

NAMC-8560-xE1/T1/J1

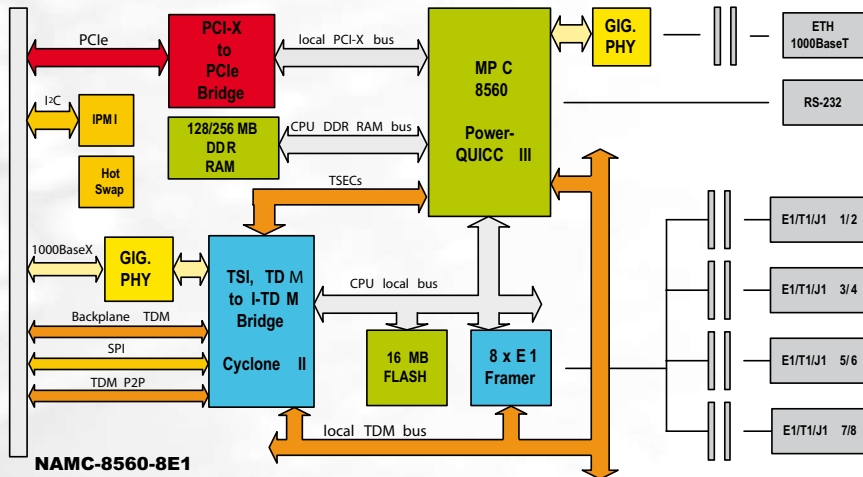


NAMC-8560-xE1/T1/J1

The **NAMC-8560-xE1/T1/J1** is targeted at telecom applications with need for a high aggregation of multiple E1/T1/J1 interfaces combined with access to switched networks based on high bandwidth Ethernet. By the powerful Freescale Power QUICC III MPC8560 and N.A.T.'s sophisticated TDM-to I-TDM converter the NAMC-8560-xE1 connects the onboard E1/T1/J1 interfaces with a Gigabit Ethernet Port for system interconnect (I-TDM). Moreover, the **NAMC-8560-xE1/T1/J1** offers additional E1/T1/J1 access via rear I/O if the application requires more than 8 E1/T1/J1 lines.

For access to LANs the **NAMC-8560-xE1** offers a 1000BaseT Ethernet port at the front panel. The module has been optimized to process standard telecom signaling protocols as well as special payload handling algorithms in next generation's systems based on the AMC or ATCA standards. Extensive software support makes the **NAMC-8560-xE1** an ideal choice for any voice/data application in ISDN, SS7, ATM, VoIP or 3G environments.

Technical Data



Overview and Purpose

The **NAMC-8560-xE1/J1/T1** is a single width double height Advanced Mezzanine Card (AMC) providing access to E1/T1/J1 interfaces in next generation systems based on the AMC or ATCA standards. The **NAMC-8560-xE1/T1/J1** is targeted at telecom applications with extensive need for a high aggregation of multiple E1/T1/J1 interfaces combined with access to switched networks based on high bandwidth Ethernet. The module has been optimized to process standard telecom signaling protocols like SS7 as well as special payload handling algorithms.

CPU and memory

The **NAMC-8560-xE1/T1/J1** is equipped with the powerful Freescale PowerQUICC III MPC8560. This network processor operates at core frequencies from 667MHz up to 1GHz. The NAMC-8560-xE1/T1/J1 provides 256 MB DDR SDRAM and 32 MB FLASH memory.

T1/J1/E1 Access

The octal long/short haul framer 82P2288 from IDT provides access to eight E1/T1/J1 lines at the front panel. For T1/J1 framing standards Super Frame (SF), Extended Super Frame (ESF) T1 Digital Multiplexer (DM, T1 only) and Switch Line Carrier -96 (SLC-96, T1 only), for E1 G.704 and G.706 (CRC-4 multi-frame) are supported.

TDM and I-TDM Interface

The E1/T1/J1 framer interfaces to the onboard timeslot interchanger (TSI) chipset. The TSI as well as the TDM-to-I-TDM bridge are incorporated in a Cyclone II FPGA from Altera. The TSI allows flexible routing as well as multicasting of 64kbps timeslots between the various E1/T1/J1 streams. The TDM-to-I-TDM bridge converts the TDM oriented bit stream into Ethernet packets and vice versa. The Ethernet packets are sent and received via a 1000BaseX Ethernet interface. In addition to the I-TDM interface, as a breaking-through feature of the **NAMC-8560-xE1/T1/J1**, the TSI offers an optional 32Mhz clocked H.110-like TDM backplane interface on the AMC extended connector.

LAN Interface

Beside the 1000BaseX Ethernet interface used for I-TDM the **NAMC-8560-xE1/T1/J1** offers a 1000BaseT Ethernet port at the front panel for local network access. Type P Control Path messages are transmitted through the I-TDM 1000BaseX interface also.

Rear I/O Access

For customers needing more than 8 E1/T1/J1 interfaces or preferring to use rear I/O with the **NAMC-8560-xE1/T1/J1**, N.A.T. offers E1/T1/J1 access by a rear transition module utilizing the user I/O pins of the extended options region of the AMC connector.

PCIe Interface and Compliance

1 lane
PICMG AMC.1 R1.0

IPMI and Compliance

PICMG AMC.0 R1.0
PICMG 2.9 R1.0

I-TDM and Compliance

GigEth at common options region
PICMG SFP.1 R1.0

TDM (option)

H.110 like 32MHz clocked TDM interface at extended option region

Networking

one GigEth at front panel

E1/T1/J1 interface

eight E1/T1/J1 at front panel

Indicator LEDs

4 standard AMC LEDs + two bicolor LEDs per RJ-45 at front panel

Memory

256MB DDR SDRAM
32MB FLASH

Operating System Support

OK-1, VxWorks, LINUX

Applications

- high density multiplexers, multi-service switches, edge routers and digital modems
- access devices and DSLAMs
- digital access cross-connect systems
- VoIP/VoP gateways and routers
- 2.5 and 3G network equipment

