



Telum™ 1001-DE

High Performance, Single Port DS3/E3 ATM AdvancedMC™ with Traffic Management

Features

Performance

- Full duplex DS3/E3 ATM Interface
- PCI Express Interface; PCIe Rev 1.0 compliant; support for a full duplex DS3/E3 Interface
- Support for 16,000 VCCs; 4 MB local memory
- Passes and manages AAL1, AAL2, and raw cells
- Segmentation and reassembly of AAL0, AAL3/4, and AAL5 cells
- Traffic management supported: ABR, CBR, UBR, and VBR
- Supports ATM Forum UNI 3.1 and TM 4.0
- Local 8051 based CSU/DSU subsystem
- Intelligent Platform Management Interface; on-board 8051 microcontroller-based subsystem; AMC.0 compliant
- AMC.0 Hot Swap compliant

Software Support

- Comprehensive Driver Development Kit (DDK)
- Support available for Carrier Grade Linux

The Telum™ 1001-DE is a high performance, single wide, full height, single port, AMC.1 compliant ATM AdvancedMC module featuring a front I/O full duplex DS3/E3 interface. The Telum 1001-DE uses the PCI Express (PCIe) Bus to communicate with the host processor on an Advanced Telecom Compute Architecture (ATCA) system. The Telum 1001-DE complies with ATM Forum UNI 3.1 and TM 4.0 and is based on an advanced ATM Segmentation and Reassembly (SAR) Controller designed to optimize the PCI Express Bus interface. The SAR segments and reassembles AAL0, AAL3/4, and AAL5 cells. It will manage and pass AAL1, AAL2 and raw cells. This module supports one full duplex ATM DS3/E3 port for protocol data unit sizes as small as two cells.

Traffic Management

The traffic management co-processor within the SAR supports Constant Bit Rate (CBR), Variable Bit Rate (VBR), Unspecific Bit Rate (UBR), Available Bit Rate (ABR), Guaranteed Frame Rate (GFR) and Generic Flow Control (GFC). In order to maximize line utilization, the xBR traffic management block automatically schedules each VCC according to user assigned parameters.

Intelligent Platform Management Interface (IPMI) & Hot Swap Compliance

An Intelligent Platform Management Interface (IPMI) subsystem is used to initialize board level parameters, monitor board voltage and temperature conditions, maintain system status and manage hot swap operation. A microcontroller is used as the IPMI intelligence and connects to the ATCA System Management bus and the local PCI Express Bridge device. The Telum 1001-DE is hot swappable and field-replaceable in accordance with AMC.0.

Local CSU/DSU Network Management

There is an 8051-based CSU/DSU subsystem for network management. Line alarm conditions, maintenance and performance data monitoring statistics are maintained by this subsystem.



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Specifications

Bus Connect

- PCI Express
- AMC.1 compliant

Board Resources

- CN8236 OC-3 SAR
- Programmable DS3/E3 Line Interface Unit
- PLX PEX8111 PCI-to-PCI Express Bridge
- 8051 based IPMI Subsystem
- 8051 based CSU/DSU Subsystem
- 75 Ohm BNC connectors

Power Requirements

- Typical
- +3.3V @ 2.0A
- +1.5V @ 0.5A
- +5.0V @ 0.1A

Form Factor

- AMC.0 compliant

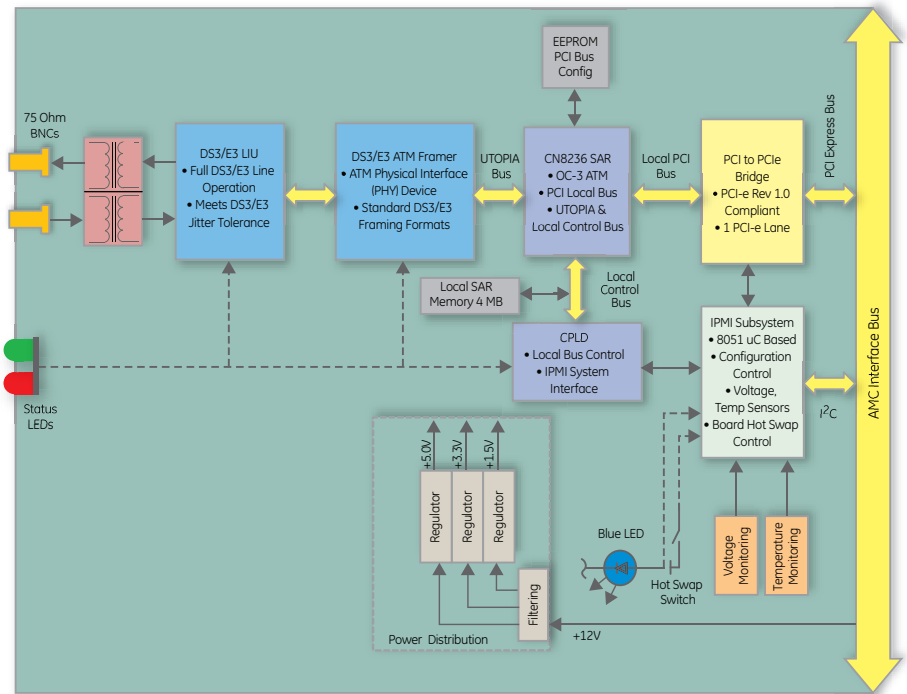
Environmental

- Operating temperature: 0°C to +55°C
- Storage temperature: -45°C to +85°C
- Humidity (R.H. non-condensing): Min. 20% Max. 95%

Regulatory Compliance

- FCC Part 15 Class "A"
- UL60950-1
- CSA22.1 No. 60950-1
- CE Mark
 - EN55022
 - EN55024
 - EN60950-1

Block Diagram



Ordering Information

21001-101

Telum 1001-DE DS3/E3 ATM AdvancedMC with 4 MB Local SAR Memory

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GE Fanuc Embedded Systems is a leading global provider of embedded computing solutions for a wide range of industries and applications. Our comprehensive product offering includes many types of I/O, single board computers, high performance signal processors, fully integrated, rugged systems including flat panel displays, plus high speed networking and communications products. The company is headquartered in the U.S. and has design, manufacturing and support offices throughout the world. Whether you're looking for one of our standard products or a fully custom solution, GE Fanuc Embedded Systems has the breadth, experience and 24/7 support to deliver what you need. For more information, visit www.gefanucembedded.com.

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Additional Resources

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