

## » Systems & Platforms «

Kontron offers designers a broad variety of industrial rack mount computers and enclosures, industrial chassis, industrial panel PCs, industrial LCD monitors and industrial flat panels, plus a selection of commercial-off-the-shelf open standard AdvancedTCA (p. 28), MicroTCA (p. 36) and CompactPCI (p. 42), VME (p. 56) or VPX pre-integrated platforms (p. 61).

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## » CRMS – Communications Rack Mount Servers «



Kontron's Communications Rack Mount Servers are ideally suited for telco and data network applications. They are available in 1U and 2U ruggedized, shallow-depth chassis with long life availability and support. Communication Rack Mount Servers include two product families:

### Carrier Grade Servers

Carrier Grade Servers are NEBS-3 and ETSI compliant standard building blocks used in a variety of telecom applications and are important for satisfying the demanding requirements and limited space of the telecom central office. Available in 1U and 2U chassis.

#### Key Benefits:

- » NEBS-3 / ETSI compliant
- » Long life support (3-5 years)
- » Short depth (20"), ruggedized chassis
- » Dual, redundant AC or DC power option
- » Telco alarm management
- » Hardware RAID option
- » Industry-leading performance/watt

### IP Network Servers

IP Network Servers are optimized for high I/O throughput and compute performance, serving as an excellent choice for data network applications with large I/O requirements. They are well suited for enterprise application acceleration and content caching, and are ideal platforms for running Telco SoIP, including IMS, IPTV, video on demand (VoD), SIP application servers, IP-PBX, and IP-PSTN gateways. Available in 1U and 2U chassis.

#### Key Benefits:

- » Short depth (20"-24"), ruggedized chassis
- » "Appliance" look and feel
- » Long life product availability (3-5 years)
- » Dual, redundant AC or DC power option
- » Hardware RAID option (2U servers only)
- » Industry-leading performance/watt

#### Carrier Grade Servers

##### CG2100 Carrier Grade Server

Available Q2-2010

<b>Form Factor</b>	2U chassis
<b>Processor</b>	Dual socket support for Next Generation Intel® Xeon® processor
<b>Chipset</b>	Intel® 5520 Chipset + ICH10R
<b>Power Supply</b>	Dual-redundant 600W AC or DC hot-swap power supply (2nd power supply optional). PMBus supported.
<b>Alarm Card</b>	Telco Alarm Management - front-panel feature supports central office alarm systems
<b>Rear I/O</b>	Two rear-panel GbE NIC (Cu) ports. Additional I/O expansion available as option (see I/O Expansion Type).
<b>PCI Slots</b>	Supports 3 or 5 PCI-E slots, or 3 PCI-E & 2 PCI-X slots. PCI Gen2 supported.
<b>Main Memory</b>	Twelve RDIMM/UDIMM memory slots (DDR3-800/1066/1333). Maximum 96 GB memory
<b>Drive bays internal</b>	Drive trays for up to six hot-swap 2.5-inch SAS or SATA hard disk drives
<b>RAID</b>	Software RAID 0,1,10 supported (std); Hardware RAID 5,6 supported as optional module
<b>Flash</b>	Flash storage capability supports specified solid state drives via USB or SATA interface; SD Flash Memory support (optional)
<b>I/O Expansion Type</b>	Optional I/O module enables external SAS storage or additional Quad GbE or Dual 10GbE ports
<b>Hot Swap</b>	Hot-swap, redundant fans; hot-swap, redundant power supplies; hot-swap hard drives
<b>Management</b>	Intel® Remote Management Module 3 (RMM3) w/ GCM4 (optional)
<b>Front Bezel</b>	Customizable front bezel adaptable to customer needs and environment
<b>Dimensions (H x W x D)</b>	3.45 x 17.14 x 20 inches (87.6 x 435.3 x 508 mm)

##### Carrier Grade Server TIGW1U

<b>Form Factor</b>	1U chassis
<b>Processor</b>	Dual socket support for Intel® Xeon® processors L5410 (45nm) OR for Intel® Xeon® processors LV 5148 or LV 5128 (65nm)
<b>Chipset</b>	Intel® 5000P Memory Controller and ESB2-E I/O Controller chipset; supports front side bus speeds of 1066 MHz and 1333 MHz
<b>Power Supply</b>	Dual, redundant 450W AC or DC Hot Swap Power Supply (2nd power supply optional)
<b>Alarm Card</b>	Telco Alarm Management - front-panel feature supports central office alarm systems
<b>Rear I/O</b>	Four rear-panel GbE NIC (Cu) ports, upgradeable to 12 GbE ports (max) based on PCI configuration
<b>PCI Slots</b>	One PCI Super slot supporting either PCI-Express x8 or optional PCI-Express x8
<b>Main Memory</b>	Six DIMM slots supporting FB DIMM memory; 240-pin DDR2-533 and DDR2-667 FB DIMMs can be used; Maximum 32GB memory
<b>Drive bays internal</b>	Drive trays for up to three hot-swap 2.5-in. SAS hard disk drives. DVD-CDR installed.
<b>RAID</b>	Software RAID 0,1 supported (std); Hardware RAID 5 supported as optional module
<b>Flash</b>	Flash storage capability supports specified solid state drives (purchased separately)
<b>I/O Expansion Type</b>	
<b>Hot Swap</b>	Hot-swap, redundant power supplies; hot-swap hard drives
<b>Management</b>	Remote Management Module (optional)
<b>Front Bezel</b>	Standard gray bezel; customizable bezel available (optional)
<b>Dimensions (H x W x D)</b>	1.70 x 16.93 x 20 inches (43.25 x 430 x 508 mm)

#### IP Network Servers

##### IP Network Server NSN2U

<b>Form Factor</b>	2U chassis
<b>Processor</b>	Two socket support for Intel® Xeon® Processors 5500 Series and Next Generation Intel® Xeon® Processors
<b>Chipset</b>	Intel® 5520 Chipset + ICH10R
<b>Power Supply</b>	Dual-redundant 600W AC or DC hot-swap power supply (2nd power supply optional). PMBus supported.
<b>Rear I/O</b>	Two rear-panel GbE NIC (Cu) ports. Additional I/O expansion available as option (see I/O Expansion Type).
<b>Front I/O</b>	N/A
<b>PCI Slots</b>	Supports 3 or 5 PCI-E slots, or 3 PCI-E & 2 PCI-X slots. PCI Gen2 supported.
<b>Main Memory</b>	Twelve RDIMM/UDIMM memory slots (DDR3-800/1066/1333). Maximum 96 GB memory
<b>Drive bays internal</b>	Drive trays for up to eight hot-swap 2.5-inch SAS or SATA hard disk drives; Additional bay supports optical drive (purchased separately)
<b>RAID</b>	Software RAID 0,1,10 supported (std); Hardware RAID 5,6 supported as optional module
<b>Flash</b>	Flash storage capability supports specified solid state drives via USB or SATA interface
<b>I/O Expansion Type</b>	Optional I/O module enables external SAS storage or additional Quad GbE or Dual 10GbE ports
<b>Hot Swap</b>	Hot-swap, redundant fans; hot-swap, redundant power supplies; hot-swap hard drives
<b>Management</b>	Intel® Remote Management Module 3 (RMM3) w/ GCM4 (optional)
<b>Front Bezel</b>	Customizable front bezel adaptable to customer needs and environment
<b>Dimensions (H x W x D)</b>	3.45 x 17.14 x 24 inches (87.6 x 435.3 x 610 mm)

##### IP Network Server NSW1U

<b>Form Factor</b>	1U chassis
<b>Processor</b>	Single socket support for the Intel® Xeon® processor 5400 series (L5410 or E5440) (45nm) OR for the Intel® Xeon® processor 5100 series (65nm)
<b>Chipset</b>	Intel® 5000P Memory Controller and ESB2-E I/O Controller chipset; supports front side bus speeds of 1066 MHz and 1333 MHz
<b>Power Supply</b>	Dual, redundant 450W AC or DC Hot Swap Power Supply (2nd power supply optional)
<b>Rear I/O</b>	Four rear-panel GbE NIC (Cu) ports, upgradeable to 12 GbE ports (max) based on PCI configuration
<b>Front I/O</b>	Optional Four or Eight front-panel GbE NIC ports (copper or fiber), with optional Bypass capability
<b>PCI Slots</b>	One PCI Super slot supporting either PCI-Express x8 or optional PCI-X 133MHz
<b>Main Memory</b>	Six DIMM slots supporting FB DIMM memory; 240-pin DDR2-533 and DDR2-667 FB DIMMs can be used; Maximum 32GB memory
<b>Drive bays internal</b>	Drive trays for two fixed 3.5-in. SATA hard disk drives
<b>RAID</b>	Software RAID 0,1 supported (std)
<b>Flash</b>	Flash storage capability supports specified solid state drives (purchased separately)
<b>I/O Expansion Type</b>	
<b>Hot Swap</b>	Hot-swap, redundant power supplies
<b>Management</b>	Remote Management Module (optional)
<b>Front Bezel</b>	Customizable front bezel adaptable to customer needs and environment
<b>Dimensions (H x W x D)</b>	1.70 x 16.93 x 20 inches (43.25 x 430 x 508 mm)

## » Rack Mount Systems «



**ENGINEERED  
IN GERMANY**

### Multifunctional Kontron Industrial Silent Server – KISS

Kontron offers a large array of Intel® based Industrial PC Rack Mount platforms around two core architectures: passive backplane (SBC) and motherboard. The benefits of the passive backplane are its ability to support a greater number and combination of ISA / PCI and PCI Express expansion slots (up to 14) and to offer longer life cycles, which can be greater than 5 years.

#### Advantages

- » Low noise design
- » Configurable with pre-verified options
- » Long life time support >5 years
- » Newest processor architectures
- » Designed for high reliability and easy maintainability
- » Shock proof rugged design
- » Excellent thermal design
- » Hot swap chassis fans
- » Designed in Germany

Also available  
in various colors!

## 4U Rack Mount Systems

Configurable KISS systems are designed to meet your requirements.

The KISS system has been designed with flexibility in mind and can accommodate PICMG 1.0, PICMG 1.3, ATX and Dual Xeon/64-bit based motherboards, as well as PCI Express ATX motherboards, all in a case that can be used as a tower, desktop or 19" rack mounted chassis. The main attraction of KISS servers is their extremely low noise level: they are inaudible against normal conversation. KISS IPC servers are therefore ideal for most noise-sensitive environments, such as hospital operating theaters and computer server rooms. The performance and configuration of KISS servers are based on Kontron's extensive range of CPU boards and backplanes, which allows them to be adapted to meet a very wide range of requirements. Redundant PSUs, RAID Subsystem KISS Stor and Remote Diagnostic Software make the KISS family a highly reliable and continuous-operating industrial Server.

