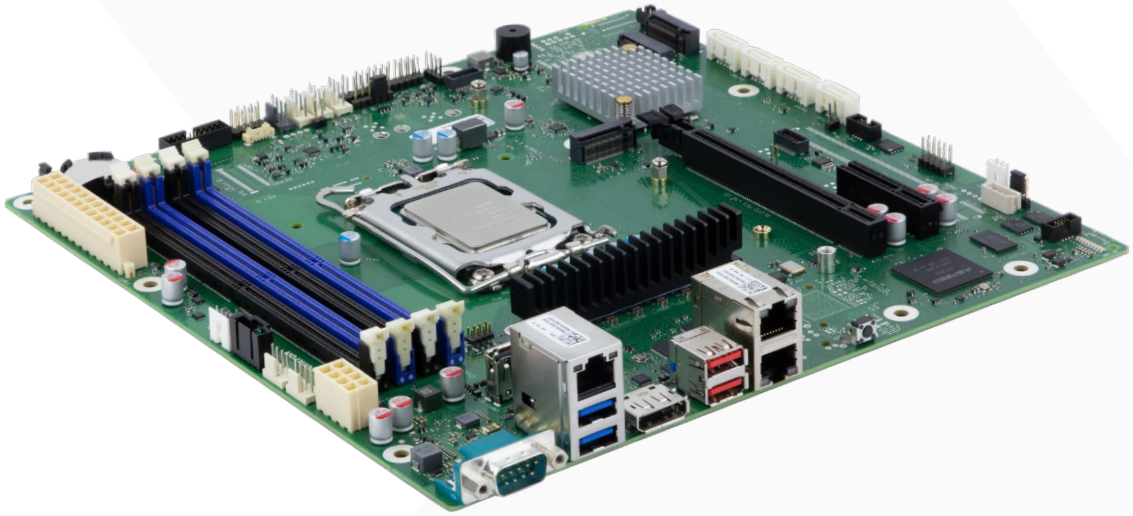
K3882-C µATX
Industrial Server



Intel® C262 Chipset and
Intel® XEON® 6300 Processors
Intel® XEON® E-2400 Processors
Pentium® Gold G7400T / G7400 Processors

- Latest DDR5 memory technology for best-in-class system performance
- ECC support
- Display Port ASPEED AST2600
- Remote Management

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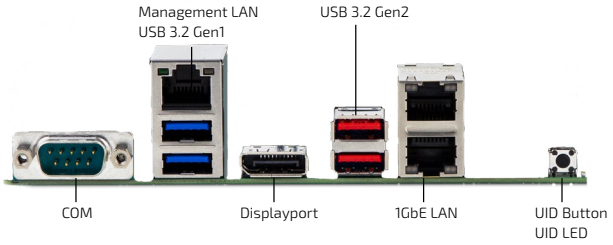
Product Highlights

K3882-C1 µATX Industrial Server

The K3882-C µATX is the first industrial Server Motherboard designed and made in Germany by Kontron. A custom BMC was developed for the motherboard, enabling remote management while ensuring the highest level of security. It provides an enterprise-grade solution for small businesses and entry-level cloud services which require server solutions with professional-grade reliability, expandability, and enhanced security capabilities. The K3882-C provides essential features like dual 1GbE LAN , 2x PCI Express, 4x M.2, NVMe, ECC-Support and many more features for server usages.. With an availability of 5+ years and 24/7 continuous operation, a reliable and stable solution is guaranteed.

- Intel® XEON® 6300 series Processors
- Intel® XEON® E-2400 series Processors
- DDR5-5600 UDIMM, max 128 Gbyte, ECC
- ASPEED AST2600 Video Graphic Adapter
- 1x Displayport 1.1a
- PCI Express® Gen5 x 16 (PEG)
- PCI Express® Gen4 x 1 (open slot)
- 8 Bit GPIO
- 2x USB 3.2 Gen1, 2x USB 3.2 Gen2
- Internal USB3.2 Gen 1 header (2ports)
- Internal USB2 Stick socket
- 2x Intel® i210 1GbE
- 4x SATA 6G
- 2x M.2 Key-M ,PCIe x4 Gen4/NVMe SSD modules
- 1x M.2 2230 (Key-E, WLAN/Bluetooth modules, PCIe)
- TPM Module Header
- 1x RS-232 support onboard
- HW Watchdog onboard (BMC)
- ATX Multirail



