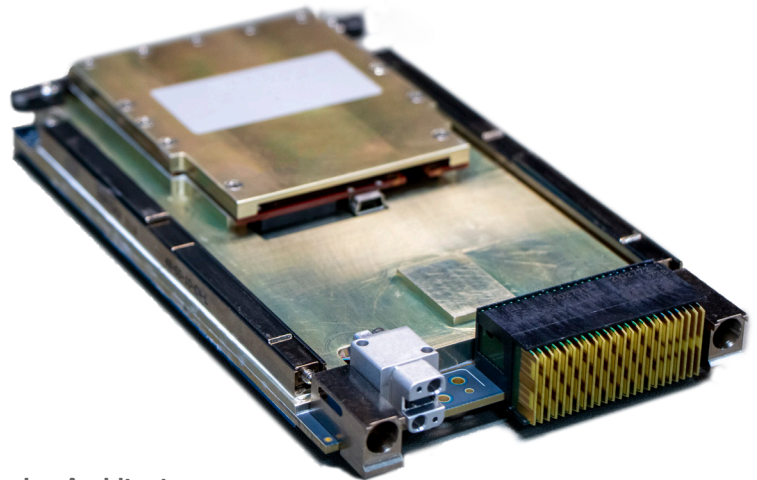


SRC7778 CMOSS/SOSA-ALIGNED DSP PAYLOAD CARD

The SRC7778 CMOSS/SOSA-Aligned DSP Payload is a 3U OpenVPX hardware accelerated processing platform designed for **high performance digital signal processing applications.**

Small Form Factor Transceiver Design

- 3U VPX payload, conduction cooled
 - OpenVPX Profile: 1F1U1S1S1U1U2F1H-14.6.11-1
 - VITA 66.4 Fiber Optic Connector for streaming VITA 49.2 Radio Transport Data
 - Designed for use with Elma Backplane Profile BKP3-TIM12-15.3.6-3, Part Number 1OVX312VZK-1X11
 - Built with compliance to VITA 46.0, VITA 48.2, VITA 49, VITA 57.1, VITA 65, VITA 66.4, VITA 67.1/67.3
 - Supports Backplane Ethernet 802.3ap, with 100BASE-BX/KX, 10GBASE-KR, 10GBASE-KX4 and support for 40GBASE-KR4
 - Supports blind-mate Fiber Optic Ethernet through the backplane, utilizing two 10GBASE-SR interfaces
 - Expandable up to four 10GBASE-SR lanes or 40GBASE-SR4
- Enclosure: 3U, 160mm standard length, 1in pitch
 - VITA 67.3 Module C aperture for CMOSS backplane compatibility
 - Payload Weight: 1.0 lb 3.8 oz
 - Prime Power: 30W (Typical) @ VS1 = 12V DC

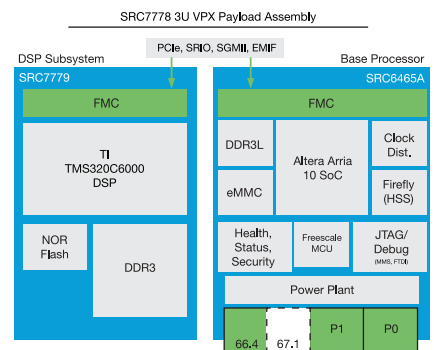


Carrier-Mezzanine Architecture

- Accepts 100 MHz LVDS System Clock (VPX REF_CLK) and 1 LVDS PPS (VPX AUX_CLK)
- Backplane synchronization trigger allows for multi-Payload synchronization capability
- VITA 57.1 FMC Interface from Base Processor Carrier card to DSP Mezzanine

Baseband Processor Card

- 1.5 TFlop Intel Arria 10 SoC
- Multiple console access via microUSB port
- High speed RAM and flash access
- Ultra-low power MCU for health and security monitoring



SRC7778 CMOSS/SOSA-ALIGNED DSP PAYLOAD CARD

DSP Mezzanine

- Texas Instruments C6000 DSP, optimized for energy efficient embedded processing
- 1 GB DDR3 SDRAM for high memory bandwidth
- TI C6000 DSP
- RAM: 2GB DDR3L-1600 SDRAM with ECC
- 2 PCIe lanes
- SRIOx4
- SGMII

Size, Weight and Power Specifications

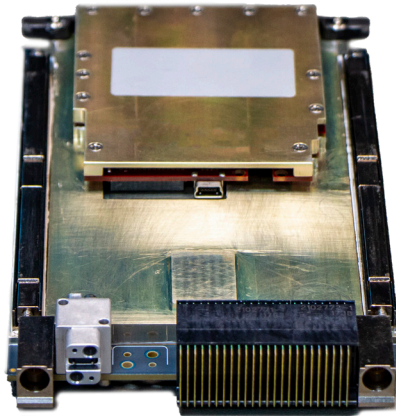
- Input range: VS1 +12V, 3.3V_AUX, P1_VBAT
- Backup battery support (through P1_VBAT Backplane Pin)
- Typical power consumption: 30W
- Dimensions: 6.72in x 3.94in x 1in
- Weight: 1 lb 3.8 oz.
- Operating temperature: -40C to 65C Ambient, Conduction Cooled

Digital Specifications

Base Processor Carrier Card

- SoC: Intel Arria 10 SX 660 (Dual-Core ARM Cortex A9)
- MCU: Freescale Kinetis K65 MCU (ARMCortex-M4F) for health and security monitoring
- RAM: 2GB DDR3L-1600 SDRAM with ECC
- Internal flash storage: 64GB eMMC for Linux and root file system

- Operating System: Linux Kernel 4.0
 - Two 10 Gigabit Ethernet (10GbE) ports through VITA 66.4 F/O Interface
 - Dedicated RS-232 UARTs to MCU and SoC
 - 2x 1000BASE-KX/10GBASE-KR Ethernet for command and control
 - 1x 10GBASE-KX4 (XAUI) Ethernet for near Real-Time Data transfers
 - 2x PCIe Gen2 interfaces for further expansion
- USB
 - USB to UART bridge allows console access to MCU and SoC
 - USB mass storage device interface
 - USB headphone/microphone accessory interface
- IEEE 1588 Precision Timing Protocol support through the backplane, with additional integrated GNSS/GPS receiver for tracking time



800-724-0451 • inquiries@srcinc.com • www.srcinc.com

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