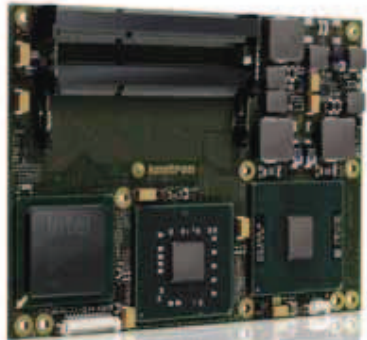


» ETXexpress® «

The COM Express™ basic module

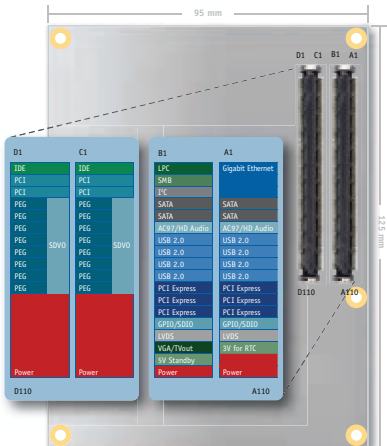


Kontron has a long and successful history of innovation within Computer-on-Modules. Under Kontron's leadership, the COM Express™ specification was developed and is now maintained by the PCI Industrial Computer Manufacturer Group (PICMG®). Kontron offers a wide range of COM Express™ compliant and compatible modules including those in its ETXexpress®, microETXexpress® and nanoETXexpress product families.

ETXexpress® is Kontron's COM Express™ basic form factor module with a footprint of 125 x 95 mm. Kontron modules offer complete, multimedia-capable computing cores for high-level applications and the high performance needed for your next generation product.

Highest Performance with the Latest Interface Technologies

- » PCI Express® – the elemental data highway
- » PCI Express® for Graphics (PEG) – for high speed x16 graphic
- » Gigabit Ethernet – for fastest connectivity
- » SerialATA 300 – for performing drives & data storage
- » Dual Channel DDR3 – for maximum memory
- » USB 2.0 - for hot pluggable devices
- » COM Express™ connectors – for highest proven transfer rates
- » Dual Channel LVDS – for high resolution
- » SDVO – for maximum display flexibility



