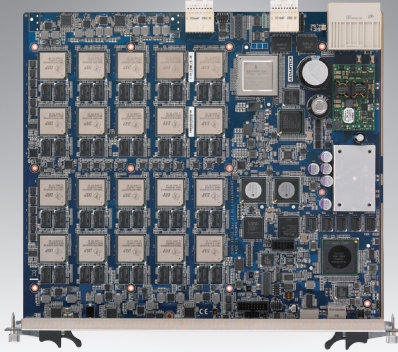


# DSP-8901

## AdvancedTCA® DSP Blade Provides Industry's Most Powerful DSP Farm for Voice and Video Processing

**NEW**



### Features

- Twenty Texas Instruments TMS320C6678 DSPs
- 512 MB ~ 2 GB DDR3 memory per DSP
- BCM56321 10 GbE switch for both Fabric Interface and Base Interface
- Freescale QorIQ™ P2020 for Local Management Processor (LMP)
- IDT Tsi577 Serial RapidIO switches
- Pigeon Point System IPMI 2.0
- Wind River Linux PNE-LE 4.0 support for P2020
- Single slot PICMG 3.0/ 3.1 compliant

### Introduction

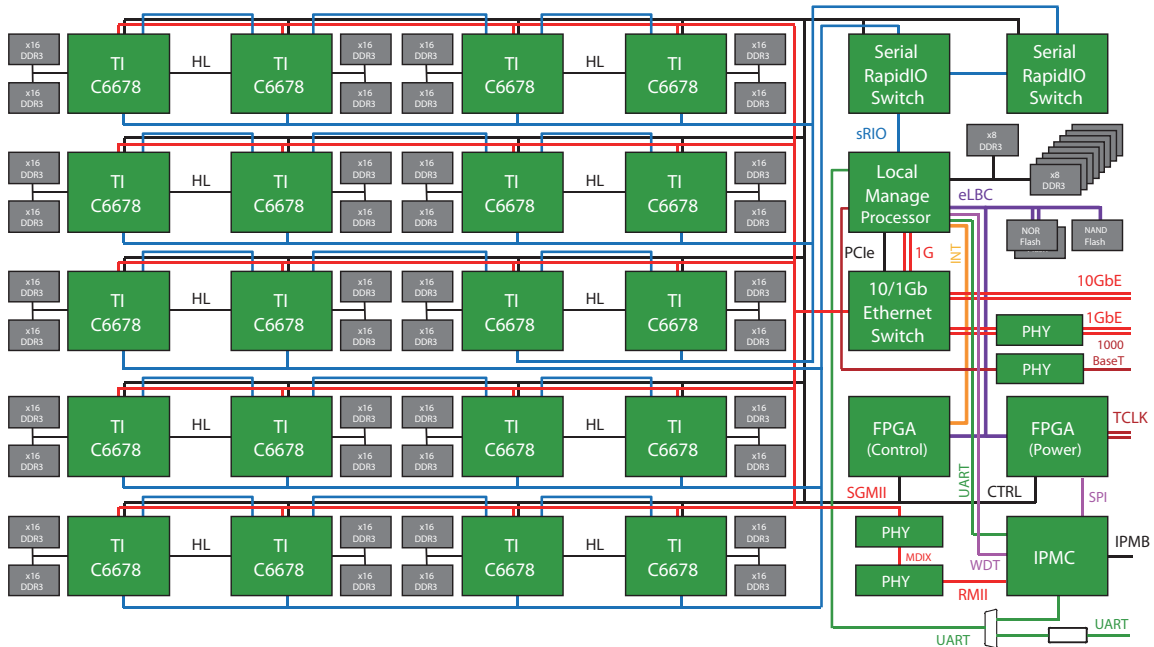
The DSP-8901 is designed with 20 TI TMS320C6678 DSPs. With its twenty onboard TMS320C6678 DSPs at 1.0 GHz core frequency, the DSP-8901 provides 160 cores of processing power to reach the higher levels of performance density needed to build the highest capacity wireless media gateways. The DSP-8901 significantly reduces overall system power dissipation and system cost, and frees up valuable slots in gateway elements for additional subscriber capacity and throughput. The DSP-8901 includes a high-performance Freescale QorIQ P2020 processor. The powerful Broadcom BCM56321 switch terminates the 10 gigabit Ethernet fabric connections and distributes traffic to the twenty DSPs. The DSP-8901 offers unrivaled packet and media processing capabilities.

