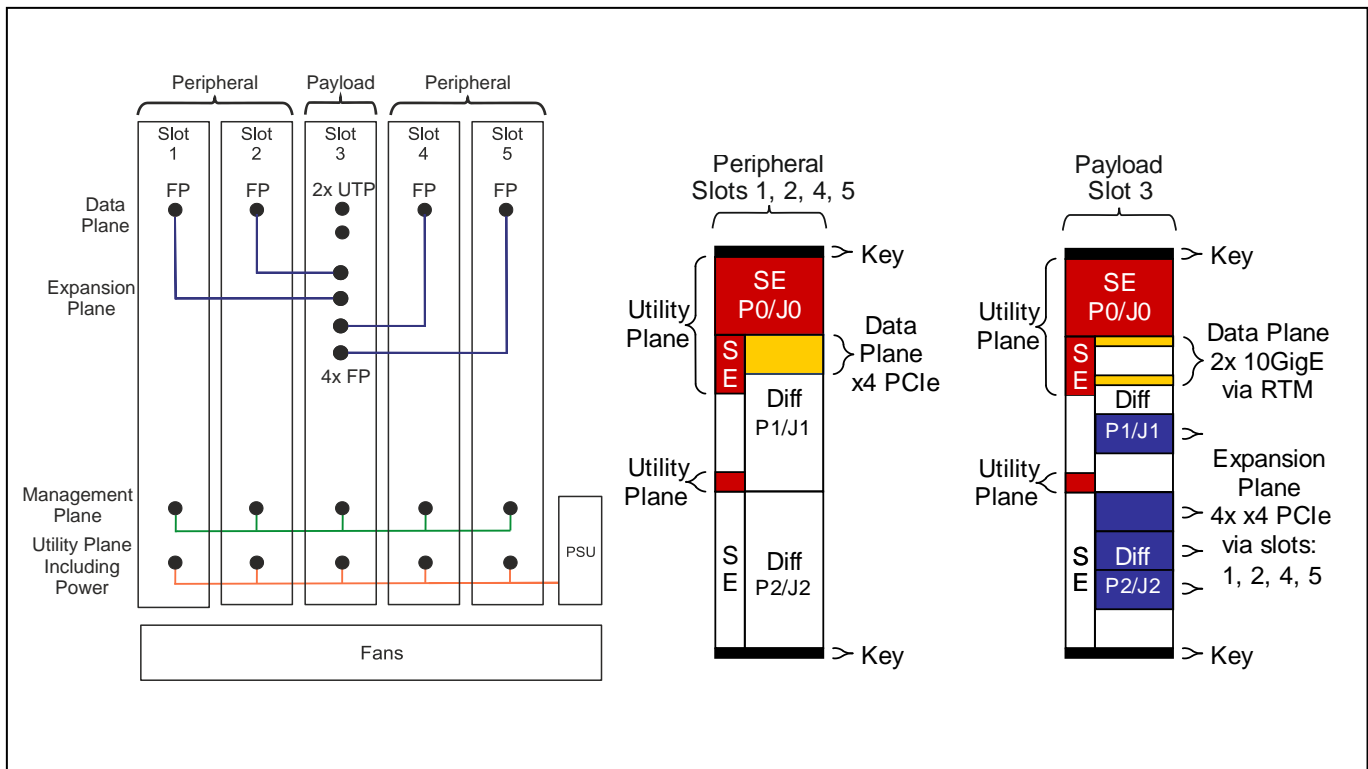# Intel® Xeon® Processor Based 5-Slot 3U VPX™ System

Key Features

SY TR2/525 is a ready-to-use solution for customers starting VPX™ projects based on Concurrent Technologies' Intel® Xeon® processor D-1500 based TR C4x/msd or TR G4x/msd boards.