Extra accessories adapt KISS to precisely meet your specific requirements:

- » An additional hold down bar for short add-on boards allows the system to withstand higher levels of shock and vibration.
- » The extension brackets allows you to put two extra full-size cards into the KISS system.
- » Up to three removable HDDs and one additional 5.25" device are configurable options.
- » Extra front I/Os are optionally available.
- » Choose from three mounting options: 19" rack mount, Desktop or Tower
- » KISS Stor
- » PCCM Remote Diagnostic software

### 4U Rack Mount Systems



KISS 4U KTQ45 ATX



KISS 4U KTC5520

Construction	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 51D+AZ 150-A-C	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 51D+AZ 150-A-C
Mounting	19" Rack Mount, Desk Top, Tower	19" Rack Mount, Desk Top, Tower
Paint Color	Flap blue, Body black, others on request (black flap is standard in NA)	Flap blue, Body black, others on request (black flap is standard in NA)
Weight	~ 15 kg	~ 15 kg
Control Panel Indicators	Power LED and HDD LED (others on request)	Power LED and HDD LED (others on request)
Control Panel Switch	ATX Power, Reset	ATX Power, Reset
CPU	Intel® E8400, Intel® QUAD Core Q9400	Intel® Xeon® Processor E5540 (80W), Intel® Xeon® Processor W5580 (130W), Intel® Xeon® Processor L5518 (60W)
Front Side Bus	800/1066/1333 MHz	1066/1333 MHz
DRAM	Up to 8 GB DDR 3	up to 96 GB DDR3 Registered ECC SDRAM
I/O Standard	2x USB 2.0 Front side	2x USB 2.0 Front side
I/Os	Rear I/Os: 3* RS232, 1 x RS485, VGA, Audio, 8* USB 2.0, PS/2 M+K, 2* LAN 10/100/1000 accessible: 3x 5.25", 2x 3.5", 1x internal 3.5", KISS Store	Rear I/Os: 2x GB LAN, 4x USB 2.0, PS/2 Mouse and Keyboard, VGA, Sound, 1x RS232C accessible: 2x 5.25", 1x Slim Bay
Drives	By PCCM	KVM over IP and Remote Management; IPMI v2.0
System Monitoring	By PCCM	1x PCI 32 Bit, 1x PCIe 2.0 x 8 using x 16 slot, 3x PCIe 2.0 x 8, 1* PCI_e x 4 using x8 Slot
Expansion Slots	4* PCI 32 bit, 1 x PCI_e x 16, 1 x PCI_e x 4	AC 550 W wide range(80+) AC redundant 500 W 2x Hot Swap Chassis Fans ultra low noise
Power Supply	AC wide range 550W(80+) , 24 V DC, 48 V DC, AC redundant	IP 20
Cooling	2x Hot Swap Chassis Fans ultra low noise	KISS Stor 1 or KISS Stor 0/5 RAID Subsystem, Slide Rails
Protection Class	IP 20	0 - 3000 m (0 - 10.000 ft) operating
Options (Fully Certified with System)	KISS Stor 1 or KISS Stor 0/5 RAID Subsystem, Slide Rails	operating: 15G, 11 ms 6 axis operating: 10 - 500 Hz 1G
Altitude	0 - 3000 m (0 - 10.000 ft) operating	operating: 5 - 95% rel non condensing
Shock DIN EN 60068-2-27	operating: 15G, 11 ms 6 axis	operating: 15G, 11 ms 6 axis
Vibration DIN EN 60068-2-6	operating: 10 - 500 Hz 1G	operating: 10 - 500 Hz 1G
Humidity rel.	operating: 5 - 95% rel non condensing	operating: 5 - 95% rel non condensing
Operating System	WIN 2000, WIN XP, Linux,	WIN Server 2008, Red Hat Enterprise Linux version 5.2 or later (64 bit)
MTBF	50.000 h* at 25°C (77°F)	50.000 h* at 25°C (77°F)
Noise	< 35 dB at 25°C (77°F)	~ 40 dB at 25°C (77°F)
Dimensions H x W x D	4U x 19" x 472 mm (18.58 inch)	4U x 19" x 472 mm (18.58 inch)
Operating Temperature	0°C to 50°C (32°F-122°F)	0°C to 45°C (32°F-11°F)



## 4U Rack Mount Systems



## KISS 4U KT965 ATXP

Construction	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 510+AZ 150-A-C
Mounting	19" Rack Mount, Desk Top, Tower
Paint Color	Flap blue, Body black, others on request (black flap is standard in NA)
Weight	~ 15 kg
Control Panel Indicators	Power LED and HDD LED (others on request)
Control Panel Switch	ATX Power, Reset
CPU	Intel® Core™2 Duo E4300,E6400
Front Side Bus	533/800/1066 MHz
DRAM	Up to 8 GByte DDR2
I/O Standard	2x USB 2.0 Front side
I/Os	Rear I/Os: 2x 10/100/1000 LAN, 8x USB 2.0, PS/2 Mouse and Keyboard, VGA, Sound, 2x RS232C, LPT
Drives	accessible: 3x 5.25", 2x 3.5", 1x internal 3.5", KISS Store
System Monitoring	By PCCM
Expansion Slots	6x PCI 32, 1x PEG
Power Supply	AC 300 W wide range, 460 W AC, 24 V DC, AC redundant
Cooling	2x Hot Swap Chassis Fans ultra low noise
Protection Class	IP 20
Options (Fully Certified with System)	KISS Stor 1 or KISS Stor 0/5 RAID Subsystem, Slide Rails
Altitude	0 - 3000 m ( 0 - 10.000 ft) operating
Shock DIN EN 60068-2-27	operating: 15G, 11 ms 6 axis
Vibration DIN EN 60068-2-6	operating: 10 - 500 Hz 1G
Humidity rel.	operating: 5 - 95% rel non condensing
Operating System	WIN 2000, WIN XP, Linux,
MTBF	50.000 h* at 25°C (77°F)
Noise	< 35 dB at 25°C (77°F)
Dimensions H x W x D	4U x 19" x 472 mm (18.58 inch)
Operating Temperature	0°C to 50°C (32°F-122°F)

## KISS 4U 986LCD ATXP

Construction	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 510+AZ 150-A-C
Mounting	19" Rack Mount, Desk Top, Tower
Paint Color	Flap blue, Body black, others on request (black flap is standard in NA)
Weight	~ 15 kg
Control Panel Indicators	Power LED and HDD LED (others on request)
Control Panel Switch	ATX Power, Reset
CPU	Celeron® 440, Intel® Core™ Duo T2500, Intel® Core™2 Duo T7400
Front Side Bus	533/667 MHz
DRAM	Up to 4 GByte DDR2
I/O Standard	2x USB 2.0 Front side
I/Os	Rear I/Os: 3x 10/100/1000 LAN, 8x USB 2.0, PS/2 Mouse and Keyboard, VGA, Sound, 4x RS232C, LPT
Drives	accessible: 3x 5.25", 2x 3.5", 1x internal 3.5", KISS Store
System Monitoring	on request
Expansion Slots	6x PCI 32, 1x PEG
Power Supply	AC 300 W wide range, 460 W AC, 24 V DC, AC redundant
Cooling	2x Hot Swap Chassis Fans ultra low noise
Protection Class	IP 20
Options (Fully Certified with System)	KISS Stor 1 or KISS Stor 0/5 RAID Subsystem, Slide Rails
Altitude	0 - 3000 m ( 0 - 10.000 ft) operating
Shock DIN EN 60068-2-27	operating: 15G, 11 ms 6 axis
Vibration DIN EN 60068-2-6	operating: 10 - 500 Hz 1G
Humidity rel.	operating: 5 - 95% rel non condensing
Operating System	WIN 2000, WIN XP, Linux,
MTBF	50.000 h* at 25°C (77°F)
Noise	< 35 dB at 25°C (77°F)
Dimensions H x W x D	4U x 19" x 472 mm (18.58 inch)
Operating Temperature	0°C to 50°C (32°F-122°F)

## KISS 4U PCI 951

Construction	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 510+AZ 150-A-C
Mounting	19" Rack Mount, Desk Top, Tower
Paint Color	Flap blue, Body black, others on request (black flap is standard in NA)
Weight	~ 15 kg
Control Panel Indicators	Power LED and HDD LED (others on request)
Control Panel Switch	ATX Power, Reset
CPU	Pentium® 4 Celeron® 2.0 GHz, Pentium® 4 2.8 GHz
Front Side Bus	400/533 MHz
DRAM	Up to 2 GByte DDR 333
I/O Standard	2x USB 2.0 Front side
I/Os	2x LAN 10/100, 1x VGA, PS/2 Mouse and Keyboard, 2x COM RS232C
Drives	accessible: 3x 5.25", 2x 3.5", 1x internal 3.5", KISS Store
System Monitoring	No
Expansion Slots	4x PCI full size, 3x PCI half size, 5x ISA full size, 2x PICMG, others on request
Power Supply	AC 300 W wide range, 460 W AC, 24 V DC, AC redundant
Cooling	2x Hot Swap Chassis Fans ultra low noise
Protection Class	IP 20
Options (Fully Certified with System)	KISS Stor 1 or KISS Stor 0/5 RAID Subsystem, Slide Rails
Altitude	0 - 3000 m ( 0 - 10.000 ft) operating
Shock DIN EN 60068-2-27	operating: 15G, 11 ms 6 axis
Vibration DIN EN 60068-2-6	operating: 10 - 500 Hz 1G
Humidity rel.	operating: 5 - 95% rel non condensing
Operating System	WIN 2000, WIN XP, Linux,
MTBF	50.000 h* at 25°C (77°F)
Noise	< 35 dB at 25°C (77°F)
Dimensions H x W x D	4U x 19" x 472 mm (18.58 inch)
Operating Temperature	0°C to 50°C (32°F-122°F)

## KISS 4U Dual XEON\*\*

Construction	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 510+AZ 150-A-C
Mounting	19" Rack Mount, Desk Top, Tower
Paint Color	Flap blue, Body black, others on request
Weight	~ 15 kg
Control Panel Indicators	Power LED and HDD LED (others on request)
Control Panel Switch	ATX Power, Reset
CPU	Up to Intel® Dual Xeon™ 3.4 GHz, Woodcrest
Front Side Bus	800 MHz
DRAM	Up to 16 GByte reg ECC
I/O Standard	2x USB 2.0 Front side
I/Os	2x LAN 10/100/1000, VGA, PS/2 Mouse and keyboard, 1x COM RS232C, 2x USB 2.0
Drives	accessible: 3x 5.25", 2x 3.5", 1x internal 3.5", KISS Store
System Monitoring	IPMI
Expansion Slots	2x 64 Bit 133/100/66 MHz 3.3 V PCI X, 3x 32 Bit 33 MHz 5 V PCI, no AGP
Power Supply	AC 460 W 100-240 V AC 50 - 60 Hz
Cooling	2x Hot Swap Chassis Fans ultra low noise
Protection Class	IP 20
Options (Fully Certified with System)	KISS Stor 1 or KISS Stor 0/5 RAID Subsystem, Slide Rails
Altitude	0 - 3000 m ( 0 - 10.000 ft) operating
Shock DIN EN 60068-2-27	operating: 15G, 11 ms 6 axis
Vibration DIN EN 60068-2-6	operating: 10 - 500 Hz 1G
Humidity rel.	operating: 5 - 95% rel non condensing
Operating System	WIN 2000, WIN XP, Linux,
MTBF	50.000 h* at 25°C (77°F)
Noise	~ 40 dB at 25°C (77°F)
Dimensions H x W x D	4U x 19" x 472 mm (18.58 inch)
Operating Temperature	0°C to 50°C (32°F-112°F)

## KISS 4U PCI 960

Construction	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 510+AZ 150-A-C
Mounting	19" Rack Mount, Desk Top, Tower
Paint Color	Flap blue, Body black, others on request (black flap is standard in NA)
Weight	~ 15 kg
Control Panel Indicators	Power LED and HDD LED (others on request)
Control Panel Switch	ATX Power, Reset
CPU	Celeron® 440, Intel® Core™ Duo T2500, Intel® Core™2 Duo T7400
Front Side Bus	800 MHz
DRAM	Up to 4 GByte DDR2
I/O Standard	2x USB 2.0 Front side
I/Os	2x LAN 10/100/1000, VGA, PS/2 Mouse and keyboard, 2x COM RS232C, 6x USB 2.0
Drives	accessible: 3x 5.25", 2x 3.5", 1x internal 3.5", KISS Store
System Monitoring	By PCCM
Expansion Slots	7x PCI 32 Bit 33 MHz 5 V, 1x PCIe x 16, 4x PCIe x1
Power Supply	AC 300 W wide range, 460 W AC, 24 V DC, AC redundant
Cooling	2x Hot Swap Chassis Fans ultra low noise
Protection Class	IP 20
Options (Fully Certified with System)	KISS Stor 1 or KISS Stor 0/5 RAID Subsystem, Slide Rails
Altitude	0 - 3000 m ( 0 - 10.000 ft) operating
Shock DIN EN 60068-2-27	operating: 15G, 11 ms 6 axis
Vibration DIN EN 60068-2-6	operating: 10 - 500 Hz 1G
Humidity rel.	operating: 5 - 95% rel non condensing
Operating System	WIN 2000, WIN XP, Linux, VISTA
MTBF	50.000 h* at 25°C (77°F)
Noise	< 35 dB at 25°C (77°F)
Dimensions H x W x D	4U x 19" x 472 mm (18.58 inch)
Operating Temperature	0°C to 50°C (32°F-122°F)