Technical Information

SYSTEM	PROCESSOR CHIPSET MEMORY	Intel® XEON® 6300 series Processors Intel® XEON® E-2400 series Processors Pentium® Gold G7400T / G7400 processors Socket LGA1700, max 95W TDP Intel® C262 Chipset DDR5 4800/5600 ECC SDRAM* 4 DIMM Sockets UDIMM DDR5-4800/5600*, max. 128 GByte Dual Channel unbuffered, ECC Effective memory speed of DDR5 modules according Intel® specification: 1x DIMM per channel = max. DDR5-4400* 2x DIMM per channel (single rank) = max. DDR5-4000 2x DIMM per channel (dual rank) = max. DDR5-3600
VIDEO	GRAPHICS	ASPEED AST2600 Video Graphic Adapter 1x Displayport 1.1a
NETWORK CONNECTION	ETHERNET1 ETHERNET2 MANAGEMENT LAN	Intel® I210AT with 10/100/1000 MBit/s, shared LAN port with BMC Wake-on-LAN (WoL) by interesting Packets, Link Status Change and Magic Packet™, PXE Support, BIOS MAC Address Display, Teaming Support Intel® I210AT with 10/100/1000 MBit/s, Wake-on-LAN (WoL) by interesting Packets, Link Status Change and Magic Packet™, PXE Support, BIOS MAC Address Display, Teaming Support Realtek RLT8211F for System Management (BMC LAN)
PERIPHERAL CONNECTION	USB SERIAL PORT OTHER I/OS PMBUS SGPIO	2x USB 3.2 Gen1, 2x USB 3.2 Gen2 Internal USB3.2 Gen 1 header (2ports) Internal USB2 Stick socket 1x RS232 (rear I/O, DB9 connector) 8 Bit GPIO (Input/Output); 3.3 V/5 V/12 V supply voltage output; SMBus controller PCA9554A 1x PMBus Connector 1x SGPIO
STORAGE & EXPANSION	SATA PCIE/M.2 SLOTS	4x Serial ATA III 600 Interface (up to 6GBit/s), NCQ, AHCI, VROC 1x M.2 PCIe 2230/2280/22110 (Key-M ,PCIe x4 Gen4/NVMe SSD modules) 1x M.2 PCIe 2280/22110 (Key M, PCIe x4 Gen 4/NVMe SSD modules) 1x M.2 PCIe 2230 (Key-E, WLAN Bluetooth modules) 1x PCIe x16 Gen5 PEG, bifurcation support 1x PCIe x1 Gen 4 (open slot)
POWER	CONNECTOR	ATX (Multirail) plus 8-pin socket (12V for CPU)

Technical Information

FIRMWARE	**BIOS** **WATCHDOG** **REAL TIME CLOCK** **TPM**	AMI Aptio 5.x (UEFI) BIOS modified and adapted by Kontron; Recovery BIOS, SM-BIOS (DMI), BIOS and CPU Microcode Update, Quick Boot, Logo Boot, Quiet Boot, Plug & Play, Automatic DRAM and PCIe Configuration, BIOS Support for S.M.A.R.T., No legacy OS support, no MBR installation (UEFI only) BMC Hardware Watchdog Integrated Infinion TPM (TPM Module Header)
SYSTEM CONTROL	**FP HEADER** **SECURITY**	1x Header for Reset button, HDD LED, Power button, Power LED, Unit ID switch and LED, Fault LED, LAN activity, SMBus Recovery BIOS, System and BIOS Password, Boot Sequence Control, Serial-/ USB-Port Access Protection, Write Protection for Flash BIOS, EraseDisk (BIOS Feature)
SYSTEM Management		ASPEED AST2600, Kontron Open BMC, Redfish and IPMI support
COOLING	**FAN**	6x PWM fan (CPU/System)
SOFTWARE	**OS SUPPORT**	Windows Server 2022, Windows Server 2025, Linux-64 No legacy OS support, no MBR installation (UEFI only)
MECHANICAL	**DIMENSION (L x W)**	µATX: 9.6" x 9.6" (243.8 x 243.8 mm)
ENVIRONMENTAL	**OPERATION TEMPERATURE**	0 °C - 60 °C
CERTIFICATION	**EMC + SAFETY**	cTÜVus acc. IEC62368-1, CE Class A incl. Industrial Immunity, UKCA, FCC Class A verified

*) DDR5-4800/5600 memory modules are supported, but the maximum effective speed is limited to DDR5-4400 (Intel design limitation for systems with 4 DIMM sockets).

Power Supply Requirements

SOURCE	VOLTAGE	MIN. PS LOAD	MAX. VOLTAGE TOLERANCE	MOTHERBOARD CAPACITIVE LOAD	MOTHERBOARD MAX. CURRENT (continous)*
Main Power Supply	+12V	0 A	± 5 %	2500µF	16A
	-12V	n.a.	n.a	-	-
	+5V	0 A	± 5 %	1900µF	6A
	3.3.V	0 A	± 5 %	1000µF	0.5A

