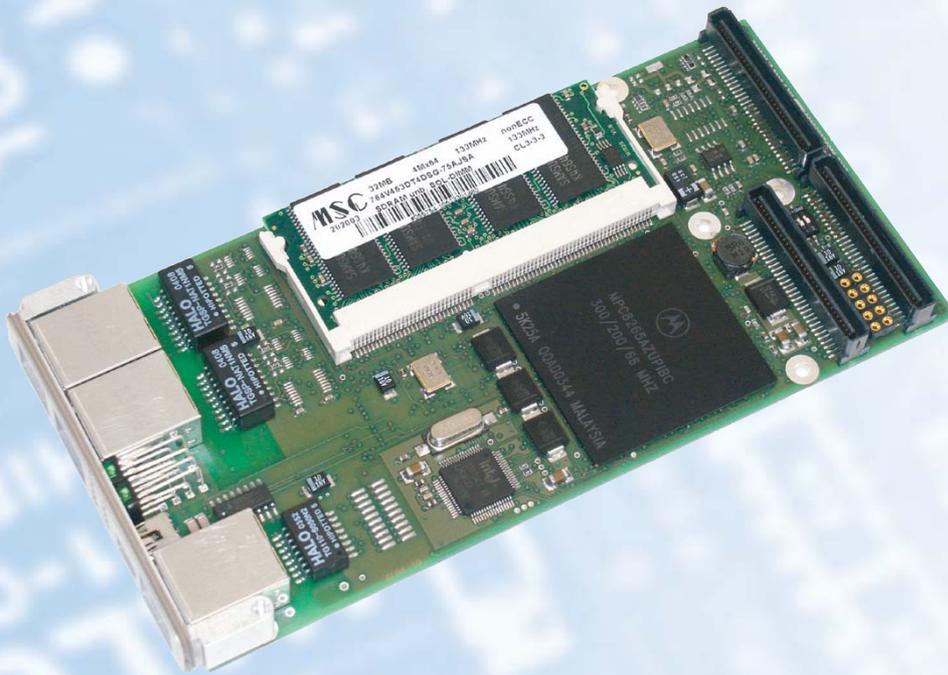


Telecommunication PMC Module

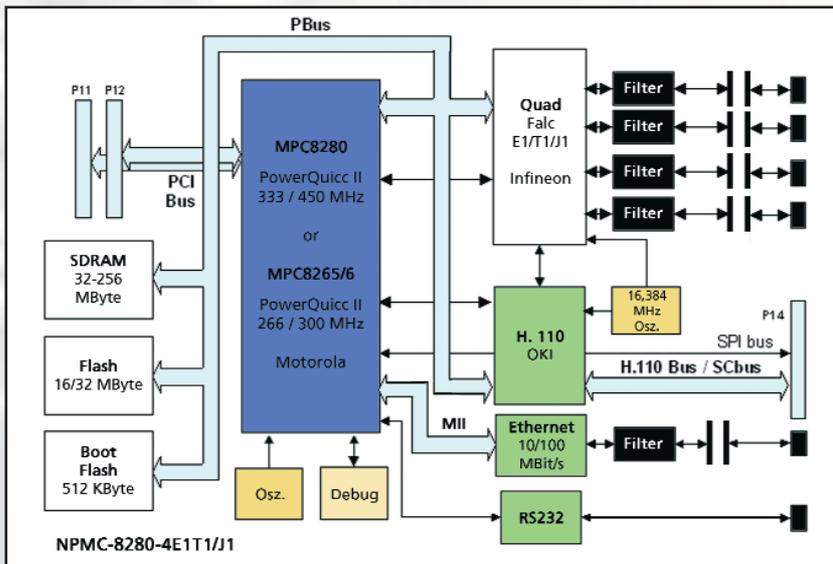


NPMC-8280-4E1/T1/J1

The NPMC-8280-4E1/T1/J1 is a high-performance PMC module, based on the Motorola versatile MPC8280 "PowerQuicc II" processor. It supports four E1/T1/J1 ports, a 100BaseT Ethernet port using standard RJ45 connector and a RS232 on a SUBD connector on the front panel.

