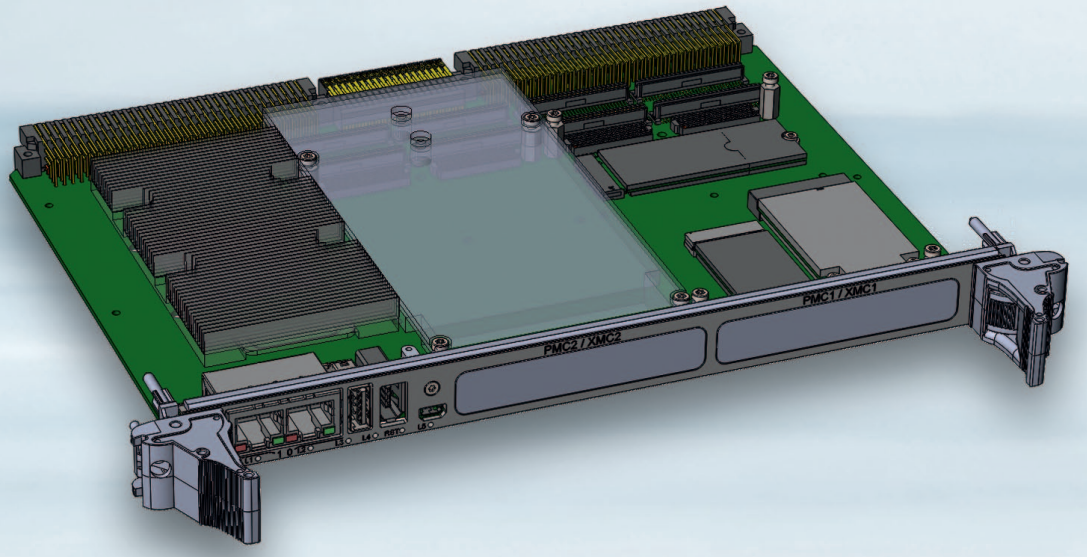
VM6062



6U VME SERVER-CLASS BLADE COMPUTER

Designed for intensive Data I/O Processing

- 2-Core 2.2 GHz Intel® Xeon® Processor D-1500 Product Family
- Up to 32 GB DDR4 on-board soldered memory with ECC
- Dual 1 Gb Ethernet, USB 3.0, HDMI, COM ports on front
- Dual PMC/XMC, Dual M.2 and mPCIe sockets
- Extended Life Cycle and Silicon Reliability

THE VM6062, A UNIQUE FULLY FLEDGE I/O BLADE SERVER PC

The VM6062 is a low power 2-Core/4-thread Intel® D1508 version of a pin compatible 6U VME SBC products range featuring a processor from the Server Class Intel® Xeon® Processor D-1500 family.

The VM6062 is a unique fully fledge I/O Blade Server PC as it features on the front panel HDMI, USB 3.0, COM and Dual Gigabit Ethernet ports aside the PMC/XMC slots.

FIELD PROVEN AND OPEN TO MIGRATION ARCHITECTURE

The VM6062 features an Intel® Xeon® Processor D-1500 family processing unit already deployed in the field of applications ranging from the Telecommunications, Industry, Transportation and Defense on Kontron products such as High Performance VPX platforms, CompactPCI Blades, COM-Express modules and SYMKLOUD servers.

TECHNOLOGY REFRESH CAPABILITY

The close pin compatibility of the VM6062 SBC with former Kontron 6U VME products such as the VM6050, VM6052 and VM6054 makes the VM6062 as a good candidate for both the expansion and the performance leveraging of existing programs.

HIGH VERSATILITY AND CUSTOMIZATION

The I/O expansion options provided by the VM6062 makes this product suitable to fulfill a large range of applications. In addition to the Two Gigabit Ethernet interfaces, three USB links, two SATA interfaces, two serial lines, one HDMI and up to height GPIO available on the base version, the VM6062 features the following I/O expansion possibilities:

- Two PMC/XMC slots
- Two M.2 slots
- One miniPCI-Express slot as exclusive use of one PMC/XMC
- PCI-Express x4 expansion on high performance UHM P0 connector compatible with V2PMC2 carrier card.

UP-TO-DATE DIGITAL SECURITY ENABLED PLATFORM

Digital security is of tremendous importance for embedded computing: the exploding number of deployed autonomous devices with no operator close by will represent a significant surface of attack. Moreover, embedded computers can be connected and active in the field during many years.