- Supplied with built-in AC power supply, backplane and cooling fans for ease of use

- Includes a VPX processor board based on the Intel® Xeon® processor D-1500 family

- Supports Gen 3 PCI Express® x4 connections to four free end-point slots without the use of a VPX switch board

- Rear Transition Module (RTM) provides 10Gigabit Ethernet connections

Option Example: Standard Development System

(with TR G4C/543 processor board and RTM)

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3U VPX Development System

- 3U VPX™ Development System:
  - → 5 vertically mounted 3U VPX slots
  - → pre-installed Intel® Xeon® processor based board
  - → cooling air intake at the bottom of the system
  - → air exhaust at top of the system
- VPX backplane topology is equivalent to:
  - → 1 x payload slot (SLT3-PAY-2U4F)
  - → 4 x peripheral slots (SLT3-PER-1F)
  - → Fat Pipe data plane connection between system controller slot (slot 3) and each peripheral slot
- pre-installed VPX processor board includes:
  - → on-board SATA Flash Module for application software
  - → software support packages
  - → dedicated Rear Transition Module (AD TR1/511)
- optional accessories:
  - → VPX XMC carrier board (TR XMC/511)
  - → conduction-cooled board card guides
- contact your local Concurrent Technologies sales office for further details on other board options

PCI Express (Gen 3) System

- Gen 3 PCI Express data plane (root complex only) with a choice of pre-installed processor board:
  - → 1 x TR C48/582 board (with System on Chip based on an 8-core Intel® Xeon® processor D-1500, 32G DRAM)
  - → 1 x TR G4C/543 board (with System on Chip based on a 12-core Intel® Xeon® processor D-1500, 64G DRAM)

Front Panel I/O

- front panel I/O supports:
  - → 1 x 10/100/1000 Mbps Ethernet port via an RJ45 connector
  - → 1 x USB 3.0 and 1 x USB 2.0 ports via a USB Type-A connector
  - → up to 3 x RS232 (Tx/Rx) ports or 1 x RS232 full modem port via a supplied connector cable, (port configuration is user selectable)
  - → 1 x VGA graphics interface supporting up to 1920 x 1080 @ 60Hz via a supplied connector cable

Rear Panel I/O

- rear panel I/O is provided using a supplied Rear Transition Module:
  - → see factory fitted accessory section (AD TR1/511)

Software Support

- supports Linux®, Windows® and VxWorks®:
  - → system supplied with Board Support Package
  - → operating system not supplied
- VITA 46.11 compatible Tier 1 Chassis Manager included in firmware on processor board

Power Supply

- integrated 300W modular power supply:
  - → +12V output (18A max)
  - → -12V output (3A max)
  - → +5V output (35A max, 0A min.)
  - → +3.3V output (28A max, 0A min.)
  - → rated power 300 Watt
  - → AC 90-264V, 47Hz to 63Hz input

Environmental Specification

- operating temperatures:
  - → +5°C to +40°C (operating)
  - → -25°C to +65°C (non-operating)
- relative humidity, non-condensing:
  - → 10% to 90% (operating)
  - → 5% to 90% (non-operating)

Mechanical Specification

- chassis weight including processor board and rear transition module is less than 16.5lbs (7.5kg)
- 5HP (1.0-inch) backplane slot pitch supports:
  - → 0.8-inch and 1.0-inch
  - → IEEE 1101.10 as per VITA 46.0
- chassis dimensions:
  - → total chassis height is 4U
  - → width 8.4-inch (214mm) x depth 11.5-inch (292mm)

Safety

- PCBs (PWB) manufactured with flammability rating of UL94V-0

Factory Fitted Accessory

AD TR1/511 Rear Transition Module

- Rear Transition Module (RTM) compatible with the pre-installed processor board
- RTM front panel connectors:
  - → 2 x 10 Gigabit Ethernet (LC optical interface)
  - → 2 x USB 2.0 Type A
- RTM on-board connectors:
  - → 2 x SATA600
- RTM on-board headers:
  - → 4 x GPIO
  - → 1 x RS232

Optional Accessories

TR XMC/511 VPX XMC Carrier

- optional XMC carrier board:
  - → x4 PCIe interface (up to Gen 3)
  - → using data plane supported in any payload slot
- XMC site supports:
  - → x4 PCIe interface (VITA 42.3)
  - → +5V VPWR or +12V VPWR
- front panel I/O aperture
- rear I/O via XMC (Pn6) connector:
  - → rear I/O mapping (VITA 46.9)
  - → optional Rear Transition Module available

Conduction-cooled Card Guides

- the design of the SY TR2/525 chassis allows for the factory fitted card guides to be changed to conduction-cooled card guides:
  - → enables conduction-cooled boards (VITA 48.2) to be fitted into any peripheral slot
  - → user configurable
  - → supplied processor board is factory fitted as an air-cooled variant only

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Please contact your local Concurrent Technologies sales office for further details on board build options and accessories.

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