

# XS-3000

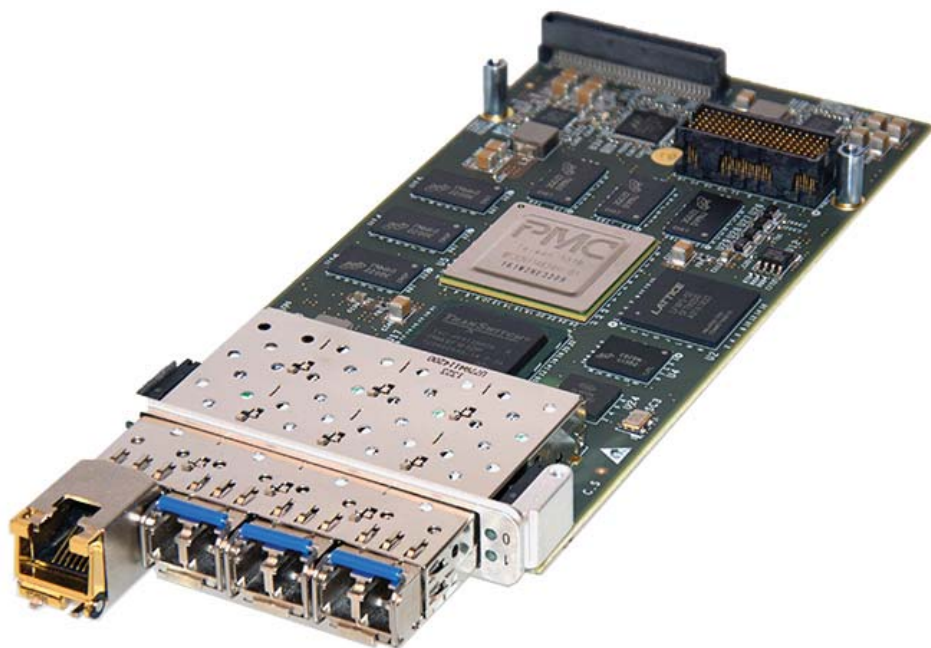
Quad OC-3, OC-12 & Gigabit Ethernet XMC

## Applications

- ▶ 3G, LTE & WiMAX Network: Control, Backhaul, Baseband and PHY.
- ▶ Voice over Packet
- ▶ Video Streaming
- ▶ Broadband Networks
- ▶ ATM to IP Gateways
- ▶ DSLAMs

## Main Features

- ▶ ATM AAL0, AAL1, AAL2 & AAL5
- ▶ Packet over SONET (POS)
- ▶ 4 x OC-3/STM-1
- ▶ 1 x OC-12/STM-4
- ▶ 1 x Gigabit Ethernet
- ▶ PCI Express
- ▶ Automatic Protection Switching
- ▶ WinPath3-SL Network Processor
- ▶ On-board 32-bit MIPS 34K™
- ▶ 2 x 256 MB DDR3
- ▶ 256 MB NAND Flash EPROM
- ▶ SFP Optical Transceivers



XS-3000 is a PCI Express Mezzanine Card (XMC) which offers high-end ATM and IP services in a compact form factor. XS-3000 provides termination, switching and interworking capabilities from any port to any port.

XS-3000 performance and features are ideally suited for applications such as Wireless networking, Voice over Packet, DSLAM and Media Signaling Gateways.

Using the state of the art third generation Wintegra™'s WinPath3-SL™ Network Processor, XS-3000 is the perfect interface to handle both ATM and IP simultaneously.

XS-3000 on-board dual MIPS 34K processors can run advanced protocols (e.g. 3GPP, SS7, ATM, VoIP) while the Network Processor handles all the data path.

