

Telecommunication PMC Module



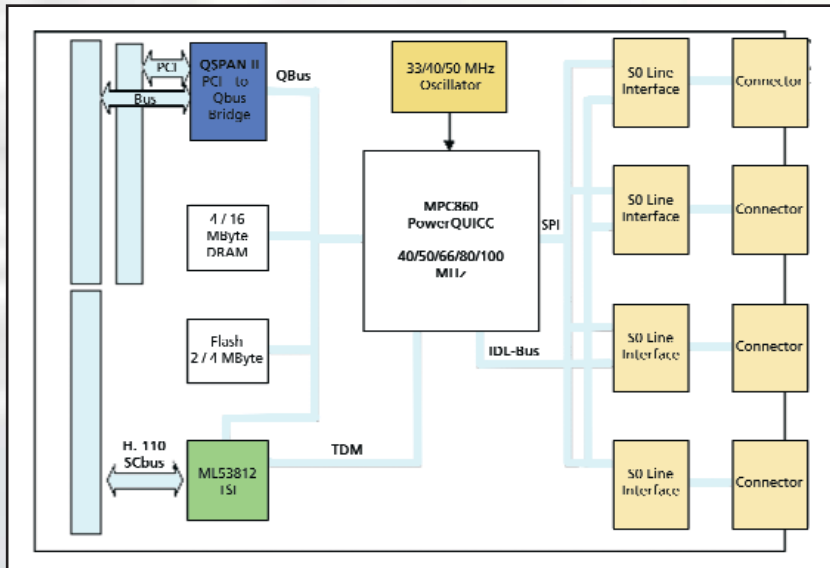
NPMC-860-450

The NPMC-860-450 is a high performance telecommunication board in PMC (PCI Mezzanine Card) form-factor. Based on the Motorola MPC860 "PowerQUICC" processor, the NPMC-860-450 supports four BRI (Basic Rate ISDN) interfaces on the front panel.

Equipped with an H.110 TDM bus controller, the NPMC-860-450 supports user data via the SCbus or via the TDM interface of the MPC860 through the PCI bus.

The NPMC-860-450 provides a cost-effective and intelligent interface for use in CompactPCI, PCI, VMEbus and proprietary telecommunication applications.

Technical Data



Overview

The NPMC-860-450 is a telecommunications interface board in PMC (PCI mezzanine card) form factor. Based on the Motorola MPC860 "PowerQUICC" CPU the NPMC-860-450 is targeted at telecom applications using Basic Rate ISDN interfaces.

Equipped with the onboard SCbus, the NPMC-860-450 provides an ideal and cost-effective interface for use in the VME, PCI, CompactPCI and proprietary environments.

Hardware

The NPMC-860-450 is a P1386.1/Draft 2.4 compatible PMC module that can be plugged onto any VME, cPCI or other carrier board offering a PMC extension slot. Using the Tundra QSPAN II PCI-to-QBUS bridge, the NPMC-860-450 is PCI Rev 2.2 compatible and capable of running in 32 bit PCI architectures.

The Embedded PowerPC based PowerQUICC MPC860 processor at 50 MHz (optional 66 or 80 MHz) provides the capability of processing user data as well as signaling information.

The four BRI S/T (S0) line interfaces are driven using the Motorola MC145574 ISDN S/T-Interface Transceiver and are available on four standard RJ45 connectors on the front panel. The four framers can be individually configured to work as a user or network side interface. The line interfaces can be operated in either Point-To-Point or Point-to-Multipoint mode.

The NPMC-860-450 is equipped with 4 or 16 MB 32-bit DRAM and 2 or 4 MB 8-bit on-board programmable Flash.

The NPMC-860-450 is equipped with an OKI CT812 H.110 controller, providing the SCbus on the PMC P14 I/O connector. Thus, the CT812 can switch any timeslot to and from any of the line interfaces for either CPU or SCbus access, or even just between the line interfaces.

Firmware

Communications protocols like ISDN, X.25, X.31 are available as binary firmware images as well as operating system independent source code licenses. By default these firmware protocols run on the well-proven N.A.T. real-time kernel OK-1 which is optionally available in source code. Also available for the NPMC-860-450 are BSPs for other operating systems such as VxWorks and LINUX.

As well as standard protocols N.A.T. offers customized firmware development. Enhanced software development and effective debugging is supported by the onboard BDM interface.

CPU

Motorola MPC860 "Power QUICC" at 50/66/80 MHz

PCI Interface and Compliance

QSPAN II PCI to QBUS bridge (33MHz, 32bit), PCI Rev. 2.2

SCbus

OKI CT812, SCbus on PMC P14 connector

DRAM

4 or 16 MB 32-bit EDO DRAM

Fast SRAM (opt)

512 KB or 1MB 32-bit SRAM

Flash

2 or 4 MB 8-bit Flash, on-board programmable

Line Interface

4 BRI S/T (S0) line interfaces on standard RJ45 connectors on the front panel supplied by Motorola MC145574

Operating System Support and Firmware

OK-1, VxWorks, Linux, ISDN, X.25 and others

Power Consumption

3.3V 0.5A (typ.), 5.5V 0.8A (typ.)

Environmental

Temperature (operating): 0°C to +50°C
Temperature (storage): -40°C to +85°C
Relative Humidity: 5% to 95% (non-condensing)

Standard Compliance

PCI Rev. 2.2
P1386 and P1386.1/Draft 2.4a

N.A.T.

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