

➤ Embedded & Industrial Motherboards

Kontron offers a broad range of industrial and embedded motherboards from mini-ITX to full size ATX. This variety of motherboards serves the different needs of our customers in the industrial and medical fields, point of sales technology, lotteries, gaming and many other applications. These products are based on state-of-the-art processor and chipset platforms. These embedded and industrial motherboards follow international industry standards with

well-defined mounting holes and standard I/O bracket areas. In addition, Kontron offers many value-added services like product longevity, detailed documentation, display support and complete life-cycle management. The embedded motherboards offer more than 5 years product availability, from the release date, based on embedded key components. Industrial motherboards typically offer 3 years availability from the release date.

➤ Embedded Motherboards



Features	886LCD-M/ATX	ATX-855GME	886LCD/ATX(GV)	886LCD-M/FLEX	886LCD/ATXU(GV)	embATX-401
CPU	Intel® Pentium® M and Celeron® M	Pentium® M and Celeron® M	Intel® Pentium® 4 and Celeron®	Intel® Pentium® M and Celeron® M	Intel® Pentium® 4 and Celeron®	Pentium® 4, Pentium® 4 M
CPU Clock	Up to 2.1 GHz	up to 1.8 GHz	Up to 3.06 GHz	Up to 2.1 GHz	Up to 3.06 GHz	up to 2.8 GHz
Front Side Bus	400 MHz		400 / 533 MHz	400 MHz	400 / 533 MHz	400 / 533 MHz
BIOS	AMI*	AMI*	AMI*	AMI*	AMI*	Award BIOS
Chipset	Intel® 855GME + 6300ESB	Intel® 855GME	Intel® 845GV + ICH4	Intel® 855GME + 6300ESB	Intel® 845GV + ICH4	Intel® 845GV
DRAM	Up to 2 GByte DDR333 SDRAM (PC2700)	2 GByte, DDR-SDRAM, ECC	Up to 2 GByte DDR-SDRAM	Up to 2 GByte DDR333 SDRAM (PC2700)	Up to 2 GByte DDR-SDRAM	2 GByte, DDR-SDRAM, ECC
Video Memory	Up to 96 MByte shared video memory	Up to 64 MByte shared video memory	Up to 256 MByte shared memory	Up to 96 MByte shared video memory	Up to 256 MByte shared memory	Up to 64 MByte shared memory
IDE Interface	2x SATA 150, 2x ATA 100	2x ATA100	2x SATA 150, 2x ATA100	2x SATA 150, 2x ATA100	2x SATA 150, 2x ATA100	2x ATA100
USB	4x USB 2.0	6x USB 2.0	6x USB 2.0 (2x internal)	4x USB 2.0	6x USB 2.0 (2x internal)	6x USB 2.0
Ethernet	Up to 3x GbE LAN		10/100Base-T	Up to 3x GbE LAN	10/100Base-T	Dual 10/100Base-T, second optional 10/100/1000 Base-T
Formfactor	ATX 300.5 mm x 190.5 mm (12" x 7.5")	ATX	ATX Formfactor, 305 x 220 mm	Flex-ATX, 228.6 mm x 190.5 mm (9" x 7.5")	Micro-ATX Formfactor 243.8 x 243.8 mm (9.6" x 9.6")	embATX
Available I/Os	6x PCI, 4x COM	6x PCI, 1x AGPx4	6x PCI 2.2 master slots	3x PCI, 4x COM	3x PCI 2.2 master slots	3 (raiser needed)
Graphics Controller	Intel® Extreme Graphics 2	Intel® Extreme Graphics 2	Intel® Extreme Graphics	Intel® Extreme Graphics 2,	Intel® Extreme Graphics	Intel® Extreme Graphics
Graphics Interface	CRT / LVDS / AGP x4 / DVO		CRT / DVO	CRT / LVDS / AGP x4 / DVO	CRT / DVO	CRT / DVO
Rear I/O	COM1, LPT, CRT, line-in, line-out, speaker, PS/2 mouse/keyboard	2x COM, LPT, VGA, LAN, PS2 KBD/MS	COM1, LPT, CRT, line-in, line-out, speaker, PS/2 mouse/keyboard	COM1, LPT, CRT, line-in, line-out, speaker, PS/2 mouse/keyboard	COM1, LPT, CRT, line-in, line-out, speaker, PS/2 mouse/keyboard	4x COM, LPT, VGA, PS2 KBD/MS, 2x USB
Power Management	ACPI 2.0 + APM 1.2		APM 1.2 + ACPI 1.0	ACPI 2.0 + APM 1.2	APM 1.2 + ACPI 1.0	
Special Feature	HDD SOFT-RAID 0/1 support On board audio amplifier	Audio	Drive digital LCD display by Add-Cards: ADD-LVDS (LVDS) & ADD-DVI (DVI)	HDD SOFT-RAID 0/1 support On board audio amplifier	Drive digital LCD display by Add-Cards: ADD-LVDS (LVDS) & ADD-DVI (DVI)	Battery backed SRAM
Additional	Available Add-Cards for DVO Interface for 2nd LCD: ADD-LVDS (LVDS), ADD-DVI (DVI)	More than 5 years availability Add-Cards: ADD-LVDS (LVDS), ADD-DVI (DVI)	Available Add-Cards for DVO Interface for LCD: ADD-LVDS (LVDS), ADD-DVI (DVI)	Available Add-Cards for DVO Interface for 2nd LCD: ADD-LVDS (LVDS), ADD-DVI (DVI)	Available Add-Cards for DVO Interface for LCD: ADD-LVDS (LVDS), ADD-DVI (DVI)	Audio, opt. 2x internal COM, opt. miniPCI, LVDS
RoHS compliant	✓	✓	✓	✓	✓	✓



