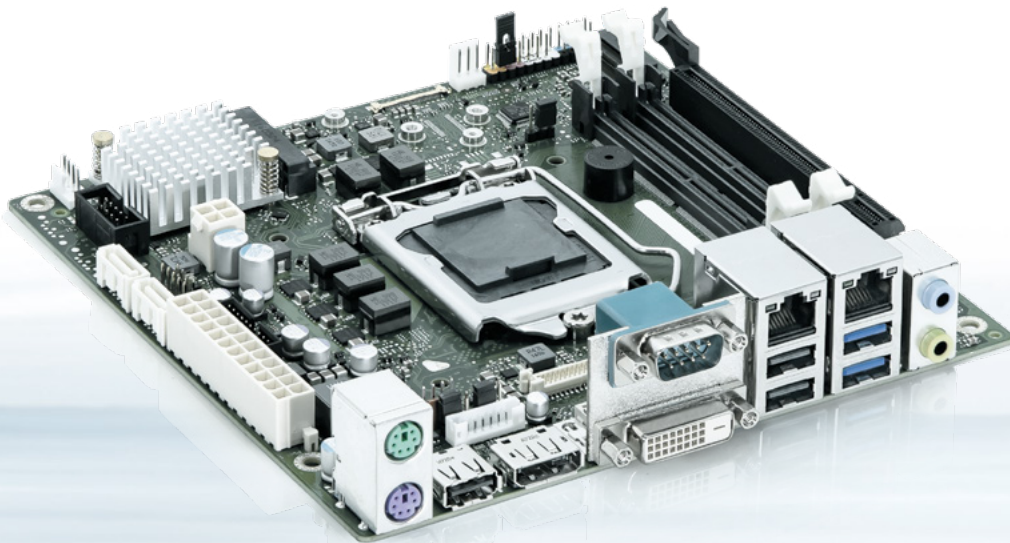


D3434-S mITX

Industrial Series



Intel® H110 Express Chipset and
Intel® 6th/7th Gen Core™ i3/i5/i7 Processors

- ▶ Dual Channel LVDS & eDP
- ▶ M.2 SSD & Mini-PCIe Socket onboard
- ▶ ATX PSU or Single 12 V Supply

POSSIBILITIES START HERE



D3434-S mITX

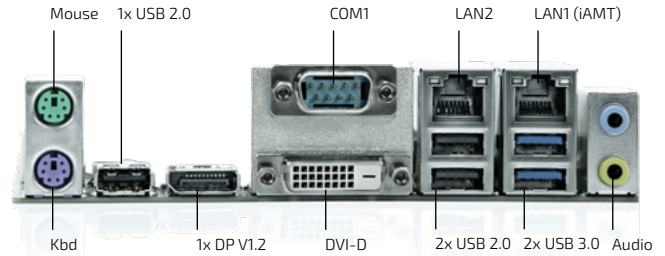
Industrial Series

The motherboard D3434-S mITX is a smart solution for industrial needs. It is equipped with the cost-optimized Intel® H110 Express Chipset and supports the 6th and 7th Gen. of Intel® Core™

processors up to 65W TDP. The D3434-S mITX also features 2x LAN, LVDS, and eDP.

PRODUCT HIGHLIGHTS

- ▶ Intel® HD Graphics (integrated in processor e.g. HD510/530)
- ▶ DVI-D, DP V1.2, eDP and Dual Channel LVDS support
- ▶ PCI Express® x16 Gen3 and Mini-PCI Express® onboard
- ▶ 8 Bit GPIO & multichannel Audio onboard
- ▶ Onboard support for M.2 SSD (SATA-based M.2)
- ▶ USB 2.0 and USB3.0 onboard
- ▶ 2x Intel GbE LAN onboard (incl. teaming support)
- ▶ Intel integrated TPM V2.0 onboard
- ▶ Dual Power Supply (ATX compliant & 12 V only)
- ▶ BIOS-POST/-Boot & OS – HW Watchdog onboard