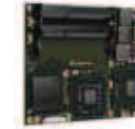
ETXexpress®



ETXexpress®-CD



ETXexpress®-PC Small Form Factor



ETXexpress®-PC Performance Package



ETXexpress®-AI

	ETXexpress®-CD	ETXexpress®-PC Small Form Factor	ETXexpress®-PC Performance Package	ETXexpress®-AI
CPU	Intel® Core™ Duo L2400, Intel® Celeron® M 440, ULV423	Intel® Core™2 Duo SP9300, SL9400, SU9300	Intel® Core™2 Duo T9400, P8400, Intel® Celeron® M Processor 575	Intel® Core™ i7 and i5 processors up to 2.66GHz
CPU Clock	up to 2x 1.66 GHz	up to 2x 2.26 GHz	up to 2x 2.53 GHz	up to 2.66 GHz
Cache	up to 4 MB L2	up to 6 MB L2	up to 6 MB L2	up to 4M L2
Chipset	Intel® 945GME, ICH7M-DH	Intel® GS45, ICH9M SFF	Intel® GM45, ICH9EM, Intel® GL40, ICH9M	Intel® Mobile QM57 Platform Controller Hub
Bus Speed	533/667 MHz FSB	800/1066 MHz FSB	800/1066 MHz FSB	800/1066 FSB
DRAM	physical memory up to 4 GByte (DDR2-RAM), Dual Channel	up to 8 GByte (DDR3-RAM), Dual Channel	up to 8 GByte (DDR3-RAM), Dual Channel	Up to 8GBytes (DDR3-RAM), Dual Channel with ECC support
DRAM socket	2x DDR2 SO-DIMM socket up to 4GByte	2x DDR3 SO-DIMM socket up to 8 GByte	2x DDR3 SO-DIMM socket up to 8 GByte	2x DDR3 SO-DIMM socket up to 8 GByte
SM Bus Support	yes	yes	yes	yes
Hard Disk	2x SerialATA (AHCI; RAID 0,1), 1x PATA	4x SerialATA 300 (AHCI; RAID 0,1), 1x PATA (optional Flash onboard)	4x SerialATA 300 (AHCI; RAID 0, 1, 5, 10, Matrix), 1x PATA	4x SerialATA (3Gb/Sec) and PATA (on type 2 only)
USB	USB 2.0, 8 ports	USB 2.0, 8 ports	USB 2.0, 8 ports	USB 2.0, 8 ports
Ethernet	10/100/1000 MBit	10/100/1000 Mbit	10/100/1000 Mbit	10/100/1000 Mbit
Ethernet Controller	Realtek RTL 8111C	Intel® 82567	Intel® 82567	Intel® 82567
Audio Controller	Intel® High Definition Audio, AC97	Intel® High Definition Audio	Intel® High Definition Audio	Intel® High Definition Audio
Graphics Controller	Intel® GMA 950 DirectX®; 9, PS 3.0	Intel® GMA X4500 DirectX®; 10, PS 4.0	Intel® GMA X4500 DirectX®; 10, PS 4.0	
Graphics Memory	up to 256 MByte DVMT 3.0	up to 1024 MB DVMT 5.0	up to 1024 MB DVMT 5.0	
Flat Panel Interface	Dual SDVO multiplexed with PEG port, Single and Dual Channel J1LL-LVDS 18/24 Bit, TVout, CRT	Dual SDVO multiplexed with PEG, DisplayPort, HDMI Single and Dual Channel J1LL-LVDS 18/24 Bit, TVout, CRT	Dual SDVO multiplexed with PEG, DisplayPort, HDMI Single and Dual Channel J1LL-LVDS 18/24 Bit, TVout, CRT	Analog VGA, LVDS & SDVO plus 3 new Digital Display interfaces (VESA Display Port, Dual Channel with ECC support, HDMI or DVI modes)
Power Management	ACPI 2.0	ACPI 3.0	ACPI 3.0	ACPI 3.0
Wide Range Support	8.5 V - 18 V	8.5 V - 18 V	8.5 V - 18 V	8 V - 18 V
Temperature/Humidity	Operation: 0 °C to 60 °C, Extended Temperature -25 °C to 75 °C on request	Operation: 0 °C to 60 °C, Extended Temperature -25 °C to 75 °C on request	Operation: 0 °C to 60 °C, Extended Temperature -25 °C to 75 °C on request	Operation: 0 °C to 70 °C
Power Consumption (typ.)	typ. Idle 11 W @ Intel® Core™ Duo L2400	typ. Idle 8W @ Intel® Core™2 Duo SP9300	typ. Idle estimated ~12W @ Intel® Core™2 Duo P8400 Economic Power-Off S5 Eco < 1 mA	20W-40W (estimate)
Dimensions H x W x D	95 x 125 mm	95 x 125 mm	95 x 125 mm	95 x 125 mm
PCIexpress	5 PCIe x1 or 1 PCIe x4, 1 PEG x16	5 PCIe x1 or 1 PCIe x1 and 1 PCIe x4, 1 PEG x16	5 PCIe x1 or 1 PCIe x1 and 1 PCIe x4, 1 PEG x16	PCIe 7(x1) lanes on Type 6, 6 (x1) lanes on Type 2, 1 PEG x16
PCI	PCI 2.3, 32 bit / 33 MHz	PCI 2.3, 32 bit / 33 MHz	PCI 2.3, 32 bit / 33 MHz	PCI Rev 2.3 @ 33MHz (Type 2 only)

THE THERMAL CONCEPT

ETXexpress® Heatspreader provides:

- » Identical mechanical size – all COM Express™ modules fit in the same system.
- » The only surface that needs cooling is the top of the heatspreader.
- » Additional active and passive Heatsinks are available.