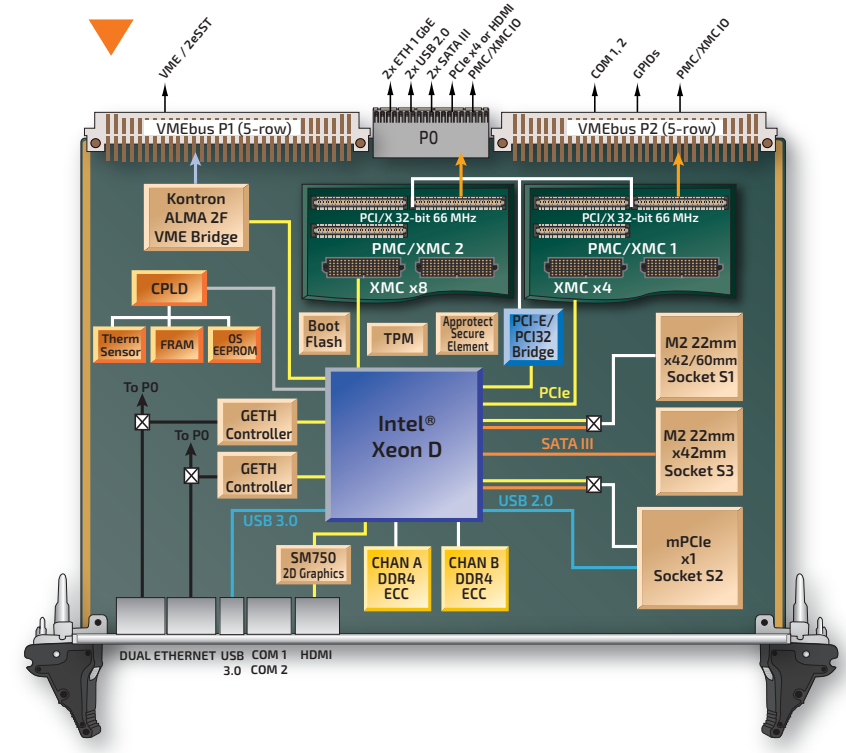
Kontron answers digital security requirements in the frame of the SEC-Line offer with hardware enforced root of trust (Dual secure elements) which are available on the VM6062, and software only techniques such as Secure Boot.

Furthermore, the design of the VM6062 already includes the host a third secure element to enhance digital security of the application.

LONG TERM SUPPLY AND SUPPORT

The VM6062 is part of the Kontron Extended Life Cycle product family which offers a 15-year minimum life cycle organization on top of Intel® embedded product line silicon life cycle. And extended long term support achievement is render simple choosing among a set of catalog support packages.

VM6062 BLOCK DIAGRAM



ASSOCIATED PRODUCTS

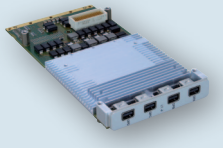
EVALUATION SYSTEM

EZ1-VM6062

REAR TRANSITION MODULE

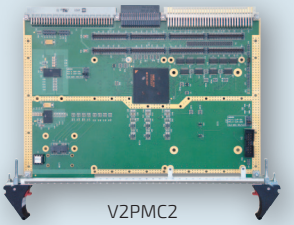
PBV36-P0-VM6-00

MULTI-HEAD GP-GPU XMC



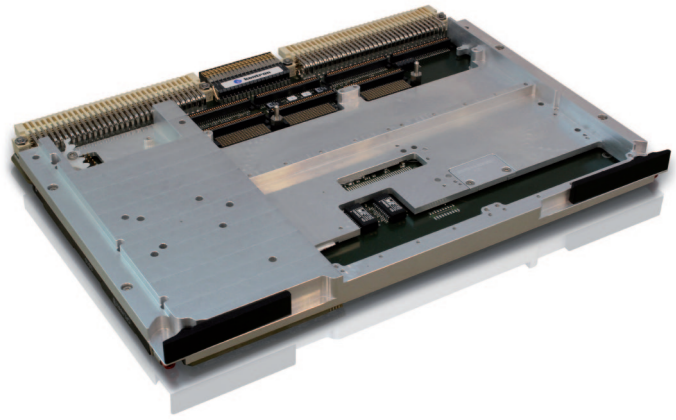
XMC-GPU91

PMCs CARRIER



V2PMC2

VM6062 RUGGED CONDUCTION COOLED (RC)



