

# Intel® Processor Based 6-Slot 3U VPX™ Gen 3 System With Expansion Plane

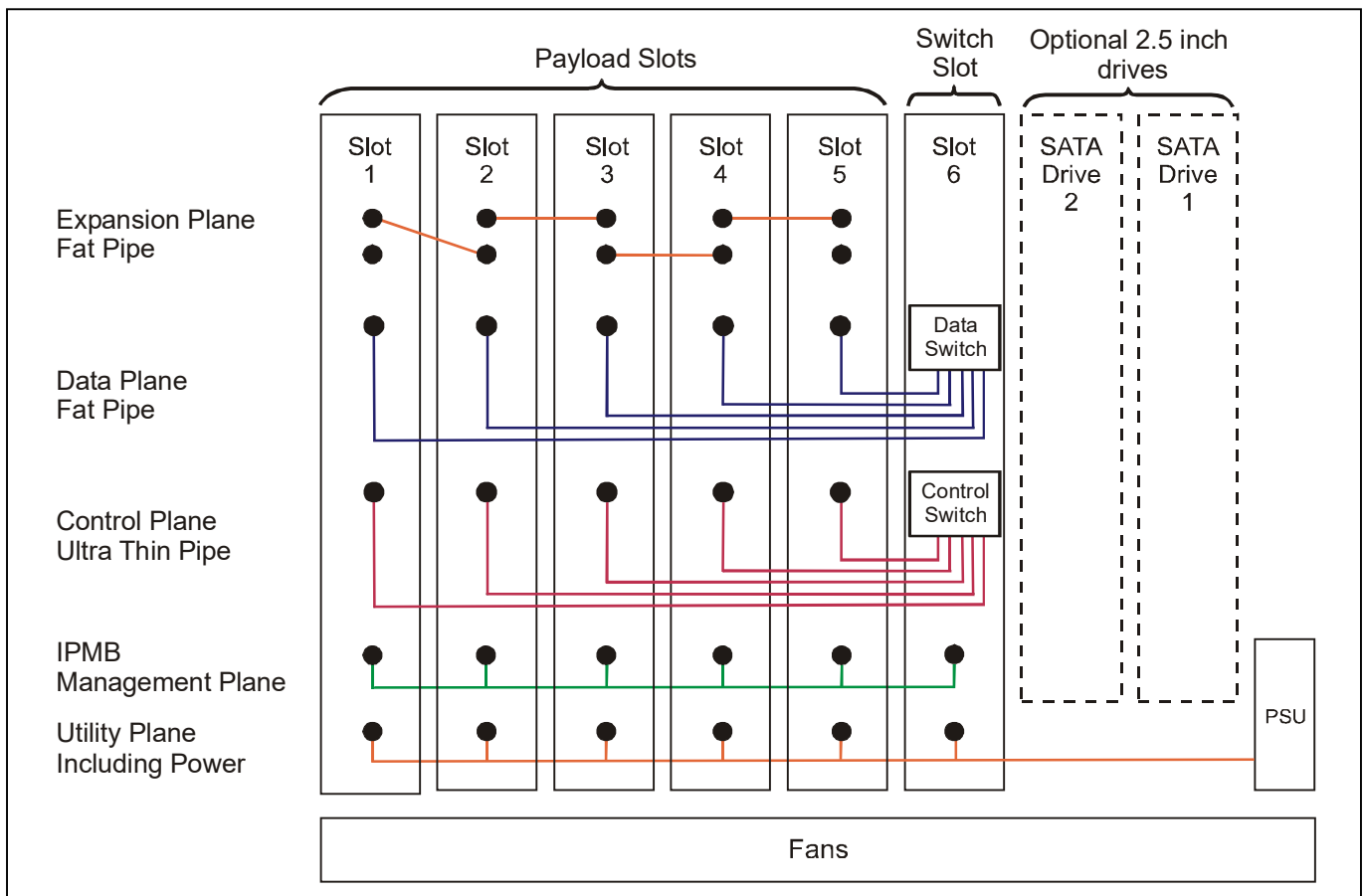
## Key Features

SY TR1/526 is designed as a solution for 3U VPX™ development projects based on Intel® processors.

