The XPort1020 is a communications controller targeting high-performance yet low-cost applications. The XPort1020 combines a wide array of supported serial protocols, a broad range of serial interface standards, and a flexible I/O routing structure to pack maximum flexibility into an industry-standard cPCI form factor.

Powered by up to three Freescale MPC8270 (PowerQUICC II™) processors, the XPort1020 implements twelve serial communication ports, each providing an EIA-530-A-compliant signal set. Support for HDLC/SDLC, UART, transparent, and BiSync modes, with NRZ, NRZI, FM0, FM1, Manchester and Differential Manchester encoding is also provided. Coupled with software-configurable support for RS-232, RS-422, RS-423, RS-485, and MIL-STD-188-114, the XPort1020 provides a wide range of serial options.

For a system designer, the XPort1020 will help drive both cost and power consumption down. Because the PCI bridge is integrated on chip and the processors are linked via the 60x bus, the XPort1020 draws less power and costs less than conventional designs based on other processors that require a PCI bridge.

XPort1020

Freescale MPC8270 Processor-Based Multi-Protocol Twelve-Port Serial 6U cPCI Module

- Up to three Freescale MPC8270 at up to 300 MHz with integrated PCI
- Up to 12 SCCs supporting a variety of serial protocols
- Hot swap support
- Up to 512 MB SDRAM
- Up to 128 MB soldered flash
- 512 kB socketed flash
- 2 kB EEPROM
- Six RS-232 SMC ports
- Front panel 10/100 Mbps Ethernet and serial ports
- Two 10/100 Mbps PICMG 2.16 backplane Ethernet ports
- Optional rear I/O
- Complies to PICMG 2.1, 2.9
- Linux BSP
- Wind River VxWorks BSP

Extreme Engineering Solutions
3225 Deming Way, Suite 120 • Middleton, WI 53562
Phone: 608.833.1155 • Fax: 608.827.6171
sales@xes-inc.com • http://www.xes-inc.com

www.xes-inc.com
Processor
- Up to three Freescale MPC8270 processors
- 300 MHz max processor speed
- 280 Dhrystones at 200 MHz
- Up to 100 MHz 60x bus
- 16 kB L1 instruction/data caches
- 32 kB internal SRAM
- Integrated MMU
- Core-disabled mode
- 32-bit, 66-MHz PCI

Memory
- Up to 512 MB SDRAM
- Up to 128 MB surface mount flash
- 2 kB SEEPROM

Front Panel Connections
- Optional 10/100 Ethernet port
- Optional RS-232 serial port
- Three 100-pin serial I/O connectors

Backplane Connections
- PICMG 2.16 Ethernet
- Twelve optional 7-wire interfaces

Serial Communication Controller
- HDLC, UART, transparent, and BiSync modes
- DPLL supporting NRZ, NRZI, FM0, FM1, Manchester, and Differential Manchester
- Independent BRGs for each SCC transceiver
- Optional external custom oscillators

Software
- Linux BSP
- Wind River VxWorks BSP
- SCC, SMC, and Ethernet drivers

Physical Characteristics
- cPCI form factor

Environmental Requirements
- Contact factory for appropriate board configuration based on environmental requirements.
- Supported ruggedization levels (see chart below): 1
- Conformal coating available as an ordering option

Power Requirements (Estimate)
- TBD

Supported Ruggedization Level

<table>
<thead>
<tr>
<th>Level 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling Method</td>
</tr>
<tr>
<td>Operating Temperature</td>
</tr>
<tr>
<td>Storage Temperature</td>
</tr>
<tr>
<td>Vibration</td>
</tr>
<tr>
<td>Shock</td>
</tr>
<tr>
<td>Humidity</td>
</tr>
</tbody>
</table>

Copyright © 2009 Extreme Engineering Solutions, Inc. (X-ES). All rights reserved.
Specifications are subject to change without notice. All trademarks are property of their respective owners.

www.xes-inc.com