

## 3 Slots, 3U VPX Intel® Core™ 2 Duo SBC, Development System



### APPLICATIONS

The SY VPX/313 is an entry level 3U VPX development system. This 3 slot system is configured to provide engineers with a practical, high quality development environment for 3U VPX applications. The SY VPX/313 is based on an EMC enclosure that provides 3 vertically mounted 3U slots on a VPX backplane, cooling fans mounted below the backplane and a 250W integrated power supply. To enable fast track development, the

system comes pre-installed with a 3U Intel® Core™ 2 Duo processor board (supporting an XMC site), associated RTM and a mass storage board fitted with a 2.5-inch SATA300 storage drive. An optional PMC/XMC carrier board is also available. The system uses standard Concurrent Technologies products allowing easy progression from development to implementation.

### HIGHLIGHTS

- 3U VPX® Development System:
  - 3 vertically mounted 3U VPX slots
- Extra wide 8HP (1.6-inch) backplane slot pitch:
  - accepts 0.8-inch, 0.85-inch and 1.0-inch modules
  - gives space between slots for attachment of emulator pods or debug/programming connectors
- VPX backplane provides:
  - 1 x system controller slot
  - 1 x peripheral slot
  - 1 x storage (or peripheral) slot
  - Fat Pipe data fabric connections from system controller slot to both peripheral slots
  - dual SATA channels between system controller slot and storage slot
  - compatible with OpenVPX™ BKP3-CEN03-15.2.9 backplane profile
- Pre-installed boards:
  - 1 x Intel® Core™ 2 Duo VPX system controller SBC, with XMC site, and rear panel transition module
  - 1 x mass storage board including 2.5-inch SATA300 storage drive and CompactFlash® site
- Pre-installed system I/O features include:
  - VGA graphics interface
  - 2 x serial ports
  - 3 x USB 2.0 ports
  - 3 x Ethernet channels
  - 2 x Serial ATA300 channels routed to storage slot
  - all accessed via the rear panel
- Optional boards:
  - front panel console interface for the system SBC
  - 1 x 3U VPX PMC/XMC carrier board
  - customer's 3U VPX board
- Embedded 250 Watt modular power supply:
  - 90-264V AC, 47Hz to 63Hz
- Support for Linux®, Windows® XP, Windows® XP Embedded, Windows® Server 2003, Windows® Server 2008, QNX®, Solaris® and VxWorks®

## 3U VPX Development System

- 3U VPX® Development System:-
  - 3 vertically mounted 3U VPX slots
  - cooling air intake at the bottom of the system
  - air exhaust at top of the system
- VPX backplane provides:-
  - 1 x system controller slot
  - 1 x storage or peripheral slot
  - 1 x peripheral slot
  - fat pipe (x4) data plane fabric connection between system controller slot and each peripheral slot
  - dual SATA channels between system controller slot and storage slot
  - compatible with OpenVPX™ (VITA 65) BKP3-CEN03-15.2.9 backplane profile

## System Configuration

- pre-installed VPX system controller board:-
  - 1 x TR 501/362 1.86 GHz Intel® Core™ 2 Duo SBC
  - with rear panel transition module and optional front panel console module
- pre-installed VPX mass storage board:-
  - 1 x TR MS1/321 includes SATA300 2.5-inch storage drive and CompactFlash® site
- slot available for VPX development:-
  - 1 x peripheral slot
- all accessed via the rear panel
- option for TR XMC/301 VPX PMC/XMC carrier

## TR 501/362 VPX Core 2 Duo SBC

- 3U 4HP VPX SBC:-
  - uses system controller slot
  - COTS board
- utilizes 1.86 GHz Intel Core 2 Duo processor:-
  - 1066 MHz Front Side Bus
  - 6 Mbytes Last-Level on-die cache
- 4 Gbytes DDR3-1066 SDRAM
- 4 Gbytes Flash Drive module
- 2 x SATA300 channels to storage slot
- up to 3 x Ethernet channels:-
  - 2 x Gigabit Ethernet channels via rear panel
  - 1 x Fast Ethernet channel via optional front panel
- up to 2 x serial interfaces:-
  - 1 x RS-232/RS-422/RS-485 interface via rear panel
  - 1 x RS-232 interface via optional front panel
- up to 3 x USB 2.0 interfaces:-
  - 2 x USB interfaces via rear panel
  - 1 x USB interface via optional front panel
- VGA graphics interface:-
  - VGA via rear panel or optional front panel
  - resolutions up to 2048 x 1536 @ 16M colors
- XMC site with rear I/O via rear panel:-
  - x4 PCI Express® (VITA 42.3)
  - rear I/O mapping (VITA 46.9)
- 3 x GPIO signals
- watchdog timer and Long Duration Timer
- support for future VITA 46.11 System Management Specification
- OpenVPX compliant

## Software Support

- supports Linux®, Windows® XP, Windows® XP Embedded, Windows® Server 2003, Windows® Server 2008, QNX®, Solaris® and VxWorks®
- system supplied without operating system