COM Express™ Starter-Kit for ETXexpress® COMs

- » Complete Starter-Kit for immediate evaluation purposes.
- » Includes all required hard- and software components for a quick start.
- » Choose your Module for the Starter-Kit.



» microETXexpress® «

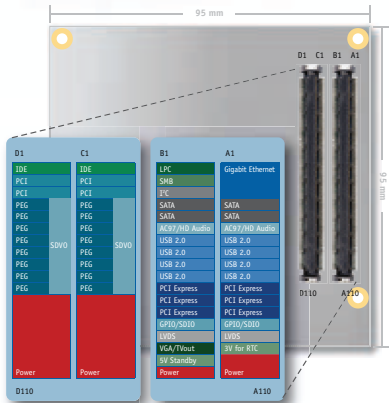
The compact COM Express™ module



Kontron microETXexpress® modules are 100 percent compliant to the open standard COM Express™ COM.0 specification maintained by PICMG® and follow the Compact form factor and the Type 2 pin-out definitions. Kontron's microETXexpress® modules are equipped with state-of-the-art features. The microETXexpress® design is the entry-level model for applications looking to transition from other small form factor solutions to COM Express™ and offers full PCI Express or PCI support.

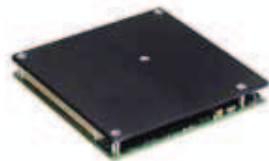
Advantages

- » COM Express™ Compact Form Factor, Pin-out Type 2
- » Interfaces compatible to ETXexpress® resp. COM Express™ basic
- » Performance scalability from Intel® Atom™ up to Intel® Core™2 Duo
- » Compact module size (95 x 95 mm)
- » Designed for mobile application requirements Kontron
- » Specialised microETXexpress® Startkits available, but also compatible with ETXexpress® Starterkits

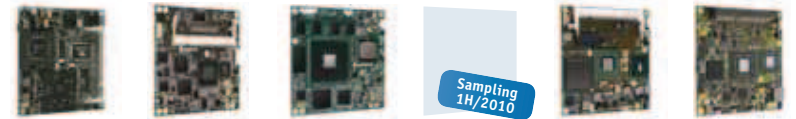


THE THERMAL CONCEPT

- microETXexpress® Heatspreader provides:**
- » Identical mechanical size – all microETXexpress® modules fit in the same system.
 - » The only surface that needs cooling is the top of the heatspreader.
 - » COM Express™ compatible



