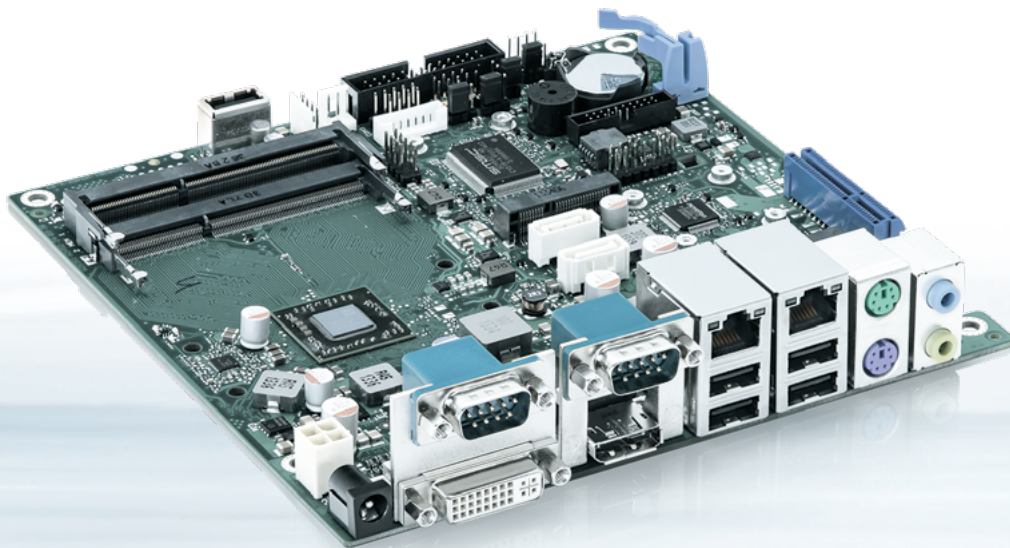


D3313-S mITX

Industrial Series



AMD Embedded G-Series SoC Platform for AMD FT3/FT3B SoC Processor

- ▶ DVI-I, DP V1.2 and Dual Channel LVDS support
- ▶ mSATA and Mini-PCI Express® onboard
- ▶ HW Watchdog
- ▶ Dual GbE LAN, 3x COM, GPIO
- ▶ 12 V & 19-24 V power supply option

POSSIBILITIES START HERE

D3313-S mITX

Industrial Series

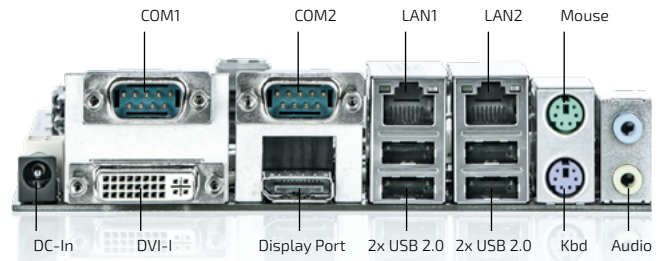
The Kontron D3313-S mITX Motherboard is equipped with AMD Embedded G-series processors. Combined with the comprehensive feature set it's the perfect fit for KIOSK, casino gambling, POS,

thin clients, industrial PCs and other applications with high power consumption efficiency and enhanced operating temperature (0 °C - 60 °C) needs.

▶ PRODUCT HIGHLIGHTS

- ▶ DDR3 1333/1600 SDRAM (SO-DIMM)
- ▶ AMD Radeon integrated graphics on board: DVI-I, DP V1.2 and Dual Channel LVDS support
- ▶ PCIe x4 connector and Mini-PCI Express®
- ▶ HD Audio
- ▶ Dual GbE LAN
- ▶ Serial ATA III onboard
- ▶ mSATA (SATA III) socket support
- ▶ USB 2.0 and USB 3.1 Gen1 onboard
- ▶ 8 Bit GPIO onboard
- ▶ 3 x serial port and 1 x parallel port onboard
- ▶ Designed for fanless operation

- ▶ BIOS-Boot & OS – HW Watchdog onboard
- ▶ Dual-Range DC Power Supply 12 V / 19-24 V