## KISS 4U PCI 759

Construction	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 510+AZ 150-A-C
Mounting	19" Rack Mount, Desk Top, Tower
Paint Color	Flap blue, Body black, others on request (black flap is standard in NA)
Weight	~ 15 kg
Control Panel Indicators	Power LED and HDD LED (others on request)
Control Panel Switch	ATX Power, Reset
CPU	Intel® Core™2 Duo E4300,E6400
Front Side Bus	1066/800/533 MHz
DRAM	Up to 4 GByte DDR2
I/O Standard	2x USB 2.0 Front side
I/Os	2x LAN 10/100/1000, VGA, PS/2 Mouse and keyboard, 2x COM RS232C, 6x USB 2.0
Drives	accessible: 3x 5.25", 2x 3.5", 1x internal 3.5", KISS Store
System Monitoring	on request
Expansion Slots	7x PCI 32 Bit 33 MHz 5 V, 1x PCIe x 16, 4x PCIe x1
Power Supply	AC 300 W wide range, 460 W AC, 24 V DC, AC redundant
Cooling	2x Hot Swap Chassis Fans ultra low noise
Protection Class	IP 20
Options (Fully Certified with System)	KISS Stor 1 or KISS Stor 0/5 RAID Subsystem, Slide Rails
Altitude	0 - 3000 m ( 0 - 10.000 ft) operating
Shock DIN EN 60068-2-27	operating: 15G, 11 ms 6 axis
Vibration DIN EN 60068-2-6	operating: 10 - 500 Hz 1G
Humidity rel.	operating: 5 - 95% rel non condensing
Operating System	WIN 2000, WIN XP, Linux, VISTA
MTBF	50.000 h* at 25°C (77°F)
Noise	~40 dB at 25 °C (77°F)
Dimensions H x W x D	4U x 19" x 472 mm (18.58 inch)
Operating Temperature	0°C to 50°C (32°F-122°F)

## KISS 4U PCI 760

Construction	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 510+AZ 150-A-C
Mounting	19" Rack Mount, Desk Top, Tower
Paint Color	Flap blue, Body black, others on request (black flap is standard in NA)
Weight	~ 15 kg
Control Panel Indicators	Power LED and HDD LED (others on request)
Control Panel Switch	ATX Power, Reset
CPU	Intel® Core™2 Duo E4300,E6400, Quad Core Q9400
Front Side Bus	1333/1066/800 MHz
DRAM	Up to 8 GByte DDR2
I/O Standard	2x USB 2.0 Front side
I/Os	2x LAN 10/100/1000, VGA, PS/2 Mouse and keyboard, 2x COM RS232C, 6x USB 2.0
Drives	accessible: 3x 5.25", 2x 3.5", 1x internal 3.5", KISS Store
System Monitoring	By PCCM
Expansion Slots	7x PCI 32 Bit 33 MHz 5 V, 1x PCIe x 16, 4x PCIe x1
Power Supply	AC 300 W wide range, 460 W AC, 24 V DC, AC redundant
Cooling	2x Hot Swap Chassis Fans ultra low noise
Protection Class	IP 20
Options (Fully Certified with System)	KISS Stor 1 or KISS Stor 0/5 RAID Subsystem, Slide Rails
Altitude	0 - 3000 m ( 0 - 10.000 ft) operating
Shock DIN EN 60068-2-27	operating: 15G, 11 ms 6 axis
Vibration DIN EN 60068-2-6	operating: 10 - 500 Hz 1G
Humidity rel.	operating: 5 - 95% rel non condensing
Operating System	WIN 2000, WIN XP, Linux, VISTA
MTBF	50.000 h* at 25°C (77°F)
Noise	< 35 dB at 25°C (77°F)
Dimensions H x W x D	4U x 19" x 472 mm (18.58 inch)
Operating Temperature	0°C to 50°C (32°F-122°F)

\* Without FANs

\*\* Not available in NA.

## 4U Short Rack Mount Systems

### The Answer for Space Limited Applications

The KISS-Short has been designed with flexibility in mind and can accommodate half size PICMG 1.2 and Flex-ATX motherboards. The main attraction of KISS-Short is its extremely low noise level, which is inaudible against normal conversation. Kontron's KISS 4U

Short offers the same features in drive space, maintainability and functionality as it's "Big Brother" KISS but is only 300 mm deep. If space is an issue, KISS-Short is the right choice.

4U Short Rack Mount Systems			
	KISS 4U Short KTQ45 Flex	KISS 4U Short KT965/Flex	KISS 4U Short 986LCD-M/Flex
<b>Mechanical Dimensions</b>	Rack Mount: 19" x 4U x 300 mm	Rack Mount: 19" x 4U x 300 mm	Rack Mount: 19" x 4U x 300 mm
<b>Construction</b>	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 510-AZ 150-A-C	=	=
<b>Mounting</b>	Rack Mount	=	=
<b>Paint Color</b>	Flap blue, Body black, others on request (black flap is standard in NA)	=	=
<b>Weight</b>	~12 kg	~12 kg	~12 kg
<b>Control Panel Indicators</b>	Power LED, HDD LED	Power LED, HDD LED	Power LED, HDD LED
<b>Control Panel Switch</b>	PWR On, Reset	PWR On, Reset	PWR On, Reset
<b>CPU</b>	Intel® Core™2 Duo E8400, Intel® Core™ Quad Q9400	Intel® Core™2 Duo E4300, E6400	Celeron® 440, Intel® Core™ Duo T2500, Intel® Core™2 Duo T7400
<b>Front Side Bus</b>	800/1066/1333 MHz	533/800/1066 MHz	533/667 MHz
<b>DRAM</b>	Up to 8 GB DDR 3	Up to 8 GByte DDR 2	Up to 4 GByte DDR 2
<b>I/O Standard</b>	2x USB 2.0 front	=	=
<b>Dimensions (H x W x D)</b>	4U x 19" x 300 mm(11.81 inch)	=	=
<b>I/Os</b>	Rear I/Os: 2* COM,VGA,Line in , Line out,8* USB 2.0, PS/2 M+K,2* LAN 10/100/100	Rear I/Os: 3x 10/100/1000 LAN, 8x USB 2.0, VGA, 2x RS232C	Rear I/Os: 2x 10/100/1000 LAN, 8x USB 2.0, VGA, 4x RS232C
<b>Drives</b>	1x 3.5" internal, 2x 5.25" front accessible, 1* 3.5" front accessible	=	1x 3.5" internal, 3x 5.25" front accessible, 2* 3.5" Front accessible
<b>System Monitoring</b>	By PCCM	By PCCM	on request
<b>Expansion Slots</b>	2x PCI full size 32 Bit, 1x PCIe x16 1 x PCIe x4	2 xPCI 32 Bit, 1x PEG, PCI_e x4	2 free PCI 32 Bit, 1x PEG, 1x PCIe x4
<b>Power Supply</b>	AC 350 W (80+) autoswitching, 24 V DC, 48 V DC	AC 270 W 115/230 Manual switching	AC 270 W 115/230 Manual switching
<b>Cooling</b>	2 Front side hot swap Chassis FANs	2 Hot swap Sensor Controlled Ultra Low Noise Chassis FANs	2 Hot swap Sensor Controlled Ultra Low Noise Chassis FANs, no CPU FAN
<b>Protection Class</b>	IP 20	IP 20	IP 20
<b>Options (Fully Certified with System)</b>	KISS Store 1 or KISS Store 0/5 RAID Subsystem, Slide Rails, additional front I/Os	KISS Store 1 or KISS Store 0/5 RAID Subsystem, Slide Rails, additional front I/Os	KISS Store 1 or KISS Store 0/5 RAID Subsystem, Slide Rails, additional front I/Os
<b>Altitude</b>	0 - 3000 m ( 0 - 10.000 ft) operating	=	=
<b>Shock DIN EN 60068-2-27</b>	Operating: 15 g 11 ms half sine	Operating: 15 g 11 ms half sine	Operating: 15 g 11 ms half sine
<b>Vibration DIN EN 60068-2-6</b>	Operating: 10-500 Hz 1 g	Operating: 10-500 Hz 1 g	Operating: 10-500 Hz 1 g
<b>Humidity rel.</b>	Operating: 5-95 rel.% non condensing	Operating: 5-95 rel.% non condensing	Operating: 5-95 rel.% non condensing
<b>Operating System</b>	WIN 2000,WIN XP, Linux	WIN XP, Linux, VISTA	WIN XP, Linux, VISTA
<b>MTBF</b>	50.000 h @ 25° C(77°F)	50.000 h @ 25° C(77°F)	50.000 h @ 25° C(77°F)
<b>Noise</b>	< 35 dB @ 25° C(77°F)	< 35 dB @ 25° C(77°F)	< 35 dB @ 25° C(77°F)
<b>Operating Temperature</b>	0°C to 50°C(32°F-122°F)	0°C to 50°C(32°F-122°F)	0°C to 50°C(32°F-122°F)

\*) Without FANs

## 2U Short Rack Mount Systems

The KISS 2U short system has been designed with flexibility in mind and can accommodate FlexATX and MiniITX motherboards, all in a chassis that can be used as a desktop or 19" rack mounted cabinet. The main attraction of KISS 2U short servers is their extremely low noise level, which is inaudible against normal

conversation. KISS IPC servers are thus ideal for most noise – sensitive environments such as hospital operating theaters and computer server rooms. The performance and maximum of configuration of KISS servers are based on Kontron's extensive range of CPU boards.

2U Short Rack Mount Systems					
	KISS 2U Short 886LCD M/Flex	KISS 2U Short 986LCDM/ITX	KISS 2U Short KT965Flex	KISS 2U Short KTQ45Flex	KISS 2U Short KTQ45Flex low profile
<b>Construction</b>	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 510-AZ 150-A-C	=	=	=	=
<b>Mounting</b>	Rack Mount, Desktop	=	=	=	=
<b>Paint Color</b>	Flap blue, Body black, others on request (black flap is standard in NA)	Flap blue, Body black, others on request (black flap is standard in NA)	=	=	=
<b>Weight</b>	~8 kg	=	=	=	=
<b>Control Panel Indicators</b>	Power LED, HDD LED	=	=	=	=
<b>Control Panel Switch</b>	Power ON, reset	=	=	=	=
<b>CPU</b>	Pentium® M Celeron® 1.5 GHz, Pentium® M 1.8 GHz	Celeron® 440, Intel® Core™ Duo T2500, Intel® Core™2 Duo T7400	Intel® Core™ Duo E4300, Intel® Core™2 Duo E6400	Intel® Core™ 2Duo E8400, Intel® Core™Quad Q9400	=
<b>Front Side Bus</b>	533 MHz	533/667 MHz	533/800/1066 MHz	800/1066/1333 MHz	=
<b>DRAM</b>	Up to 2 GByte DDR	Up to 4 GByte DDR 2	Up to 8 GByte DDR 2	Up to 8 GB DDR 3	=
<b>I/O Standard</b>	Front: 2x USB 2.0	=	=	=	=
<b>Drives</b>	1x 3.5" accessible, 1x 5.25" accessible, 1x 3.5" Internal	1x 3.5" Internal, 1x 3.5" accessible, 1x 5.25" accessible	1x 3.5" Internal, 1x 3.5" accessible, 1x 5.25" accessible	1x 3.5" Internal, 1x 3.5" accessible, 1x 5.25" accessible	1x 3.5" Internal, 1x 3.5" accessible, 1x 5.25" accessible
<b>System Monitoring</b>	No	on request	by PCCM	by PCCM	by PCCM
<b>Expansion Slots</b>	2x PCI 32 Bit 33 MHz max length: 230mm	=	=	=2x PCI full size 32 Bit, or 1x PCIe x16 and PCIe x4 or 1x PCI 32 Bit and 1* PCI_e x 16	=2x PCI full size 32 Bit, 1x PCIe x16 1 x PCIe x4
<b>Power Supply</b>	AC 300 W wide range, 24 V DC	=	=	=	=
<b>Cooling</b>	3 Hot swap low noise chassis fans	=	=	=	=
<b>Altitude</b>	0-3000 m (0-10.000 ft) operating	=	=	=	=
<b>Shock DIN EN 60068-2-27</b>	operating: 5 g 11 ms half sine	=	=	=	=
<b>Vibration DIN EN 60068-2-6</b>	operating: 10 - 500 Hz 1.0 g	=	=	=	=
<b>Humidity rel.</b>	operating: 5 - 95% non condensing	=	=	=	=
<b>Operating System</b>	WIN 2000,WIN XP, Linux	WIN XP, Linux,WIN 2000	WIN XP, Linux,WIN 2000,VISTA	WIN XP, Linux,WIN 2000,Windows 7	=
<b>MTBF</b>	50.000h at 25°C(77°F)	=	=	=	=
<b>Noise</b>	< 35 dBA at 25 °C(77°F)	=	=	=	=
<b>Dimensions H x W x D</b>	2U x 19" x 350 mm (13.78inch)	=	=	=	=
<b>Operating Temperature</b>	0°C to 50°C (32°F-122°F)	0°C to 50°C (32°F-122°F)	0°C to 50°C (32°F-122°F)	0°C to 50°C (32°F-122°F)	0°C to 50°C (32°F-122°F)

\*) Without FANs

## 2U Rack Mount Systems

### Versatile 2U Solution for space limited applications

The features of the KISS 2U include an especially low installation height (88.90 mm), extremely quiet (<35 dbA), scalable as desired, RoHS-compliant, long-term available and ruggedized. Ideal Industrial Server solution with redundant AC PSU and integrated hot swappable RAID 1 Subsystem. KISS 2U features

PICMG 1.3 and PICMG 1.0 slots boards or Flex ATX motherboards, and is accordingly expandable in an especially flexible fashion, up to multicore and PCI-Express-based systems. In both the Flex ATX and PICMG 1.3 designs, the KISS 2U servers offer performance currently up to Intel® QUAD Core Q9400 and up to 8 GByte DDR2 memory. The chassis for the KISS 2U is designed either for the desktop or for installation in a 19" cabinet.