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XALYO SYSTEMS

# XS-3000

## Quad OC-3, OC-12 & Gigabit Ethernet XMC

### ATM

- ▶ AAL0, AAL1, AAL2 & AAL5 **1**
- ▶ 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

### Network Processor

- ▶ Wintegra™ WinPath3-SL™ **2**
- ▶ 256 MBytes Packet DDR3
- ▶ 256 MBytes Application DDR3
- ▶ 32-bit / 400 MHz DDR3
- ▶ MIPS 34K™ CPU @ 600 MHz
- ▶ 6 WinGines @ 320 MHz
- ▶ 2.5 MBytes Internal Memory
- ▶ For more details see [www.wintegra.com](http://www.wintegra.com)

### System busses

- ▶ PCI Express **4**
- ▶ x1
- ▶ 2.5 Gbps
- ▶ Microprocessor bus **5**
- ▶ 16 bit
- ▶ 256 MBytes NAND Flash

### Interworking and QoS

- ▶ IPv4 and IPv6 Routing **3**
- ▶ Multicast
- ▶ MPLS
- ▶ Packet Switching
- ▶ IEEE1588v2
- ▶ Synchronous Ethernet
- ▶ NAT/PAT
- ▶ PWE3 (CESoPSN & SATOP)
- ▶ GRE, GTP and L2TP
- ▶ Bridging
- ▶ VLAN Stacking
- ▶ Ethernet OAM
- ▶ Per-flow Queueing
- ▶ WRED

### Physical Layer

- ▶ SONET/SDH **6**
- ▶ 4 x OC-3/STM-1 ports
- ▶ 1 x OC-12/STM-4 port
- ▶ APS (Automatic Protection Switching)
- ▶ ATM (ITU-T I.432)
- ▶ POS (RFC 1619, RFC 1662)
- ▶ Gigabit Ethernet **7**
- ▶ 1 x 1000BASE-X port, or
- ▶ 1 x 1000BASE-T port



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Quad OC-3, OC-12 & Gigabit Ethernet XMC

## Specifications

Form factor	.....XMC
Dimensions	..... 149mm x 74 mm
Processor	..... Wintegra WinPath3-SL
PCIExpress	..... 1 lane
UTOPIA/POS-PHY bus	..... 16-bit, 50 MHz, L2
Ethernet ports	..... 1 x 1000BASE-X
Optical connector	..... LC (SFP)
Communication ports	..... 4 x OC-3/STM-1 or 1 x OC-12/STM-4 1 x Gigabit Ethernet
Protocols	..... ATM and IP
Flash memory	..... 256 MBytes NAND
Host memory	..... 256 MBytes DDR3, 400 MHz
Packet memory	..... 256 MBytes DDR3, 400 MHz
Operating systems	..... Linux, Vxworks
Operating temperature	..... 0 to 55°C
Storage temperature	..... -40 to 85°C
Relative humidity	..... 5% to 90% non-condensing
Altitude	..... 0 to 15'000 ft
Power consumption	..... 17 W max (est.)
12 V	..... 0.85 A
3.3V	..... 2.10 A

## Standards compliance

PCI Express	..... PCI Express Base Specification 1.0a
VITA 42.0	.....XMC
VITA 42.3	.....XMC PCI Express Protocol Layer
IEEE 802.3	..... CSMA/CD (Ethernet)
MSA SFP	..... MultiSource Agreement SFP
RFC 1483	..... Multiprotocol Encapsulation over AAL5
RFC 1577	..... Classical IP and ARP over ATM
RFC 1619	..... PPP over SONET/SDH
RFC 1661	..... The Point-to-Point Protocol (PPP)
RFC 1662	..... PPP in HDLC-like Framing
RFC 2474	..... Definition of the Differentiated Services Field in the IPv4 and IPv6 Headers
RFC 2475	..... An Architecture for Differentiated Services
RFC 2615	..... PPP over SONET/SDH
RFC 2684	..... Multiprotocol Encapsulation over AAL5
ITU-T I.432	..... B-ISDN User-Network Interface
ITU-T I.363.1	..... B-ISDN ATM Adaptation Layer Type 1
ITU-T I.363.2	..... B-ISDN ATM Adaptation Layer Type 2
ITU-T I.363.5	..... B-ISDN ATM Adaptation Layer Type 5
ITU-T I.366.1	..... Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL type 2
ITU-T I.610	..... B-ISDN Operation and Maintenance Principles and Functions

## Ordering Information

XS-3000

WinPath3-SL ATM and IP PCI Express Card  
320 MHz, 512 MB SDRAM, 256 MB Flash  
Quad STM-1 or Single STM-4 & 1000BASE-X

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