on rear □ Up to 16 ports on rear (suitable for conduction cooled version)
Environmental specifications	<ul style="list-style-type: none"> ■ Conformal coating
Cooling Concept	<ul style="list-style-type: none"> ■ Also available with conduction cooling in MEN CCA frame

Please note that some of these options may only be available for large volumes. Please ask our sales staff for more information.

Ordering Information

Standard G303 Models	02G303-00	G303, 3U CompactPCI® Serial, 11-port unmanaged Gigabit Ethernet switch, 8 links on backplane plus 3 RJ45 on front, -40..+85°C with qualified components
Related Hardware	02G302-00	G302, 3U CompactPCI® Serial, 11-port managed Gigabit Ethernet switch, 8 links on backplane plus 3 RJ45 on front, -40..+85°C with qualified components
Documentation	Compare Chart 3U CompactPCI® Serial CPU and I/O cards » Download Compare Chart Industrial Ethernet switches for different platforms » Download 20G303-00 G303 User Manual	

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