➤ Embedded Mini-ITX

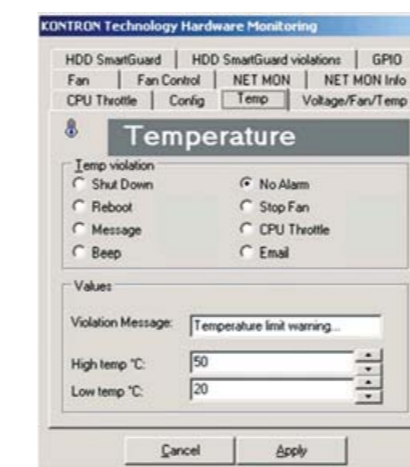
Mini-ITX is the latest motherboard formfactor and has been well received by the demanding industrial customers. The very compact and space saving footprint (17 cm x 17 cm) meets the growing need for a small formfactor and allows the customer to design a very

compact system without giving up the standard ATX mounting holes and the I/O bracket area. The Mini-ITX formfactor fills the gap between small modules (like 3.5" Single Board Computers) and full-size ATX motherboards.



Features	886LCD-M/mITX	886LCD-M/mITX (BGA)	886LCD/mITX	786LCD/mini-ITX
CPU	Intel® Pentium® M, Celeron® M	Intel® Mobile Celeron® on board	Intel® Pentium® 4, Celeron®	Intel® ULV/LV Celeron®
CPU Clock	Up to 2.1 GHz	600 MHz (BGA) / Other BGA CPUs available on request	Up to 3.06 GHz	Intel® Celeron 400 MHz ULV / 733 MHz LV
Front Side Bus	400 MHz	400 MHz	400 / 533 MHz	100 / 133 MHz
BIOS	AMI*	AMI*	AMI*	AMI*
Chipset	Intel® 855GME + 6300ESB	Intel® 855GME + 6300ESB	Intel® 852GME + 6300ESB	Intel® 815E + ICH4
DRAM	Up to 1 GByte DDR333 SDRAM (PC2700)	1 GByte DDR333 SDRAM (PC2700)	1 GByte DDR333 SDRAM (PC2700)	128/256 MByte on board. 1x168pin DIMM socket for extra memory (up to 512 MByte total)
Video Memory	Up to 96 MByte shared video memory	Up to 96 MByte shared video memory	Up to 96 MByte shared video memory	Up to 12 MByte shared video memory
IDE Interface	2x SATA 150, 2x ATA100	2x SATA 150, 2x ATA100	2x SATA 150, 2x ATA100	2x ATA100, 2x SATA 150 (optional)
USB	4x USB 2.0	4x USB 2.0	4x USB 2.0	6x USB 2.0
Ethernet	Up to 3x GbE LAN	Up to 3x GbE LAN,	Up to 3x GbE LAN	Up to 3x 10/100 BaseT LAN
FormFactor	Mini-ITX, 17 cm x 17 cm (6.7" x 6.7")	Mini-ITX, 17 x 17 cm (6.7" x 6.7")	Mini-ITX, 17 x 17 cm (6.7" x 6.7")	Mini-ITX, 17 x 17 cm (6.7" x 6.7")
Available I/Os	1x PCI, 4x COM	1x PCI, 4x COM	1x PCI, 4x COM	1x PCI, 4x COM
Graphics Controller	Intel® Extreme Graphics 2, LVDS on board	Intel® Extreme Graphics 2, LVDS on board	Intel® Extreme Graphics 2, LVDS on board	Integrated Intel® Graphics engine, LVDS on board
Graphics Interface	CRT / LVDS / AGP x4 / DVO	CRT / LVDS / AGP x4 / DVO	CRT / LVDS / AGP x4 / DVO	CRT / LVDS / AGP x4 / DVI
Rear I/O	COM1, LPT, CRT, line-in, line-out, speaker, PS/2 mouse/keyboard	COM1, LPT, CRT, line-in, line-out, speaker, PS/2 mouse/keyboard	COM1, LPT, CRT, line-in, line-out, speaker, PS/2 mouse/keyboard	COM1, LPT, CRT, line-in, line-out, speaker, PS/2 mouse/keyboard
Power Management	ACPI 2.0 + APM 1.2	ACPI 2.0 + APM 1.2	ACPI 2.0 + APM 1.2	ACPI 2.0 + APM 1.2
Special Feature	HDD SOFT-RAID 0/1 support	HDD SOFT-RAID 0/1 support	HDD SOFT-RAID 0/1 support	IEEE 1394 optional