TECHNICAL INFORMATION

SYSTEM	PROCESSOR	Intel® Core™ i7/i5/i3 (6th/7th Gen) processor series Intel® Pentium®/Intel® Celeron® processor series Socket LGA1151 – up to 65 W TDP
	CHIPSET	Intel® H110 Chipset
	MEMORY	DDR4 2133/DDR4 2400, Dual Channel 2 SO DIMM sockets, up to 32 GByte memory
VIDEO	GRAPHICS	Intel® HD Graphics, DX12
AUDIO	AUDIO CODEC	Realtek ALC671
	AUDIO INTERFACE	5.1-channel, High Definition Audio Codec
NETWORK CONNECTION	ETHERNET	Intel i219LM & 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
PERIPHERAL CONNECTION	USB	3x USB 2.0, 2x USB 2.0 (by header), 2x USB 3.0, 2x USB 3.0 (by header)
	SERIAL PORT	1x RS232, 1x RS232 (by header)
	OTHER I/Os	GPIO (by header)
STORAGE & EXPANSION	SATA	2x Serial ATA III 600 Interface (up to 6Gbit/s), NCQ, AHCI, 1x M.2 SATA (2242/2260), 1x Mini PCIe (halfsize/fullsize)
	PCIe/PCI SLOTS	PCIe x16: 1x Gen3
POWER	CONNECTOR	ATX Power Supply
	INPUT VOLTAGE	ATX (Multirail) or Single 12 V
FIRMWARE	BIOS	AMI Aptio 5.x (UEFI) BIOS modified and adapted by Fujitsu Technology Solutions; 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., Advanced Power Management, ACPI S3/S4, Wake on time from S5, HW Watchdog support & BIOS integrated HW Diagnostic Tool. No legacy OS support, no MBR installation (UEFI only due to Intel restrictions) 3-Level HW Watchdog (BIOS/BIOS POST/OS)
	WATCHDOG	Integrated
	REAL TIME CLOCK	Intel® integrated TPM V2.0
	TPM	

► TECHNICAL INFORMATION

SYSTEM CONTROL	FP HEADER	1x Header for Reset button, HDD LED & Speaker, Power button, Power LED Recovery BIOS, System and BIOS Password, Boot Sequence Control, Serial- / USB- Port Access Protection, Boot Sector Virus Warning, Write Protection for Flash BIOS, EraseDisk (BIOS Feature), Intel® integrated TPM V2.0
	SECURITY	
COOLING	FAN	2x PWM fan (CPU/System)
SOFTWARE	OS SUPPORT	MS Windows 7, MS Windows 10 Linux-64
MECHANICAL	DIMENSIONS (L x W)	Mini-ITX: 6.7" x 6.7" (170 x 170 mm)
CERTIFICATION	EMC & SAFETY	FCC-B verified cTÜVus acc. IEC62368-1, CE Class-B

► POWER SUPPLY REQUIREMENTS

SOURCE*	VOLTAGE	MIN. PS LOAD	MAX. VOLTAGE TOLERANCE	MOTHERBOARD CAPACITIVE LOAD	MOTHERBOARD MAX. CURRENT
ATX Power Supply	+ 12 V	0.05 A	± 5 %	1.300 µF	8 A / 12 A**
	- 12 V	0 A		-	Not used
	+ 5 V	0.2 A	± 5 %	900 µF	3 A
	+ 3.3 V	0 A	± 5 %	350 µF	0.5 A
	+ 5 Vaux	0 A	+ 5 % / - 3 %	330 µF	0.5 A
12V only PSU	+ 12 V	0 A	± 5 %	1.300 µF	8 A / 12 A**

*) ATX PSU or 12 V only DC Supply

**) Max. Cont. Current = 8 A; max. Surge Current = 10 A (< 100 sec) / 12 A (< 10 ms)

TECHNICAL INFORMATION

FEATURES	Chipset Board Size VGA / DVI-I / DVI-D / DP V1.2 / 2nd DP V1.2 / LVDS / eDP Buzzer / int. Speaker Support / 5.1 Multichannel Audio Dual LAN Gbit / 100 Mbit / 10 Mbit / WoL / LAN Boot iAMT 11.0 vPro / Intel Standard Manageability / DASH V1.1 SATA / ATA / RAID / eSATA-Support / mSATA / M.2 SSD FireWire™ / USB 2.0 / USB 3.0 FAN monitored & controlled PSU / CPU / AUX1* / AUX2 TEMP monitored CPU / onboard sensors / external sensor	iH110 Mini-ITX - / - / + / + / - / + / + + / + / + + / + / + / + / + - / - / - + / - / - / + / - / + - / + / + - / + / + / - + / + / -
SPECIAL FEATURES	Silent Fan / System Guard / Silent Drives Recovery BIOS / Desk Update / Multi Boot HDD Password / HDD Encryption / EraseDisk / TPM Logo Boot Option High Efficiency Core Voltage Regulator Design BIOS POST- / BIOS Boot- / OS- HW Watchdog Operating Mode 24-7 / 8-5 (hrs per day - days per week) Mainboard operating temperature range (chassis inside)**	+ / + / + + / + / + + / - / + / + + + + / + / + + / - 0 °C – 60 °C
INTERNAL CONNECTORS	SO DIMM Sockets (DDR4 2133/2400) PCI Express® x16 (Gen3) / Support for lane split (8+8 or 8+4+4) mSATA / Mini PCI Express Slot (halfsize / fullsize, incl.USB 2.0) SATA-600 / SATA-300 / mSATA / M.2 SSD*** S/PDIF (digital Audio) OUT / IN Frontpanel Audio (9-Pin, HD Audio & Legacy Audio AC97) USB 2.0 channels / USB 3.0 channels / USB Stick (3.0) Serial (COM2, RS232) / Parallel Port Connector LVDS / LVDS Backlight / Embedded DisplayPort FAN PSU / CPU / AUX1* / AUX2 Intrusion (Case Open) / GPIO (8Bit) / SMBus (Case Temp.) ATX Power Supply (24 pin + 4 pin) / single 12 V PSU****	2 1 / - - / 1 2 / - / - / 1 1 / 0 1 2 / 2 / - 1 / - 1 / 1 / 1 0 / 1 / 1 / 0 1 / 1 / - 1 / 1
EXTERNAL CONNECTORS	VGA Sub D / DVI-I / DVI-D / DisplayPort V1.2 Audio Mic. In / Line in / Line out (or driver configuration) LAN (RJ-45) PS/2 Mouse / Keyboard USB 2.0 / USB 3.0 Serial (COM1, RS232)	- / - / 1 / 1 - / 1 / 1 2 1 / 1 3 / 2 1

