



V Rose Microsystems, Inc.

www.vrosemicrosystems.com

VRM-XS2000

Product Data Sheet

Overview:

The VRM-XS-2000 is a PCI Telecom Mezzanine card (PTMC) which offers high-end ATM and IP services at an attractive price. The VRM-XS-2000 provides termination, switching and interworking capabilities from any port to any port. The VRM-XS-2000 performance and features are ideally suited for applications such as Wireless networking, Voice over Packet, DSLAM and Media Gateways. Using the state of the art Wintegra™'s WinPath2™ Network Processor, The VRM-XS-2000 is the perfect interface to handle ATM and IP simultaneously.

The VRM-XS-2000 on-board MIPS processor can run advanced protocols (e.g. 3GPP, SS7, ATM, VoIP) while the Network Processor handles all the data path. The VRM-XS-2000 I/O ports are highly configurable and support a mix of: OC-3/STM-1, OC-12/STM-4, 1000BASE-T and 1000BASE-X. Compliant with IEEE 1386.1 PCI Mezzanine card (PMC) and PICMG 2.15 PCI Telecom Mezzanine Card (PTMC), The VRM-XS-2000 can be used in cPCI, cPSB, AdvancedTCA™, VME, PC, and proprietary applications. The VRM-XS-2000 architecture allows to bypass the bottleneck of current systems by handling all the processing on-board and performing segmentation and reassembly locally, which allows to offload the CPU on the carrier board and optimizes bus transfers while doing termination.



Features:

ATM:

- AAL0, AAL1, AAL2 & AAL5
- ATM cell switching
- AAL2 CID switching
- Traffic management as per TM 4 .1:
- CBR, VBR, GFR and UBR
- Per VC queueing
- Full UNI/NNI VPI/VCI range
- OAM F4 and F5 as per ITU-T I.610

PT5MC:

- PICMG@ PT5MC compliant
- 2 x Gigabit Ethernet ports
- 8 x CT Bus lines
- UART
- Reference clock

Network Processor:

- Wintegra™ WinPath2™ @ 600 MHz
- 128 MBytes Packet SDRAM
- 128 MBytes Parameter SDRAM
- 128 MBytes Application SDRAM
- 32-bit / 200 MHz DDR2 SDRAM
- MIPS 24K™ CPU @ 600 MHz
- 6 WinGines @ 300 MHz
- Handles 18+ data path protocols

IP:

- PPP support
- HDLC support up to OC-12 rates
- Parsing of PPP over HDLC frames (RFC 2615 and RFC 1662)
- Packet scheduling

Interworking:

- L2 interworking between ATM/Ethernet
- IP routing and forwarding over ATM (RFC 1483/2684/1577)
- IP routing/forwarding over PPP (RFC1661)
- AAL2 to IP/UDP interworking
- GTP support

System Busses:

PCI bus

- PCI 2.2 Specification compliant
- 33 / 66 MHz operation
- 32-bit interface
- 3.3 V and 5 V signalling

Host bus

- PPC 60X @ 66 MHz
- 64-bit interface
- 16 MBytes Flash EPROM



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Physical Layer:

SONET/SDH

- Single OC-12 port or
- Quad OC-3 ports
- APS (Automatic Protection Switching)
- ATM (ITU-T I.432)
- POS (RFC 1619, RFC 1662)

Front Gigabit Ethernet

- 1 x 1000 BASE-X or
- 1 x 1000 BASE-T (Through SFP adapter)

Telecom Clock:

- Advanced PLL
- Meets GR-1244-CORE for Jitter/Wander for Stratum 4/4E
- Reference clock output to backplane (19.44 MHz)
- Reference clock input from the backplane (2 kHz, N * 8 kHz up to 77.76 MHz)

Ordering:

VRM-XS-2000: Quad OC-3/STM-1, Single OC-12/STM-4, Triple Gigabit Ethernet ATM and IP PMC 300 MHz, 384 MB SDRAM, 16 MB Flash

VRM-XS-TP001: OC-3/STM-1 multi mode SFP transceivers

VRM-XS-TP002: OC-3/STM-1 single mode IR SFP transceivers

VRM-XS-TP004: OC-12/STM-4 single mode IR SFP transceivers

VRM-XS-TP007: Gigabit Ethernet single mode SFP transceivers

