SY VPX/507

7 Slots, 3U VPX™
Dual Intel® Core™ i7 SBCs,
Star Fabric
Development System

APPLICATIONS

The SY VPX/507 is a centrally switched 3U VPX™ development system. This 7 slot system is configured to provide engineers with a practical, high quality development environment for 3U VPX applications. The SY VPX/507 is based on an EMC enclosure that provides 7 vertically mounted 3U slots on a VPX star fabric backplane, cooling fans mounted below the backplane and a 650W integrated power supply. To enable fast track development, the system comes pre-installed with two 3U VPX 2nd generation Intel® Core™ i7 processor boards, associated RTMs, and fabric switch board (PCI Express® and 1000Base-BX). The system uses standard Concurrent Technologies products allowing easy progression from development to deployment.

HIGHLIGHTS

- 3U VPX™ Development System:
  - 7 vertically mounted 3U VPX slots
- SY VPX/507 VX backplane provides:
  - 6 x 5HP (1 inch) 3U VPX slots
  - 1 x 5HP (1 inch) 3U fabric switch slot
  - 6 x Fat Pipe data plane configured as single star topology via fabric switch slot
  - 6 x Ultra-Thin Pipe control plane configured as single star topology via fabric switch slot
  - compatible with OpenVPX™ BKP3-CEN07-15.2.3-n backplane profile
- Pre-installed boards:
  - 2 x Intel® Core™ i7 VPX processor SBCs, each with 8Gbytes Flash Module and a Rear Transition Module
  - 1 x VPX Fabric Switch board (6 x data plane fabric interface (x4 PCI Express®) and 6 x control plane fabric interface (1000Base-BX))
- Embedded 650 Watt modular power supply:
  - 90-264V AC, 47Hz to 63Hz
- Each pre-installed VPX processor SBC supports:
  - 1 x DisplayPort interface
  - 1 x VGA graphics interface
  - 2 x serial ports
  - 3 x USB 2.0 ports
  - 2 x Ethernet channels
  - 1 x SerDes (1000Base-BX) channel
  - 2 x Serial ATA channels
- Supplied with Fabric Switch Configuration software:
  - used to remotely configure fabric switch board
- Optional Fabric Interconnect Networking Software:
  - allows applications to efficiently communicate with each other over backplane fabric
3U VPX Development System

- 3U VPX™ Development System:
  - 7 vertically mounted 3U VPX SHP slots
  - cooling air intake at the bottom of the system
  - air exhaust at top of the system
  - adjustable cooling fan speed, 600 lfm at full speed
  - 8HP removable HDD cage supporting:
    - 2 x 2.5-inch HDDs or 1 x 3.5-inch HDD, pre-wired
    - adjustable legs (fold or extend)
  - COTS chassis
  - VPX backplane provides:
    - 1 x system controller slot
    - 1 x fabric switch slot
    - 5 x peripheral slots
    - 6 x Fat Pipe data plane configured as single star topology via fabric switch slot
    - 6 x Ultra-Thin Pipe control plane configured as single star topology via fabric switch slot
  - backplane compatible with OpenVPX™ (VITA 65) BKP3-CE07-15.2.3-n profile

System Configuration

- pre-installed VPX processor boards:
  - 2 x TR 803/592 2.2 GHz Intel® Core™ i7-2655LE SBCs
  - system controller SBC uses payload slot 1
  - peripheral SBC uses payload slot 4
  - 2 x Rear Transition Modules (RTM)
- pre-installed VPX fabric switch board:
  - 1 x FR 331/506 PCIe/SerDes switch
  - data plane, 6 ports x4 PCIe Express® and
  - control plane, 6 ports SerDes (1000Base-BX)
  - switch board uses slot 7
- slots available for VPX development:
  - 4 x peripheral payload and RTM slots

TR 803/592 VPX Intel Core i7 SBC

- utilizes 2.2 GHz Intel® Core™ i7 processor:
  - 4 MBytes Last-Level on-die cache
  - 8 GBytes soldered DDR3-1333 SDRAM
  - 8 GBytes Flash module
  - 1 x 4x PCIe Express® data plane port
  - 1 x SerDes (1000Base-BX) control plane port
  - 2 x Gigabit Ethernet channels:
    - 1 x Ethernet channel via front panel
    - 1 x Ethernet channel via RTM
  - 2 x serial ports:
    - 1 x RS232 port via front panel
    - 1 x RS232/RS422/RS485 port via RTM
  - 3 x USB 2.0 interfaces:
    - 1 x USB port via front panel
    - 2 x USB ports via RTM
  - DisplayPort connection on front panel:
    - resolutions up to 2560 x 1600 @ 60 Hz
    - supports VGA (not DVI-D) adaptors
  - VGA graphics interface via RTM:
    - resolutions up to 2048 x 1536 @ 16M colors
  - 2 x SATA channels via RTM (one pre-wired to HDD cage)
  - 3 x GPIO signals via RTM
  - watchdog timer and Long Duration Timer
  - support for future VITA 46.11 System Management Specification

Software Support

- operating system not supplied
- Fabric Switch Configuration (FSC) software:
  - used to remotely configure fabric switch
  - remote computer requires Windows® or Linux® to support the FSC software
  - see datasheet SW FSC/001
- system supplied with FSC software
- Optional Fabric Interconnect Networking Software (FIN-S):
  - allows applications on multiple processor boards to efficiently communicate with each other over the PCIe fabric
  - see datasheet SW FNS/nnn
  - FIN-S is ordered separately
- Optional Linux Board Support Package (BSP):
  - provides software support for the two TR 803/592 Single Board Computers (SBCs)
  - BSP is ordered separately
- contact your local sales office for further details

Power Supply

- integrated 650W power supply:
  - +12V output (10A max)
  - +5V output (95A max, 0A min)
  - +3.3V output (40A max, 0A min)
  - +12V output (6A max, 0A min)
  - AC 90-264V, 47Hz to 63Hz input

Environmental Specification

- operating temperatures:
  - +5°C to +40°C (operating)
  - 0°C to +45°C (operating from optional 2.5” or 3.5” SSD only)
  - -25°C to +65°C (storage)
- relative humidity, non-condensing:
  - 10% to 90% (operating)
  - 5% to 95% (storage)

Mechanical Specification

- chassis weight including pre-installed boards is 10.3kg (22.7lbs)
- 5HP (1.0 inch) backplane slot pitch supports:
  - 1.0 inch modules compliant with VITA 46.10 as per VITA 46.
- chassis dimensions:
  - total chassis height is 4U
  - w 483mm (19.0 inch) x d 329mm (13.0 inch) x h 198mm (7.8 inch) - with legs folded
  - h 248mm (9.8 inch) - with legs extended

Safety

- PCBs (PWB) manufactured with flammability rating of 94V-0

ORDERING INFORMATION

Order Number  Product Description (Hardware and Software)
SY VPX/507-10  3U VPX™ Development System with four empty VPX slots
  (includes two VPX 2.2 GHz Intel® Core™ i7 processor SBCs, VPX Fabric Switch board and Fabric Switch Configuration software (FSC))

For accessories please contact your local sales office.

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