microETX express®

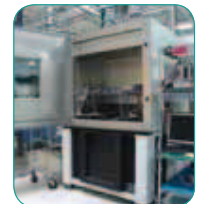


	microETX express®-PM	microETX express®-SP	microETX express®-XL	microETX express®-PV	microETX express®-DC	microETX express®-PC
CPU	Intel® Pentium® M, Intel® Celeron® M	Intel® Atom™ Z510 and Z530	Intel® Atom™ processor Z520PT (1.33GHz)	Intel® Next Generation Atom processors up to Dual Core	Intel® Atom™ N270	Intel® Core™ 2 Duo SL9400, SU9300, Intel® Celeron® M Processor 722, 723
CPU Clock	600 MHz up to 1.4 GHz	1.1 GHz and 1.6 GHz	1.33GHz	TBD	1.6 GHz	up to 1.86 GHz
Cache	up to 2 MByte L2	32 kB Instruction Cache + 24 kB L1, up to 512KB L2	512KB L2	TBD	512KB L2	up to 6 MB L2
Chipset	Intel® 82855GME, Intel® 82852GME, ICH4	Intel® System Controller Hub US15W	Intel® US15WPT System Controller Hub	Intel® 82801HM	Intel® 945GSE, ICH7M	Intel® GS45, ICH9M SFF
Bus Speed	400 MHz FSB	400/533 MHz FSB	533MHz FSB	TBD	400/533 MHz FSB	800/1066 MHz FSB
DRAM	up to 1 GByte (DDR-RAM)	up to 2 GB (DDR2-RAM)	up to 2GB on-board DDR2 (industrial temperature range)	up to 2 GB (DDR2-RAM)	up to 2 GB (DDR2-RAM)	up to 4 GB (DDR3-RAM)
DRAM socket	1x DDR SO-DIMM socket up to 1 GByte	1x DDR2 SO-DIMM socket up to 2 GB	N/A	1x DDR2 SO-DIMM socket up to 2 GB	1x DDR2 SO-DIMM socket up to 2 GB	1x DDR3 SO-DIMM socket up to 4 GB
SM Bus Support	yes	yes	yes	yes	yes	yes
Hard Disk	2x SerialATA (RAID 0,1), 1x PATA	2x SerialATA (RAID 0,1), 1x PATA	1x SATA, 1x PATA, Optional industrial temperature range SSD onboard	3x SerialATA	2x SerialATA (AHCI), 1x PATA, optional SSD flash onboard	3x SerialATA 300 (AHCI; RAID 0,1), 1x PATA
USB	USB 2.0, 6 ports	USB 2.0, 8 ports (1x USB Client)	USB 2.0, 8 ports	USB 2.0, 8 ports	USB 2.0, 8 ports	USB 2.0, 8 ports
USB Boot/Legacy Support	yes/yes	yes/yes	yes/yes	yes/yes	yes/yes	yes/yes
Ethernet	10/100 MBit	10/100/1000 Mbit	10/100/1000 Mbit	10/100/1000 Mbit	10/100/1000 Mbit	10/100/1000 Mbit
Ethernet Controller	Intel® 82562 ET	Intel® 82574L	Intel® 82574 (Industrial Temperature Range)	Intel® 82567	Intel® 82574L	Intel® 82567
Audio Controller	AC97	Intel® High Definition Audio	Intel® High Definition Audio	Intel® High Definition Audio	Intel® High Definition Audio, AC97	Intel® High Definition Audio
Graphics Controller	Intel® Extreme Graphics 2	Intel® GMA 500, DirectX® 9, PS 3.0	Intel® GMA 500, DirectX® 9, PS 3.0	TBD	Intel® GMA950, DirectX® 9, PS 2.0	Intel® GMA X4500, DirectX® 10, PS 4.0
Graphics Memory	up to 64 MByte UMA	up to 256 MB DVMT	up to 1024 MB DVMT	TBD	up to 256 MB DVMT	up to 1024 MB DVMT
Flat Panel Interface	CRT, JILI-LVDS	SDVO, Single-Channel JILI-LVDS 18/24 Bit	Single channel 24 bit LVDS, Single SDVO support	LVDS, VGA	VGA, SDVO multiplexed and Dual Channel JILI-LVDS 18 Bit, TVout	Dual SDVO multiplexed and HDMI, Single and Dual Channel JILI-LVDS 18/24 Bit, TVout, VGA
Power Management	ACPI, APM 1.2	ACPI 2.0	ACPI 3.0	ACPI 3.0	ACPI with S5 Eco	ACPI 3.0
Wide Range Support	8.5 V - 18 V	8.5 V - 18 V	4.75 V - 18 V	4.75V to 18V	8.5 V - 18 V	8.5 V - 18 V
Power Consumption (typ.)	typ. Idle 10.5 W @ Intel® Pentium® M 738	typ. Idle ~9.5 W @ Intel® Atom™ Z530	< 8W (estimate)	8W - 18W (estimate)	typ. Idle ~8 W @ Intel® Atom™ N270, Economic Power-Off S5 Eco < 1 mA	typ. Idle ~7.5W @ Intel® Core™2 Duo SU9300
Dimensions H x W x D	95 x 95 mm	95 x 95 mm	95 x 95 mm	95 x 95 mm	95 x 95 mm	95 x 95 mm
PCExpress		2 PCIe x1, optional up to 5 PCIe x1	2 PCIe x1 lanes	5 PCIe x1 lanes	3 PCIe x1	5 PCIe x1 or 1 PCIe x4, 1 PEG x16
PCI	PCI 2.3, 32 bit / 33 MHz	PCI 2.3, 32 bit / 33 MHz	PCI 2.3, 32 bit / 33 MHz	PCI 2.3, 32 bit / 33 MHz	PCI 2.3, 32 bit / 33 MHz	PCI 2.3, 32 bit / 33 MHz