2U Rack Mount Systems	KISS 2U PCI 960	KISS 2U PCI 760	KISS 2U PCI 759	KISS 2U KT965Flex	KISS 2U 986Mini ITX	KISS 2U KTQ45/Flex
<b>Construction</b>	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 510-AZ 150-A-C	-	-	-	-	-
<b>Mounting</b>	Rack Mount, Desktop	-	-	-	-	-
<b>Paint Color</b>	Flap blue, Body black, others on request (black flap is standard in NA)	-	-	-	-	-
<b>Weight</b>	~ 10 Kg	~ 10 Kg	~ 10 Kg	~ 8 Kg	-	-
<b>Control Panel Indicators</b>	Power LED, HDD LED	-	-	-	-	-
<b>Control Panel Switch</b>	Power ON, reset	-	-	-	-	-
<b>CPU</b>	Celeron® 440, Intel® Core™ Duo T2500, Intel® Core™2 Duo T7400	Intel® Core™ Duo E4300, Intel® Core™2 Duo E6400, Intel® Core™2 Quad Q9400	Intel® Core™ Duo E4300, Intel® Core™2 Duo E6400	Intel® Core™ Duo E4300, Intel® Core™2 Duo E6400	Celeron® 440, Intel® Core™ Duo T2500, Intel® Core™2 Duo T7400	Intel® E8400, Intel® QUAD Core Q9400
<b>Front Side Bus</b>	533/667 MHz	800/1066/1333 MHz	800/1066/1333 MHz	533/800/1066 MHz	533/800/1066 MHz	800/1066/1333 MHz
<b>DRAM</b>	Up to 4 GByte DDR 2	Up to 8 GByte DDR 2	Up to 4 GByte DDR 2	Up to 8 GByte DDR 2	Up to 8 GByte DDR 2	Up to 8 GB DDR 3
<b>I/O Standard</b>	Front: 2x USB 2.0	-	-	-	-	-
<b>Drives</b>	1x 3.5" Internal, 1x 3.5" accessible, 1x 5.25" accessible	-	-	-	-	-
<b>System Monitoring</b>	By PCCM	By PCCM	on request	By PCCM	on request	By PCCM
<b>Expansion Slots</b>	3x PCI full size 32 Bit, 1x PCIe x16, 1x PCIe x4	3x PCI full size 32 Bit, 1x PCIe x16, 1x PCIe x4	4x PCI full size 32 Bit, 1x ISA, 1x PIGMG 1.0	2x PCI 32 Bit 33 MHz full size	-	2x PCI full size 32 Bit, or 1x PCIe x16 and PCIe x4 or 1x PCI 32 Bit and 1x PCI_e x 16
<b>Power Supply</b>	AC 300 W, 24V DC, redundant AC PSU	-	-	-	-	-
<b>Cooling</b>	3 Hot swap low noise chassis fans	-	-	-	-	-
<b>Altitude</b>	0 - 3000 m (0 - 10.000 ft) operating	-	-	-	-	-
<b>Shock DIN EN 60068-2-27</b>	operating: 5 g 11 ms half sine	-	-	-	-	-
<b>Vibration DIN EN 60068-2-6</b>	operating: 10 - 500 Hz 1.0 g	-	-	-	-	-
<b>Humidity rel.</b>	operating: 5 - 95% non condensing	-	-	-	-	-
<b>Operating System</b>	WIN 2000, WIN XP, Linux, VISTA	WIN 2000, WIN XP, Linux, VISTA	WIN 2000, WIN XP, Linux, VISTA	WIN XP, Linux, WIN 2000, VISTA	WIN 2000, WIN XP, Linux, VISTA	WIN 2000, WIN XP, Linux, Windows 7
<b>MTBF</b>	50.000 h at 25°C (77°F)	-	-	-	-	-
<b>Noise</b>	< 35 dB at 25 °C (77°F)	-	< 40 dB at 25 °C (77°F)	< 35 dB at 25 °C (77°F)	-	-
<b>Dimensions H x W x D</b>	2U x 19" x 472 mm(18.58inch)	-	-	-	-	-
<b>Operating Temperature</b>	0°C to 50°C (32°F-122°F)	0°C to 50°C (32°F-122°F), (0°C-45°C (32°F-113°F) for Quad Core CPUs)	-	0°C to 50°C (32°F-122°F)	-	-

\*) Without FANs

## 1U Short Rack Mount Systems

When space is limited, the KISS 1U short systems are designed to provide a solution. Only 350 mm(13,78 inch) deep, these smaller systems can be configured to meet your needs.

### 1U Short Rack Mount Systems



KISS 1U Short PCI 960

<b>Features</b>	KISS 1U Short 986
<b>Construction</b>	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 510-AZ 150-A-C
<b>Mounting</b>	Rack Mount, Desktop
<b>Paint Color</b>	Flap blue, Body black, others on request (black flap is standard in NA)
<b>Weight</b>	~6 kg
<b>Control Panel Indicators</b>	Power LED, HDD LED
<b>Control Panel Switch</b>	Power ON, reset
<b>CPU</b>	Celeron® 440, Intel® Core™ Duo T2500, Intel® Core™2 Duo T7400
<b>Front Side Bus</b>	533/667 MHz
<b>DRAM</b>	Up to 4 GByte DDR 2 SDRAM
<b>I/O Standard</b>	Front I/O : 4 * USB 2.0 Rear: 2x COM , 2x USB ,VGA and 2* GB LAN
<b>Drives</b>	KISS Stor Slim , SLIM DVD RW, Internal 1 * HDD, CF
<b>System Monitoring</b>	on request
<b>Expansion Slots</b>	2x PCI 32 Bit 33MHz or 1* PCI_e x 16
<b>Power Supply</b>	AC wide range 270 W, 24 V DC, 48 V DC
<b>Cooling</b>	4 chassis FAN
<b>Options (Fully Certified with System)</b>	KISS Stor Slim
<b>Altitude</b>	0 - 3000 m ( 0 - 10.000 ft) operating
<b>Shock DIN EN 60068-2-27</b>	Operating: 5 g 11 ms half sine
<b>Vibration DIN EN 60068-2-6</b>	Operating: 10-500 Hz 1 g
<b>Humidity rel.</b>	5 - 95% non condensing
<b>Operating System</b>	WIN XP, WIN 2000, Linux
<b>MTBF</b>	30.000h at 25°C (77°F)
<b>Noise</b>	~ 40 dB at 25°C (77°F)
<b>Dimensions H x W x D</b>	1U x 19" x 350 mm (13,78 inch)
<b>Operating Temperature</b>	0° to 50°C (32°F-122°F)

## 1U Rack Mount Systems

The KISS 1U provides numerous customer options with an especially low installation height (44.45 mm). It is extremely quiet (< 35dba), scalable, RoHS compliant, has long term availability all in a ruggedized platform. The KISS 1U features PICMG 1.3 single board computer support, and due to the flexible design provides multicore, and PCI-based as well PCI express

based solutions. With PICMG 1.3 designs, the KISS 1U offers performance currently up to Intel® Quad Core™ Q9400 and up to 8 GByte DDR2 memory. 2 free fullsize slots, either in PCI or PCI express, options for more drives, and various power supplies enable KISS 1U for different applications.

### 1U Rack Mount Systems



KISS 1U PCI 760



KISS 1U PCI 960



KISS 1U Short 986

Construction	Anti corrosion and long term stable heavy duty steel EN 10215-DX 51D+AZ 150-A-C	Anti corrosion and long term stable heavy duty steel EN 10215-DX 51D+AZ 150-A-C	Anti-corrosion and long term stable heavy duty steel EN 10215-DX 51D+AZ 150-A-C
Mounting	Rack Mount, Desktop	Rack Mount, Desktop	Rack Mount, Desktop
Paint Color	Flap blue, Body black, others on request (black flap is standard in NA)	Flap blue, Body black, others on request (black flap is standard in NA)	Flap blue, Body black, others on request (black flap is standard in NA)
Weight	~10 kg	~10 kg	~6 kg
Control Panel Indicators	Power LED, HDD LED	Power LED, HDD LED	Power LED, HDD LED
Control Panel Switch	Power ON	Power ON	Power ON, reset
CPU	Intel® Core™2 Duo E4300, E6400, Q9400	Celeron® 440, Intel® Core™ Duo T2500, Intel® Core™2 Duo T7400	Celeron® 440, Intel® Core™ Duo T2500, Intel® Core™2 Duo T7400
Front Side Bus	533/800/1033 MHz	533/667 MHz	533/667 MHz
DRAM	Up to 8 GByte DDR 2 SDRAM	Up to 4 GByte DDR 2 SDRAM	Up to 4 GByte DDR 2 SDRAM
I/O Standard	Front I/O : 1 x GB LAN, 2 * USB 2.0 Rear: 2x COM , 2x USB ,VGA and 2* GB LAN	Front I/O :1x GB LAN, 2 x USB 2.0 Rear: 2x COM , 2x USB ,VGA and 2* GB LAN	Front I/O :4 * USB 2.0 Rear: 2x COM , 2x USB ,VGA and 2* GB LAN
Drives	KISS Stor Slim , SLIM DVD RW, Internal up to 3 * HDD, CF	KISS Stor Slim , SLIM DVD RW, Internal up to 3 * HDD, CF	KISS Stor Slim , SLIM DVD RW, Internal 1 * HDD, CF
System Monitoring	on request	on request	on request
Expansion Slots	2x PCI 32 Bit 33MHz or 1* PCI_e x 16 and 1* PCI_e x 4	2x PCI 32 Bit 33MHz or 1* PCI_e x 16 and 1* PCI_e x 4	2x PCI 32 Bit 33MHz or 1* PCI_e x 16
Power Supply	AC wide range 270 W, 24 V DC, 48 V DC	AC wide range 270 W, 24 V DC, 48 V DC	AC wide range 270 W, 24 V DC, 48 V DC
Cooling	4 chassis FAN	4 chassis FAN	4 chassis FAN
Options (Fully Certified with System)	KISS Stor Slim	KISS Stor Slim	KISS Stor Slim
Altitude	0 - 3000 m (0 - 10.000 ft) operating	0 - 3000 m (0 - 10.000 ft) operating	0 - 3000 m (0 - 10.000 ft) operating
Shock DIN EN 60068-2-27	Operating: 5 g 11 ms half sine	Operating: 5 g 11 ms half sine	Operating: 5 g 11 ms half sine
Vibration DIN EN 60068-2-6	Operating: 10-500 Hz 1 g	Operating: 10-500 Hz 1 g	Operating: 10-500 Hz 1 g
Humidity rel.	5 - 95% non condensing	5 - 95% non condensing	5 - 95% non condensing
Operating System	WIN XP, WIN 2000, Linux	WIN XP, WIN 2000, Linux	WIN XP, WIN 2000, Linux
MTBF	50.000h at 25°C (77°F)	50.000h at 25°C (77°F)	30.000h at 25°C (77°F)
Noise	~ 40 dB at 25°C (77°F)	~ 40 dB at 25°C (77°F)	~ 40 dB at 25°C (77°F)
Dimensions H x W x D	1U x 19" x 457 mm (18 inch)	1U x 19" x 457 mm (18 inch)	1U x 19" x 350 mm (13,78 inch)
Operating Temperature	0° to 50°C (32°F-122°F)	0° to 50°C (32°F-122°F)	0° to 50°C (32°F-122°F)

## 1U KVM – Keyboard-Video-Mouse

Kontron's RMVS and RPD series 1U monitor/keyboard drawers have been meeting the needs of our customers for over five years. During this time, we have noted the additional features that customers have requested and have incorporated them into our revolutionary new KVM 1U series, which offers more valuable features and options than any other comparable models. The KVMs offer three different LCD display sizes up to an unprecedented 19", all with high contrast ratios and wide viewing angles.

