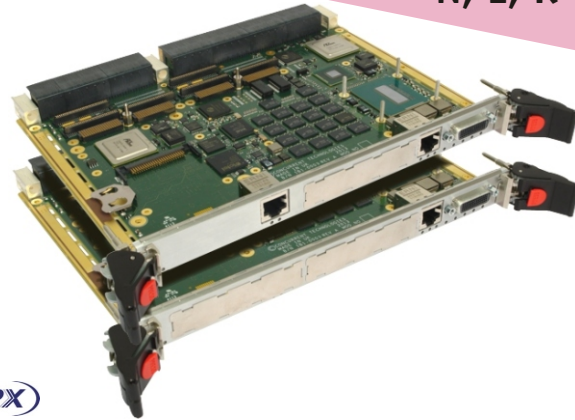


## 4<sup>th</sup> Generation Intel® Core™ Processor Dual XMC/PMC Embedded Controller



### APPLICATIONS

The VR E1x/msd is a PC-compatible, high performance, high functionality 6U VPX air-cooled processor board supporting the 4<sup>th</sup> generation Intel® Core™ processor (2-core or 4-core) and the Intel® QM87 PCH with up to 32 Gbytes of DDR3L-1600 ECC DRAM. This single slot board features two XMC/PMC sites and a variety of interfaces including an option for an on-board 2.5-inch storage drive and CompactFlash®. The VR E1x/msd is

suitable for a range of applications within industrial control, transport, aerospace, security and defense applications. For harsher environments extended temperature versions are supported. For rugged applications two VPX-REDI versions are catered for: VPX-REDI Type 1 and Type 2 conduction-cooled boards. For all board versions, to simplify integration, many operating systems are supported.

### HIGHLIGHTS

- 6U VPX (VITA 46.0) single board computer:
  - air-cooled
  - use in commercial (non-rugged) applications
  - 6U VPX 0.8-inch slot or 1.0-inch slot
  - optional rear transition module available
- Compatible with several OpenVPX™ profiles
- 4th generation Intel® Core™ processor:
  - option for 2-core or 4-core processor
  - includes Intel® Advanced Vector Extensions 2 (AVX2)
  - includes Intel® AES New Instructions (AES-NI)
- 16 or 32 Gbytes soldered DDR3L-1600 DRAM with ECC
- Rear plug compatible with the popular VR 737/x8x SBC
- Configurable PCI Express® (PCIe) data plane fabric interface (VITA 46.4) supports:
  - four x8 or eight x4 PCI Express ports with DMA
  - support for Gen1, Gen2 and Gen3
  - supports up to four non-transparent links
- Control plane interface (VITA 46.6) supports:
  - 2 x Gigabit Ethernet and 2 x 1000Base-BX interfaces
- Up to 2 x Gigabit Ethernet ports via front panel:
  - alternatively one port via front and one via rear
- Up to 4 x SATA600 interfaces including optional on-board SATA600 2.5-inch HDD/SDD site
- Onboard CompactFlash® socket
- Up to 2 x XMC/PMC module interfaces:
  - 32/64-bit, 33/66/100 MHz PCI/PCI-X™
  - 2 x XMC module interfaces (x8 PCI Express®)
  - front and rear I/O options
- 8 x GPIO, 8 x GPI, 6 x serial interfaces
- Up to 5 x USB 2.0 and 3 x USB 3.0/2.0 ports
- 3 x independent digital and analog graphics interfaces
- High definition stereo audio
- Optional support for:
  - compatible I/O with legacy VR 737/x8x VPX SBC
  - single or dual XMC/PMC sites
  - Built-In Test (BIT) firmware and software
  - board-level security package
  - Trusted Platform Module (TPM)
- Optional Rear Transition Modules
- Extended temperature versions (E-Series, K-Series)
- Ruggedized conduction-cooled versions (RCx-Series):
  - rear plug compatible with the air-cooled versions
- Watchdog and long duration timers
- Support for Linux®, Windows® and VxWorks®

