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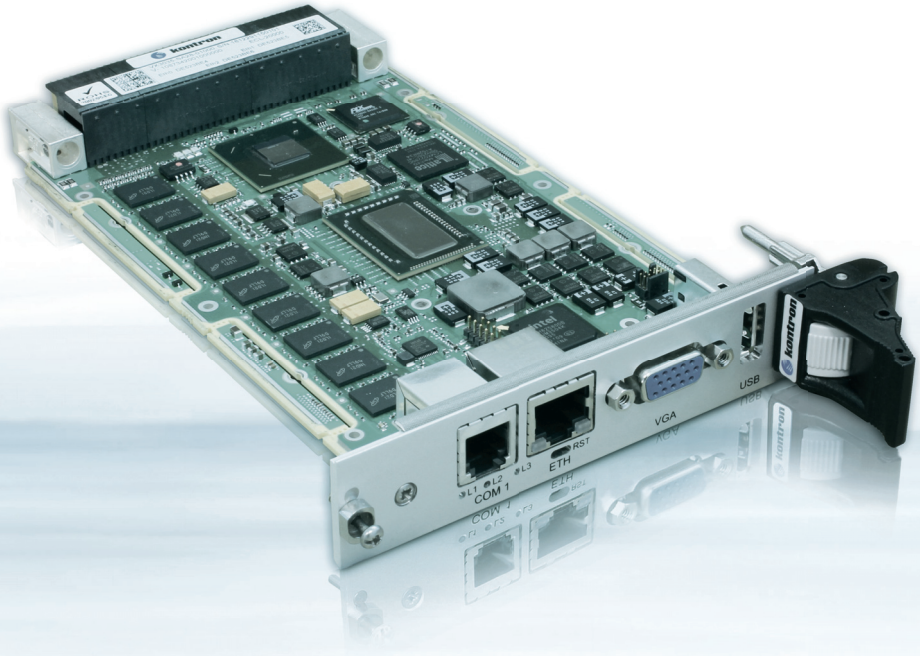
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Find the *Kontron VX3035* at our website: ***Click HERE***

VX3035



VPX OpenVPX™

3U VPX 2ND GENERATION INTEL® CORE™ i7 SINGLE BOARD COMPUTER

- Intel® Core™ Core i7-2655LE 2.2 GHz, four threads, Intel® HD Graphics
- VXFabric™ option for computing nodes
- supporting safety critical applications
- long term supply program
- turnkey development platforms

POSSIBILITIES START HERE kontron

PRODUCT OVERVIEW

VX3035 is a multipurpose 3U VPX rugged single board computer offering the ultimate performance for embedded applications. Coupled with Kontron Long Term Supply policy, this board is poised to become the general purpose small SBC for many generations of embedded applications for the Military and Aerospace market.
Based on Intel®'s high performance computing architecture, VX3035 offers the best features set:

STANDARDS

- 3U VPX VITA 46, OpenVPX VITA65, VPX REDI VITA 48.
- Single CPU: compatible with all existing legacy application x86 code.

SWAP-C

- Four Execution Threads: compact 4-way SMP solution for parallel computing tasks at low power, low size.
- Turbo Boost: up to 2.5 GHz operation of a single threaded workload in the same power envelope.
- Integrated Graphics Controller with two DisplayPorts or VGA: for all HMI applications.

SAFETY CRITICAL

- Two channels of DDR3 soldered memory with ECC: performance and security.
- 64 KByte of permanent Ferroelectric Random Access Memory (F-RAM) allowing permanent retention of application key operational data.
- 8 GByte of System Flash with Recovery BIOS Image and permanent storage of BIOS parameters.

RUGGED DESIGN

Rugged Conduction-Cooled version: for the harshest environments.

CONNECTIVITY

- Up to 5 lanes of PCIe to the backplane: I/O extensions at peak bandwith.
- 4 SATA ports to the backplane: for secure RAID storage Applications.