Additional	Available Add-Cards for DVO Interface for 2nd LCD: ADD-LVDS (LVDS), ADD-DVI (DVI), over 5 years availability	Available Add-Cards for DVO Interface for 2nd LCD: ADD-LVDS (LVDS), ADD-DVI (DVI), over 5 years availability	Available Add-Cards for DVO Interface for 2nd LCD: ADD-LVDS (LVDS), ADD-DVI (DVI), over 5 years availability	N/A on board audio amplifier, over 5 years availability
RoHS compliant	✓	✓	✓	✓

- 5 year lifecycle and long term service & support
- Life-cycle management & revision control
- Extended technical support and documentation
- Flat Panel Display support incl. LVDS, DVI and ADD Cards
- Scalability from mini-ITX to full-size ATX
- Standard ATX power supply and standard I/O bracket area
- Short time-to-market with standard formfactors
- Remote hardware and hard disk monitoring/control by original API software



Temperature monitoring example

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or www.kontron.com/reply/05 or motherboard@kontron.com

► Industrial Motherboards



Features	889 LCD/ATX	889 LCD/ATXU	886 LCD/ATXU
CPU	Intel® Pentium® 4 and Celeron®	Intel® Pentium® 4 and Celeron®	Intel® Pentium® 4 and Celeron®
CPU Clock	Up to 3.8 GHz	Up to 3.4 GHz	Up to 2.8 GHz
Front Side Bus	800 / 533 MHz	800 / 533 MHz	400 / 533 MHz
BIOS	Phoenix™	Phoenix™	Phoenix™
Chipset	Intel® 915G + ICH6	Intel® 915G + ICH6	Intel® 845G + ICH4
IDE Controller	4x SATA150, 1x ATA100	2x SATA150, 1x ATA100	2x ATA 33/66/100
DRAM	Up to 4 GByte of DDR2 533/400 SDRAM	Up to 4 GByte of DDR 400 SDRAM (PC3200)	Up to 2 GByte of DDR 266 SDRAM (PC2100)
USB	8x USB 2.0 (4x internal)	8x USB 2.0 (4x internal)	6x USB 2.0
Ethernet	10/100/1000 Base-T	10/100/1000 Base-T	10/100 Base-T
FormFactor	ATX Formfactor, 304.8 x 243.8 mm	Micro-ATX Formfactor, 243.8 mm x 243.8 mm	
Available I/Os	2x PCI Expressx1, 4x PCI (32 Bit/33 MHz)	1x PCI Expressx1, 2x PCI (32 Bit/33 MHz)	3x PCI (2.2 master)
Graphics Memory	Up to 224 MByte	Up to 224 MByte	Up to 96 MByte
Graphics	Intel® GMA 900 on board, PCI-Express 16x, SDVO port for ADD2-DVI card	Intel® GMA 900 on board, PCI-Express 16x, SDVO port for ADD2-DVI card	Intel® Extreme Graphics on board, AGP x 4, DVO port for ADD cards
Format	ATX Formfactor, 304.8 x 243.8 mm	Micro-ATX Formfactor, 243.8 mm x 243.8 mm	
Rear I/O	COM1, LPT, CRT, line-in, line-out, speaker, PS/2 mouse/keyboard	COM1, LPT, CRT, line-in, line-out, speaker, PS/2 mouse/keyboard	COM1, LPT, CRT, line-in, line-out, speaker, PS/2 mouse/keyboard
Power Management	APM 1.2 + ACPI 1.0	APM 1.2 + ACPI 1.0	APM 1.2 + ACPI 1.0
Additional	Available Add-Cards for SDVO Interface: ADD2-DVI (Digital LCD drive)	Available Add-Cards for SDVO Interface: ADD2-DVI (Digital LCD drive)	Available Add-Cards DVO Interface: (DVI/LVDS)
Operating Temperature	0° to 50°C	0° to 50°C	0° to 50°C
RoHS compliant	✓	✓	-