COM Express™ for Extreme Temperatures

Mission-critical applications in the military, aerospace, transportation, energy and industrial automation markets offer the biggest challenges for extended temperature designs. To achieve functionality in extended temperature ranges, customers have two recommended ways to ensure that COM solutions perform within extended temperature environments – by design (solutions built with all industrial grade components) and by 100 percent extended temperature testing of

the solution. The Kontron microETXexpress®-XL offers a "by design" modular solution fully approved for use under E2 industrial temperature range (-40°C to +85°C) conditions. Kontron also offers other high-performance COMs re-engineered to be reliable under such extreme temperature conditions. A whitepaper detailing the Kontron approach to serving extreme applications also is downloadable from the Kontron website.



» nanoETExpress «

The ultra-small COM Express™ compatible module



The Kontron nanoETExpress Computer-on-Module design is compatible with the PICMG® defined COM Express™ standard and follows the Pin-out Type 1. With a credit card sized footprint of a mere 55 mm x 84 mm, nanoETExpress modules are ideal for ultra-mobile applications that require energy-saving x86 processor performance, high-end graphics, PCI Express and Serial ATA combined with longer battery life.

The nanoETExpress is designed with the requirements of handheld devices for medical and multi-media applications as well as small mobile data systems in mind, not to mention a host of new applications that prior to now have not been possible due to size or power consumption limitations. Kontron nanoETExpress modules are compatible with the COM Express™ standard following Pin-out Type 1 with respect to the physical positioning of the connector as well as the pin definition.

Advantages

- » Ultra compact COM Express™ compatible module (55 x 84 mm)
- » Based on COM Express™ Pin-out Type 1
- » SerialATA, for highspeed drives
- » Memory and FlashDrive on board
- » Long-term replacement for legacy small form factors

Not bigger than a credit card!



THE THERMAL CONCEPT

nanoETExpress Heatspreader provides:

- » Identical mechanical size – all nanoETExpress modules fit in the same system.
- » The only surface that needs cooling is the top of the heatspreader.
- » Additional active and passive Heatsinks are available.



nanoETExpress



nanoETExpress-SP

CPU	Intel® Atom™ processor Z5XX series
CPU Clock	1.1 GHz up to 1.6 GHz
Cache	32 kByte Instruction Cache + 24 kByte L1/512 kByte L2
Chipset	Intel® System Controller Hub US15W
Bus Speed	400/533 MHz FSB
DRAM	onboard up to 1024 MByte (DDR2)
SM Bus Support	yes
Flash Disk	on Board SSD Flash up to 4 GByte
USB	USB 2.0, 8 ports (1 client)
USB Boot/Legacy Support	yes/yes
Ethernet	10/100/1000 MBit Ethernet
Ethernet Controller	on Board Intel® 82574L Hartwell
SATA	1x Serial ATA supporting 1.5 GBt/s
Audio Controller	Intel® High Definition Audio
Graphics Controller	Integrated Intel® Graphics HDTV/HD capable, Decoder for MPEG2(HD)/H.264
Graphics Memory	up to 256 MByte, UMA
Flat Panel Interface	Single Chanel LVDS 18/24 Bit; WXGA 1366x768; SDVO (optional) up to 1920x1080
Power Management	ACPI 2.0 + APM S3 hot and cold support
Wide Range Support	4.75 V - 14,7 V
Power Consumption (typ.)	typ. Idle 4,5 W @12V
Dimensions H x W x D	55 x 84 mm
Additional	1 SDIO port (shared with GPIO); 4x GPI; 4x GPO; I2C Bus; LPC Bus; TPM external on LPC
PCIexpress	1 PCIe x1 lane (opt. 2 PCIe x1 if no onboard LAN)

