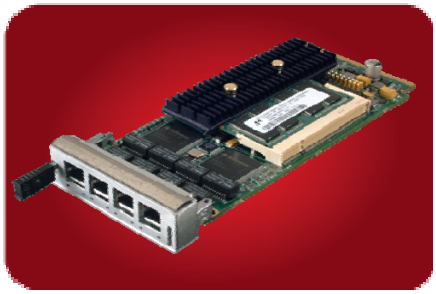
INTERPHASE



*i*SPAN® 3639 AdvancedMC™ T1/E1/J1 Communications Controller

Quad/Octal Port Multiprotocol Controller for Signaling and Media Applications on AdvancedTCA and µTCA Platforms

FEATURES

Four or Eight T1/E1/J1 interfaces

Optimized for Signaling and Media applications

Designed for ATCA and µTCA platforms

Rich and field-proven Software Development Suite (*i*WARE)

On-board support for multiple network protocols:

- SS7 (MTP1 & MTP2) LSL/HSL
- SAAL/GR-2878
- ATM (incl. IMA)
- Frame Relay
- HDLC & Media Interface
- I-TDM

Pre-integrated with various 3rd party upper layer protocol stacks

Single width, Mid-size or Full-size PICMG AMC.0 R2.0 compliant

Front or Rear access

Optional acceleration of media termination and circuit switching*

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

PCI-Express (AMC.1) and Gigabit Ethernet (AMC.2) connectivity

Support of telecom clocks TCLKA, TCLKB, TCLKC and TCLKD.

APPLICATIONS

Softswitches and MSC Servers
Serving / Gateway GPRS Support Nodes (xGSNs)
Signaling Gateways
Wireless BSCs/RNCs
Media Gateways
Media Servers
Call Servers
HLRs

Designed for Signaling and Media Applications

The *i*SPAN 3639 AdvancedMC™ T1/E1/J1 communications controller from Interphase delivers a comprehensive high-capacity connectivity solution for use with AdvancedTCA and MicroTCA platforms to deliver a wide range of Voice-Over-IP, Wireless and IP Multi-Media Subsystem (IMS) infrastructure application elements.

High Performance and Capacity

With up to 8 T1/E1/J1 interfaces, the *i*SPAN 3639 provides a high-capacity solution for signaling and media applications and enables optimization of slot usage. With support for a high-performance PCI-Express interface to a host processor, or gigabit Ethernet connectivity to the AdvancedMC connector, the *i*SPAN 3639 enables rapid exchange of payload information and is hence ideal for a broad spectrum of applications requiring T1/E1/J1 connectivity.

Powerful Solution Architecture

The *i*SPAN 3639 incorporates the Freescale PowerQUICC III™ communications controller to deliver high-performance and high-capacity processing of signaling traffic. With the addition of an optional FPGA-based support for TDM switching* and I-TDM protocol conversion, the 3639 can be used for full capacity media termination and media switching applications.

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3639 Solution Components

AdvancedMC Connectivity

- PCI-Express x1 link on AMC port 4 (AMC.1 Type 1)
- 2 Gigabit Ethernet links on AMC port 0 (AMC.2 Type E1) and 8 (AMC.2 T1)
- Optional I-TDM Gigabit Ethernet link on AMC port 1 or 9
- Telecom clocks on TCLKA and TCLKB, optionally TCLKC/D
- PCI-Express 100 MHz clock input on AMC FCLKA
- T1/E1/J1 line signals on AMC port 20-12 towards 3rd-party Rear Transition Module

Processor/Memory

- PowerQUICC III (MPC8560) RISC processor, allowing full support of various communication protocols, and reducing host CPU processing
- Optional FPGA-based media termination and switching
- 128 MB of DDR SDRAM on SODIMM (up to 1GB)
- Optional SDRAM for CPM tables (best CPM performances)
- 16 MB downloadable 8-bit Flash Memory
- Option for up to 256 MB of NAND Flash

Network Interfaces

The 3639 can interface with PSTN/ISDN networks via:

- Four or eight individually software selectable T1/E1/J1 lines
  - Front access, on 4 RJ45 connectors, each supporting 2 lines, or
  - Rear access, on AMC ports 20 to 12
  - QuadFALC™ framers supporting long or short haul interfaces, AMI, HDB3, or B8ZS line coding and various superframe formats
- I-TDM over a Gigabit Ethernet link on AMC connector (line interfaces are located on another card in the system)

Telecom Clock Management

- Line interfaces configurable in LT (clock slave) or NT (clock master) mode (lines can have independent clock rhythms)
- Three synchronization modes supported:
  - Free running internal clock
  - Recovered clock (loop back timing) from any T1/E1/J1 line
  - System telecom clock reference (via AMC TCLKA or TCLKC)
- Clock can be forwarded to AMC TCLKB or TCLKD

Board Development Kit

The 3639 BDK is specific to the 3639 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

Board Support Package

The 3639 Linux BSP provides kernel, development environment and basic drivers for use with Linux to develop embedded software on the 3639.

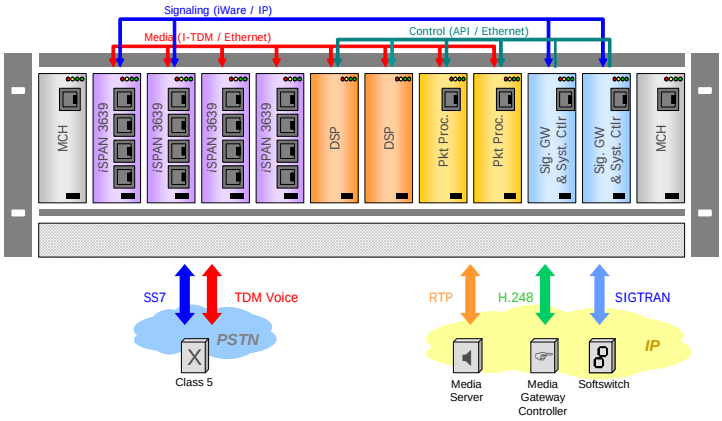
*i*WARE® Software Development Suite (SDS)

The ***i***WARE SDS is an integrated set of embedded firmware, host drivers and utilities that accelerates application development and eases integration of the ***i***SPAN 3639 to deliver end applications. Protocols provided:

- SS7 MTP1 and 2 (up to 128 LSLs)
- ATM AAL0, AAL2, and AAL5, with IMA capability
- SSCF and SSCOP (SAAL)
- Frame Relay
- HDLC and Enhanced Media transfers (HMP applications)*
- I-TDM for media transport over Ethernet backplane

iWARE SDS provides the same API in PCI-Express and Ethernet modes.

Application Example: The iSPAN 3639 provides the PSTN interface to a µTCA VoIP Access Gateway (1K media channels with embedded Signaling Gateway):



Technical Specifications

Architecture	
Processor	MPC8560 @ 833 MHz
RAM Memory	128 MB DDR SDRAM or SODIMM
ROM Memory	16 MB NOR Flash, 128 MB NAND Flash
Connectivity	AMC.1 (PCI Express), AMC.2 (Ethernet)
Mechanical	
Form Factor	AdvancedMC single-width Full/Mid-size
Length	180.6 mm (7.11 in.)
Width	73.5 mm (2.89 in.) (single-width)
Operating Environment	
Power Consumption	20 W typ. / 24 W max.
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

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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.