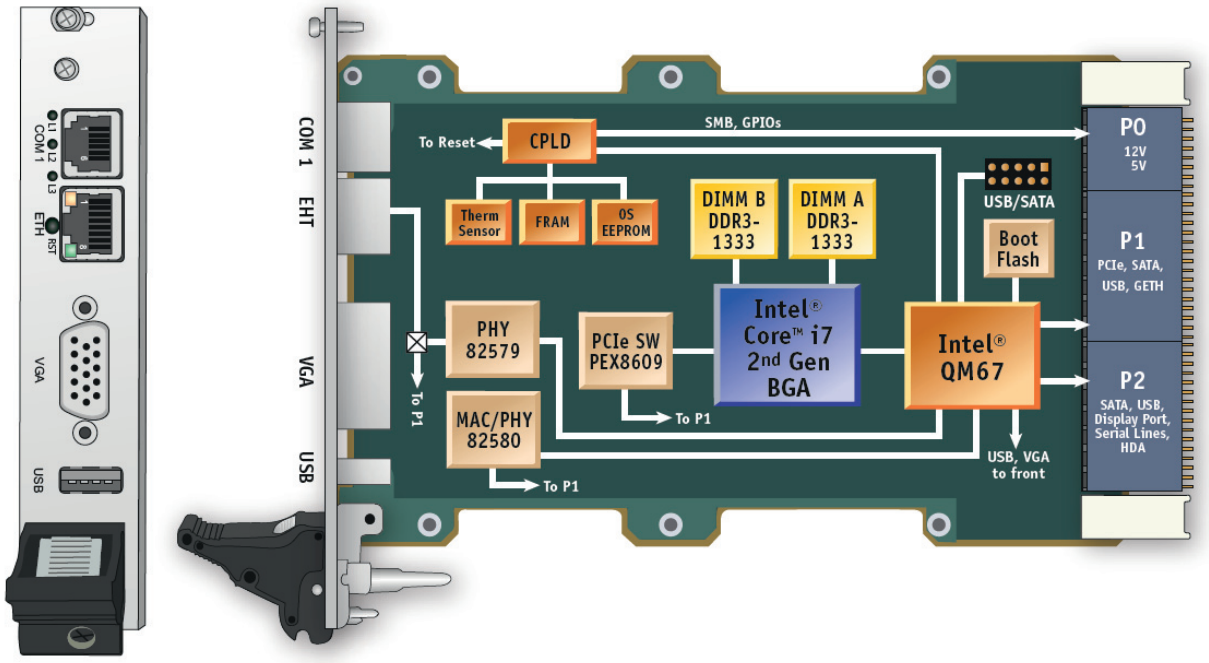
VERSATILITY

- VX3035 is compatible with 0.8" and 1" slot pitch. Pick the best size/power tradeoff for your application.
- Extension connectors on top and bottom allow SBC custom extension for cost effective program customizations.

LONG TERM SUPPLY

VX3035 is the member or Extended Life Cycle product family, which offers a 15-year life cycle organisation on top of Intel® embedded product line silicon life cycle.
Available in Kontron 3U VPX development systems, along with 3U VPX carriers and 3U VPX Ethernet plus PCIe switches, the VX3035 is the ideal candidate for long term programs in search of general purpose or compact high performance parallel computing solutions.