Ready-to-run Starter Kits

When you're ready to start evaluating the nanoETExpress platform, make sure to place your order for one of the ready-to-run starter kits that comes complete with all needed accessories as well as a LCD display.



nanoETExpress-HMI Starterkit

incl. nanoETExpress-HMI Board, display and more.



nanoETExpress Human Machine Interface (HMI) Baseboard

is designed to allow embedded application developers to get up and run quickly with the nanoETExpress module platform, giving them a head start on the total system design.



nanoETExpress Evaluation carrier board

is designed to allow embedded application developers to get up and running quickly on the nanoETExpress modular platform.

» The ETX® Solution «



ETX® Computer-on-Modules are the perfect solution for embedded applications that require full PC functionality and high performance CPUs. They support x86 CPUs from 500 MHz up to Intel® Core™2 Duo and offer a full complement of PC I/O such as keyboard, serial, parallel and Parallel ATA interfaces. The full-featured ETX® series also includes onboard USB, ethernet, graphics and sound. ETX® modules are installed on the application-specific carrier board much like an integrated circuit component, in a host site comprised of four low profile, surface mount connectors.

- » 2x SerialATA support by connector area on the module
- » ETX® 3.0 is 100 percent backwards pin-to-pin compatible with previous ETX® standard revisions
- » No redesign needed for the ETX® carrier boards
- » Long Term Support

THE THERMAL CONCEPT

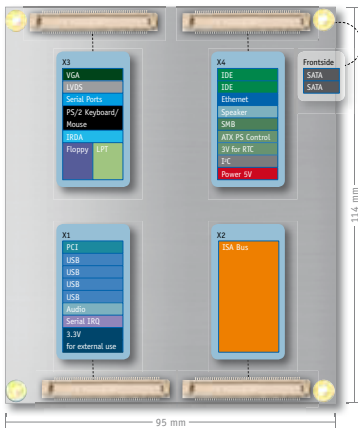
ETX® Heatspreader provides:

- » Identical mechanical size – all ETX® modules fit in the same system.
- » The only surface that needs cooling is the top of the heatspreader.
- » Additional active and passive Heatsinks are available.



ETX® Starter-Kit

- » Complete Starter-Kit for immediate evaluation purposes.
- » Includes all required hard- and software components for a quick start.
- » Choose your Module for the Starter-Kit.



