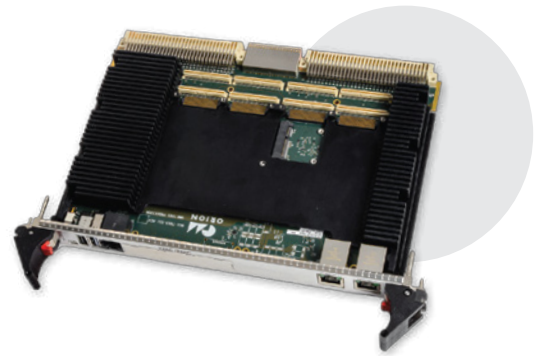# VME7663 ■

Rugged 6U VME64x Intel® Core™ i7
5th Gen. Single Board Computer
(Air or Conduction cooled)

Your Partner in Embedded Solutions

Features

6U VME64x 5th Gen. Intel® Core™ i7 SBC

16GB DDR3 SDRAM with ECC

Up to two 64GB NAND Flash

Xilinx Artix-7 VME64x bridge with support for 2eSST and 2eVME

Mini PCIe/mSATA connector with USB capability

Up to seven available USB 2.0 ports

Up to three available USB 3.0 ports

One eSATA 6.0Gbps and two SATA 1.5Gbps

Four serial ports

Four available 1GbE Base-T ports

Two available HDMI ports

Two PMC/XMC sites

I²C accessible Trusted Platform Module 2.0

Anti-tamper features available

Various Board Support Packages (BSP) available including Linux, WindRiver VxWorks, and Windows

For a more in-depth analysis visit our website at www.oriontechnologies.com

Orion has successfully generated products utilizing an extensive assortment of microprocessors since 1990. Our single board computer product offering includes both custom and standard form factors such as VPX, VME, Compact PCI, XMC, and PMC.

Whether it's a small quantity, one-time requirement or a high volume product for years to come, we would like to be your partner in embedded solutions.

Ordering Options

VME7663-ABCDEF

A - Processor Options
   1 = Reserved
   2 = i7-5700EQ Quad Core 2.6GHz (3.4GHz Max)
   3 = i7-5850EQ Quad Core 2.7GHz (3.4GHz Max)
       with Iris Pro Graphics

B - Memory Options
   1 = 16GB RAM

C - Onboard Storage
   1 = 64GB Primary NAND, No Secondary NAND
   2 = 64GB Primary NAND, 8GB Secondary NAND
   3 = 64GB Primary NAND, 64GB Secondary NAND

D - I/O Options
   1 = HDMI, 8x GPIO, 2x USB 3.0, 2x USB 2.0, 2x SATA, two
       Front Panel GigE Ports, one available PMC/XMC site
   2 = HDMI, 8x GPIO, 2x USB 3.0, 2x USB 2.0, 2x SATA, one
       Front Panel GigE Port, two available PMC/XMC sites

E - Removable Storage
   0 = None installed
   1 = Contact Factory

F - Environmental
   1 = Air-cooled, 0 to +55°C Operating Temp.
   2 = Air-cooled, -40 to +55°C Operating Temp.
   3 = Air-cooled, -40 to +70°C Operating Temp.
   4 = Primary side conduction-cooled,
       -40 to +70°C Operating Temp.
   5 = Primary side conduction-cooled,
       -40 to +85°C Operating Temp.
   6 = Secondary side conduction-cooled,
       -40 to +85°C Operating Temp.

MEMBER
VITA
Open Standards, Open Markets

Certified System ™
SAI GLOBAL
AS9100
Aerospace

ORION
A Phoenix Mecano Company

16GB DDR3 w/ ECC

5th Generation Core I7

JTAG

PCIe x8
PCIe x8

DMI FDI

mSATA/ Mini PCIe

x1 x4
PCIe 2.0 Switch
x1 x4 x1 x4

Boot Flash

XDP

JTAG

PCIe x4

SATA

USB

Power Sequence

Smart Fusion 2 FPGA

USB 2.0

Smart Fusion 2 FPGA

PCIe Quad Serial Ports

PCIe to PCI-X 64-bit 133MHz

SPI

4x PCIe x1

Smart Fusion 2 FPGA

8 GPIO to PM

PCIe x1 via switch

SPI

TPM

GPIO

LPC

LPC Debug Header

LPC

Artix-7 FPGA PCIe to VME Bridge

8Gb DDR3

QM87 PCH

XMC (Optional) PMC

J16 J14

XMC PMC

J26 J24

Crypto Key Store

Anti-Tamper Accessories

USB

2x USB 2.0

4x 1Gb PCIe MAC/PHY

SATA

2x SATA 1.5Gbps

2x SATA NAND Flash

SATA USB

4x USB 2.0
2x USB 3.0

HDMI/DVI

Mag Mag

** P4V2-32+32ac PMC Mapping to VME P2 (See VITA 35 Section 2.5)

* VITA 31.1 Ethernet Mapping to VME P0

eSATA 6Gbps (Optional)

Digital Audio

HDMI/DVI

USB 2.0

USB 3.0/2.0

Personality Module

14D and 12S

I/O

2x 1G Base-T

2x 1G Base-T (Optional)

2x RS-422

2x RS-422

**

Front Panel

Front Panel

*

Front Panel

VME P0

VME P1

VME P2