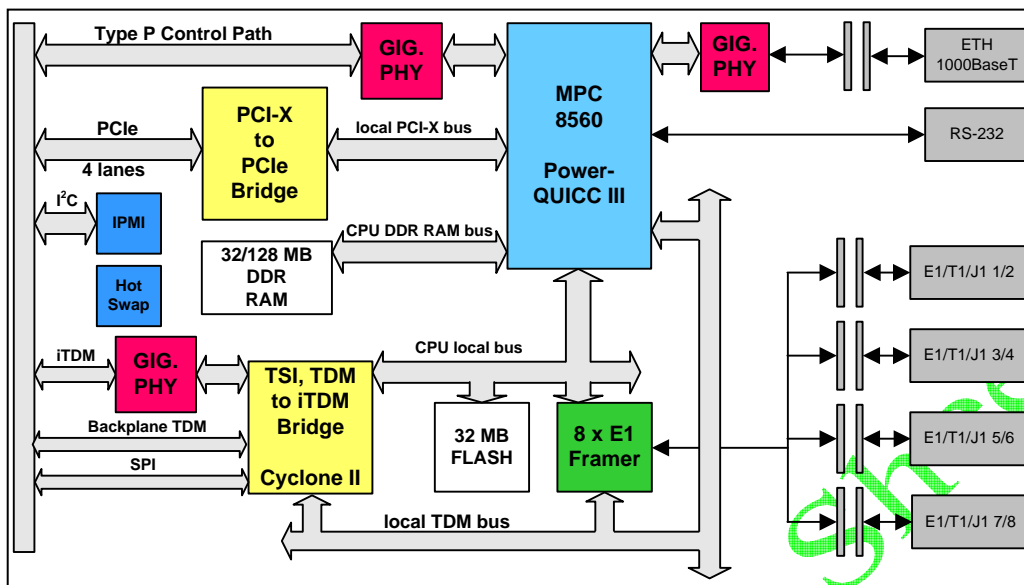


# NAMC-8560-xE1/T1/J1

## Multiple E1/T1/J1 AMC module for uTCA and ATCA



### Overview and Purpose

The NAMC-8560-xE1/J1/T1 is 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 signalling protocols like SS7 as well as special payload handling algorithms.

### CPU and memory

The NAMC-8560-xE1/T1/J1 is equipped with the extremely powerful Freescale Power-QUICC III MPC8560. This network processor operates at core frequencies from 667MHz up to 1GHz. The NAMC-8560-xE1/T1/J1 provides 128 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 multiframe) 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-iTDM 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-iTDM bridge converts the TDM oriented bit stream into Ethernet packets and vice versa. The Ethernet packets are sent and received via a 1000BaseT-BX 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 1000BaseT Ethernet interface used for I-TDM the NAMC-8560-xE1/T1/J1 offers two more 1000BaseT Ethernet ports: one at the front panel for local network access and another one at the common options region of the AMC connector as a 1000BaseT-BX Tye P Control Path.

### Rear I/O Access

For customers 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

4 lanes  
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, another GigETh at common options region (type P control path)

### E1/T1/J1 interface

eight E1/T1/J1 at front panel, clock distribution via clock region at AMC connector or via rear transition module

### Indicator LEDs

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

### 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