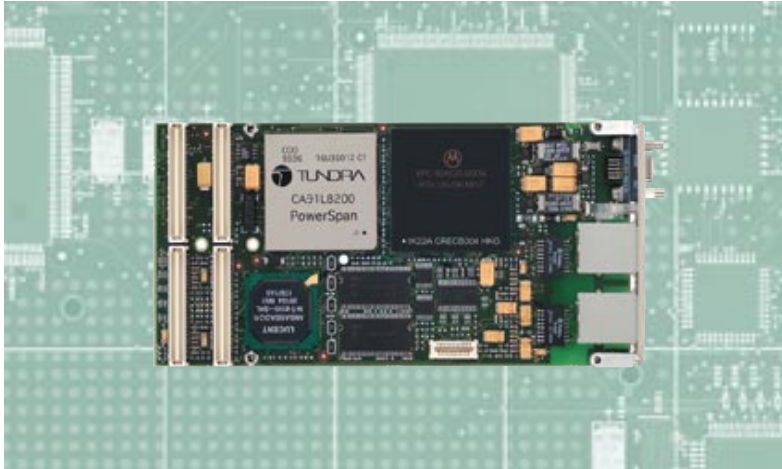


PowerQUICC II Based PMC Telecom Controller for Force StackWare MTP-2, LAPD and Frame Relay



*Offers OEMs a Powerful
Telecom Controller in a
Small Form Factor*

■ Telecommunications

■ Data Communications

Features

- StackWare protocol software availability for:
 - MTP-2, MTP-1
 - LAPD, HDLC
 - Frame Relay
- PowerQUICC II processor offers:
 - Up to 280 MIPS rated CPU
 - Up to 256 HDLC channels
 - Up to 64 MTP-1 channels
 - Over 32 MTP-2 channels
 - Approx. 2000 LAPD messages/sec.
 - Approx. 2000 Frame Relay messages/sec.
- Software selectable E1/T1/J1 interfaces
 - Two on front panel (RJ45)
 - Four on CPCI RTB (RJ45)
 - Integrated CSU on RTB (rear I/O)
- H.110/SCbus interface (TDM bus) and sub-channel switching support
- Single-slot PMC easily integrates on CPCI, VME and proprietary designs

Highlights

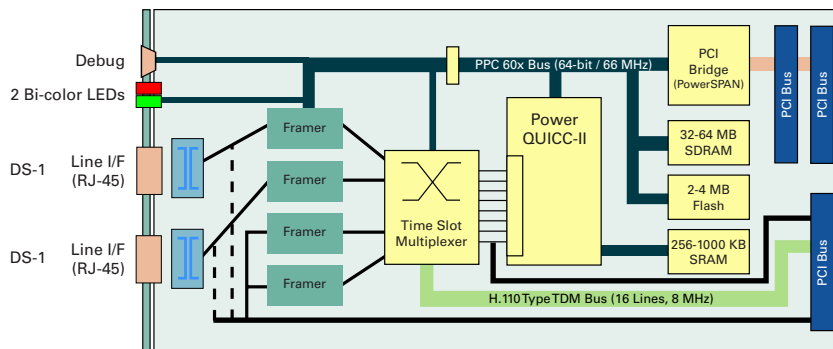
The PMC-8260 PCI mezzanine card (PMC) module is an ideal subsystem solution that can be easily integrated into larger systems, making it a virtual “plug-and-play” component for advanced communications equipment.

Featuring the robust PowerQUICC II™ communication processor, the PMC-8260 is perfect for telecommunications protocols. Its high-performance features include a 64-bit memory interface, 280 MIPS PowerPC™ core, dedicated local bus for SRAM and an enhanced CPM-communications processor module and software selectable DS-1 interface.

PMC-8260 boards are qualified for use with SPARC® and PowerPC processors on a wide range of VME and CompactPCI® applications.

Together, PMC-8260 and StackWare™ protocols offer a single-source solution for hardware and software, minimizing development costs and time-to-market.





PMC-8260 Telecom Controller Architecture

PMC-8260 architecture

The PMC-8260, an upgrade of the PMC/860, is a high performance member of Force Computers' family of telecom controllers.

Its E1/T1/J1 (DS-1) interfaces allow direct network connection, and its time division multiplexing (TDM) bus interface complies with and supports H.110 and optionally supports SCbus. The architecture allows non-blocking routing of time slots among the DS-1, TDM bus and PowerQUICC-2.

Target applications

PMC-8260 target applications include advanced intelligent network (AIN/IN), network convergence and wireline/wireless infrastructure applications. The PMC-8260 is easily integrated to offload a host system via MTP-2, Frame Relay or LAPD lower-level protocol processing. The controller can connect to the telecom network, as well as an internal TDM bus, to distribute data within a system.

Time slot multiplexer and TDM bus interface

The PMC-8260 has an integrated, three-port time-slot-switching matrix, which allows system developers to route any time slot among a DS-1 interface, the processor's time slot assigner and the H.110 interface.

In mode "A," time slots are switched on frame boundaries to ensure a constant relative timing relationship. Mode "B," variable delay mode, enables shorter input-to-output delays.

The H.110/SCbus interface can be configured as a master or slave clock. For synchronizing different data signals, the PMC-8260 uses an internal clock, which is user selectable and can source the clock of either DS-1 line, the H.110/SCbus interface or a local on-board oscillator. The clock is available to all I/O devices.