For increasing demand in high end video conferencing, broadcasting and telepresence fields, the DSP-8901 ATCA blade also offers unrivaled image processing performance for compression and decompression, image analysis, filtering and format conversion.

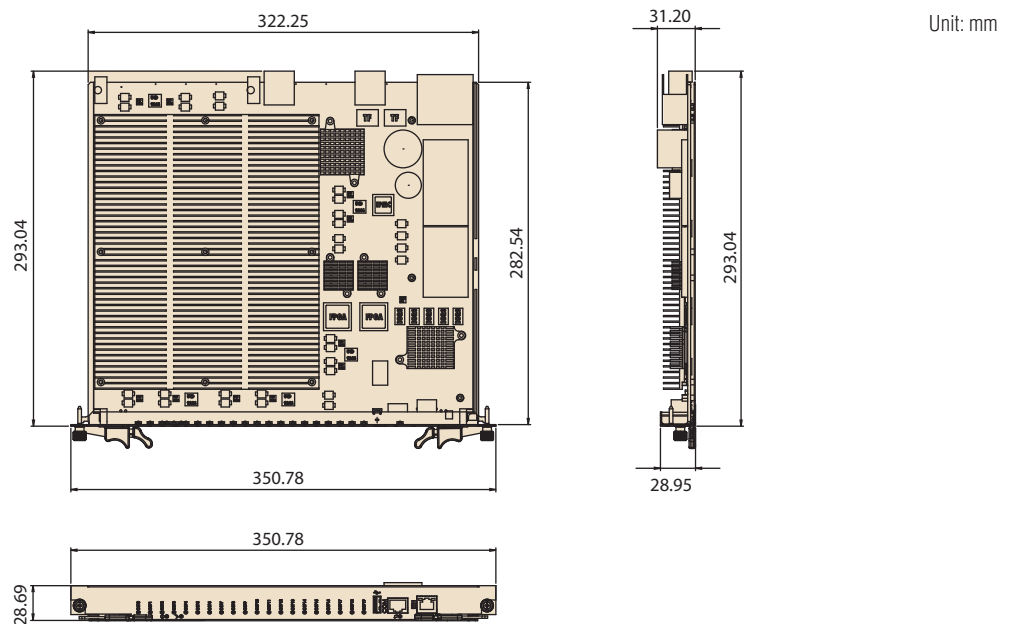
### Specifications

DSP Farm	DSP	TI TMS320C6678
	Number of DSPs	20
	Speed of DSP	1.0 GHz
	Cores per DSP	8 x TMS320C66x DSP @ 1.0 GHz
	DDR3 Memory per DSP	512 MB ~ 2 GB
	Interface	Serial RapidIO interface 1000 Mbps Ethernet with SGMII
Zone 2	Fabric Interface/Base Interface	1 x Broadcom BCM56321 10 GbE switch 2 x 10 GbE XAUI for fabric interface 2 x 1000 Mbps 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	2 GB, 1 x 128 M*8 1 G 1333 MHz (ECC)
	Interface	Serial RapidIO interface 10/100/1000Mbps Ethernet interfaces PCIe interface USB 2.0 interface
	Boot Flash	Dual boot flashes (redundancy) Redundant pair of 128 MB
Front I/O Interface	Local Bus	1 x NAND Flash up to 1 GB
	Console Port	1 x RJ-45 (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 (20 total LEDs)
	Health Status	Green
	Out of Service	Red/Yellow
	ATCA Hot Swap	Blue
Power	Watt	Max. 350 W
Cooling	Heatsink	Passive Aluminum Cooler
	Boot Loader	U-Boot
Software Support	H/W Management	Compliant with Pigeon Point System IPMI 2.0
	Operating System	WindRiver Linux PNE-LE 4.0/Freescale SDK
	Dimensions (W x D)	322.25 x 294.56 mm (12.69" x 11.60")
Physical Characteristics	Weight	3 kg
	Operating Environment	Temperature: 0 to 45° C, Humidity: 20% to 90 % RH
Environment	Storage Temperature	Temperature: -20 to 70° C, Humidity: 5% to 95 % RH
	Compliance	EMC/Safety
PICMG		3.0/3.1

### Block Diagram



### Dimensions



### Ordering Information

Part Number	Description
DSPA-8901E	AdvancedTCA TI TMS320C6678 DSP Blade w/ 32-bit memory for Voice and Video Processing