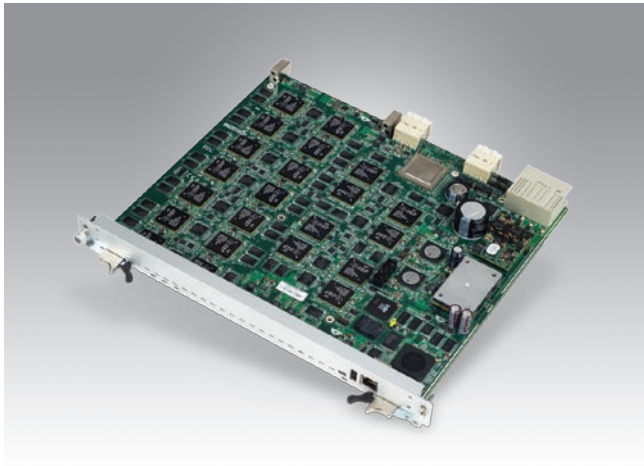


MIC-5701E

AdvancedTCA® DSP Blade for Voice and Video Processing



Features

- 22 Texas Instruments TMS320TCI6486 DSPs
- 1 Broadcom BCM56334 10 GbE switch for both fabric interface and base interface
- 1 Freescale QorIQ P2020 local management processor
- 2 Tundra/IDT Tsi577 Serial RapidIO switches
- TI Telogy Networks Framework
- ENEA OSEck®, LINX® and dSPEED®
- Wind River Linux PNE-LE 3.0 support for P2020
- Single slot PICMG 3.0/3.1 compliant

Introduction

The MIC-5701E is a voice and video-over-IP DSP farm on a single-slot ATCA blade targeting telephony infrastructure applications, including voice-over-packet high-density gateways, wireless media gateways, and remote access servers.

A key requirement of telephony infrastructure applications is the availability of large on-chip memories to handle vast amounts of channel data during transcoding processing. Each of the twenty-two on-board DSPs incorporate 768 KB of shared RAM and 608 KB local L2 RAM and connect to 256 MB external DDR2 memory, thereby reducing system power dissipation and system cost and enhancing board density. Each DSP has six optimized cores, making a total of 132 cores per MIC-5701 to combine highest performance with the lowest power dissipation per port. Serial RapidIO is implemented for inter-DSP communications and Gigabit Ethernet is embedded for native connectivity to IP-based systems.

The blade is an excellent choice for applications including video and telecom infrastructure, medical imaging, and wireless infrastructure. The C64x+ devices are upward code-compatible from previous C6000™ devices making the MIC-5701 an ideal upgrade platform from previous generation designs.

The MIC-5701E includes a high-performance Freescale QorIQ P2020 processor managing a powerful Broadcom BCM56334 switch which terminates the 10 gigabit Ethernet fabric connections and distributes traffic to the twenty-two DSPs. The MIC-5701E offers unrivaled packet and media processing capabilities for high density transcoding in a compact ATCA form factor with a power consumption of under 220W. DSP software support is available through TI's Telogy Networks framework and codecs, and from Advantech's ecosystem software partner ENEA.

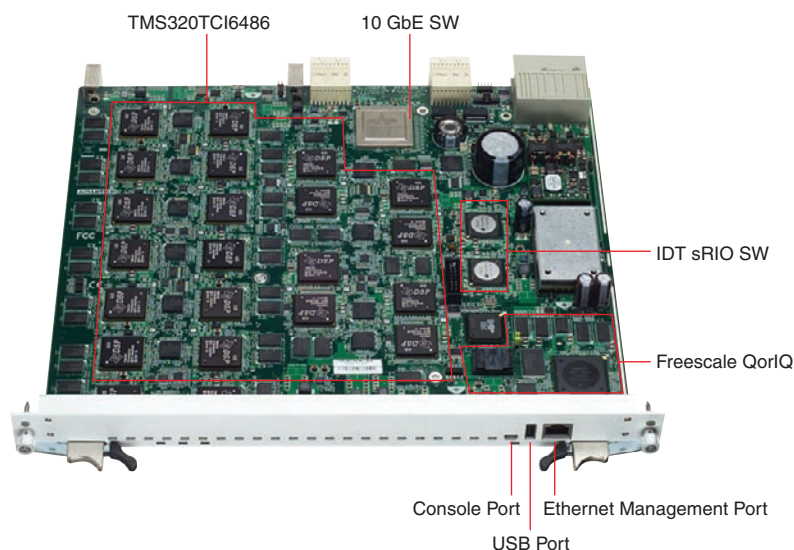
Specifications

Feature	Description	
DSP Farm	DSP	TI TMS320TCI6486
	Number of DSPs	22
	Speed of DSP	625 MHz
	Cores per DSP	6 x C64x+ @ 625 MHz
	DDR2 Memory per DSP	256 MB
Interface	Serial RapidIO Interface 1000 Mbps Ethernet with RGMII	
Zone 2	Fabric Interface/ Base Interface	1 x Broadcom BCM56334 10 GbE Switch 2 x 10 GbE XAU1 for fabric interface 2 x 1000 BaseT for base interface
Serial RapidIO	Serial RapidIO Switch	2 x Tundra/IDT Tsi577 (16-port 3.125 Gb Serial RapidIO Switch)
Local Management Processor (LMP)	Processor	1 x Freescale QorIQ P2020
	E500 Core Frequency	Up to 1.2 GHz
	DDR3 Memory	512 MB 1x 128 M* 8 1 G 1333 MHz (ECC)
	Interface	Serial RapidIO interface 10/100/1000 Mbps Ethernet interfaces PCIe interface USB 2.0 interface 10/100/1000 Mbps Ethernet interface PCIe interface USB 2.0 interface
	Boot Flash	Dual boot flashes (redundancy) Redundant pair of 128 MB
	Local Bus	1x NAND Flash up to 1 GB
Front I/O Interface	Console Port	1x Mini-USB UART
	USB Port	1x Type A
	Ethernet Management Port	1x RJ-45

Specifications

Front LEDs	DSP Status	Per DSP Dual Color RED/GREEN DSP Status (22 total LEDs)
	Power Good	Green
	Out of Service	Red/Yellow
	ATCA Hot Swap	Blue
Power	Watts	Max. 220W
Cooling	Heatsink	Passive Aluminum Cooler
SW Support	Boot Loader	U Boot
	HW Management	Compliant with IPMI 2.0
	Operating System	Wind River Linux PNE-LE 3.0/Freescale SDK
Physical Dimensions	Dimensions	294.56 x 322.25 mm (11.60" x 12.69")
	Weight	3 kg
Environment	Operating Environment	Temperature: 0 to 45° C Humidity: 20% to 90 % RH
	Storage Temperatures	Temperature: -20 to 70° C Humidity: 5% to 95 % RH
Compliance	EMC/Safety	CE mark (EN60950-2001) UL60950-1/CSAC22.2 FCC47 CFR Part15, Class A 55022/EN55024/EN300386)
	PICMG	3.0/3.1

Placement



Ordering Information

Model Number	Description
MIC-5701E	AdvancedTCA® DSP Blade for Voice and Video Processing

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