TECHNICAL INFORMATION

PROCESSOR		2-Core/4-thread Intel® D1508 Member of the Server Class Intel® Xeon® Processor D-1500 family 3 MB Cache 2.2 GHz Processor Base Frequency 2.6 GHz Maximum Turbo Frequency Intel® Virtualization features VT-d, VT-x and AVX2
ONBOARD CONTROLLER	Watchdog	PLD-based, timeout ranging from 2 µs to 510s, IRQ, Reset, dual-stage
	System CPLD	One CPLD Board controller for power sequencing, reset handling, monitoring, failure detection
	RTC	Separated low power RTC with optional onboard battery
MEMORY	System Memory	8 GB DDR4 dual channel memory with ECC Expandable to 32 GB
	Flash (uEFI BIOS)	2x 16 MB FLASH, with recovery image and uEFI BIOS settings
	EEPROM	One serial 256 Kbit EEPROM dedicated to system data One serial 256 Kbit EEPROM dedicated to application data
	M.2 Option	Dual M.2 SSD slots.
FRONT INTERFACES	USB	1x USB 3.0
	Gigabit Ethernet	2x RJ-45 10/100/1000BASE-T Ethernet switchable to rear P0 connector
	HDMI	HDMI port
	Serial Line	IEEE1394 connector. 2x EIA-232 simplified lines
	LEDs	4
	Reset	Reset push button
REAR INTERFACES	USB	2x USB 2.0
	Gigabit Ethernet	2x 10/100/1000BASE-T Ethernet switchable to front
	SATA	2x SATA III
	HDMI	HDMI port exclusive with PCI-Express
	PCI-Express	x1 or x4 without HDMI, PCI-Express 2.0
ONBOARD INTERFACES	PMC	PCIbus 32/66
	XMC	VITA 42, PCIe x8 (XMC#2) and PCIe x4 (XMC#1) VITA 61 XMC 2.0 support: contact Kontron
	M.2	2x M.2, one exclusive to PMC/XMC#1
	Mini-PCIe	1x PCIe/USB interface, exclusive to PMC/XMC#1
BUILT IN TEST	Software Options	PBIT Power-on Built in Test CMON control monitoring
POWER	Standard	3.3V, 5V (+12/-12V if required for mezzanine)
	5V only option	Contact Kontron
DIMENSIONS	(BASELINE)	VME 1 slot, 6U, 4HP, 0.8" slot pitch, P1 P2 P0 equipped, 5-row backplane connector
WEIGHT (BASELINE)		Standard Air Cooled Version: 480g approx. / Conduction Cooled Version: 800g approx.

ENVIRONMENTAL SPECIFICATION

	SA - STANDARD COMMERCIAL	WA - EXTENDED TEMPERATURE	RA - RUGGED AIR-COOLED	RC - RUGGED CONDUCTION-COOLED
Conformal Coating	Optional	Standard	Standard	Standard
Cooling Method	Convection	Convection	Convection	Conduction
Operating Temperature	0° to +55°C	-20° to +65°C	-40° to +70°C	-40° to +85°C
Storage Temperature	-40° to +85°C	-45° to +100°C	-50° to +100°C	-50° to +100°C
Vibration Sine (Operating)	20-500 Hz - 2 g	20-500 Hz - 2 g	20-2,000 Hz - 3 g	22-2,000 Hz - 5 g
Random	f (Hz) 10 40 100 200 2000 PSD (g2/Hz) 0.01 0.01 0.0007 0.0007 0.00005		5 Hz to 100 Hz +3 dB/octave 100 Hz to 1000 Hz 0.04 g2/Hz 1000 Hz to 2000 Hz-6 dB/octave	5 Hz to 100 Hz +3 dB/octave 100 Hz to 1000 Hz 0.1 g^2/Hz 1000 Hz to 2000 Hz-6 dB/octave
Shock (Operating)	20 g/11 ms Half Sine	20 g/11 ms Half Sine	20 g/20 ms Half Sine	40 g/20 ms Half Sine
Altitude (Operating)	-1,500 to 60,000 ft	-1,500 to 60,000 ft	-1,500 to 60,000 ft	-1,500 to 60,000 ft
Relative Humidity	90% without condensation	95% without condensation	95% without condensation	95% without condensation

ORDERING INFORMATION

ARTICLE	ORDER CODE	DESCRIPTION
VM6062	VM6062-SA28-00000000	6U single slot 4 HP (0,8") VME SBC Intel® Dual-Core D1508 processor, 8 GB dual bank DDR3-SDRAM with ECC, two PMC/XMC slots, two M.2, one mPCIe, P0 connector. Air-Cooled SA Class (0°C to +55°C) Conformal coating in option.
VM6062	VM6062-WA28-00000000	6U single slot 4 HP (0,8») VME SBC Intel® Dual-Core D1508 processor, 8 GB dual bank DDR3-SDRAM with ECC, two PMC/XMC slots, two M.2, one mPCIe, P0 connector. Air-Cooled WA Class (-20°C to +65°C). Conformal coating (default).
VM6062	VM6062-RA28-00000000	6U single slot 4 HP (0,8») VME SBC Intel® Dual-Core D1508 processor, 8 GB dual bank DDR3-SDRAM with ECC, two PMC/XMC slots, two M.2, one mPCIe, P0 connector. Air-Cooled RA Class (-40°C to +75°C). Conformal coating (default).
VM6062	VM6062-RC28-00000000	6U single slot 4 HP (0,8») VME SBC Intel® Dual-Core D1508 processor, 8 GB dual bank DDR3-SDRAM with ECC, two PMC/XMC slots, two M.2, one mPCIe, P0 connector. Air-Cooled SA Class (-40°C to +85°C). Conformal coating (default).

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