

MIC-5701E

AdvancedTCA® DSP Blade for Voice and Video Processing

NEW



Features

- 22 Texas Instruments TMS320TCI6486 DSPs
- One Broadcom BCM56334 10 GbE switch for both fabric interface and base interface
- One Broadcom QorIQ P2020 local management processor
- Two 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 incorporates 768 KB of shared RAM and 608 KB local L2 RAM and connects 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-5701E 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-5701E 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.

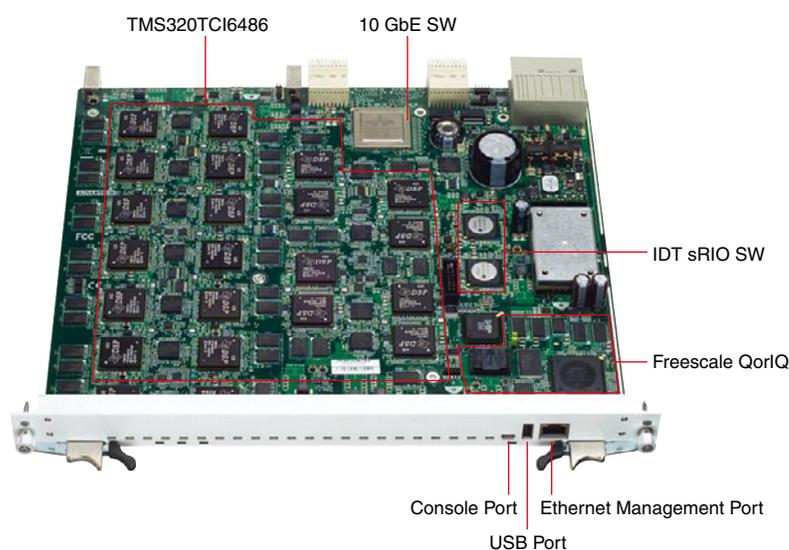
Specifications

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	
Zone 2	Fabric Interface/ Base Interface	Serial RapidIO Interface	
		1000 Mbps Ethernet with RGMII	
Serial RapidIO	Serial RapidIO Switch	1 x Broadcom BCM56334 10 GbE Switch	
		2 x 10 GbE XAUI for fabric interface 2 x 1000 Mbps for base interface	
Local Management Processor (LMP)	Processor	2 x Tundra/IDT Tsi577 (16-port 3.125 Gb Serial RapidIO Switch)	
		1 x Freescale QorIQ P2020	
	E500 Core Frequency	Up to 1.2 GHz	
			512 MB
	DDR3 Memory	1 x 128 M* 8 1 G 1333 MHz (ECC)	
			Serial RapidIO interface
	Interface	10/100/1000 Mbps Ethernet interfaces	
			PCIe interface
			USB 2.0 interface
			10/100/1000 Mbps Ethernet interface
Boot Flash	Dual boot flashes (redundancy)	PCIe interface	
		USB 2.0 interface	
Local Bus	1 x NAND Flash up to 1 GB		
		Redundant pair of 128 MB	

Specifications

Front I/O Interface	Console Port	1 x Mini-USB UART
	USB Port	1 x Type A
	Ethernet Management Port	1 x RJ-45
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
	Operating Environment	Temperature: 0 to 45° C Humidity: 20% to 90 % RH
Environment	Storage Temperatures	Temperature: -20 to 70° C Humidity: 5% to 95 % RH
	Compliance	EMC/Safety
PICMG		3.0/3.1

Placement



Ordering Information

Model Number	Description
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