## ORDERING INFORMATION

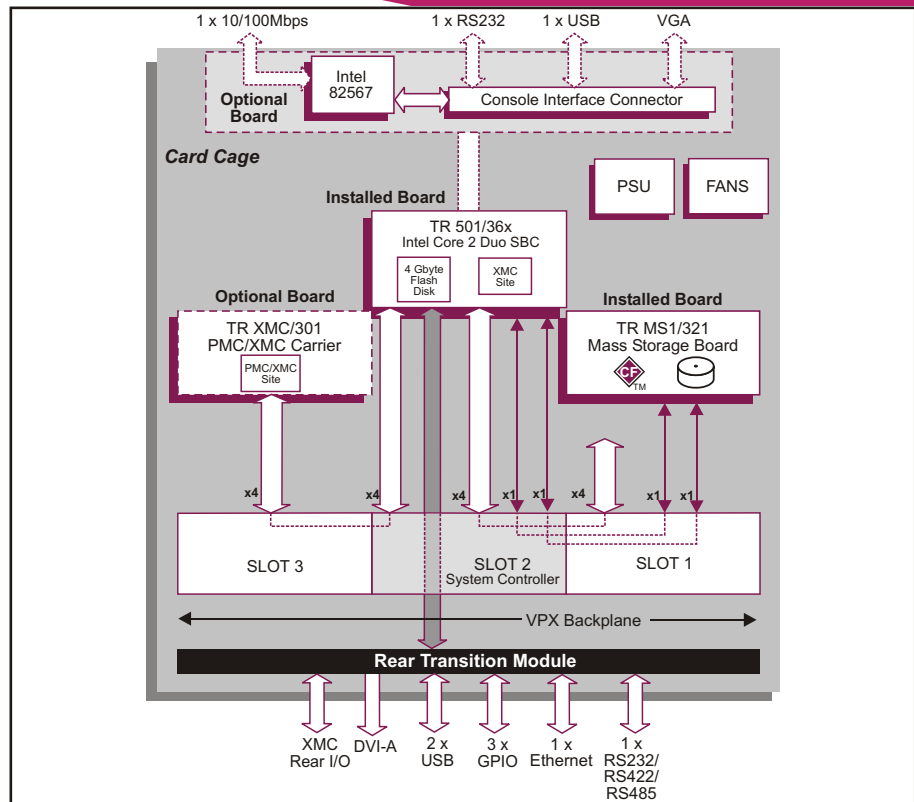
### Order Number Product Description (Hardware)

SY VPX/313-10 3U VPX Development System with an empty VPX peripheral slot, (includes VPX 1.86 GHz Intel Core 2 Duo processor SBC, XMC site, and 2.5-inch SATA300 storage drive)

### Optional Accessories

AD EN1/001-10 Front Panel Console Module (optional board for use with the VPX system's SBC)  
 TR XMC/301-10 3U VPX PMC/XMC Carrier board with 64-bit rear I/O via PMC Pn4 rear I/O connector  
 TR XMC/301-20 3U VPX PMC/XMC Carrier board with 64-bit rear I/O via XMC Pn6 rear I/O connector

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## TR MS1/321 3U VPX Mass Storage

- 3U 4HP VPX mass storage board:-
  - uses the storage peripheral slot
  - COTS board
- provides 2.5-inch SATA300 storage drive
- supports CompactFlash® site:-
  - provided via on-board SATA to EIDE bridge
- OpenVPX compliant

## Power Supply

- Integrated 250W modular Power Supply:-
  - +12V output (5.5A max)
  - +5V output (33A max, 0A min)
  - +3.3V output (33A max, 0A min)
  - rated power 250 Watt
  - AC 90-264V, 47Hz to 63Hz input

## Environmental Specification

- operating temperatures:-
  - +5°C to +40°C (operating)
  - -25°C to +65°C (storage)
- relative humidity, non-condensing:-
  - 10% to 85% (operating)
  - 5% to 85% (storage)

## Mechanical Specification

- chassis weight including SBC and Mass Storage Board is less than 10Kg (22lbs)
- chassis dimensions:-
  - total chassis height is 4U
  - 342mm(w) x 190mm(h) x 295mm(d) - with legs folded
  - 342mm(w) x 225mm(h) x 295mm(d) - with legs extended

## Safety

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

## Optional Accessories

### AD EN1/001 Front Panel Console

- optional board for development
- provides additional front panel I/O for the VPX SBC:-
  - 1 x Fast Ethernet interface
  - 1 x RS-232 interface
  - 1 x USB 2.0 interface
  - 1 x VGA (same interface as the rear panel)

### TR XMC/301 3U VPX PMC/XMC Carrier

- optional board for development
- 3U 4HP VPX PMC/XMC Carrier board:-
  - uses the peripheral slot
  - COTS board
- 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:-
  - PCIe x4 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)
  - OpenVPX compliant