▶ TECHNICAL INFORMATION

SYSTEM	PROCESSOR	D3313-S1: AMD Embedded GX-210HA SOC D3313-S4: AMD Embedded GX-222GC SOC D3313-S6: AMD Embedded GX-424CC SOC
	MEMORY	2x SO DIMM Socket (1.5 V / 1.35 V), max. 16 GByte, Single Channel DDR3-1333 (CL9) / DDR3-1600 (CL11) / DDR3-1866 (D3313-S6 only) SDRAM Unbuffered, no ECC. Effective memory speed depends on installed SoC.
VIDEO	GRAPHICS	D3313-S1: AMD Radeon HD8210E D3313-S4/-S6: AMD Radeon R5E
AUDIO	AUDIO CODEC AUDIO INTERFACE	Realtek ALC 671 5.1-channel, High Definition Audio
NETWORK CONNECTION	ETHERNET	2x Realtek RTL 8111G, 10/100/1000, PXE- & WoL Support, Teaming Support
PERIPHERAL CONNECTION	USB	4x USB 2.0 (Typ A rear) 2x USB 3.1 Gen1 (by header) 2x USB 2.0 (by header) 1x USB 2.0 (internal Typ A plug)
	SERIAL PORT	2x RS232 (DB9 rear)
	OTHER I/Os	1x RS232 (by header) 1x LPT (by header) 1x 8-bit GPIO (by header)
STORAGE & EXPANSION	SATA	1 x PCIe x4 (Gen2); "mechanical open slot" for usage of x16 cards 1 x Mini-PCIe (Gen2) incl. USB2.0; support for halfsize & fullsize cards 1 x mSATA (SATA-III); support for fullsize modules
POWER	CONNECTOR	12 V / 19-24 V (max. 5 A via external DC connector / max. 8 A via internal DC connector)
	INPUT VOLTAGE	Onboard CPU Core Voltage Regulator
FIRMWARE	BIOS	AMI Aptio 4.x UEFI BIOS modified and adapted by Fujitsu Technology Solutions; Recovery BIOS, SM-BIOS (DMI), BIOS Update, Quick Boot, Logo Boot, Quiet Boot, Plug & Play, Automatic DRAM and PCI Configuration, BIOS Support for S.M.A.R.T., Advanced Power Management, configurable LVDS support, integrated HW diagnostic tool, EraseDisk Feature
	WATCHDOG REAL TIME CLOCK	2-Level WD (BIOS Boot WD / OS WD) Integrated

▶ TECHNICAL INFORMATION

SYSTEM CONTROL & MONITORING	FP HEADER SECURITY	1x Header for Reset button, HDD LED, Power button, Power LED Recovery BIOS, System and BIOS Password, Boot Sequence Control for each drive, Serial Port Access Protection, Boot Sector Virus Warning, Write Protection for Flash BIOS, Harddisk Password incl. "Silent Password" option (no keyboard entry required)
COOLING	FAN	2x PWM Fan (CPU/System) 1x Fanless Heatsink, up to 10 W TDP (optional) 1x Fanless Heatpipe Cooler, up to 15 W TDP (optional)
SOFTWARE	OS SUPPORT	MS Windows XP32, 7-32, 7-64, 10-64 Linux-32, 64
MECHANICAL	DIMENSIONS (L x W)	Mini-ITX 6,7" x 6,7" (170 x 170 mm)
CERTIFICATION	EMC & SAFETY	CE; cTÜVus acc. IEC60950-1 (CSA/UL compliance), CB (TUEV-NCB), FCC-B verified

▶ MOTHERBOARD VERSIONS

	PROCESSOR	GRAPHICS	MEMORY	DISPLAY OPTIONS
D3313-S1 eKabini	GX-210HA 1.0 GHz Dual Core	Radeon™ HD 8210E 300 MHz	DDR3 / 1333 ⁱⁱⁱ⁾	for all versions: 1x DVI-I max. 1920 x 1200 1x DP V1.2 max. 3840 x 2160 1x LVDS 24Bit Dual Channel max. 1920 x 1200 max. 2 independent displays (DVI-I & DP or DVI-I & LVDS) Supports DirectX11 / DirectX11.1
D3313-S4 SteppeEagle	GX-222GC 2.2 - 2.4 GHz ⁱ⁾ Dual Core 10/15 W TDP ⁱⁱ⁾	Radeon™ R5E 655/800 MHz	DDR3 / 1600	
D3313-S6 SteppeEagle	GX-424CC 2.4 GHz Quad Core 25 W TDP	Radeon™ R5E 655/800 MHz	DDR3 / 1600 DDR3 / 1866	