The monitor flips up and stays put at any angle thanks to its heavy-duty torque hinge. Choose from different standard keyboard languages based on your application's requirements. The KVMs are designed to allow multiple back panel termination options including 8-port KVM which can be cascaded to control up to 512 systems. The unit comes with standard preinstalled ball bearing slide rails making rack installation faster and easier than ever.

### 1U KVM



RPD-1151



RPD-1158



RPD-1171



RPD-1178

Weight	14 kg	14 kg	14 kg	14 kg
OSC	OnScreenControl function including: auto adjustment, brightness, contrast, phase, H-V position, frequency, size and display mode	OnScreenControl function including: auto adjustment, brightness, contrast, phase, H-V position, frequency, size and display mode	OnScreenControl function including: auto adjustment, brightness, contrast, phase, H-V position, frequency, size and display mode	OnScreenControl function including: auto adjustment, brightness, contrast, phase, H-V position, frequency, size and display mode
Brightness	200 cd/m²	200 cd/m²	260 cd/m²	260 cd/m²
Interface	8x 25 pin D type female connectors for 8-platform connection (VGA, PS/2 keyboard and PS/2 mouse, male connectors at the platform side)	8x 25 pin D type female connectors for 8-platform connection (VGA, PS/2 keyboard and PS/2 mouse, male connectors at the platform side)	8x 25 pin D type female connectors for 8-platform connection (VGA, PS/2 keyboard and PS/2 mouse, male connectors at the platform side)	8x 25 pin D type female connectors for 8-platform connection (VGA, PS/2 keyboard and PS/2 mouse, male connectors at the platform side)
Keyboard	PS/2 84 keys keyboard and trackball (German and US layout)	PS/2 84 keys keyboard and trackball (German and US layout)	PS/2 84 keys keyboard and trackball (German and US layout)	PS/2 84 keys keyboard and trackball (German and US layout)
Display Types	15" TFT XVGA	15" TFT XVGA	17" TFT SXGA	17" TFT SXGA
KVM	1 port	8 port	1 port	8 port
Cascading	-	up to 512 PCs	-	up to 512 PCs
KVM control	-	Port selection through front panel switches	Port selection through front panel switches	Port selection through front panel switches
Material	heavy duty steel	heavy duty steel	heavy duty steel	heavy duty steel
Power Supply	85 V ~ 264 V AC input	85 V ~ 264 V AC input optimal - 48 V DC	85 V ~ 264 V AC input	85 V ~ 264 V AC input
Humidity rel.	max. 90% rel.	max. 90% rel.	max. 90% rel.	max. 90% rel.
Dimensions H x W x D	19" x 1U x 492 mm	19" x 1U x 492 mm	19" x 1U x 550 mm	19" x 1U x 550 mm
Additional	-	8 Port KFM for cascading	8 Port KFM for cascading	8 Port KFM for cascading
Operating Temperature	0° to 40°C	0° to 40°C	0° to 40°C	0° to 40°C



## » PCCM – PC Condition Monitoring «



### PC Condition Monitoring For Industrial PCs – Detecting Errors Before They Occur

#### Avoiding system failures with dynamic maintenance intervals

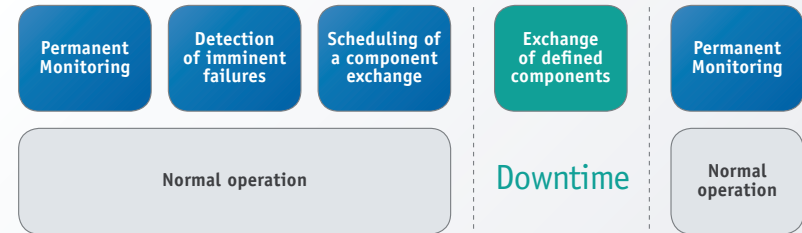
Although previously only costly server systems were automatically monitored, PCCM opens new possibilities for professional monitoring of industrial systems.

#### Constant monitoring

Only constant monitoring of vital operating parameters such as processor temperature, fan speeds, system voltages, power supply units and hard drive condition allows possible malfunctions in hardware and software to be detected early and suitable measures to be taken.

Special solutions can in principle also be drawn up for OEMs in order to satisfy the OEM product range and the special needs of its clientele. The OEM user thus gets increased reliability without additional expense.

### Planned maintenance = reduced downtime with PCCM



### Uncalculable downtime without PCCM



### Monitoring

- » System temperatures
- » Fan speed
- » Hard drives
- » KISS Stor RAID status
- » All supply voltages
- » Redundant power supply units

### Reporting

- » SNMP
- » SMS
- » POPup
- » Mail
- » Local: acoustically and visually

### Evaluation

- » Access to historical data
- » Memory: min/max / average values
- » Graphic representation



## » Fanless Box PCs – CB Series «



### Embedded Box PCs

Starting from the smallest dimensions of 75 x 250 x 160 mm (H x W x D), OEMs can use the “form follows function” principle to configure their individual Embedded Box PCs with respect to size, system components and feature set in order to meet their application-specific requirements. From the outset, the flexible assembly and interface capabilities of these standard products have been designed to meet different configuration requirements with pre-verified options. This significantly reduces initial development costs for OEMs. Box PCs are used in the automation, transportation, medical, energy and infotainment sectors.

- » High performance with low power consumption
- » Future ready with Intel® Atom™ technology
- » Variable in form and function

### Fanless Box PCs – CB Series

As a robust and fanless embedded box, Kontron's CB Series is suitable for demanding industrial environments and also for applications in vertical markets such as medical, transportation, digital signage and infotainment. Through documented testing, lifecycle management, excellent thermal values and design "Engineered in Germany", the CB series ensures the highest quality and reliability.

### Advantages

- » Fanless, maintenance free
- » Lifecycle management
- » Long-term availability
- » Documented testing
- » Excellent thermal design
- » Engineered in Germany



### CB SERIES TECHNOLOGY

The new fanless Kontron CB series is designed for a broad spectrum of applications which require long-term availability, lifecycle management and extreme reliability, for example, in medical technology, transportation, automation, P.O.S. and digital signage applications.

Kontron's Embedded CB series, which comes in a rugged aluminum chassis, excels thanks to its high performance-per-watt with fully passive-cooling which makes it more robust than other designs available to date in the same performance class. The ready-to-run

embedded box PC is ideal for rugged application areas, which require interfaces for various deployments like RS232, RS422/485, digital I/Os, CAN interface, NVRAM, Firewire, and up to three gigabit Ethernet interfaces besides the standard PC interfaces. Additional cabling work can be eliminated due to the WiFi option. Customer-specific extensions can be carried out via PCI Express Mini Card slot.

**Due to the flexible design, nearly all form factors and functionality can be achieved.**



## Concept Box (CB) - Series

### Designed for your demand » CB Series Technology

The new fanless Kontron CB standard product series is designed for a broad spectrum of OEM applications which require long-term availability, lifecycle management and extreme reliability. Let our concept box line be your next system platform for medical technology, transportation, automation, infotainment, P.O.S. and digital signage applications. Kontron's Embedded CB series, which comes in a rugged aluminum chassis, excels thanks to its high performance per-watt with fully passive-cooling which makes it

more robust and reliable than other designs available to date in the same performance class. The ready-to-run embedded box PC is ideal for rugged application areas, which require interfaces for various deployments like RS232, RS422/485, digital I/Os, CAN interface, NVRAM, Firewire, and up to two gigabit Ethernet interfaces besides the standard PC interfaces. Additional cabling work can be eliminated due to the WiFi option. Customer-specific extensions can be carried out via PCI Express Mini Card slot. Due to the flexible design, nearly all form factors and functionality can be realized by OEMs looking for a fast go-to-market system solution.

### Concept Box (CB) - Series



CB 751



CB-752



CB 753

Construction	designed in an ultra low profile aluminum chassis	designed in an ultra low profile aluminum housing	designed in an ultra low profile aluminum housing
Mounting	Wall mount, Desktop, Front mount	Wall mount, Desktop, Front mount	Wall mount, Desktop, Front mount
Paint Color	Blue	Blue	Blue
Weight	~ 5 kg	~ 3 kg	~ 7 kg
Control Panel Indicators	Power LED, HDD LED	Power LED, HDD LED	Power LED, HDD LED
Control Panel Switch	PWR on	PWR on	PWR on
CPU	Intel® Celeron® M Processor ULV, 1.06 GHz (mBGA479), Intel® Celeron® M Processor, LV, 1.66GHz (mBGA479)	Intel® Atom N270 1,60 GHz	Intel® Core™ 2 Duo Mobile P8400 2.26GHz; FS81066 3MB mPGA478
DRAM	3 GB DDR memory support (2+1)	2 GB DDR2	2xDIMM-240 up to 8GB
I/O Standard	Front: 4x USB, 3x GB LAN, PS/2 M+K, VGA, Line in, Line out, Firewire, RS232, Rear: 3x RS232, 2x USB	Front: 2x GB LAN, 2x COM, VGA, 4x USB Rear: 2x USB, Audio, GPIO	Front: 4x USB, 3x GB LAN, PS/2 M+K, VGA, Line in, Line out, Firewire, RS232 Rear: 3x RS232
Dimensions (H x W x D)	75 mm x 250 mm x 260 mm (2,95 inch x 9,84 inch x 10,23 inch)	75 mm x 250 mm x 160 mm (2,95 inch x 9,84 inch x 6,3 inch)	75 mm x 350 mm x 300 mm (2,95 inch x 13,78 inch x 11,81 inch)
Free Slots	PCI Express mini Card	PCI Express mini Card	2x PCI slot or 1x PCIeExpress
Drives	2,5" HDD/SSD, CF	2,5" HDD/SSD, CF	2,5" HDD/SSD, CF
Compliance	CE compliant, Designed to meet UL, Shock and Vibration proofed	CE compliant, Designed to meet UL, Shock and Vibration proofed	CE compliant, Designed to meet UL, Shock and Vibration proofed
Power Supply	24 VDC (10-32V) external AC adapter	24 VDC (6,5 VDC to 30 VDC), optional external AC adapter	24 VDC (10-32V) external AC adapter
Cooling	Fanless	Fanless	Fanless
Options (Fully Certified with System)	DVI	CAN Bus, RS 422/485, 18-bit DVI, 3rd COM, NVRAM	DVI
Shock DIN EN 60068-2-27	operating: 5G 11ms duration, 6 directions (half-sine)	operating: 5G 11ms duration, 6 directions (half-sine)	operating: 5G 11ms duration, 6 directions (half-sine)
Vibration DIN EN 60068-2-6	operating: 10-150 Hz: 0,5G sine / 3 axis	operating: 10-500 Hz: 0,5G sine / 3 axis	operating: 10-500 Hz: 0,5G sine / 3 axis
Temperature/Humidity	operating: 0°C to 50°C according IEC 60068-2-1, 60068-2-2, 60068-2-14 operating: 5 to 95 % @ 40°C not condensing	operating: 0°C to 50°C according IEC 60068-2-1, 60068-2-2, 60068-2-14, operating: 5 to 95 % @ 40°C not condensing	operating: 0°C to 50°C according IEC 60068-2-1, 60068-2-2, 60068-2-14, operating: 5 to 95 % @ 40°C not condensing
Operating System	WIN XP, Linux, WIN XP embedded	WIN CE 6.0, WIN XP embedded, Linux embedded, WIN XP pro	WIN XP, Linux, WIN XP embedded
MTBF	~40.000 h	~40.000 h	~40.000 h
Noise	0 db if only CF used	0 db if only CF used	0 db if only CF used

## Industrial Box PCs

Kontron's V Box Express PCs are powerful and robust industrial box PCs, designed especially for rugged use in close proximity to machinery. RoHS-compliant, equipped with a scalable ETXexpress module and high-performance processors up to Intel® Pentium® M 2.0 GHz or with the new Intel® Core™2 Duo™ the V Box Express series is optimally equipped for every task in measurement, controls, operation and visualization.