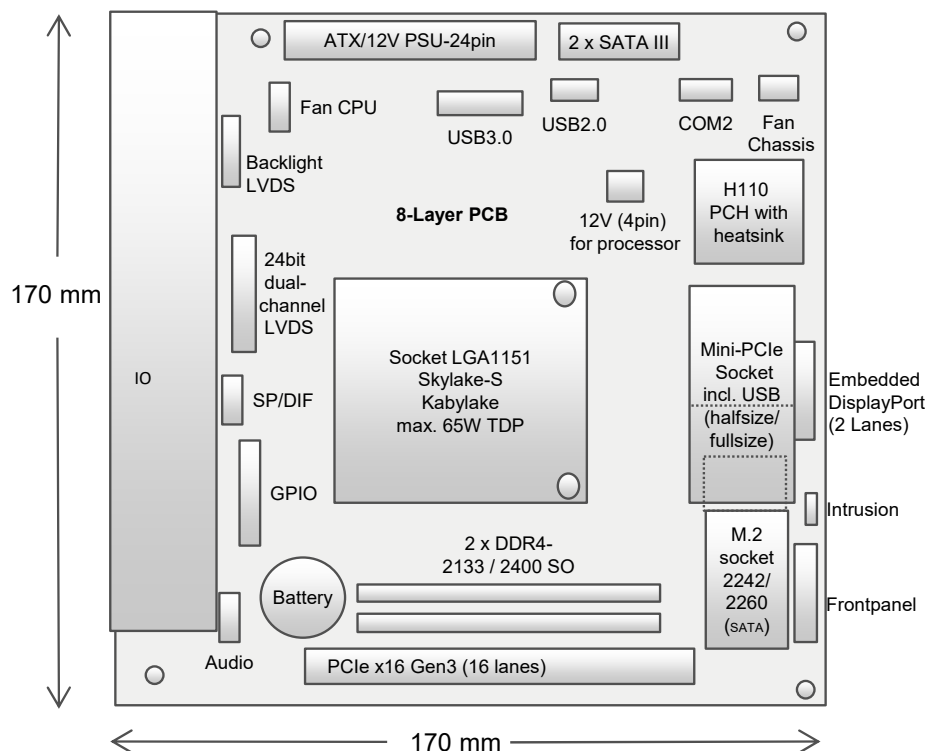
*) Fan AUX1 = 3Pin & PWM support

**) Forced cooling required, see technical documentation for detailed requirements

***) If a M.2 module @60 mm is installed, only halfsize Mini-PCIe module can be installed! D3434-5 supports M.2 SATA-based modules only!

****) Alternative: Powered by 12 V DC only. See TechNotes document for further details

CONNECTOR / SOCKET DIAGRAM



▶ ORDERING INFORMATION

ARTICLE	PART NO.	DESCRIPTION
D3434-S2 mITX	F5120-V147	Intel® 6th/7th Gen Core™ Processor Series, Intel® H110 Chipset
D3434-S1 mITX	F5120-V120	Intel® 6th Gen Core™ Processor Series, Intel® H110 Chipset
ACCESSORIES		
MINI PCIe TO M.2 ADAPTER	F5000-M3	D3436-S
SERIAL PORT CABLE	F5000-K10	Fullsize slot bracket
RISERCARD	F5000-R6	1x PCIe x4 (D3318-A)
CHASSIS KIT	F5000-J3	SMARTCASE™ S720

▶ Global Headquarters

Kontron S&T AG

Lise-Meitner-Str. 3-5
86156 Augsburg, Germany
Tel.: + 49 821 4086 0
Fax: + 49 821 4086 111
info@kontron.com
www.kontron.com