Product variants

All PMC-8260 products have the following:

- 133- or 200 MHz processor
- 133- or 166 MHz CPM
- 32 MBytes DRAM
- 2 MBytes Flash memory
- Two or four DS-1 interfaces (two DS-1 versions are on front panel)
- Selected variants have TDM interface, terminated for H.110 or SCbus
- Select variants have 1 MByte SRAM

Product variants with 64 MByte SDRAM, 4 MByte Flash, other SRAM configurations or E1 75-Ohm interface are available on a per project basis.

Processor/memory

- PowerQUICC II (MPC8260)
- 133- or 200 MHz core,
- 133- or 166 MHz CPM
- 186 MIPS (133 MHz) or 280 MIPS (200 MHz) rated CPU
- 32 MBytes shared SDRAM
- 2 MBytes Flash memory
- 1 MByte fast SRAM on most variants
- PCI Rev 2.2 compliant interface, up to 64-bit / 66 MHz

I/O capabilities

- Framer device: PMC-Sierra PM4351 (Comet)
- Two E1/T1/J1 (DS-1) software selectable telecom interfaces on front panel
- Two RJ-45 interfaces
- Four DS-1 PMC User I/O interfaces (alternate to two front panel I/O)
- CompactPCI RTB with long haul and CSU support
- RS-232 Debug interface
- Two LEDs, bi-color (red/green)

Switching subsystem

- Time slot multiplexer and H.100/ H.110 interface device, Lucent T8105 (Ambassador), with constant and variable delay
- Supports external H.110/SCbus, sub-channel switching and non-blocking routing
- Connects up to 8 x 2 MHz links to PowerQUICC II SCC 1-8 channels, up to four framers and TDM

DS1 clocking

- E1/T1/J1 or H.110/SCbus can serve as local master clock
- Independent, onboard oscillator

Firmware features

- Board Configuration Status registers
- JTAG on PCI connector
- BDM, COP and SCC2 access via on-board connector
- Programmable real-time clock
- Integrated Watchdog timer
- Comprehensive Reset Logic
- Power on self test for CPU, DRAM, SRAM and I/O device
- Additional features including diagnostics available via the StackWare software product

Software support

- StackWare MTP-1, MTP-2
- StackWare HDLC, LAPD
- StackWare Frame Relay
- Solaris 2.6, Solaris 7 and Solaris 8 drivers
- VxWorks Tornado 2.0 drivers

Environmental

- Operating temperature: 0°C to +55°C
- Storage temperature: -40°C to +85°C
- Humidity: 5% to 95% non-condensing
- ETS 300 019-1-1/1.1 (storage), ETS 300 019-1-3/3.3 (operation)
- Forced airflow: 300 LFM (linear feet per minute)

Power consumption

- PMC/8260/DS1-N-F/133-32 (typ.)
 - 3.3V: 1.1A
 - 5V: 1.1A
 - Total: 9.1W
- PMC/8260/DS1-SC-F/200-32-1 (typ.)
 - 3.3V: 1.7A
 - 5V: 1.1A
 - Total: 11.1W

Standards compliance

- CE approval
- FCC part 15
- EMC/EMI: EN 55022, EN 50082-2
- Safety: UL 1950, EN 60950
- ITU G.703/704, G.823
- ETSI TBR4 and ETSI 300 011 network side for layer 1 (E1-120 Ohm)
- ETS NTR-4 (E1-75 Ohm)
- FCC part 68 (T1 100 Ohm)
 - With rear I/O: full integrated CSU support
 - With front I/O: DSX-1 interface support
- Mechanical: PMC single width form factor, IEEE P1386.1 Draft 2.0 (75m x 150mm)
- Electrical: PMC IEEE P1386.1 Draft 2.0 compliant; exception: power consumption is exceeded

Order information

Product Name	Order No.
PMC-8260 / DS1-N-F / 133-32-0	107333
PMC-8260 / DS1-SC-F / 133-32-1	107295
PMC-8260 / DS1-N-F / 200-32-1	107335
PMC-8260 / DS1-SC-F / 200-32-1	107334
PMC-8260 / DS1-H110-F / 200-32-1	107296
PMC-8260 / DS1-H110-R / 200-32-1	107336
ACC / RTB-8260 / DS1	107338
PMC-8260 / DS1 / TM	107337
TORNADO 2.0 / BSP PMC-8260	107405
ACC / CABLE / MD9-D9/2	102189

StackWare Protocol Software

SW/STACK/LAPD/R4	107499
SW/STACK/MTP2/R4	107497
SW/STACK/FR/R4	107498



www.forcecomputers.com

Force Computers is the leading designer and worldwide supplier of standard and custom systems, board-level computer platforms, and services for the embedded market.

THE AMERICAS Corporate Headquarters

Force Computers Inc.
5799 Fontanos Way
San Jose, CA 95138-1015
Tel.: (408) 369-6000
Fax: (408) 371-3382

EUROPE European Headquarters

Force Computers GmbH
Prof.-Messerschmitt-Str. 1
D-85579 Neubiberg/München
Tel.: +49 (089) 608 14-0
Fax: +49 (089) 609 77 93

ASIA Japanese Headquarters

Force Computers Japan K.K.
Shiba Daimon MF Building 4F
2-1-16 Shiba Daimon
Minato-ku, Tokyo 105-0012
Tel.: +81 (03) 3437 3948
Fax: +81 (03) 3437 3968