The integrated innovative cooling concept of the V Box Express II realizes a passive and fanless cooling.

With small dimensions the compact box PCs are used primarily where little space is available, such as in enclosures, consoles, or directly on machines. The high electromagnetic compatibility and the resistance to shock and vibration make the systems ideal for use in robust environments.

### Industrial Box PCs



V Box Express



V Box Express II

Construction	heavy duty steel	heavy duty steel
Mounting	Wall Mount, Desk Top	Wall Mount
Weight	~ 6.1 kg	~ 5.5 kg
CPU	Pentium® M 2.0 GHz or Intel® Core™2 Duo up to 2.0 GHz	Pentium® M 2.0 GHz, Intel® Core™2 Duo 2.16 GHz
DRAM	Up to 2 GByte DDR2	Up to 2 GByte DDR2
Drive bays internal	1x or 2x 2.5" removable HDD SATA optional (PCI Slot mounted), 1x Compact Flash + 1x Compact Flash optional	1-2x 2.5" HDD SATA opt., 1-2x CF
I/O Standard	3x RS232, 1x RS232/422/485 opt., 1x DVI-I, 1x DVD-D opt., 4x USB 2.0 + 2x USB 2.0 opt.	3x RS232, 1x RS232/422/485 opt., 1x DVI-I, 1x DVD-D opt., 4x USB 2.0 + 2x USB 2.0 opt.
Ethernet	1x LAN 10/100 (Pentium® M), 1x LAN 10/100/1000 (Intel® Core™2 Duo)	1x LAN 10/100 (Pentium® M), 1x LAN 10/100/1000 (Intel® Core™2 Duo)
Expansion Slots	4x PCI half size or 2x PCI + 2x PCI Express x1	2x PCI, 2x PCI Express x1 opt. instead of CF slot
Power Supply	24 V DC	24 V DC
Cooling	2 Chassis FAN	Fanless
Protection Class	IP 20	IP 20
Certifications	CE, FCC A, cULus	CE, FCC A, cULus, GOST, CB
Altitude	Operating: 10000 ft (3.048m) Storage: 15000 ft (4.622m)	Operating: 10000 ft (3.048m) Storage: 15000 ft (4.622m)
Shock DIN EN 60068-2-27	Operating: 15G, 11ms Storage: 30G, 11ms duration	Operating: 15G, 11ms Storage: 30G, 11ms duration
Vibration DIN EN 60068-2-6	Operating: 10-500 Hz, 1G/3 axis	Operating: 10-500 Hz, 1G/3 axis
Humidity rel.	5 - 95% @ 40°C not condensing	5 - 95% @ 40°C not condensing
Operating System	WIN XP (embedded), LINUX (embedded)	WIN XP (embedded), LINUX (embedded)
MTBF	> 25000 h	> 40.000 h
Dimensions H x W x D	270 x 145 x 218 mm (10.63 x 5.70 x 8.58 inch)	235 x 330 x 130 mm (9.25 x 13.00 x 5.12 inch)
Operating Temperature	0°C to 50°C	0°C to 50°C

## ThinkIO – Compact and Rugged Embedded IPC

The ThinkIO family is dedicated to OEMs acting in industrial, building and energy automation markets. The open and adaptable ThinkIO is utilized either as Industrial PC (IPC) with software development on different operating systems, or optionally as an IEC61131-3 compliant SoftPLC. The integrated platform significantly reduces time to market, allowing OEMs to focus on their core competence and save resources.

### SoftPLC CoDeSys

- » Supports all five IEC 61131-3 languages
- » Integrated Visualization
- » Integrated OPC Server
- » Integrated WAGO-I/O configuration
- » Integrated field bus configuration
- » Integrated Modbus TCP
- » Configuration of network, clock, graphics, security and backup via Web browser
- » About 100 renowned companies belong to the CoDeSys Automation Alliance

### WAGO-I/O-SYSTEM 750 and 753

- » 1, 2, 4 or 8 channels per module
- » Modules digital, analog, AS-I, RS232, RS485, counter, ...
- » 0°C to +55°C, several modules available: -20°C to +60°C
- » 753 series – connection part removable from electronics
- » Pre-wiring possible
- » Increased maintainability
- » Intermixable with 750 series

### ThinkIO and HMI

- » Control and visualization in one unit
- » Easy process data display with CoDeSys Target and Web Visualization
- » Panel connection via DVI/VGA
- » Touch function via USB drivers integrated in software for Kontron Touch Panels
- » Distant monitoring with Kontron MicroClient

### ThinkIO



ThinkIO-P



ThinkIO-Duo

Construction	No ventilation slots, no rotating mass storage, no fan, aluminium chassis, soldered components	Maintenance free: no ventilation slots, no batteries, no fan, aluminium chassis, soldered components
Mounting	DIN Rail	DIN Rail
Weight	~ 1.100 g	~ 1.100 g
CPU	Intel® Celeron® M 600 MHz to Intel® Pentium® M 1.4 GHz	Intel® Core™Duo 1.2 GHz, Intel® Celeron® M 1.06 GHz
DRAM	256 MByte standard, up to 1 GByte max.	1 GByte standard
Flash	512 MByte/2 GByte onboard standard, external CF socket	512 MByte/2 GByte onboard standard, external CF socket
NVRAM	1 MByte standard, battery backed	512 kByte standard
I/O Standard	2x LAN 10/100, 2x USB 2.0, RS232, DVI-I, 2x digital in, 2x digital out, watchdog relay out, RUN/STOP switch, reset, RTC	2x LAN 10/100/1000, 2x USB 2.0, RS232, DVI-I, 7x digital in, 2x digital out, watchdog relay out, RUN/STOP switch, reset, RTC
Dimensions (H x W x D)	100 mm x 236 mm x 65* mm (*from upper edge of DIN 35 rail)	100 mm x 236 mm x 65* mm (*from upper edge of DIN 35 rail)
Power Supply	24 V DC (-25%/+30%) / typ. 600 MHz: 17 W, 1.4 GHz: 24 W, 1 GHz: 16 W	24 V DC (-25%/+30%) / typ. 30 W
Cooling	passive, no fan	passive, no fan
Protection Class	IP 20	IP 20
Options (Fully Certified with System)	WAGO-I/O System, Profibus-DP Master/Slave, CANopen Master/Slave, DeviceNet Master/Slave (DeviceNet only with BSPs)	WAGO-I/O System, 3rd LAN 10/100, Profinet Controller, Profibus Master, CANopen Master
Shock DIN EN 60068-2-27	15 g acceleration, 11 ms duration, 3 shocks per direction (18 total)	15 g acceleration, 11 ms duration, 3 shocks per direction (18 total)
Vibration DIN EN 60068-2-6	5-9 Hz 3.5 mm amplitude, 9-150 Hz 4g, 1 octave/min, 10 sweeps/axis	5-9 Hz 3.5 mm amplitude, 9-150 Hz 4g, 1 octave/min, 10 sweeps/axis
Humidity rel.	93% RH at 40°C, non-condensing	93% RH at 40°C, non-condensing
Operating System	Embedded real-time Linux 2.6 distribution independent (preinstalled), Windows XP embedded	Embedded real-time Linux 2.6 distribution independent (preinstalled), Windows XP embedded
Accessories	10ms holdup module acc. IEC61131-2/PS2	10ms holdup module acc. IEC61131-2/PS2
Standard	Emission: EN55022/B, EN61000-6-3, DNV SFC/B, FCC part 15/B, /Immission: EN55024, EN61000-6-2 / Electrical Safety: EN60950-1 / Temperature Cold: IEC60068-2-1 / Temperature Dry Heat: IEC60068-2-2 / DIN 35 Rail: EN50022	Emission: EN55022/B, EN61000-6-3 / Immission: EN55024, EN61000-6-2 / Electrical Safety: EN60950-1 / Temperature Cold: IEC60068-2-1 / Temperature Dry Heat: IEC60068-2-2 / DIN 35 Rail: EN50022
Operating Temperature	0°C to +55°C, extended temperature (Intel® Celeron® M 1 GHz): -40°C to +70°C max.	0°C to +55°C

## KIM

### Light Industrial Box PCs

Kontron's KIM wall mount / Table Top Box PCs can be used for various applications including Medical, Gaming, Process Control, and in Embedded Applications. The KIM Box PC is specifically designed for use within light industrial environments. Supporting up to the Intel® Core™2 Duo processors expands the limits

of performance, while high speed graphics enable precise 3D pictures and brilliant view. Due to the huge amount of on board I/Os like 3x LAN, 6x USB, 4x COM, KIM enables connectivity for most applications. The long term availability, easy maintenance, and serviceability protect your investment and since KIM is based on Kontron's Mini ITX-Board, it offers flexible and scalable configurations.

### KIM



KIM 986 LCD/mITX

KIM KT690

Mounting	Desktop, Wall Mount	Desktop, Wall Mount
Paint Color	Blue	Blue
Weight	~ 5 kg	~ 5 kg
Control Panel Indicators	Power LED, HDD LED	Power LED, HDD LED
Control Panel Switch	ATX Switch	ATX Switch
CPU	Celeron® 440, Core™ Duo T2500, Core™ 2 Duo T7400	AMD Turion64™ dual core / AMD Sempron CPU
Front Side Bus	533/667 MHz	533/667 MHz
RAM	up to 2 GByte DDR 2	up to 2 GByte DDR 2
CompactFlash	Internal Dual CF	Internal Dual CF
I/O Standard	3* LAN 10/100/1000, 8x USB, 4x COM, LPT,PS/2 M+K	2* LAN 10/100/1000, 8x USB, 2x COM, LPT,PS/2 M+K
Dimensions (H x W x D)	153mm x 214 mm x 196 mm	153mm x 214 mm x 196 mm
Drives	HDD SATA up to 1TB	HDD SATA up to 1TB
Expansion Slots	1x PCI 32 Bit Half size	1x PCI 32 Bit Half size
Power Supply	AC 300 W wide range, optional 24 V DC	AC 300 W wide range, optional 24 V DC
Cooling	CPU Fan less, one PSU Fan	CPU Fan less, one PSU Fan
Protection Class	IP20	IP20
Options (Fully Certified with System)	Dual DVI	Dual DVI
Operating Temperature	0° to 50°C	0° to 50°C

## KIC – Kontron Intelligent Control

The KIC is designed for applications where the IPC due to decreasing demand for space and energy moves into it away from the 19-inch cabinet into the machine itself. KIC stands next to its compact dimensions (200mm x 200mm x 86mm) with a very comprehensive feature set and very service-friendly rear mount, similar to ATX power supplies. In analogy to the ATX power supply, the integrated temperature-controlled fan blows the warm air outwards. For small automation systems it can also take over the cooling of the entire chassis.

The hardware of KIC can be flexibly configured corresponding to the customized requirements. The small and rugged design offers excellent mechanical stability and mounting flexibility. The dual access provides easier access to the multitude of interface options.

The KIC accommodates an ETX Express baseboard. The user interfaces of all KIC system configurations are always the user interfaces of this installed baseboard. They are accessible from two oppositely positioned sides. The front interface has all interfaces for integration of the small automation system into a plant management system. The rear interfaces are intended to communicate with Soft-PLC and field bus interfaces using real time Ethernet protocols like EtherCAT, Sercos etc. The on-board available ETX Express module connector allows the equipping with an ETX or  $\mu$ ETX module (depending on the system configuration ordered).

Using Kontron ETXexpress and  $\mu$ ETXexpress CPU modules the KIC can be adapted to a wide range of CPU processing power. The first KIC system is equipped with the ETXexpress-MC CPU module.

The KIC has a non-volatile memory (NVRAM) of either 32Kbyte or 128Kbyte.

