Up to 16-Port Layer2/Layer3 3U CompactPCI Switch

» Fully managed layer2 and layer3 switching and routing
» Leading edge technology based on BCM56226
» Front panel design with RJ45 or M12 connectors
» Rugged air-cooled or conductive-cooled versions available
**CP3923**  
*Up to 16-Port Layer2/Layer3 3U CompactPCI Switch*

Welcome the latest member of the 3U CompactPCI switch family – the CP3923. The CP3923 is a fully managed Layer 2/3 Gigabit Ethernet switch offering IPv4/IPv6* routing and full management capabilities. It supports a powerful set of CLI, Telnet, Web and SNMP management interfaces to configure the entire set of protocols and parameters including Layer 2 and Layer 3 (IPv4/IPv6*) protocols, Multicasting, QoS and Security. On top of that, the CP3923 maximizes the reliability of rugged COTS applications by supporting Intelligent Platform Management (IPMI) and hot swap capabilities.

**Unique Versatility**  
Eight GbE ports to the rear and up to 8 GbE ports to the front ensure highest connectivity capabilities. The CP3923 is available with three different front I/O versions: Either with 8 GbE ports via RJ45 (CP3923-8C) or for mobile- and transportation-oriented applications with 4 (CP3923-4M) or 8 (CP3923-8M) Fast Ethernet ports via M12-D connectors. For applications requiring utmost mechanical stability and reliability the CP3923 is also available as rugged, conductive-cooled version (CP3923-RC).

**Robust and Reliable**  
The careful design and selection of high temperature resistant components together with the elaborate heat sink construction ensures high product reliability. Designed with soldered components the CP3923 is able to handle the toughest environmental conditions. With respect to the transportation market the CP3923-4M and the CP3923-8M are fully EN50155 compliant. The CP3923-RC fullfills are requirements of the VITA 47 environmental class ECC4.

**Long-Term Availability**  
Based on chosen components from embedded roadmaps, the CP3923 ensures long-term availability and therefore eliminates the risk of unplanned design changes and unexpected application modification.

*IPv6 support optional*
Technical Information

Controller and Switch
- Broadcom BCM56226 Ethernet switch
- PowerPC® 405EX, 32-bit, RISC processor core operating up to 600 MHz
- NXP LPC2368 32-bit microcontroller, for IPMI
- 512MB DDR2 RAM 200 MHz
- 1GB NAND Flash optionally available

Front Interfaces on Standard Boards
- **Common**:
  - 1x RS232 management port via Hirose connector
  - Reset button
  - Status LEDs, 1x per port
  - Hot swap LED
- **CP3923-8C**: 8x 10/100/1000Base-T ports via RJ45
- **CP3923-4M**: 4x 10/100Base-T ports via M12 D-coded connectors
- **CP3923-8M**: 8x 10/100Base-T ports via M12 D-coded connectors
- **Rear I/O via J2**:
  - The CP3923 supports:
    - Eight Gigabit Ethernet ports
    - One 10/100/1000Base-T management port
    - One RS232 management port

CompactPCI Bus Interface
- PICMG 2.0 Rev. 3.0 compatible, universal 5V and 3.3V PCI signalling voltage supported

Hot Swap
- The board supports full hot swap capability as required by PICMG 2.1 R2.0
- It can be removed or inserted in a powered slot, please refer to the PICMG 2.1 R2.0 specification for additional details

Compliancy
- CompactPCI® Core Specification PICMG 2.0 Rev. 3.0
- CompactPCI® Hot Swap Specification PICMG 2.1 R2.0
- CompactPCI® System Management Specification PICMG 2.9 R1.0
- Intelligent Platform Management Interface Specification v1.5
- IEEE 802.3, 2000
- ANSI/Vita 47-2005
- Designed to meet or exceed:
  - Safety: UL 60950-1, CSA 22.2 No 60950-1, EN60950-1
  - EMI/EMC: EN 55022 / EN 55024, EN 50081-1 / EN 61000-6-2
  - EN50155 (only CP3923-4M and CP3923-8M)

Software
- **Management**:
  - Management via SNMP, Telnet, CLI
  - In-band
  - Out-of-band via Ethernet or RS232
  - IPMI v1.5
  - Reliable software, field upgradable
  - Advanced management monitoring features