► AGP Digital Display Cards



Features	ADD-LVDS	ADD-DVI	ADD-DVI-I/CRT	ADD2-DVI
Series	ADD-Card	ADD-Card	ADD-Card	ADD2-Card
Video Output	LVDS	DVI, CRT and TV-out	DVI & CRT	DVI
Resolution	Up to 2048x1536	Up to 1600x1200	Up to 1600x1200	Up to 1600x1200
Applicable Motherboards	886LCD series and 886LCD-M series	886LCD series and 886LCD-M series	886LCD series and 886LCD-M series	889LCD series
Height	Full	Full	Low Profile	Full
Interface	AGP/DVO	AGP/DVO	AGP/DVO	PCI-Express
RoHS compliant	✓	✓	✓	✓

AGP Digital Display Card (ADD-Card)

Adds extra digital flat panel display support by using an on-board graphics interface connector. The solution is flexible

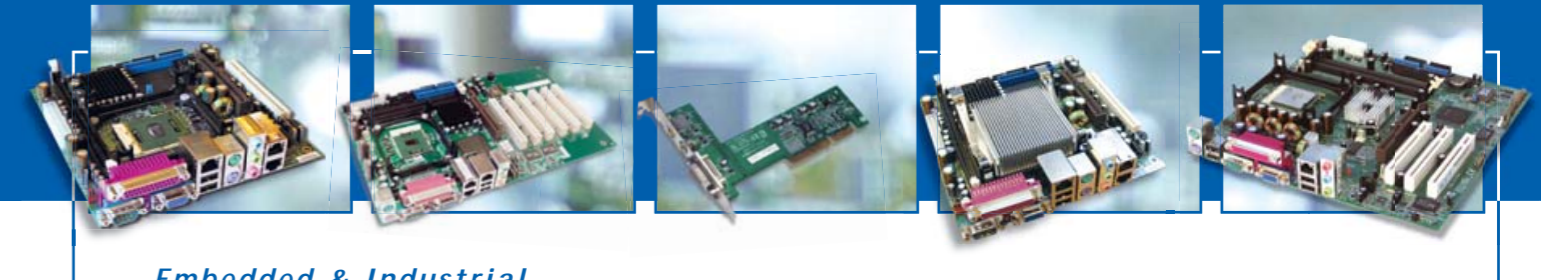
and cost effective. Kontron offers both LVDS and DVI interface ADD cards.



Advantages of Kontron`s Embedded/ Industrial Motherboard Series :

- Long Term Availability
- Latest PC technology with rich feature set
- Wide range of Flat Panel Display support
- Scalability
- Strong support for professional applications

The future starts now!



Embedded & Industrial Motherboards

yes

Please send me a detailed technical data sheet about

yes

Please call me, I have a question concerning:

Please make me an offer - free-of-charge and with no obligation - for the following product:

Product name _____ quantity _____

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