### KIC



KIC-MC Box

System	KIC-MC
Product Line	KIC series
Paint color	Front blue, body black
Weight	~ 3 kg
CPU Module	ETXexpress®-MC
CPU	T7500
DRAM	Up to 4 GB DDR2
Non volatile memory (NVRAM)	32KByte or 128KByte
Interfaces Front	LVDS, RS232, 2x LAN 10/100/1000 MBit, 3x USB 2.0, Audio, mono, 8x GPIO, DC-In, Power Control signals (Power Button, Power LED)
Interfaces Rear	DVI-I, RS232, 2x LAN 10/100/1000 MBit, 6x USB 2.0, Line out, Stereo
Controls on the frontside	Remote On/Off, Remote LED
Drives	2x 2,5" HDD/SSD
Expansion slots	1 x PCI_e x1
Power supply	24 V DC
Cooling	1 chassis FAN
Vibration	Operating: 10 to 500 Hz Random
Humidity	20% to 80%
Dimensions (H x W x D)	87 x 200 x 199
Approvals	CE
MTBF	50.000 h
Temperature	Operating: 0°C to 50°C
Dimensions H x W x D	270 x 145 x 218 mm (10.63 x 5.70 x 8.58 inch)
Operating Temperature	0°C to 50°C (32°F-122°F)

### MICROSPACE® Medical



MPC50M

Processor/Performance	Intel® Core™ Duo L2400 / Intel® Core™2 Duo L7400 (2x 1.6 GHz / 2x 1.5 GHz)
HDD	1x 250 GByte-SATA (max. 2x 1 TByte-SATA)
CompactFlash	-
Memory	2 GByte (max. 3 GByte) / (max. 4 GByte)
Graphics/Resolution	int. graphic Controller / QXGA
Video Interface 1	CRT
Video Interface 2	DVI
COM1 / COM2	DSUB9 Dsub / DSUB9 DSub (galv. isolated on request)
COM3 / COM4	-
USB	1x 2.0 front, 4x 2.0 back, 2x 2.0 internal (galv. isolated on request)
LAN Port A	10/100 BASE-T (RJ45) with LAN boot
LAN Port B	1 GByte LAN (RJ45)
Sound	ALC882-7.1
Expansion	MiniPCI, 2x PCI32Bit slot, PCI Express
Protection class	IP40, medical ground contact
Standard Temperature	+5°C to +35°C
Extended Temperature	tbd
Dimensions (W x L x H in mm)	300 x 280 x 160
Weight	6 kg
Special Features	Optical drive: (PATA) DVD-R/W, CD-R/W, Video interface 3 LVDS

### MICROSPACE® Defense



MPCX27MIL

Processor/Performance	Intel® Atom™ 510 / 1.1 GHz
HDD	32 GByte (SSD)
CompactFlash	-
Memory	1 GByte
Graphics/Resolution	int. graphic Controller / UXGA
Video Interface 1	MIL
Video Interface 2	intern
COM1 / COM2	RS232C (MIL) / RS232C or GPS (MIL)
COM3 / COM4	-
USB	4x 2.0 (MIL)
LAN Port A	100/10 MByte-LAN (MIL) with LAN boot (LAN wake)
LAN Port B	100/10 MByte-LAN (MIL)
Sound	3x Stereo ALC882 (MIL)
Digital Input/Output	-
DC voltage input (not isol.), V1248	8V-58VDC / typ. 15W (MIL)
DC voltage input (1.5kV isol.), Ixx	-
Expansion	PCI/104ex
Protection class	IP67
Standard Temperature	-40°C to +85°C @ 1.1 GHz MIL810
Extended Temperature	-
Dimensions (W x L x H in mm)	110 x 150 x 60
Weight	2,55 kg



MICROSPACE®  
Industrial

## MPC20

## MPC20L

## MPC21

## MPC21A

## MPC21B

## MPC21C

## MPCV800

## MPCV800I

## MPCF50

## MPCF50A

## MPCR50

<b>Processor/Performance</b>	AMD Geode™ LX800 / 0.5 GHz	AMD Geode™ LX800 / 0.5 GHz	AMD Geode™ LX800 / 0.5 GHz	AMD Geode™ LX800 / 0.5 GHz	AMD Geode™ LX800 / 0.5 GHz	AMD Geode™ LX800 / 0.5GHz	AMD Geode™ LX800 / 0.5 GHz	AMD Geode™ LX800 / 0.5 GHz	Intel® Core™ Duo L2400 / Intel® Core™2 Duo L7400 (2x 1.6 GHz / 2x 1.5 GHz)	Intel® Core™ Duo L2400 / Intel® Core™2 Duo L7400 (2x 1.6 GHz / 2x 1.5 GHz)	Intel® Core™ Duo L2400 / Intel® Core™2 Duo L7400 (2x 1.6 GHz / 2x 1.5 GHz)
<b>HDD</b>	Optional	Optional	Optional	Optional	Optional	Optional	160 GByte, 2.5"	160 GByte, 2.5"	320 GByte (SATA)	320 GByte (SATA)	1x 250 GByte to 2x 1 TByte in 3.5"-BAY
<b>CompactFlash</b>	CF 256 MByte installed	socket (type I/II)	CF 256 MByte installed	CF 256 MByte installed	CF 256 MByte installed	CF 256 MByte installed	-	-	-	-	1x
<b>Memory</b>	256 (max. 1 GByte)	256 (max. 1 GByte)	256 (max. 1 GByte)	256 (max. 1 GByte)	256 (max. 1 GByte)	256 (max. 1 GByte)	512 MByte (max. 1 GByte)	512 MByte (max. 1 GByte)	1 GByte (max. 2 GByte), (max. 3 GByte)	1 GByte (max. 2 GByte), (max. 3 GByte)	2 GByte (max. 3 GByte)
<b>Graphics/Resolution</b>	int. graphic Controller / UXGA	int. graphic Controller / UXGA	int. graphic Controller / UXGA	int. graphic Controller / UXGA	int. graphic Controller / UXGA	int. graphic Controller / UXGA	int. graphic Controller / UXGA	int. graphic Controller / UXGA	int. graphic Controller / QXGA	int. graphic Controller / QXGA	int. graphic Controller / QXGA
<b>Video Interface 1</b>	CRT	CRT	CRT	CRT	CRT	CRT	CRT	CRT	CRT	CRT	CRT
<b>Video Interface 2</b>	-	-	-	-	-	-	-	-	DVI	DVI	DVI
<b>COM1 / COM2</b>	-	-	RS232C (DSUB9) / -	RS232C (DSUB9) / RS232C (DSUB9)	RS232C (DSUB9) / RS232C (DSUB9)	RS232C (DSUB9) / RS232C (DSUB9)	RS232C (DSUB9) / RS232C (DSUB9)	RS232C / RS232C	-	-	DB DSUB9, RS232 / DB DSUB9, RS232
<b>COM3 / COM4</b>	-	-	-	RS232C (DSUB9) / RS232C (DSUB9)	CAN1 (DSUB9) / CAN2 (DSUB9)	-	-	RS232C, option RS422/485/ RS232C, option RS422/485	-	-	-
<b>USB</b>	4x 2.0 (1x internal)	4x 2.0 (1x internal)	4x 2.0 (1x internal)	4x 2.0 (1x internal)	4x 2.0 (1x internal)	4x 2.0 (1x internal)	4x 2.0	4x 2.0	6x 2.0	6x 2.0	4x 2.0
<b>LAN Port A</b>	10/100 BASE-T	10/100 BASE-T	10/100 BASE-T	10/100 BASE-T	10/100 BASE-T	10/100 BASE-T	10/100 BASE-T (RJ45)	10/100 BASE-T (RJ45)	10/100 BASE-T (RJ45) with LAN boot	10/100 BASE-T (RJ45) with LAN boot	10/100 BASE-T (M12) RJ45 with LAN boot
<b>LAN Port B</b>	10/100 BASE-T	-	10/100 BASE-T	10/100 BASE-T	10/100 BASE-T	10/100 BASE-T	1 GByte (RJ45)	1 GByte (RJ45)	1x 1 GByte LAN (RJ45)	3x 1 GByte LAN	1 GByte-LAN-RJ45
<b>Sound</b>	Stereo In/Out	Stereo In/Out	Stereo In/Out	Stereo In/Out	Stereo In/Out	Stereo In/Out	-	AC97-2.3	ALC882-7.1	ALC882-7.1	ALC882-7.1
<b>Digital Input/Output</b>	-	-	-	4x opto isol. 50V/1A	-	-	24 programmable I/O	24 programmable I/O	-	-	4x opto output, 4x opto input
<b>DC voltage input (not isol.), V1248</b>	10V-28V/typ.10W	10V-28V/typ.10W	10V-28V/typ.10W	10V-28V/typ.10W	10V-28V/typ.10W	10V-28V/typ.10W	-	-	-	-	-
<b>DC voltage input (1.5kV isol.), Ixx</b>	-	-	-	-	-	-	-	-	-	-	-
<b>Expansion</b>	-	-	-	-	-	-	MiniPCI, PC/104-Plus (max. 2 cards)	MiniPCI, PC/104-Plus (max. 2 cards)	MiniPCI	PCIexpress MiniCard	2x PCIexpress MiniCard, 2x PCI/104express slot 1x PCI ExpressCard slot
<b>Protection class</b>	-	-	-	-	-	-	IP40	IP40	IP40	IP40	IP40
<b>Standard Temperature</b>	0°C to +50°C (with HD)	0°C to +50°C (with HD)	0°C to +50°C (with HD)	0°C to +50°C (with HD)	0°C to +50°C (with HD)	0°C to +50°C (with HD)	+5°C to +50°C (with HD)	+5°C to +50°C (with HD)	+5°C to +50°C (with HD)	+5°C to +50°C (with HD)	-20°C bis +50°C (with HD)
<b>Extended Temperature</b>	-25°C to +70°C (without HD)	-25°C to +70°C (without HD)	-25°C to +70°C (without HD)	-25°C to +70°C (without HD)	-25°C to +70°C (without HD)	-25°C to +70°C (without HD)	-25°C to +70°C (with SSD/CF)	-25°C to +60°C (with SSD/CF)	-25°C to +70°C (with SSD)	-25°C to +70°C (with SSD)	-40°C bis +70°C (SSD, no HD)
<b>Dimensions (W x L x H in mm)</b>	165 x 110 x 27	165 x 110 x 27	165 x 110 x 46	165 x 110 x 46	165 x 110 x 46	165 x 110 x 46	292 x 146 x 83	292 x 146 x 83	310 x 256 x 42	310 x 256 x 42	480 x 132 x 250
<b>Weight</b>	500 g	500 g	700 g	700 g	700 g	700 g	3 kg	3 kg	3 kg	3 kg	6 kg
<b>Special Features</b>	fanless, incl. DC power cable	fanless	MiniPCI-socket, incl. DC power cable	MiniPCI-socket, incl. DC power cable	MiniPCI-socket, incl. DC power cable	MiniPCI-socket, incl. DC power cable	Videointerface 3: LVDS, 18 bit	Videointerface 3: LVDS, 18 bit	3D-Support: DirectX9	3D-Support: DirectX9	Option: WLAN, GSM-UMTS CAN, IBIS, GPS

MICROSPACE®  
Vehicle

MPCX28



MPCX50

Processor/Performance	Intel® Atom™ Z530 / 1.6 GHz	Intel® Core™ Duo L2400 / Intel® Core™2 Duo L7400 (2x 1.6 GHz / 2x 1.5 GHz)
HDD	(Option: 2.5" 80 GByte or 32 GByte SSD)	SATA - E38, 80 GByte (opt. 32 GByte SSD)
CompactFlash	Option	yes
Memory	1 GByte DDR2	2 GByte (max. 3 GByte)
Graphics/Resolution	int. graphic Controller / UXGA	int. graphic Controller / QXGA
Video Interface 1	DVI-D	CRT
Video Interface 2	Customer specific DVI-A	DVI
COM1 / COM2	RS232C, RS422/485 (DSUB9) / RS232, RS422/485 (DSUB9)	RS232C, RS422/485 (DSUB9) / RS232, RS422/485 (DSUB9)
COM3 / COM4	-	RS232C, RS422/485, intern / RS232, RS422/485, intern
USB	2x 2.0 back, 2x 2.0 front	2x 2.0 front, 1x 2.0 (M12) front
LAN Port A	1 Gbit/s (RJ45) with LAN boot, WakeOnLan	10/100 BASE-T (RJ45), with LAN boot
LAN Port B	1 Gbit/s (RJ45)	1 GByte-LAN, with LAN boot, WakeOnLan
Sound	2x Stereo (ALC882-7.1)	2x Stereo (ALC882-7.1), of which 1x 10W
Digital Input/Output	DC-isolated in/output	4x output, 4x opto input
DC voltage input (not isol.), V1248	10-54VDC/typ.15W	8-58VDC, 35W
DC voltage input (1.5kV isol.), Ixx	-	24/36/48/72/110VDC/typ.35W
Expansion	2x PCIexpress MiniCard, 1x PCI/104	2x PCIexpress MiniCard, 1x PCI/104express slot, 1x ExpressCard
Protection class	IP52	IP40
Standard Temperature	-25°C to +55°C (with HD)	-25°C up to +55°C (with HD)
Extended Temperature	-25°C to +70°C (with SSD, no HD)	-40°C up to +70°C (with SSD)
Dimensions (W x L x H in mm)	159 x 187 x 66	320 x 132 x 250
Weight	1,5 kg	5 kg
Special Features	WakeOnMove, RingWake, WakeOnRing, PowerSaveMode	Option: WLAN, GSM-UMTS/GPRS, CAN, IBIS, GPS

