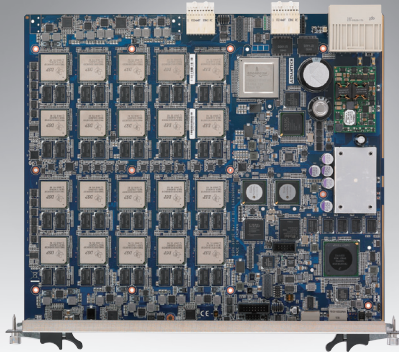


DSP-8901

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

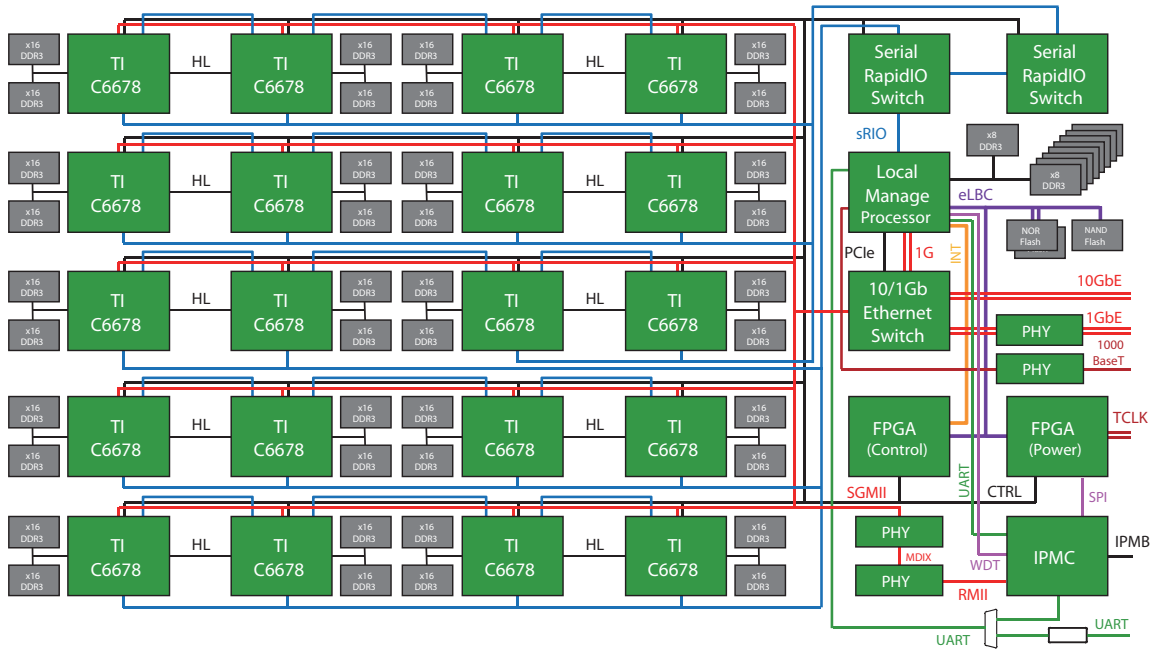
The DSP-8901 is designed with 20 TI TMS320C6678 DSPs. With its twenty onboard TMS320C6678 DSPs at 1.0 GHz core frequency, the DSP-8901 provides 160 cores of processing power to reach the higher levels of performance density needed to build the highest capacity wireless media gateways. The DSP-8901 significantly 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.

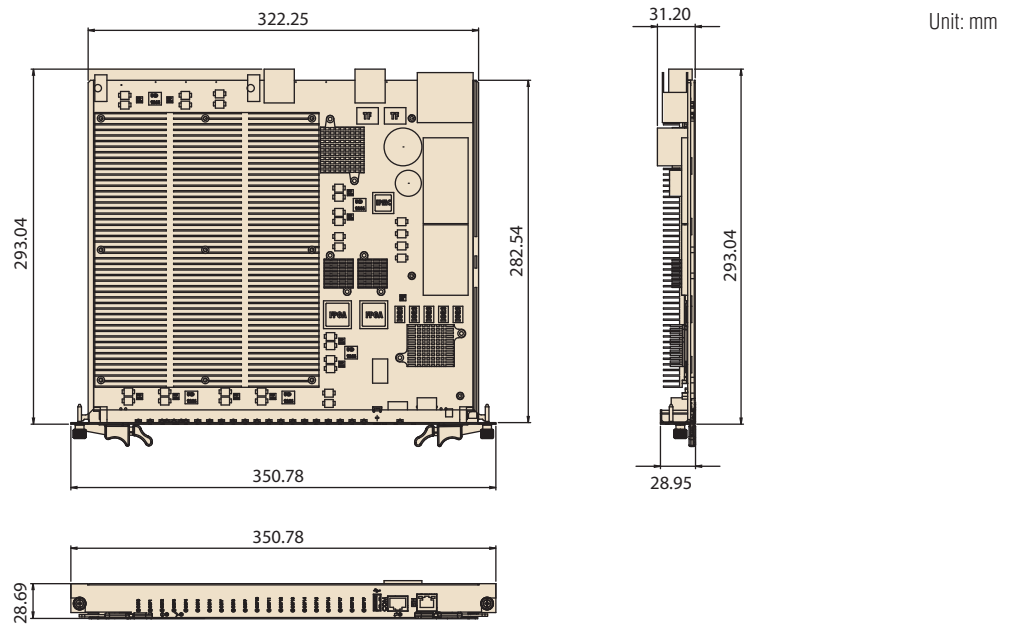
Specifications

| | | |
|----------------------------------|---------------------------------|---|
| 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 |