Monitor 4.8™
Manager of OAM Network Traffic at OC-48 Rate

Product Brief

Traffic Management Family

Features:

Overall

- Full duplex OC-48 Operations, Administration, Maintenance (OAM) and Protection Switching (PS) processing
- Source/sink operations for up to 256K bi-directional connections simultaneously
- Supports VP, VC, VP-to-VC, and VC-to-VP switching
- Compliant to ITU I610, I371 and I630 Recommendations

Operations, Administration, Maintenance (OAM)

- AIS, RDI, CC cell generation timers
- AIS, RDI, CC cell receive timers
- Performance Management (PM) forward monitoring cell generate and receive processes
- LB cell processing
- PM backward reporting cell generation
- Activation/Deactivation protocol state machine
- All OAM capabilities are available on a per-connection basis

Protection Switching

- Individual or group protection on a per-connection basis
- 1+1 and 1:1, revertive/non-revertive architectures
- On-chip global priority logic and APS cell generation process

General Description

The Monitor 4.8 is a single chip device that provides a comprehensive set of ATM Layer functions. It is a hardwired implementation of the ITU I610 Operations, Administration, and Maintenance (OAM), I630 Protection Switching (PS) and I371 GCRA Policing specifications and provides support for 256K bi-directional independent ATM VCs at an aggregate rate of OC-48 full duplex.

The Monitor 4.8 provides full support for all 256K connections for OAM Fault Management processing (AIS/RDI/CC), Performance Management (forward and backward cell generation), and ATM Layer Protection Switching processing (1:1 and 1+1 configurations). A standard GCRA dual leaky bucket policer (or GFR policer) with Partial Packet discard capability for non-compliant AAL5 frames is also provided. The Monitor 4.8 maintains a comprehensive set of per connection/per port statistics and provides a standard 32-bit PCI CPU interface port for configuration, statistics gathering and non-intrusive monitoring for any of the OAM/PS cell flows by the host CPU.
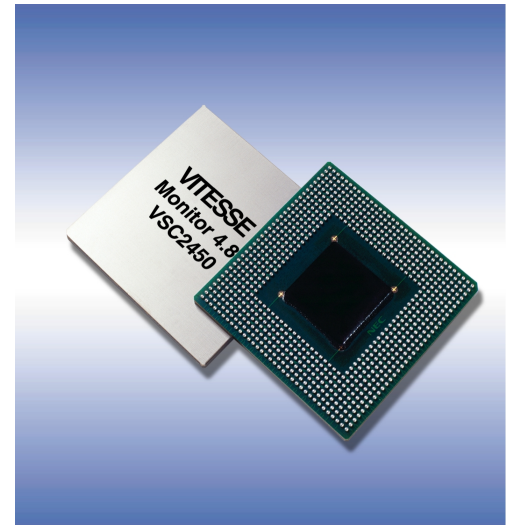
Benefits

The Monitor 4.8 provides industry-standard interfaces to Vitesse's other line card components (OC-48 Framers, OC-48 traffic management/SAR, and programmable classification engine), reducing the customer's hardware development cycle and shortening critical time to market.

The Monitor 4.8 is a full duplex OC-48 device providing full rate 2.488Gbps cell transfer in both ingress and egress directions. By supporting 256K full duplex ATM VCs the total aggregate cell processing performance is 11.36 million cells per second--the highest performance single chip solution in the industry.

With OAM/PS cell processing on all 256K connections, the Monitor 4.8 device enables a new level of network monitoring and provisioning capabilities for network administrators.

When used in conjunction with the PaceMaker™ (VSC2400) device, which combines the SAR and Traffic Management functions into a single chip, the Monitor 4.8 (VSC2450-00) provides the lowest power, lowest cost, and lowest chip count solution for an OC-48 ATM line card in the industry.

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Features (continued):

Policer:

- UTI ɪ371 Compliant
- Dual Leaky Bucket
- Guaranteed Frame Rate
- Partial Packet Discard for non-conforming AAL5 frames
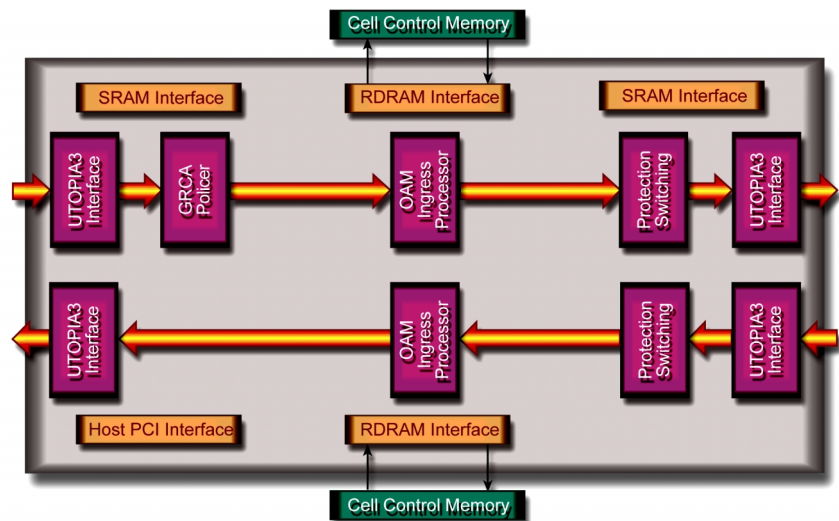
Target Applications:

- ATM Core Switches
- ATM Access Multiplexers
- Wireless Base Stations
- Core Routers

Traffic Management Family of Products

Vitesse's Traffic Management family of products is targeted at the packet processing problems found within core switches and high-speed routers at the heart of the Internet.

The products deal with the policing, management, quality provisioning and switching of layer 2, 3, and 4 data packets at speeds of 2.5 Gbps and beyond.

Monitor 4.8 Block Diagram

Specifications:	
Environmental	
■ Power Supply: 2.5V core, 3.3V I/O ■ Power Dissipation: 4W (Typical) ■ Package: 756-pin ABGA	■ Operating temperature: -40° to + 85° Celsius ■ Storage temperature: -65° to + 150° Celsius

Ordering Information:	
Part Number	**Description**
VSC2450-00UY/A	Full Duplex OC-48 OAM, Policing and Protection Switching processor

Complete System Solutions, From PHYs to Fabrics

Vitesse is dedicated to providing complete system solutions for our customers. Vitesse offers the end-to-end IC solution for high-speed telecommunication and networking applications for the core, metro, and aggregation markets. This complete system solutions consists of a family of products, including PHYs, network processors, traffic managers, and fabrics, for varying service and line speed requirements.

For more information on Vitesse Products visit the Vitesse web site at www.vitesse.com/platform or contact Vitesse Sales at (800) VITESSE or anp-sales@vitesse.com

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