MICROSPACE®  
Railway

MPCX27R



MPCX27RL



MPCX28R



MPCX50R



MPCF50R

Processor/Performance	Intel® Atom™ 510 / 1.1 GHz	Intel® Atom™ 510 / 1.1 GHz	Intel® Atom™ Z530 / 1.6 GHz	Intel® Core™ Duo L2400 / Intel® Core™2 Duo L7400 (2x 1.6 GHz / 2x 1.5 GHz)	Intel® Core™ Duo L2400 / Intel® Core™2 Duo L7400 (2x 1.6 GHz / 2x 1.5 GHz)
HDD	SSD-Drive (2.5") SATA2, 32 GByte	SSD-Drive (2.5") SATA2, 32 GByte	Option: 2.5" 80 GByte or 32 GByte SSD	80 GByte 2.5" or 32 GByte SSD	80 GByte 2.5" or 32 GByte SSD
CompactFlash	-	-	Option	yes	yes
Memory	1 GByte	1 GByte	1 GByte DDR2	2 GByte	2 GByte (max. 3 GByte)
Graphics/Resolution	int. graphic Controller / UXGA	int. graphic Controller / UXGA	int. graphic Controller / UXGA	-	2048 x 1536 (@ 75 Hz)
Video Interface 1	MDSUB	MDSUB	DVI-D	QXGA	QXGA
Video Interface 2	intern	3.5"-LCD 640x 480	Customer specific DVI-A	DVI	DVI
COM1 / COM2	RS232C (M12) / RS232C or GPS (M12)	RS232C (M12) / RS232C or GPS (M12)	RS232C, RS422/485 (DSUB9) / RS232, RS422/485 (DSUB9)	RS232 (DSUB9) / RS232 (DSUB9)	RS232 (DSUB9) / RS232 (DSUB9)
COM3 / COM4	-	-	-	RS232, CAN (DSUB9) / RS232, CAN (DSUB9)	RS232, CAN (DSUB9) / RS232, CAN (DSUB9)
USB	2x 2.0 (M12)	2x 2.0 (M12)	2x 2.0 front, 2x 2.0 back, 1x 2.0 (M12) back	2x 2.0 front, 1x 2.0 (M12) front	2x 2.0 front, 1x 2.0 (M12) front
LAN Port A	100/10 MB-LAN (M12), with LAN boot, WakeOnLan	100/10 MB-Byte-LAN (M12), with LAN boot, WakeOnLan	100/10 MB-Byte-LAN (M12), with LAN boot, WakeOnLan	10/100 BASE-T (M12) with LAN boot	10/100 BASE-T (M12)
LAN Port B	100/10 MB-Byte-LAN (M12)	100/10 MB-Byte-LAN (M12)	100 BASE-T (M12), WakeOnLan	1 GByte-LAN (RJ45) with LAN boot	1 GByte-LAN (RJ45)
Sound	ALC882-7.1 (intern)	ALC882-7.1 (intern)	2x Stereo (ALC882-7.1)	2x Stereo (ALC882-7.1), of which 1x 10W (DSUB9)	AC97-2.3
Digital Input/Output	-	-	DC-isolated in/output	4x opto output, 4x opto input	4x opto output, 4x opto input
DC voltage input (not isol.), V1248	8-58VDC/typ.15W	8-58VDC/typ.15W	10-54VDC/typ.15W	8-58VDC/typ.40W	8-58VDC/typ.35W
DC voltage input (1.5kV isol.), Ixx	24/36/48/72/110VDC, 15W	24/36/48/72/110VDC, 15W	24/36/48/72/110VDC/typ.15W	24/36/48/72/110VDC/typ.40W	24/36/48/72/110VDC/typ.35W
Expansion	2x PCIe Mini Card, PCI/104ex	2x PCIe Mini Card, PCI/104ex	2x PCIe Mini Card, 1x PCI/104	2x PCIexpress MiniCard, 1x PCI/104express slot, 1x PCI ExpressCard slot	2x PCIexpress MiniCard, 2x PCI/104express slot, 1x PCI ExpressCard slot
Protection class	IP65, EN50155	IP65, EN50155	IP52, EN50155	IP40, EN50155	IP40, EN50155
Standard Temperature	-25°C to +55°C (T1) (with HD)	-25°C to +55°C (T1) (with HD)	-25°C to +55°C (T1) (with HD)	-25°C to +55°C (T1) (with HD)	-25°C to +55°C (T1) (with HD)
Extended Temperature	-25°C to +70°C (T3) (with SSD)	-25°C to +70°C (T3) (with SSD)	-25°C to +70°C (T3) (with SSD)	-25°C to +70°C (T3) (with SSD)	-25°C to +70°C (T3) (with SSD)
Dimensions (W x L x H in mm)	130 x 180 x 68	130 x 180 x 68	159 x 190 x 66	480 x 132 x 250	300 x 320 x 60
Weight	2,4 kg	2,4 kg	1,6 kg	6 kg	3 kg
Special Features	Option: WLAN PCIe MiniCard, GSM PCIe MiniCard, GPS A1080	Option: WLAN PCIe MiniCard, GSM PCIe MiniCard, GPS A1080	WakeOnMove, RingWake, WakeOnRing, PowerSaveMode	-	-

## » Turnkey Systems «



Kontron's full-line of Turnkey Systems are ideally suited for radar, sonar, image computing, data control, and electronic warfare in ships, aircraft, and ground vehicles.

There is a Kontron Turnkey Systems for each phase of design – from application development and integration to deployment and support.

### Key Benefits:

- » High-performance
- » Low-cost
- » COTS based solution
- » 3U cPCI, 3U/6U VPX or 6U VME format
- » Built for Customization

### 3U CompactPCI

#### 3U cPCI



#### Easy ITC

CPU	Intel® Core™2 Duo 1.5 GHz
CPU L2 Cache	4 MB
Chipset	Intel® 3100
DRAM	1GB DDR2#B722; 400 SDRAM with ECC
Operating System Preinstalled	Linux Fedora9, Windows XP Pro
Hard Disk	SATA 40 GB Hard Disk Drive
Ethernet	2x Gigabit Ethernet configurable front or rear
Graphics Controller	XGI Z11 with 32 MB SDRAM
Dimensions (H x W x D)	191 x 169.64 x 298.1 mm
Front IO	3x USB, VGA, PS2 Keyboard/Mouse, 2x Gigabit Ethernet (configurable on front or rear), 2x Serial Lines
Rear IO	2x USB, 2x Serial Lines, 2x Gigabit Ethernet (configurable on front or rear)
Accessories	3U cPCI Rear Transition Module

### 3U VPX

Kontron Evaluation and Development systems designed to make the first contact with the VPX standard as easy as possible. EZ3-VPX is the quickest route to the VPX technology. It comes

ready a PowerPC or Intel® SBC running Linux or VxWorks. It can accommodate 3U VPX I/O Cards in 4 3U VPX slots (full mesh). Start with VPX TODAY with Kontron.

#### 3U VPX



#### EZ3-VX3020

CPU	Intel® Core™2 Duo processor at 1.5 GHz
CPU L2 Cache	4 MB
Chipset	Intel® 3100
DRAM	Soldered 1 GB DDR2-400 SDRAM with ECC
Flash Disk	USB 2.0 Flash Disk socket
Operating System Preinstalled	Linux Fedora 9
Hard Disk	SATA Hard Disk Drive of 80 GB or more
Ethernet	2x Gigabit Ethernet configurable front or rear
Graphics Controller	XGI Z11 with 32 MB SDRAM
Dimensions (H x W x D)	191 x 169.64 x 298.1 mm
Front IO	2x COM, VGA, PS2 Mouse/Keyboard, LEDs, Reset
Rear IO	1x USB 2.0, 2x Gigabit Ethernet, 1x COM
Accessories	VPX 3U Rear Transition Module



#### EZ3-VX3230

CPU	Freescape MPC8544 @ 1 GHz, low power CPU
CPU L2 Cache	256 KB
Chipset	Single Chip Design (SOC)
DRAM	Soldered 1 GB DDR2-533 SDRAM with ECC
Flash Disk	USB 2.0 Flash Disk socket
Operating System Preinstalled	Linux Fedora 9 or VxWorks 6.6
Hard Disk	-
Ethernet	2x Gigabit Ethernet configurable front or rear
Graphics Controller	Not Applicable
Dimensions (H x W x D)	191 x 169.64 x 298.1 mm
Front IO	2x GigEthernet, Serial, USB 2.0, LEDs
Rear IO	2x USB 2.0, 2x GigEthernet, 2x SATA, 2x COM, PCIe 4x1, GPIO
Accessories	VPX 3U Rear Transition Module, USB Mass Storage Cards

## 6U VPX

6U VPX board open a new era for embedded performance computing. Designed to replace existing backplane standards used in rugged application, 6U VPX opens a way forward for hi speed serial fabrics such as RapidIO, PCIe, 10Geth and more in the Military and Aerospace application domains.

As for 3U VPX, Kontron Evaluation and Development systems are designed to make the first contact with the VPX standard as easy as possible. EZ2-VX6060 VPX is the quickest route to the 6U VPX technology.

It comes ready a dual Intel® Core i7 SBC running Linux or VxWorks. Start with VPX TODAY with Kontron.

### 6U VPX



**EZ2-VX6060**

Available  
1H-2010

CPU	Dual Intel® Core™ i7
CPU L2 Cache	256 KB per core
Chipset	Two Intel® Platform Controller Hub PCH QM 57
DRAM	8 GB
OS Preinstalled	Linux 2.6.x or VxWorks 6
Hard Disk	250 GB SATA Hard Disk Drive
Ethernet	6x Gigabit Ethernet (2x Front Panel, 4x Rear Panel)
Dimensions (HxWxD)	88.9 x 482.6 x 440 mm
Options	None
Front I/O	2x Gigabit Ethernet, 2x USB, 1x Serial Line, 4x LEDs, 1x VGA, 1x Display Port
Rear I/O	4x Gigabit Ethernet, 4x Serial ATA, 2 PCI-E, 4x Serial Ports, 2x Display Ports, 1x Audio Port
Audio Port	
Open Slots	One VPX slot for user extension
Accessories	Rear Transition Module

## 6U VME

Although VME is still the most popular board form factor for markets such as MAG (Military, Aerospace, Government), finding a simple and complete VME platform is becoming a real challenge

for software teams involved in application development. Kontron 6U VME turnkey systems offer the right solution, powered by a PowerPC or x86 single board computer.

### 6U VME



**EZ1-VM6250**



**EasyPC1**

CPU	Freescall Dual-Core MPC8640D @1.25 GHz with Altivec	Dual-Core Intel® Xeon® ULV @ 1.67 GHz
CPU L2 Cache	2 MB	2 MB
Chipset	Single Chip Design (SOC)	Intel® E7520 Server Class MCH
DRAM	2 GB DDR2 with ECC	1 GB DDR2-400 SDRAM with ECC
Operating System Preinstalled	Linux Fedora 9	Red Hat Enterprise Linux (RHEL)
Hard Disk	250 GB SATA Hard Disk Device	80 GB IDE Hard Disk Device
Ethernet	3x Gigabit Ethernet	2x Gigabit Ethernet or 6x Gigabit Ethernet (cf. Options)
Dimensions (H x W x D)	44.64 x 443.5 x 254.3 mm	44.64 x 443.5 x 254.3 mm
Options	None	Quad Gigabit Ethernet XMC
Front IO	-	1x USB, 2x Gigabit Ethernet, 1x Serial Line, 3x LEDs
Rear IO	2x USB, 3x Gigabit Ethernet, 1x Serial	None
Open Slots	One VME64X slot for user extensions	Can be customised with a different XMC mezzanine
Accessories	Rear Transition Module	None

## Kontron Turnkey Systems for each phase of design