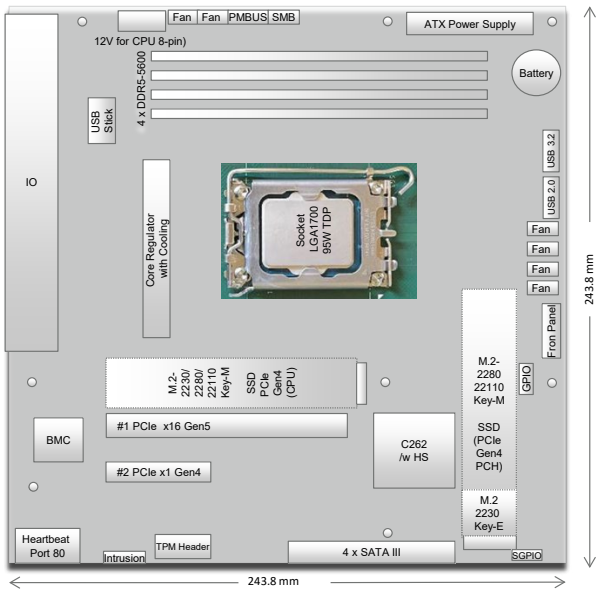
See TechNotes document for detailed power requirements

Technical Details

FEATURES	Chipset	Intel® C262
	DP / HDMI / LVDS / eDP	+ / - / - / -
	Stereo Audio / 5.1 Multichannel Audio / Front Panel Audio	- / - / -
	Buzzer / int. Speaker Support (stereo)	+ / -
	GbE LAN / Dual GbE LAN / 2.5GbE LAN / 10GbE LAN	- / + / - / -
	Out of Band Remote Management	+
	WoL / PXE / LAN Teaming / TSN	+ / + / + / -
	SATA / SATA RAID / M.2 (SATA) / M.2 (PCIe/NVME)	+ / + / - / +
	USB 2.0 / USB 3.2 (Gen1) / USB 3.2 (Gen2) / USB 3.2 (Gen2) Type-C	+ / + / + / -
	FAN monitored & controlled CPU Thermal Zone / Board Thermal Zone	+ / +
	TEMP monitored CPU / onboard sensors / external sensor	+ / + / -
SPECIAL FEATURES	Silent Fan / System Guard	+ / -
	Recovery BIOS / Flash Update / Multi Boot	+ / + / +
	HDD Password / EraseDisk / TPM V2.0 onboard / optional TPM module	+ / + / - / +
	BIOS POST- / BIOS Boot- / OS- HW Watchdog	+ / + / +
	Operating Mode 24-7 / 8-5 (hrs per day - days per week)	+ / -
	BMC Heartbeat / Port 80 / Fault LED	+ / + / +
	Motherboard operating temperature range (chassis inside) *	0 °C ... +60 °C
INTERNAL CONNECTORS	DIMM Sockets (DDR5 5600) / ECC Support	4 / +
	PCI Express® x16: 16lanes-Gen5 / PCI Express® x16: 4lanes-Gen4	1 / -
	PCI Express® x1: Gen1-"open"	1
	SATA-III / M.2 Key-M SSD / M.2 Key-B	4 / 2 / -
	SGPIO / SCSI Drive Activity Connector	1 / 1
	M.2 2230 (Key-E, PCIe & USB2.0 for WLAN/Bluetooth)	1
	Front Panel Audio (9-Pin, HD Audio) / S-PDIF Out (Digital Audio)	- / -
	USB 2.0 pin header (2 port) / USB 2.0 single port header / USB Stick socket	1 / - / 1
	USB 3.2 Gen1 pin header (2 ports) / USB 3.2 Gen2 Type A header	1 / -
	Serial COM header / CCTalk header[7] / Parallel Port header	- / - / -
	LVDS / LVDS Backlight / Embedded DisplayPort @ 4 lanes	- / - / -
	FAN PWM	6
	Intrusion (Case Open) / GPIO (8 Bit) / SMBus	1 / 1 / 1
	PMBus **	1
	Stereo Speaker header / Digital Mic header	- / -
	Front Panel / Server extension header	1 / 1
	nano SIM Card	-
	SATA Drive Power Connector (5 V/12 V) / DC-In Connector 8-34 V (4 pin)	- / -
EXTERNAL CONNECTORS	DisplayPort V1.1a / HDMI / DVI / VGA	1 / - / - / -
	Audio Mic. In / Line in / Line out (or driver configuration)	- / - / -
	LAN (RJ-45 / BMC LAN)	2 / 1
	USB 2.0 / USB 3.2 Gen1 / USB 3.2 Gen2	0 / 2 / 2
	Multirail PSU (24 pin + 8 pin) / Single 12 V PSU	1 / -
	Serial COM interface	1

*) Forced cooling required for high operating temperature range. See TechNotes document for details.
**) See Technotes for supported PSU Models.

Connector/Socket Diagram



Ordering Information

ARTICLE	PART NO.	DESCRIPTION
K3881-C1 µATX	F5110-V261	K3881-C1 Industrial Motherboard Intel® C266 Chipset
K3882-C1 µATX	F5110-V262	K3882-C1 Industrial Motherboard Intel® C262 Chipset

Accessories

TPM-MODULE	S26361-F5000-R012	Infineon SLB9670, TPM V2.0 (TCG compliant)
SLIM HEATSINK LGA1700 65W	F5000-C030	Box contains 40x cooler plus 40x backplate

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