- Supplied with built in AC power supply, backplane and cooling fans for ease of use
- Provisioned for a switch and up to 5 payload boards
- Includes a high performance Intel® processor based board:
  - ➔ Select from a range of performance, memory, graphics and networking options
  - ➔ Additional packages available to improve security, reduce boot time and enable Built-In-Test
- Four free payload slots for additional processors and application specific boards
- Optional carrier board for XMC based I/O



Option Example: Empty Development System  
(without fabric switch and processor board)



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## 3U VPX Development System

- 3U VPX<sup>®</sup> Development System:
  - 6 vertically mounted 3U VPX 5HP slots
  - option for pre-installed fabric switch board and pre-installed Intel<sup>®</sup> processor based board
  - 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
  - empty 8HP removable mass storage drive carrier cage supporting either 2 x 2.5-inch drives or 1 x 3.5-inch drives (storage drives supplied by user)
- VPX backplane provides:
  - 1 x fabric switch slot (SLT3-SWH-6F6U-14.4.1)
  - 5 x payload slots (SLT3-PAY-1F2F2U-14.2.2)
  - system controller slot configured to slot 1 (can be reconfigured by user)
  - 5 x Fat Pipe data plane configured as single star topology via fabric switch slot
  - 5 x Ultra-Thin Pipe control plane configured as single star topology via fabric switch slot
  - 4 x Fat Pipe expansion plane configured as a daisy chain topology between payload slots
  - backplane compatible with OpenVPX<sup>®</sup> (VITA 65) BKP3-CEN06-15.2.2-3 profile
- all pre-installed processor boards include:
  - on-board SATA Flash Module for application software
  - software support packages
  - Rear Transition Module (RTM)
- slots available for VPX development boards:
  - 5 x payload slots (with RTM slots)
- contact your local Concurrent Technologies sales office for further details on all system options

## Example: Empty Development System

- option for empty system (chassis) without fabric switch and without processor board

## Example: System with Fabric Switch Only

- option for PCI Express<sup>®</sup> data plane with pre-installed VPX fabric switch (up to Gen 3)
- option for Ethernet 10GBASE-KR data plane with pre-installed VPX fabric switch

## Example: PCI Express (Gen 3) System

- option for PCI Express data plane with pre-installed VPX fabric switch (up to Gen 3) and a processor board:
  - 1 x TR E54/571 board (6<sup>th</sup> generation Intel<sup>®</sup> Core<sup>™</sup> Processor)
- plus option for a VPX PMC/XMC carrier board (TR XMC/501)
- plus option for a VPX XMC carrier board (TR XMC/511)

## Example: Ethernet 10GBASE-KR System

- option for Ethernet 10GBASE-KR data plane with pre-installed VPX fabric switch and processor boards:
  - 3 x TR C48/582 boards (each with System on Chip based on Intel<sup>®</sup> Xeon<sup>™</sup> Processor D-1500)
- plus pre-installed VPX XMC carrier board (TR XMC/511)

## Software Support

- supports Linux<sup>®</sup>, Windows<sup>®</sup> and VxWorks<sup>®</sup>:
  - proprietary Board Support Package
  - operating system not supplied
- optional Fabric Interconnect Networking Software (FIN-S):
  - allows applications on multiple processor boards to efficiently communicate with each other over the fabric
  - see datasheet SW FNS/nnn
  - FIN-S is ordered separately
- VITA 46.11 compatible Tier 1 Chassis Manager included in firmware on processor board
- processor board options are also available for security, Built-In-Test (BIT) and faster boot loading
- 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<sup>°</sup>C to +40<sup>°</sup>C (operating)
  - -25<sup>°</sup>C to +65<sup>°</sup>C (non-operating)
- relative humidity, non-condensing:
  - 10% to 90% (operating)
  - 5% to 95% (non-operating)

## Mechanical Specification

- empty chassis weight is 19.4 lb (8.8 kg):
  - for pre-installed boards refer to their technical reference manual
- 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 19.0-inch (483mm) x depth 13.0-inch (329mm) x height 7.8-inch (198mm) (legs retracted)
  - height 9.8-inch (248mm) (legs extended)

## Safety

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

## Optional Accessories

### TR XMC/501 VPX PMC/XMC Carrier

- optional PMC/XMC carrier board:
  - uses any payload slot
  - x4 PCIe interface (up to Gen 2)
- PMC site supports:
  - 32/64-bit, 33/66MHz PCI bus
  - 64-bit PCI-X bus up to 133MHz
  - 5V and 3.3V signaling
- XMC site supports:
  - x4 PCIe interface (VITA 42.3)
- front panel I/O
- rear I/O options via PMC (Pn4) or XMC (Pn6) connector:
  - rear I/O mapping (VITA 46.9)
  - optional Rear Transition Module available

### 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
  - using expansion plane supported adjacent to processor board
- XMC site supports:
  - x4 PCIe interface (VITA 42.3)
- front panel I/O
- rear I/O via XMC (Pn6) connector:
  - rear I/O mapping (VITA 46.9)
  - optional Rear Transition Module available