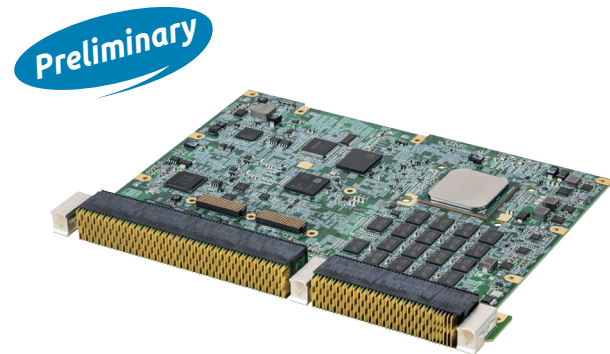


# VPX6011 Series

## Rugged 6U VPX Intel® Xeon® Processor D-1500 Processor Blade

### Features

- Intel® Xeon® Processor D-1500 SoC with up to 12 cores (formerly "Broadwell-DE")
- DDR4-2133 soldered ECC SDRAM up to 32GB
- Up to PCIe x16 Gen3 interface
- One XMC expansion slot, PCIe x8 Gen3 with Rear I/O to P3



### Specifications

#### • Processor & System

##### CPU

Intel® Xeon® D-1559 12-core, 45W TDP  
Intel® Xeon® D-1539 8-core, 35W TDP  
Intel® Pentium® D-1519 4-core, 25W TDP

##### RAM

Dual channel DDR4-2133 ECC soldered SDRAM, up to 32GB

##### BIOS

AMI EFI on 128Mbit SPI flash

#### • VITA Standards

VITA 46.0 VPX Base Standard  
VITA 46.4 PCI Express on VPX Fabric  
VITA 46.6 Gigabit Ethernet Control Plane  
VITA 46.9 PMC/XMC/Ethernet Signal Mapping to 3U/6U VPX VITA 46.10 Rear Transition Module on VPX  
VITA 46.11 System Management on VPX  
VITA 48.0 Ruggedized Enhanced Design Implementation Mechanical Base Specification  
VITA 65 OpenVPX Architecture Framework for VPX

#### • Connectivity

##### XMC

PCIe x8 Gen3 with Rear IO to P3 X24s+X8d+X12d

##### Ethernet

2x 10G-KR to P4  
2x 1000BASE-T to P4  
2x 1000BASE-BX to P4

##### Graphics

SMI750 via PCIe x1  
One VGA to P3

##### USB

2x USB 3.0/2.0 to P4

##### Serial Port

1x RS-232 to P5  
1x RS-232/422 to P5

##### PCI Express

PCIe x16 Gen3 to P1, configurable to 2 PCIe x8 to P2

#### • Storage

##### SBC

Soldered 32GB SLC NAND flash SATA 6Gb/s

##### SATA

2x SATA 6Gb/s to P5

## Specifications

- **Security**

**TPM**

Atmel TPM version 1.2

**IPMC**

Smart Fusion A2F200 with VPX code base

**BIOS**

Dual fail safe BIOS

- **OS Support**

Red Hat Enterprise Linux 6.5

Wind River VxWorks 7.0

Microsoft Windows 10 32/64-bit

- **Miscellaneous**

**LEDs**

Blade status LEDs on front and rear

**Watchdog Timer**

System reset or NMI with programmable interval

**GPIO**

8x 5V tolerance GPIO to P5

**Reset Button**

System button on front panel

- **Miscellaneous**

**Form Factor**

6U VPX 1.0 in. pitch

**Operating Temp.**

-40°C to +75°C (at wedge locks)

**Storage Temp.**

-50°C to +100°C

**Relative Humidity**

95% non-condensing

**Shock**

15Hz-2KHz, 12Grms, random, each axis, operating

**Vibration**

Sawtooth 40G, 11ms, each axis, operating

**Thermal Dissipation**

Conduction

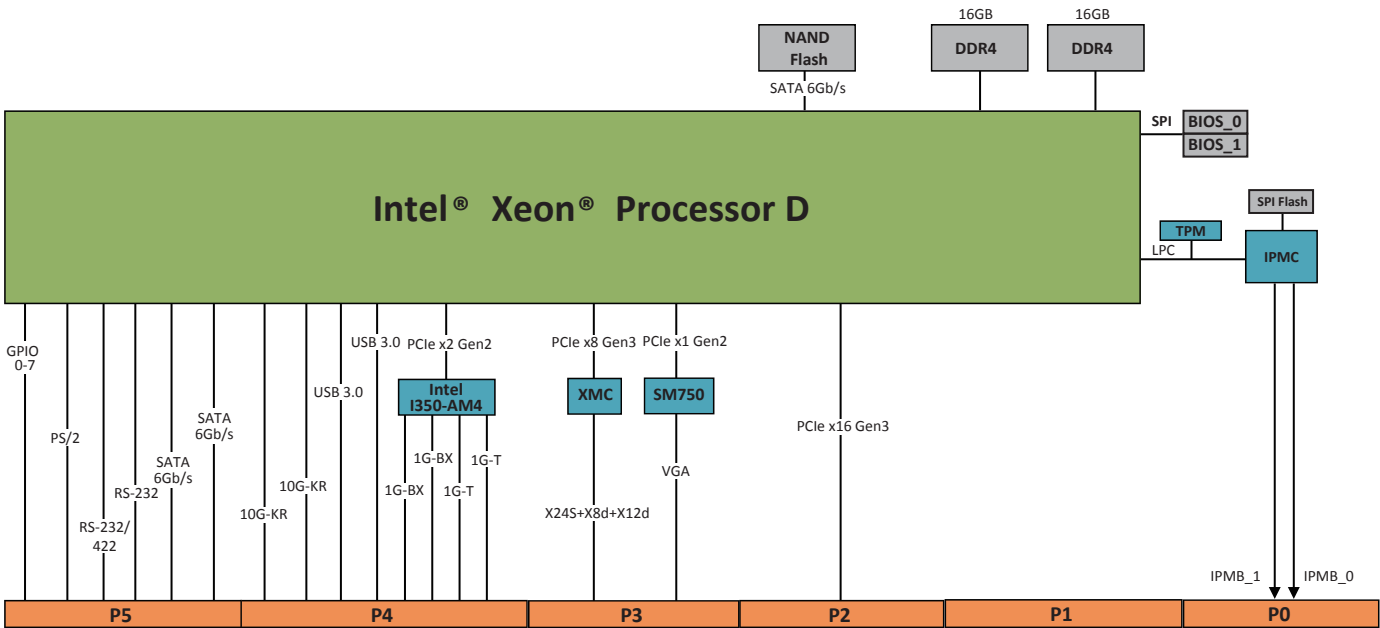
**Power Consumption**

12V, 6.8A

5V, 1A

Total power consumption 86.6W (estimated)

# VPX6011 Block Diagram



## Ordering Information

### Processor Blades

- VPX6011EL/1559/M32/S32/XMC-R1**  
 6U VPX processor blade with Intel® Xeon® D-1559, DDR4 32GB, SLC 32GB, 2x 10G-KR, 4x GbE, VGA, 2x USB 3.0/2.0, XMC slot, conformal coating & ETT -40°C to +75°C, conduction cooled
- VPX6011EL/1539/M16/S32/XMC-R1**  
 6U VPX processor blade with Intel® Xeon® D-1539, DDR4 16GB, SLC 32GB, 2x 10G-KR, 4x GbE, VGA, 2x USB 3.0/2.0, XMC slot, conformal coating & ETT -40°C to +75°C, conduction cooled