

MOTHERBOARDS AND SMARTCASE™



▶ LONG LIFECYCLE

Availability up to 7 years

▶ ENHANCED HARDWARE FEATURE SET

24/7 continuous operation at 60°C

▶ EXTENSIVE POWERFUL SOFTWARE TOOLS

Customization of Motherboards

MOTHERBOARDS AND SMARTCASE™



Kontron offers a comprehensive portfolio of high quality, longevity and competitive motherboards from small Mini-STX up to full-size ATX form factor. They provide the best technical requirements for various applications of different vertical markets like Industrial Automation, POS/POI, KIOSK, Digital Signage, Medical, Casino Gaming, Video Surveillance or Transportation. Kontron motherboards support latest processors and chipset platforms and utilize advanced technology components. They come up with an availability of up to 7 years from the release date, based on embedded key components. The Kontron motherboard portfolio has also included the "Designed by Fujitsu" motherboards, which still offer an outstanding quality "Made in Germany" and be available at an excellent price-performance ratio. In addition, a corresponding portfolio on chassis kit solutions (SMARTCASE™), add on cards and related 3rd party accessories is also available. Furthermore, Kontron offers many value-added services like detailed documentation, a professional life-cycle management and customizing tools.



SPECIAL FEATURES

The motherboard components of the industrial series are designed for long-term, continuous operations (24/7) in an extended temperature range and high system load. Industrial motherboards are specified for a temperature range between 0 and 60 ° Celsius.

About Kontron – Member of the S&T Group

Kontron is a global leader in IoT/Embedded Computing Technology (ECT). As a part of technology group S&T, Kontron offers a combined portfolio of secure hardware, middleware and services for Internet of Things (IoT) and Industry 4.0 applications. With its standard products and tailor-made solutions based on highly reliable state-of-the-art embedded technologies, Kontron provides secure and innovative applications for a variety of industries. As a result, customers benefit from accelerated time-to-market, reduced total cost of ownership, product longevity and the best fully integrated applications overall.

For more information, please visit: www.kontron.com

About the Intel® Partner Alliance

From modular components to market-ready systems, Intel and the over 1,000+ global member companies of the Intel® Partner Alliance provide scalable, interoperable solutions that accelerate deployment of intelligent devices and end-to-end analytics. Close collaboration with Intel and each other enables Alliance members to innovate with the latest IoT technologies, helping developers deliver first-in-market solutions.

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GLOBAL HEADQUARTERS

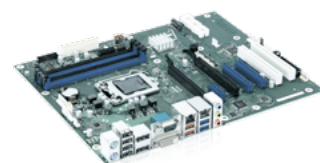
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MOTHERBOARDS

Industrial Series



NEW!