Equipped with an H.110 TDM bus controller and due to the CPU providing up to 855 MIPS the NPMC-8280-4E1/T1/J1 is optimized for use in sophisticated telecom applications in SS7, ISDN, ATM or VoP environments.

Technical Data



Overview

The NPMC-8280-4E1/T1/J1 is a telecommunications interface board in PMC (PCI mezzanine card) form-factor. Based on the Motorola MPC8280 "PowerQuicc II" CPU the NPMC-8280-4E1/T1/J1 is targeted at telecom applications with a need for a powerful and versatile platform, such as applications using SS7, ISDN, ATM, VoP or any combination of these protocols.

Hardware

The NPMC-8280-4E1/T1/J1 is a P1386.1/Draft 2.0 compatible PMC module that can be plugged onto any VME, cPCI or other carrier board offering a PMC extension slot. Using the on-chip PCI bridge of the MPC8280, the NPMC-8280-4E1/T1/J1 is PCI Rev. 2.2 compatible. The MPC8280 PowerQUICC II processor provides computing resources up to 855 MIPS (450MHz). For less demanding applications the MPC8280 can be replaced by the pin-compatible MPC8265.

The four primary rate line interfaces (E1/T1/J1) are driven using Infineon PEB22554 "Quad Falc" and are available on two standard RJ-45 connectors on the front panel.

In addition to the four E1/T1 lines the NPMC-8280-4E1/T1/J1 offers a RS232 serial interface on a mini SUB-D connector and a 10/100 Megabit/sec (10/100BaseT) Ethernet interface on a RJ45 connector to be used with a standard CAT5 UTP cable.

Thus the NPMC-8280-4E1/T1/J1 is the generic platform for any implemen-

tation switching between the classic TDM streams as on E1/T1/J1 and the new generation of packetized data applications running on Ethernet.

Moreover, the 100BaseT port can serve as a configuration and management port, i.e. for SNMP.

The onboard OKI CT812 H.110 bus controller offers access to the H.110 TDM (Time Division Multiplex) bus and its SC Bus subset on the PMC P14 multi-purpose I/O connector.

Equipped with up to 256MB SDRAM and either 16 or 32MB on-board erasable Flash-Memory the NPMC-8280-4E1/T1/J1 is optimized to meet the performance and memory requirements of state-of-the-art communication protocols and applications.

Firmware

Communication protocols like SS7, ISDN, etc., 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-8280-4E1/T1/J1 are BSPs for other operating systems such as VxWorks or 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/JTAG interface.

CPU

Motorola MPC8280 "PowerQuicc II" at 333MHz or 450 MHz

PCI Interface and Compliance

MPC8280 on-chip PCI bridge, 32bit /33MHz, PCI Rev. 2.2

H.110 Bus

OKI CT812, H.110 on PMC P14 connector

DRAM

256MB SDRAM (PC-100, 64 bit) installed in a SODIMM slot

Flash PROM

16 or 32MB Flash PROM (32bit)

Line Interface

four primary rate E1/T1/J1 lines (I.431) on standard RJ45 connectors on the front panel supplied by Infineon PEB22554 "QuadFalc"

Serial I/O

RS232 compatible on the front panel

Networking

100BaseT Ethernet (IEEE 802.3) on standard RJ45 connector on the front panel

Indicator LEDs

6 software programmable LEDs and 2 system status indicator LEDs on the front panel

Operating System Support and Firmware

OK-1, VxWorks, LINUXSS7, ISDN and others

Power Consumption

3.3V 0.85A typ. , 5V 0.55A typ.

Environmental

Temperature (operating):
0°C to +60°C with forced air cooling,
Temperature (storage):
-40°C to +85°C
Relative Humidity:
10% to 90% at +55°C
(non-condensing)

Standard Compliance

P1386 and P1386.1/Draft 2.0

N.A.T.

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