

Signalware SS7 Boards

XH0303 – PCI Express SS7 T1/E1/J1 Interface Board

Product Overview

Mobile operators continue to experience increasing Signaling System 7 (SS7) network traffic due to the expansion of wireless usage and strong demand for value-added services such as text messaging, prepaid, global roaming, and virtual private networks. In order to manage this growth, while enhancing network efficiency, the next generation of communication infrastructure solutions must cost-effectively increase SS7 link density, performance, and scalability. As the communications network infrastructure is built out for VoIP, IMS, wireless data, and other transformational services, the equipment is poised to move from a proprietary and customized hardware infrastructure to a commercially available set of components. Purpose-built SS7 network interface boards in standard server platforms continue to be a preferred solution for running these new applications. The availability of Ulticom's Signalware® XH0303 PCI Express board will enable Ulticom's SS7 to run on the newest and most powerful servers in the market today.

Product Description

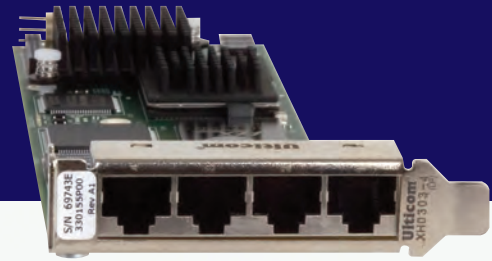
The Signalware XH0303 SS7 PCI Express interface board is an essential part of Ulticom's Signalware SP (Signaling Services Platform), providing a fault-resilient service execution environment and a complete suite of SS7 software protocol components. The XH0303 offers high-density, high-throughput connectivity to SS7 network elements by providing the physical link interface enabling Signalware applications to interconnect with the SS7 signaling network. It performs the functionality of MTP Level 1, 2, and portions of Level 3 for ANSI, ITU-T, Chinese, and Japanese SS7. The XH0303 has the ability to terminate up to four channelized T1/E1/J1 lines and process up to 124 Low-Speed or up to 4 High-Speed SS7 links. The High-Speed Links (HSL) will support either Q.703 Annex A or ATM (AAL5 on the board) supporting GR-2878 or Q.2110/2130/2140 upper layers on the Signalware SP. These connectivity options allow a broad range of architectures that can be supported by the XH0303 board.

Applications

The Signalware XH0303 SS7 PCI Express interface board, coupled with Signalware SP, is an ideal component solution to rapidly build and deploy new, value-added applications. With its highly configurable design and ability to run large volumes of SS7 network traffic, the XH0303 can be used to satisfy a broad range of requirements for the most demanding telecom applications.

Typical network elements that can use the XH0303 include home location registers, signaling gateways, softswitches, service control points, voice messaging platforms, SMS routers, and location servers. The modular PCI Express form factor allows the XH0303 board to be used within a variety of rack mount servers, which utilize PCI Express slots. The Signalware XH0303 board, coupled with the world's leading commercial SS7 middleware, supports this level of modularity and delivers a high performance, cost-effective signaling solution for next generation communication equipment.

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Product Features

- Low profile (Full Height Compatible) PCI Express form factor interface board with four RJ-48C, software-selectable T1/E1/J1 ports; field-expandable up to 124 Low-Speed Links at 48, 56, or 64 Kb/s or up to 4 High-Speed Links (HSLs) based on Q.703 Annex A or ATM (AAL5 supporting GR-2878 or Q.2110/2130/2140 upper layers)

Note: J1 is the Japanese version of T1

- Preventative Cyclic Retransmission (PCR) for satellite networks under ANSI, ITU, and Chinese standards
- PCI Express x1 lane connector type
- Solaris™ and Linux® support
- Manufactured in ISO 9001-certified facilities
- UL, CE, FCC, VCCI, and RoHS-compliant

Product Advantages

- Industry-leading SS7 MSU processing and throughput
- Field-upgradeable to higher link densities and different interfaces (channelized, unchannelized, ATM) with the use of Field Programmable Gate Array (FPGA) semiconductors
- Reduced host CPU utilization through the efficient movement of data to/from the host with Direct Memory Access (DMA)
- Flash memory to store configuration data and board software reduces frequency of host-to-board communication
- Flexibility to use software selectable channelized, unchannelized, or ATM interfaces

Technical Specifications

- Operating Temperature 0°C to 50°C
- Storage Temperature -40° to 70°C
- Clock Speed 66 MHz bus; 660 MHz internal to PowerPC
- Memory 4 M x 36 SRAM (equivalent to 16 Mbytes)
- Host Interface PCIe 2.5 Gigabit/second/Lane/direction, x1, serial interface compliant with: PCIe Base spec, Revision 1.0a, PCIe CES spec, Revision 1.1 +3.3 VDC signaling level, Full bus master/slave, DMA with buffer chaining
- Power Requirements +3.3V 5.26W (typ); 7.00W (max)
+12.0V 2.27W (typ); 3.00W (max)

Connector Signal List

RJ48C connectors, each defined as follows:

- Pin Signal Description
- 1 Receive (to the board)
 - 2 Receive (to the board)
 - 3 No connection
 - 4 Transmit (to the network)
 - 5 Transmit (to the network)
 - 6 No connection
 - 7 Shield
 - 8 Shield

Ordering Information

Low Profile	Description	Low Profile	Description	Low Profile	Description
XH0303-4(LP)*		XH0303-4(LP)*		XH0303-4(LP)*	
330155A00B002	T1/E1/J1 Board, 2 Link	330155A00B064	T1/E1/J1 Board, 64 Link	330155A00BH04	T1/E1/J1 Board, 4 HSL
330155A00B004	T1/E1/J1 Board, 4 Link	330155A00B096	T1/E1/J1 Board, 96 Link	330155A00BA01	T1/E1/J1 Board, 1 ATM
330155A00B008	T1/E1/J1 Board, 8 Link	330155A00B124	T1/E1/J1 Board, 124 Link	330155A00BA02	T1/E1/J1 Board, 2 ATM
330155A00B012	T1/E1/J1 Board, 12 Link	330155A00BH01	T1/E1/J1 Board, 1 HSL	330155A00BA03	T1/E1/J1 Board, 3 ATM
330155A00B016	T1/E1/J1 Board, 16 Link	330155A00BH02	T1/E1/J1 Board, 2 HSL	330155A00BA04	T1/E1/J1 Board, 4 ATM
330155A00B024	T1/E1/J1 Board, 24 Link	330155A00BH03	T1/E1/J1 Board, 3 HSL		
330155A00B032	T1/E1/J1 Board, 32 Link				

*Full height compatible with optional full height front panel that is included with every shipment.

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Signaling Solutions**

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