		D3646-S ATX	D3641-S µATX	D3633-S mITX	D3634-S mITX	D3543-S mITX	D3544-S mSTX	D3313-S1 mITX	D3713-V/R mITX
BASEBOARD	DIMENSIONS CHIPSET	9.6" x 12" (243.8 x 304.8 mm) Intel® C246	9.6" x 9.6" (243.8 x 243.8 mm) Intel® C246	6.7" x 6.7" (170 x 170 mm) Intel® Q370	6.7" x 6.7" (170 x 170 mm) Intel® H310	6.7" x 6.7" (170 x 170 mm) Intel® Embedded SoC	5.5" x 5.8" (140 x 148 mm) Intel Embedded SoC	6.7" x 6.7" (170 x 170 mm) Embedded G-Series SoC (eKabini)	6.7" x 6.7" (170 x 170 mm) AMD Embedded Ryzen™ V1000/ R1000 Series SoC
CPU SUPPORT	PROCESSOR	Intel® Core™ 8th/9th Gen & Xeon® Processor Series	Intel® Core™ 8th/9th Gen & Xeon® Processor Series	Intel® Core™ 8th/9th Gen. Processor Series	Intel® Core™ 8th/9th Gen. Processor Series	S1: Dual-Core J4005 SoC (2.70 GHz/10W) S2: Quad-Core J4105 SoC (2.50 GHz/10W) S3: Quad-Core J5005 SoC (2.80 GHz/10W) -	S1: Dual-Core J4005 SoC (2.70 GHz/10W) S2: Quad-Core J4105 SoC (2.50 GHz/10W) S3: Quad-Core J5005 SoC (2.80 GHz/10W) -	GX-210HA SOC 1.0GHz DualCore	V1: V1202B Dual-Core 2.3/3.2 GHz V2: V1605B Quad-Core 2.0/3.6 GHz V4: V1807B Quad-Core 3.35/3.8 GHz R1: R1102G Dual-Core 1.2/2.6 GHz R2: R1305G Dual-Core 1.5/2.8 GHz R4: R1606G Dual-Core 2.6/3.5 GHz
	PROCESSOR SOCKET MAX. PROCESSOR POWER CONSUMPTION	LG A1151 95 W	LG A1151 95 W	LG A1151 95 W	LG A1151 95 W	- 10 W	- 10 W	AMD FT3 9 W	AMD FP5 V1: 12W / 15W / 25W TDP V2: 12W / 15W / 25W TDP V4: 35W / 45W / 54W TDP R1: 6W TDP R2: 8W / 10W TDP R4: 12W / 15W / 25W TDP yes
	CPU TDP LIMITING OPTION HIGH EFFICIENCY CORE VOLTAGE REGULATOR	yes yes	yes yes	yes yes	yes yes	- yes	- yes	- yes	yes
MEMORY	MAX. CAPACITY/ NUMBER OF SOCKETS RAM SPEED	64 GByte/4 DDR4 2400/2666 ECC support	64 GByte/4 DDR4 2400/2666 ECC support	64 GByte SO/2 DDR4 2400/2666	32 GByte SO/2 DDR4 2400/2666	24 GByte SO/2 DDR4 2400	16 GByte SO/1 DDR4 2400	16 GByte SO/2 DDR3 1333	32 GByte/2 DDR4 2400/3200 ECC Option
GRAPHICS	ONBOARD GRAPHICS	Intel® UHD Graphics; DX 12	Intel® UHD Graphics; DX 12	Intel® UHD Graphics; DX 12	Intel® UHD Graphics; DX 12	S1: Intel® UHD Graphics 600 S2: Intel® UHD Graphics 600 S3: Intel® UHD Graphics 605 2x DP V 1.2; LVDS; eDP V 1.4	S1: Intel® UHD Graphics 600 S2: Intel® UHD Graphics 600 S3: Intel® UHD Graphics 605 2x DP V 1.2; LVDS; eDP V 1.4	AMD Radeon HD8210E	AMD Radeon™ Vega Graphics (within SoC)
	GRAPHICS INTERFACES	DVI-D/2x DP V1.2 Optional VGA-Ext. D3653	DVI-D/2x DP V1.2 Optional VGA-Ext. D3653	DVI-D/2x DP (V 1.2)/LVDS/eDP V 1.4 (2 Lanes Supported)	DVI-D/DP (V 1.2)/LVDS/eDP V 1.4 (2 Lanes Supported)	2x DP V 1.2; LVDS; eDP V 1.4	2x DP V 1.2; LVDS; eDP V 1.4	DVI-I/DP (V 1.2)/LVDS	up to 4x DP V1.4/ 1x eDP @ 4 lanes/1x LVDS