ETX®



ETX®-LX ETX®-CN8 ETX®-PM/PM3 ETX®-CD ETX®-DC

	ETX®-LX	ETX®-CN8	ETX®-PM/PM3	ETX®-CD	ETX®-DC
CPU	AMD Geode™ LX800	VIA C7®, VIA Eden®	Intel® Pentium® M, Intel® Celeron® M	Intel® Core™ 2 Duo, Intel® Core™ Duo, Intel® Celeron® M	Intel® Atom™ N270
CPU Clock	500 MHz	500 MHz up to 1.5 GHz	600 MHz up to 1.8 GHz	1.06 GHz up to 2x 1.66 GHz	1.6 GHz
Cache	128 kB L2	128 kB L2	up to 2 MB L2	up to 4 MB L2	512 kB L2
Chipset	AMD Geode™ CS5536 Companion Device	VIA CN896, VIA VT8237S	Intel® 82855GME/82852GM, ICH4	Intel® 945GME, ICH7M	Intel® 945GSE, ICH7M
Bus Speed	Geode™-Link	400/533/667 MHz	400 MHz	400/533/667 MHz	400/533 MHz
DRAM	up to 1 GB (DDR-RAM)	up to 2 GB (DDR2-RAM)	up to 1 GB (DDR-RAM)	up to 2 GB (DDR2-RAM)	up to 2 GB (DDR2-RAM)
DRAM socket	1x DDR SO-DIMM up to 1 GB	1x DDR2 SO-DIMM up to 2 GB	1x DDR SO-DIMM up to 1 GB	1x DDR2 SO-DIMM socket up to 2 GB	1x DDR2 SO-DIMM socket up to 2 GB
SM Bus Support	yes	yes	yes	yes	yes
Flash Disk	CompactFlash™ Type II socket onboard	-	-	-	-
Hard Disk	2x SerialATA (RAID 0,1), 1x PATA, 1x CompactFlash™ Type II socket on board	2x SerialATA 300 (RAID 0,1), 2x PATA	2x SerialATA w/ RAID (only ETX®-PM3), 2x PATA	2x SerialATA (AHCI), 1x PATA	2x SerialATA (AHCI), 2x PATA
USB	USB 2.0, 4 ports	USB 2.0, 4 ports	USB 2.0, 4 ports; opt. 6 ports	USB 2.0, 4 ports; opt. 6 ports	USB 2.0, 4 ports; opt. 6 ports
USB Boot/Legacy Support	yes/yes	yes/yes	yes/yes	yes/yes	yes/yes
Ethernet	10/100 Mbit	10/100 Mbit	10/100 Mbit	10/100 Mbit	10/100 Mbit
Ethernet Controller	Intel® 82551ER	VIA VT 6103L	Intel® 82562ET	Intel® 82562EZ	Intel® 82562V
Audio Controller	AL203 AC 97 Rev 2.3 compatible Codec	AC97, Via VT1618	AC97, Codec Crystal CS4299	AC97, Codec Crystal CS4299	AC97, HDA Codec Realtek ALC888
Graphics Controller	LX800, integrated graphic processor	VIA Uni Chrome Pro™ IGP (Chrome 9™ HCDX9 IGP) Dual Independent Display Support	Intel® Extreme Graphics 2 Dual Independent Display Support	Intel® GMA 950	Intel® GMA 950
Graphics Memory	up to 254 MB UMA	up to 256 MB UMA	up to 64 MB UMA	up to 224 MB DVMT 3.0	up to 224 MB DVMT 3.0
Flat Panel Interface	JILI Interface (LVDS) or JIDI (digital) TTL-Interface	JILI-LVDS, TVout	JILI-LVDS, DVO	JILI-LVDS, SDVO	JILI-LVDS, SDVO
Power Management	ACPI 2.0, APM 1.2, S3 support	ACPI, APM 1.2	ACPI, APM 1.2, S3 support	ACPI, APM 1.2, S3 support	ACPI, APM 1.2, S3 support
Temperature/Humidity	Operation: 0° to 60°C, Extended Temperature -25°C to 75°C on request	Operation: 0° to 60°C	Operation: 0° to 60°C, Extended Temperature -25°C to 75°C on request	operation: 0° to 60°; Extended Temperature -25°C to 75°C on request	operation: 0° to 60°; Extended Temperature -25°C to 75°C on request
Power Consumption (typ.)	typ. Idle: 6.5 W @ AMD Geode™ LX800	typ. Idle 9.3W @ VIA Eden® 500 MHz	typ. Idle 10W @ Intel® Pentium® M 738	typ. Idle 13.8 W @ Intel® Core™2 Duo L7400	typ. Idle ~10.5 W @ Intel® Atom™ N270
Dimensions H x W x D	95 x 114 mm	95 x 114 mm	95 x 114 mm	95 x 114 mm	95 x 114 mm

» Extended Temperature COMs «



According to industry standards, the typical temperature range is 0°C to + 60°C (+32°F to +140°F). However, temperatures in many areas of applications deviate considerably from this norm in both extremes and require boards which are designed for operation or storage temperatures above or below this standard temperature range. For this reason, Kontron offers dedicated modules for E1 Extended Temperature -25°C to +75°C (-13°F to +167°F) or even for the Industrial Temperature range -40°C to +85°C (-40°F to 185°F).

