



iSPAN® 5639E PCI-Express T1/E1/J1 Media Interface Controller

*Octal Port Network Interface with Echo Cancellation for Media
and Signaling Applications*

FEATURES

Eight individually software selectable T1/E1/J1 interfaces

Optimized for Media applications:

- Host Media interface (TRDA)
- HDLC framing
- Echo Cancellation
- Adaptive Noise Reduction
- I-TDM transport protocol

Support for Signaling protocols such as SS7 MTP2 on LSL and HSL, or SAAL over ATM

Termination of up to 256 media streams for processing on the host or transport using I-TDM on the front panel Ethernet port

Embedded G.168 Echo Cancellation (128ms tail on all channels)

Rich and field-proven Software Development Suite (iWARE)

High bandwidth PCI-Express host connectivity

Freescale™ MPC8560 (PowerQUICC III™) on-board processor @ 833 MHz

Front Panel Gigabit Ethernet port for management and data traffic

APPLICATIONS

Specialized Resource Points (SRP)

Ring Back Tone (RBT) / Multimedia Servers

IMS Media Resource Function (MRF)

Voice Portals

Voice/Video Mail Servers

Service Nodes (SN)

NGN IP Media Servers

Call Centers

Flexible Solution for Multimedia Applications

The iSPAN 5639E PCI-Express T1/E1/J1 Media Interface controller from Interphase delivers a comprehensive high-performance connectivity solution for use with PCI-Express enabled rack-mount servers to deliver a wide range of multimedia and user interaction applications for Intelligent Networks, NGN, Wireless or IP Multimedia Subsystem (IMS) infrastructure.

High Performance and Capacity

With 8 T1/E1/J1 interfaces, the iSPAN 5639E provides a high-capacity solution for media and signaling applications, and enables optimization of slot usage within the server. With a high-performance PCI-Express interface to the host, together with an optimized data transfer API, the iSPAN 5639E enables rapid exchange of media data and is hence ideal for all host-based media processing applications.

Powerful Solution Architecture

The iSPAN 5639E incorporates a Freescale PowerQUICC III communications controller to deliver high-performance and high-capacity data processing. An FPGA implements all TDM switching and I-TDM protocol conversion for the transport of media data over Ethernet. Finally, an Octasic OCT6100 ASIC performs high-quality echo cancellation and voice quality enhancement functions.





5639E Solution Components

Processor/Memory

- PowerQUICC III (MPC8560) RISC processor @ 833 MHz, allowing support of various communications protocols
- 128 MB of DDR SDRAM on SODIMM (upgradeable up to 1 GB)
- 16 MB downloadable 8-bit boot Flash EPROM
- Option for 128 MB of Storage Flash EPROM
- PCI-Express x1 (single lane) host connectivity

Media Stream Processing

- T1/E1 timeslots interchange
- TDM to I-TDM protocol conversion for data transport over Ethernet
- G.168-2002 echo cancellation on all 256 channels

Network Interfaces

- Eight individually software selectable T1/E1/J1 lines, using 4 RJ45 connectors, each supporting 2 lines
- Two QuadFALC™ framers supporting long haul or short haul interfaces, AMI, HDB3, or B8ZS line coding and various superframe formats
- One Gigabit Ethernet port for management traffic or I-TDM inter-working

Telecom Clock Management

- Line interfaces configurable in LT (clock slave) or NT (clock master) mode (lines can have independent clock rhythms)
- Synchronization on internal clock generator or on any of the 8 T1/E1 lines

Board Development Kit

The BDK is specific to the 5639E hardware and not tied to a particular operating system environment. The kit contains the following main components:

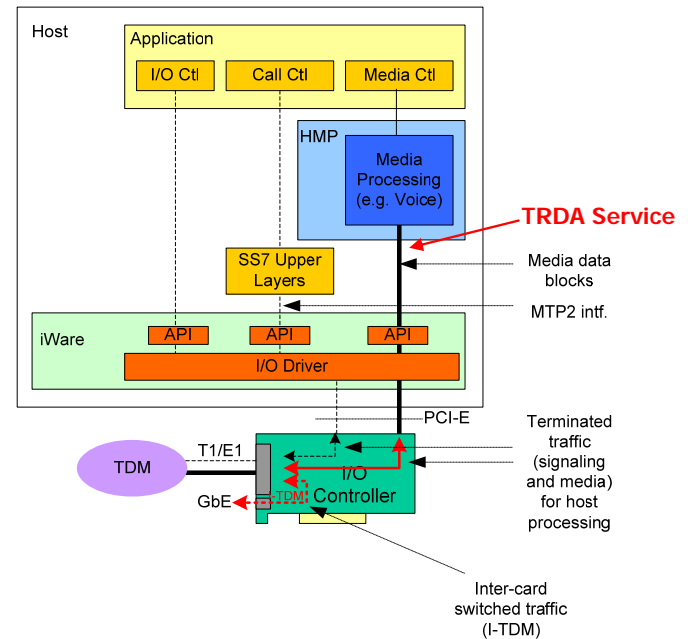
- Boot Firmware with power-on self-test, power-on boot sequence, built-in self-test and configuration via a command line interface
- Setup and Built-in Self-test utilities, Documentation

iWARE® Software Development Suite (SDS)

iWARE SDS is an integrated set of embedded firmware, host drivers and utilities that accelerates application development and eases integration of the iSPAN 5639E to deliver media applications. Services provided:

- TDM Raw Data Access (TRDA) for HMP applications
- HDLC framing
- I-TDM for media transport over Ethernet
- Echo cancellation
- Signaling protocols such as SS7 MTP1/2, SAAL/ATM, Frame relay, etc.
- Clocking and TDM switching

Host-based Media Processing application example: the iSPAN 5639E provides the PSTN interface to a Media Server, supporting the T1/E1 line control, signaling protocols, media traffic termination onto the host, embedded echo cancellation and inter-card / inter-server TDM switching.



Technical Specifications

Architecture

Processor	MPC8560-PQIII 850MHz
RAM Memory	128 MB DDR SDRAM on SODIMM
ROM Memory	16 MB NOR Flash, 128MB NAND Flash
Connectivity	PCI-Express x1 Link

Mechanical

Form Factor	PCIe x4 standard height half length
Length	166.1 mm (6.5 in)
Width	93.72 mm (3.7 in)

Operating Environment

Power Dissipation	17W maximum
Temperature	0 to 55 °C (32 to 131 °F)
Storage Range	-40 to 80 °C (-40 to 176 °F)
Relative Humidity	5% to 95% non-condensing
Altitude	0 to 15,000 ft

6/7/2010

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About Interphase Corporation

Interphase Corporation (NASDAQ: INPH) delivers solutions for network connectivity, interworking, and packet processing for key applications for the communications, Mil/Aero, and enterprise markets. Founded in 1974, Interphase provides expert customization services and contract manufacturing, in addition to its COTS portfolio, and plays a leadership role in next generation AdvancedTCA® (ATCA), AdvancedMC™ (AMC), PCI-X, and PCIe standards and solutions. Interphase is headquartered in Plano, Texas, with sales offices across the globe.

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