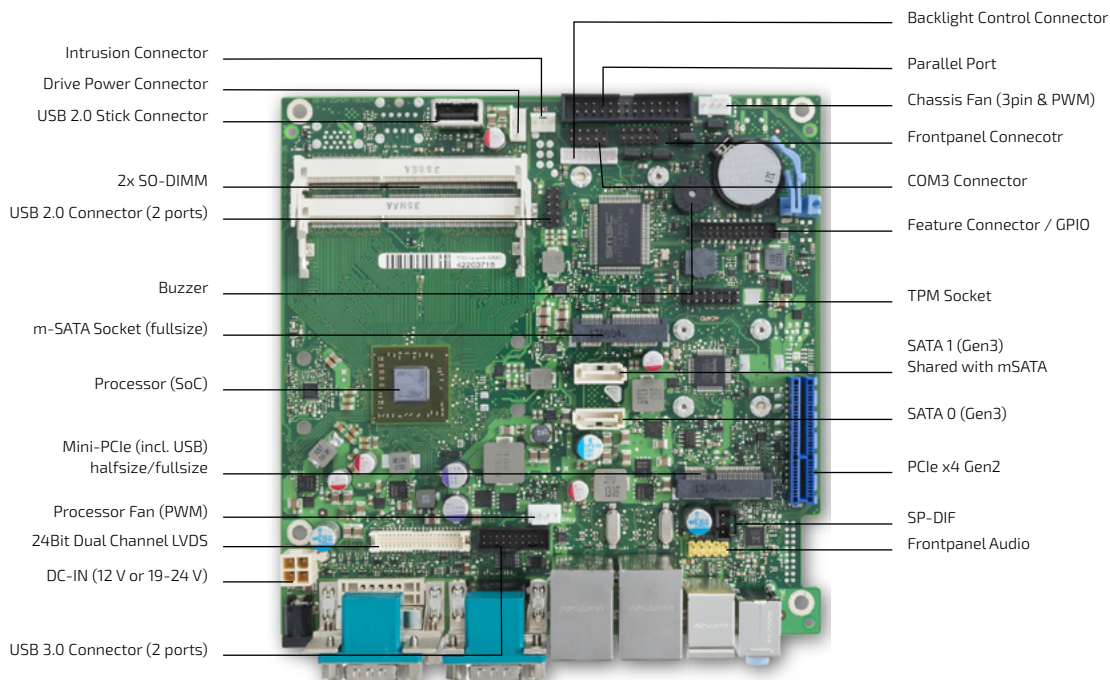
i) Nominal / Boost Mode
ii) Configurable max. TDP (BIOS Option)
iii) DDR3-1600 modules useable

▶ POWER SUPPLY REQUIREMENTS

SOURCE	VOLTAGE	MIN. PS LOAD
DC-In (auto range)	12V +/- 10 % or 19-24 V +10 % / -15 %	5 A (external connector) 8 A (internal connector) ^{A)}