VX3035 BLOCK DIAGRAM AND FRONT PANEL



TECHNICAL INFORMATION

PROCESSOR		Second Generation Intel® Core™ i7 processor (32nm manufacturing process): - Intel® Core™ i7-2655LE Processor (4M Cache, 2.20 GHz) Please contact Kontron for further information concerning the suitability of other Intel processors for use with the VX3035
MEMORY	SYSTEM MEMORY FLASH (UEFI BIOS) EEPROM USB/SATA NAND FLASH	Up to 8 GByte dual channel DDR3 SDRAM running at 1333 MHz, with ECC, soldered 8 MByte FLASH, with recovery image and uEFI BIOS settings Serial EEPROM (24LC64) 8 KByte for storing product VPD Flash mezzanine socket for USB or SATA NAND Flash modules (typically 8, 16 or 32 GByte)
ONBOARD CONTROLLER	PLATFORM CONTROLLER HUB GRAPHICS GIGABIT ETHERNET WATCHDOG RTC	Mobile Intel® QM67 Express Chipset: - SATA host controller with six ports with RAID 0/1/5/10 support - USB 2.0 host interface with up to 14 ports (6x ports are used on the VX3035) - 2x PCI Express x4 or 8x PCI Express x1 2.0 ports High performance 3D graphics controller integrated in the processor: - Support for two independent displays - Supports digital display resolutions up to 2560 x 1600 pixels @ 60 Hz - Supports analog display resolutions up to 2048 x 1536 pixels @ 75 Hz - Dynamic Video Memory Technology (DVMT) 3x GbE, 2 1000BASE-BX with Intel i82580 Ethernet controller (rear), One 1000BASE-T with i82577 (front or rear, BIOS option) PLD-based, timeout up to 510s, IRQ, Reset Integrated in QM67 with 256 Byte CMOS RAM plus separate ultra low power time of day device
FRONT INTERFACES 4HP (0,8") OR 5HP (1")	VGA USB ETHERNET SERIAL LEDs	1x VGA-CRT 15-pin D-Sub connector 1x USB 2.0 ports, 4-pin standard USB connectors 1x RJ45 with integrated LEDs (ACT, SPEED) 1x RJ11 EIA-232 (with CTS/RTS) 3 bicolor Leds for system info (fault, proc hot, WD), and user application feedback
ONBOARD INTERFACES	DEBUG INTERFACE USB/SATA TOP LAYER EXTENSION BOTTOM LAYER EXTENSION	XDP port for processor emulation probe connection 1x onboard FLASH mezzanine socket for USB or SATA modules The high-speed I/O connector holds PCIe x4 channel for I/O extensions (XMC, HDD etc), 3.3 V Power This connector holds the following interfaces - PCIe x1 for any I/O extension mezzanine - Four GETH 1000BASE-T signals - 3.3 V Power
VPX INTERFACE	SLOT PROFILES	SLT3-PAY-2F2U-14.2.3 - SLT3-PAY-1F1F2U-14.2.4 - SLT3-PAY-1F1U-14.2.10
REAR I/O VIA P1/P2		The VX3035 supports: - One x4 PCIe non transparent port - Four SATA II ports - Three Gigabit Ethernet ports - Four USB 2.0 ports - Two DP ports - One HDA port - One PCIe x1 link. - Two simplified EIA232/EIA422 serial (one with CTS/RTS)
SUPERVISORY FUNCTIONS		- Non Maskable RESET, - NVMRO, SMB 0 and SMB 1 interfaces for Status, Start, Reset. Compatible with Kontron CMB, temperature and voltage sensors on the board. - PCIe optional reference clock

ENVIRONMENTAL SPECIFICATION

	SA - STANDARD COMMERCIAL (1" single height passive module heat sink, forced air)
CONFORMAL COATING	Optional
AIRFLOW	3.5 m/s
TEMPERATURE	VITA 47-Class AC1
COOLING METHOD	Convection
OPERATING	0° to +55° C
STORAGE	-45° to +85° C
VIBRATION SINE (OPERATING)	20-500 Hz - 2 g
RANDOM	VITA 47-Class V1
SHOCK (OPERATING)	20g/11 ms Half Sine
ALTITUDE (OPERATING)	-1,500 to 60,000 ft
RELATIVE HUMIDITY	90 % without condensation (95% with coating)

ORDERING INFORMATION

ARTICLE	PART NO.	DESCRIPTION
SA - STANDARD COMMERCIAL		
VX3035	VX3035-SA24-01000	Air-cooled 3U VPX Single Board Computer, 2.2 GHz Intel® Core™ i7 2nd Gen, 4 GByte DDR3-SDRAM, front: 1"
VX3035	VX3035-SA24-00000	Air-cooled 3U VPX Single Board Computer, 2.2 GHz Intel® Core™ i7 2nd Gen, 4 GByte DDR3-SDRAM, front: 0.8"
VX3035	VX3035-SA12-01000	Air-cooled 3U VPX Single Board Computer, 2.2 GHz Intel® Core™ i7 2nd Gen, 2 GByte DDR3-SDRAM /single bank, front: 1", no PCIe on VPX, no P2 VPX I/O connector.
VX3035	VX3035-SA28-01000	Air-cooled 3U VPX Single Board Computer, 2.2 GHz Intel® Core™ i7 2nd Gen, 8 GByte DDR3-SDRAM, front: 1"
VX3035	VX3035-SA28-00000	Air-cooled 3U VPX Single Board Computer, 2.2 GHz Intel® Core™ i7 2nd Gen, 8 GByte DDR3-SDRAM, front: 0.8"
ASSOCIATED PRODUCTS		
VX3035-RTM	RTM PB-VX3-011	3U VPX Rear Transition Module compatible with the VX3035
USB FLASH MODULE	FDM-USB-xGB-2MM-IV	USB Flash Device (x GByte)
SATA FLASH MODULE	FDM-SATA-32GB-C0V	32 GBytes MLC device, commercial temperature
SATA FLASH MODULE	FDM-SATA-8GB-I0V	8 GBytes SLC device, industrial temperature
SERIAL CABLE	KIT-2X-RJ12DB9	Serial cable adapter

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