- » The capability of each product to work in a specified environment is proven by Kontron at both the time of engineering as well as in production. Results of the applicable tests are available upon request.
- » E1 (-25°C to 75°C resp. -13°F to 167°F) and Industrial Temperature Range (-40°C to +85°C resp. -40°F to 185°F) are guaranteed. Test reports are available for all 100 percent screened extended temperature assemblies as well as for "by design" extended temperature solutions.
- » See the list below for the dedicated standard products.

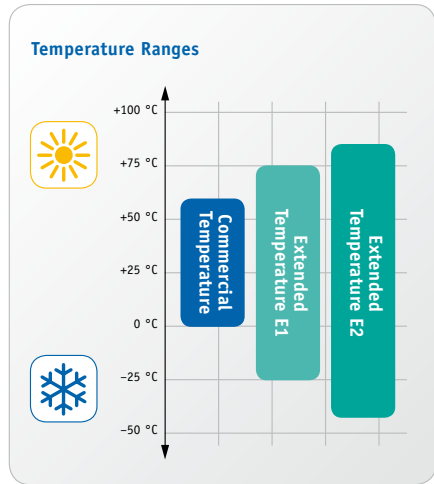
Feel free to ask about other modules with wider temperature ranges.

E1 Extended Temperature COMs

- ETX®-LX 500 MHz Extended Temp. E1
- ETX®-LX 500 MHz digital Extended Temp. E1
- ETXexpress®-CD 1.66 GHz Extended Temp. E1
- ETXexpress®-PC 1.86 GHz Extended Temp. E1
- microETXexpress®-PC 1.2 GHz Extended Temp E1
- nanoETXexpress-SP 1.1 GHz Extended Temp. E1
- nanoETXexpress-SP 1.6 GHz Extended Temp. E1

E2 Industrial Temperature COMs

- microETXexpress®-XL 1.3 GHz



» Value-Adds for COMs «

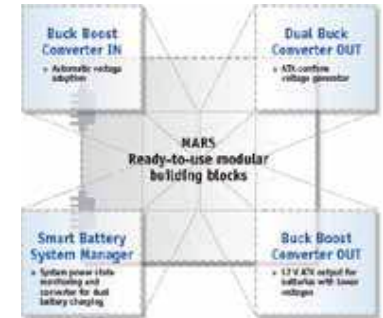
MARS – Mobile Application platform for Rechargeable Systems for all COM Express™ and ETX® modules



More and more manufacturers are depending on intelligent battery management solutions. MARS allows you to save a great deal of time and effort when developing Smart Battery concepts. Simply adapt the modular building blocks you need and utilize the proven layout and schematics instead of having to develop the whole unit yourself.

- » Easy initial start-up
- » Broadly scalable: input voltage range 5 to 28 VDC
- » High flexibility through 2 smart batteries used in parallel
- » MARS saves effort, time and money!

Configuration for any application



K-station – One API for all COMs

Different modules, different operating systems and even different development environments make the programmer's life more complicated. Kontron's K-station tool kit overcomes this by establishing an abstraction layer. It provides an easy-to-use programming interface to achieve independence and reuse know-how and code on different hardware module configurations, including hardware, BIOS and software configurations.



K-station is a software tool kit and API designed for:

- » Product and software development
- » Product support
- » Maintenance for application developers and software solution Integrators

K-station's API is identical on all Kontron Computer-on-Modules.

- » Powerful software tool kit and developer library for Computer-on-Modules
- » Easy-to-use programming interface
- » Independence, flexibility and on time in the market



Whitepaper and demo video downloadable from web.