A) See TechNotes document for power supply details

CONNECTOR / SOCKET DIAGRAM



TECHNICAL INFORMATION

FEATURES		
FEATURES	Board Size: Mini-ITX: 6.7" x 6.7" (170 x 170 mm) VGA* / DVI / DisplayPort / LVDS / HDMI* Stereo Audio / Multich. Audio / Buzzer / int. Speaker Support Dual LAN Gbit / 100 Mbit / 10 Mbit LAN ASF / AoL / WoL / Boot / DASH Support SATA / ATA / RAID / mSATA FireWire™ / USB 2.0 / USB 3.1 Gen1 FAN monitored & controlled CPU / AUX1 / AUX2 TEMP monitored CPU / onboard Sensors / external Sensors	+ + / + / + / + / + + / - / + / - + / + / + - / - / + / + / - + / - / - / + - / + / + + / + / - + / + / -
SPECIAL FEATURES	Silent Fan / System Guard / Silent Drives Recovery BIOS / Desk Update / Multi Boot HDD Password / HW Diagnostic Tool / EraseDisk / TPM Boot Logo Option HW Watchdog: BIOS POST WD / BIOS Boot WD / OS WD Operating Mode 24-7 / 8-5 (hrs per day - days per week) Mainboard operating temperature range (chassis inside)	+ / + / + + / + / + + / + / + / - + - / + / + + / - 0 °C – 60 °C
INTERNAL CONNECTORS	DIMM Sockets (DDR3 1333/1600/1866, SO-DIMM) PCI Express® x4 Slot (Gen2) / PCI Slot (32Bit, 33 MHz) Mini PCI Express® Slot (incl.USB 2.0) / Socket for TPM 1.2 module SATA (600) / ATA / Floppy / CF Card / mSATA (600) Frontpanel HD Audio (9-Pin "Azalia")** / SPDIF OUT USB 2.0 channels / USB 3.1 Gen1 channels Specific socket for internal USB stick (USB 2.0) Serial Port (COM3) / Parallel Port (LPT) FAN*** CPU / System (AUX1) / System (AUX2) SMBus (Case Temperature) / Intrusion (Case Open) LVDS Dual Channel / Backlight Inverter Feature Connector (8 Bit General Purpose I/O) Frontpanel (Power Switch, LEDs, Intel 10 pin header) Onboard Power Output (+5 V/2 A, +12 V/2 A) for drives Onboard (internal input) DC-In 12 V / 19-24 V @ 8 A max.	2 1 / - 1 / 1 2 / - / - / - / 1 1 / 1 2 / 2 1 1 / 1 1 / 1 / - - / 1 1 / 1 1 1 1 1
EXTERNAL CONNECTORS	VGA Sub D* / DVI-I / HDMI* / DisplayPort Audio In / Line out (or driver configuration) LAN (RJ-45) PS/2 Mouse / Keyboard USB 2.0 / USB 3.1 Gen1 Serial (RS232, FIFO, 16550 compatible) DC-IN (external input) 12 V/19-24 V @ 5 A max.	- / 1 / - / 1 1 / 1 2 1 / 1 4 / - 2 1

*) Via optional DVI-I / VGA interface connector resp. DVI-I / HDMI interface connector
**) Support for AC'97 audio frontpanel possible via BIOS Setup option
***) CPU fan = 4 pin PWM, system fan = 4 pin PWM or 3 pin (selectable via BIOS Setup)

▶ ORDERING INFORMATION

ARTICLE	PART NO.	DESCRIPTION
D3313-S1 mITX	F5120-V98	AMD embedded G-Series SOC, AMD Dual-Core GX-210HA (1.0 GHz/9 W)
D3313-S4 mITX	F5120-V104	AMD embedded G-Series SOC, AMD Dual-Core GX-222GC (2.22 GHz/15 W)
D3313-S6 mITX	F5120-V130	AMD embedded G-Series SOC, AMD Quad-Core GX-424CC (2.4 GHz@25 W)
ACCESSORIES		
ACTIVE HEATSINK (25 W) + BACKPLATE	F5000-C5	For D3313-S4/-S6
FANLESS HEATSINK (9 W) + BACKPLATE	F5000-C6	For D3313-S1
RISERCARD 1X PCIE X4	F5000-R6	D3318
SERIAL PORT CABLE	F5000-K5	400 mm, full size slot bracket
MINI PCIE TO M.2 ADAPTER	F5000-M3	D3436-S
AC ADAPTER	F5000-P3	19 V/65 W (E623)
DRIVE POWER CABLE	F5000-K1	For SATA HDD/SATA slimline DVD
SMARTCASE™ S710	F5000-J2	Chassis Kit
FANLESS HEATPIPE COOLER (15 W) + BACKPLATE	F5000-C7	For D3313-S1/-S4

▶ GLOBAL HEADQUARTERS

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