

# Telum™ 1001-O12

High Performance OC-12 ATM AdvancedMC™ Module with Traffic Management and Support for Automatic Protection Switching

## Features

### Performance

- 1 port OC-12 with 622 Mb/s full duplex line speed
- PCI Express Interface: Rev 1.0 compliant
- 8 MB local memory; supports up to 16,000 VCCs
- 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
- On-board microcontroller based subsystem; AMC.1 compliant for Intelligent Platform Management Interface
- Optional Automatic Protection Switching port
- Module Hot Swap; AMC.1 compliant

### Software Support

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

### Applications

- Edge & core switches/routers
- Wireless base stations
- DSLAM
- Server platforms
- Test & measurement

### Product Reliability

- High MTBF
- Technical support for OEM customers and resellers

The Telum™ 1001-O12 is a high performance, single wide, full height, AMC.1 compliant ATM adapter featuring a front I/O full duplex OC-12 interface. It is intended for high availability Telecom applications. The Telum 1001-O12 is available with single mode or multi-mode optics, with or without an Automatic Protection switching (APS) port. The Telum 1001-O12 uses the PCI Express Bus (PCIe) to communicate with the host processor on an Advanced Telecom Computing Architecture (ATCA) system as well as other architectures. This AdvancedMC module 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 PCIe Bus interface. The SAR segments and reassembles AAL0, AAL3/4, and AAL5 cells. The Telum 1001-O12 supports one full duplex OC-12 port for protocol data unit sizes as small as two cells. An optional APS port is available.

### 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). 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 initializes board level parameters, monitors board voltage and temperature conditions, maintains system status, and manages hot swap operation. A microcontroller is used as the IPMI intelligence and connects to the ATCA System Management bus and the local PCIe Bridge device. The Telum 1001-O12 is hot swappable and field-replaceable in accordance with AMC.1.

### Automatic Protection Switching

Automatic Protection Switching (APS) initiation time requirements are supported as required in Bellcore Standard GR-253-CORE. If a network failure condition is detected, the APS network port can be shut down and network termination switched to the second port. This APS function can be performed automatically or under host control to ensure high availability of services.

### Software

To simplify system integration, the Telum 1001-O12 employs a comprehensive set of software drivers that are compatible with Carrier Grade Linux operating systems. Additional software includes: a user friendly Application Programmers Interface (API), and a Driver Development Kit (DDK) that provides a common development environment for multiple interfaces.

# Telum 1001-O12 High Performance OC-12 ATM AdvancedMC Module

## Specifications

### Bus Interfacet

- PCI Express
- AMC.1 compliant

### Board Resources

- CN8237 OC-12 SAR
- PMC5356 ATM PHY; 2 PHYs for optional APS
- PLX PEX8114 PCIe Bridge
- APS for port redundancy
- 8051-based IPMI subsystem
- OC-12 SFP optical transceiver; single & multi-mode support

### Power Requirements

- Typical +12.0V @ 1.2A

### Form Factor

- AMC.1 compliant

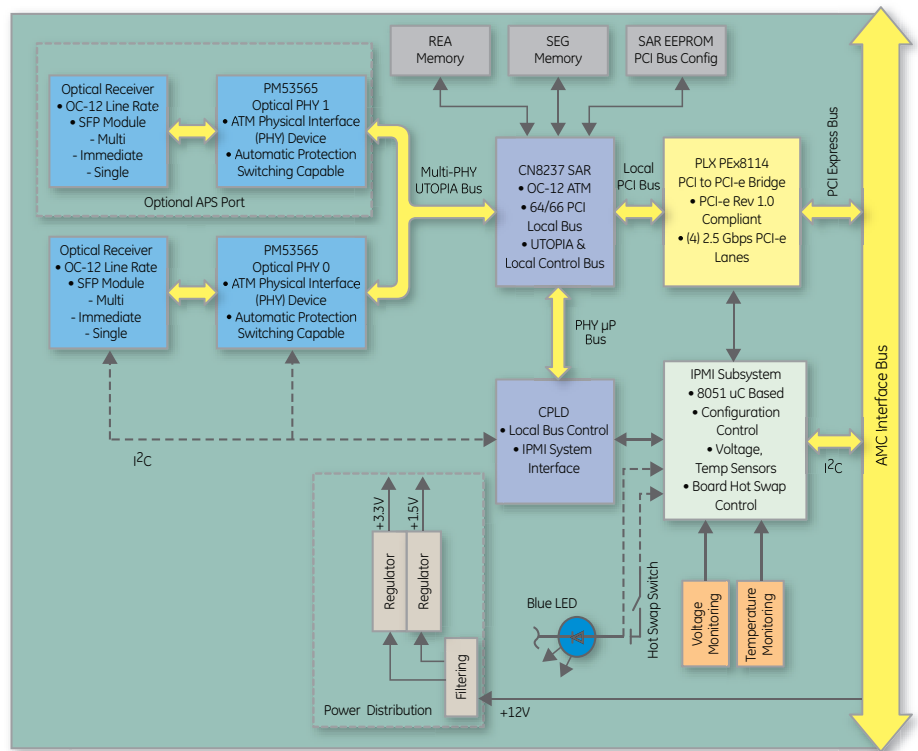
### Environmental

- 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
- CSA22.2 No. 60950-1
- CE Mark
  - EN55022
  - EN55024
  - EN60950-1

## Block Diagram



## Ordering Information

### 24001-202

Telum 1001-O12M1 8MB (Single Port, Multi-Mode Optics, SFP connector)

### 22001-203

Telum 1001-O12M2 8MB (APS Port, Multi-Mode Optics, SFP connectors)

### 24001-204

Telum 1001-O12S1 8MB (Single Port, Single Mode Optics, SFP connector)

### 24001-201

Telum 11001-O12S2 8MB (APS Port, Single Mode Optics, SFP connectors)

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## Additional Resources

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