Switching and Routing
- **Ethernet Bridging**:
  - Static and dynamic link aggregation, Classic, rapid and multiple spanning tree algorithms, Quality Of Service, Full Duplex operation and flow control, Layer 2 multicast services, VLAN support, IGMP and MLP snooping, Access Control Lists
  - IPv4 Forwarding, ARP, ICMP, static routing, OSPF and RIP routing, Virtual router redundancy protocol (VRRP), ECMP Equal Cost Multipath routing
  - Multicast:
    - IGMPV2 /v3, PIM-DM/PIM, MLD v1/v2
  - Services:
    - SNMP client, DHCP server, Event Management, POST, SNMP, Support for multiple configurations, TFTP server, Power on and diagnostic tests
  - IPv6 support optional

General
- **Dimensions**
  - 100 x 160 mm, 3U

Weight
- CP3923-8C: 420g
- CP3923-4M: 410g
- CP3923-8M: 500g
- CP3923-RC: 390g

MTBF
- CP3923-8C: 244,715 h acc. to Telcordia Issue 1, Method I Case 3, Ground Benign, controlled at 40°C
- CP3923-4M: 252,158 h acc. to Telcordia Issue 1, Method I Case 3, Ground Benign, controlled at 40°C
- CP3923-8M: 246,110 h acc. to Telcordia Issue 1, Method I Case 3, Ground Benign, controlled at 40°C
- CP3923-RC: 262,140 h acc. to Telcordia Issue 1, Method I Case 3, Ground Benign, controlled at 40°C

Power Consumption
- Typ. 20 W

Environmental
- **Operating Temp.**
  - CP3923-8C: -40°C to +85°C, forced system airflow required
  - CP3923-4M/-8M: -40°C to +70°C, EN60068 TX
  - CP3923-RC: -40°C to +85°C, conduction-cooled

- **Storage Temp.**
  - -50°C to +105°C

- **Climatic Humidity**
  - 93% RH at 40°C, non-condensing (acc. to IEC 60068-2-78)
Ordering Information

<table>
<thead>
<tr>
<th>Article</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Switch</strong></td>
<td></td>
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<tr>
<td>CP3923-8C-E2</td>
<td>3U 8HP L2/L3 managed 16-port Switch, 8x GbE front (RJ45), 8x GbE rear, RS232 and GbE management ports, extended temperature range E2</td>
</tr>
<tr>
<td>CP3923-8C-E2-C</td>
<td>3U 8HP L2/L3 managed 16-port Switch, 8x GbE front (RJ45), 8x GbE rear, RS232 and GbE management ports, extended temperature range E2, with conformal coating</td>
</tr>
<tr>
<td>CP3923-4M-EX-C</td>
<td>3U 8HP L2/L3 managed 12-port Switch, 4x Fast Ethernet front (M12), 8x GbE rear, RS232 and GbE management ports, extended temperature range TX, with conformal coating</td>
</tr>
<tr>
<td>CP3923-8M-EX-C</td>
<td>3U 12HP L2/L3 managed 16-port Switch, 8x Fast Ethernet front (M12), 8x GbE rear, RS232 and GbE management ports, extended temperature range TX, with conformal coating</td>
</tr>
<tr>
<td>CP3923-RC-E2-C</td>
<td>3U 4HP conductive-cooled L2/L3 managed 8-port Switch, 8x GbE rear, RS232 and GbE management ports, extended temperature range E2, with conformal coating</td>
</tr>
<tr>
<td><strong>Rear Transition Module</strong></td>
<td></td>
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<tr>
<td>CP-RIO3-923-8C</td>
<td>8HP rear I/O module, 8x GbE (RJ45), RS232 and GbE management ports (RJ45)</td>
</tr>
<tr>
<td><strong>Cable for Switch Configuration (via Front Port)</strong></td>
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<tr>
<td>CABLE-SERIAL-10-PIN-MINI-TO-9-PIN-DSUB</td>
<td>Serial adapter cable 10-pin mini to 9-pin D-Sub</td>
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**Notes:**
- All versions optionally available with IPv6 (Add suffix -ENH to model number to indicate IPv6 option)
- Please contact your local sales representative for further assistance concerning configuration options

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