ETHERNET	ONBOARD LAN CONTROLLER IAMT/VPRO	Intel® i219LM Intel® i210AT yes/yes	Intel® i219LM Intel® i210AT yes/yes	Intel® i219LM Intel® i210AT yes/yes	Intel® i219LM Intel® i210AT -/-	Intel® i210 Realtek RTL8111G -/-	Intel i210 Realtek RTL8111G -/-	2x Realtek RTL8111G -/-	1x Intel i210 1x Realtek RTL8111H -/-
AUDIO	TYPE ONBOARD CONTROLLER BUZZER/SPEAKER/ S/PDIF HEADER	5.1 Multich. Realtek ALC671 yes/yes/yes	5.1 Multich. Realtek ALC671 yes/yes/yes	5.1 Multich. Realtek ALC671 yes/yes/yes	5.1 Multich. Realtek ALC671 yes/yes/yes	5.1 Multich. Realtek ALC671 yes/-/yes	5.1 Multich. Realtek ALC671 yes/-/yes	Stereo Realtek ALC671 yes/-/yes	Stereo Realtek ALC256 yes/yes/yes
EXTENSION SLOTS	PCIEX16/X8/X4/X1/PCI	2/2/-/1/2	2/-/-/2/-	1/-/-/1/-	1/-/-/1/-	-/1/-/1/-	-/1/-/1/-	-/1/-/1/-	-/1/-/1/-
	MINI-PCI/MSATA M.2 SSD (PCI AND/OR SATA)	- 1x M.2 Key M Socket (2280) for PCIe (4 lanes) based M.2 Modules	- 1x M.2 Key M Socket (2280) for PCIe (4 lanes) based M.2 Modules	yes/- 1x M.2 Key M Socket (2242/2260/2280) for PCIe (4 lanes) based M.2 Modules	yes/- 1x M.2 Key M Socket (2242/2260/2280) for PCIe (2 lanes) based M.2 Modules	yes/- PCIe (1 lane) & SATA; Key-B (2242/2260/2280)	-/- PCIe (1 lane) & SATA; Key-B (2242/2260/2280)	yes/yes -	yes/- 1x M.2 Key-M (PCIe x4) R-Series: M.2 Key-M socket shared with PCIe x4 slot (M.2 or PCIe slot usable; BIOS Setup option) 1x M.2 Key-B (SATA or PCIe)
	M.2 WLAN (KEY-E)	yes	yes	-	-	yes	yes	-	-
EXTERNAL/INTERNAL CONNECTORS	USB PORTS 3.1 GEN2/3.1 GEN1/2.0/STICK SOCKET SATA PORTS/SATA RAID COM PORT INT. HEADER/ EXT. // PARALLEL PORT INT. HEADER	2/4/6/yes 6/yes 3/1//yes	2/4/6/yes 6/yes 3/1//yes	2/4/6/yes 4/yes 1/1//	-/4/5/- 4/- 1/1//	-/4/6/yes 2/- 2/2//yes	-/4/5/- 2/- 2//	-/2/6/yes 2/- 1/2//internal	2/4/2/1 2/- 2/2//
	EXTERNAL SUPPLY INTERNAL SUPPLY	- ATX PSU	- ATX PSU	- ATX PSU or single 12 V	- ATX PSU or single 12 V	8-36 V	8-24V	12V/19-24V	8-36 V
POWER SUPPLY OPTIONS	EXTERNAL SUPPLY INTERNAL SUPPLY	- ATX PSU	- ATX PSU	- ATX PSU or single 12 V	- ATX PSU or single 12 V	8-36 V	8-24V	12V/19-24V	8-36 V
MISCELLANEOUS	FAN SPEED CUSTOMIZING	yes	yes	yes	yes	yes	yes	yes	yes
	TPM V2.0 CHASSIS INTRUSION SUPPORT	yes (Infineon) yes	yes (Infineon) yes	yes (Infineon) yes	yes (Intel®) yes	yes (Intel®) yes	yes (Intel®) yes	- yes	yes (AMD); Infineon module optional yes
	HW WATCHDOG MISCELLANEOUS	yes GPIO (8Bit) 4x COM	yes GPIO (8Bit) 4x COM	yes Onboard LVDS 24bit & eDP Mini-PCIe (Halfsize/Fullsize Support) & M.2 SSD (PCIe), GPIO (8Bit) COM: RS-232/-422/-485 Supported	yes Onboard LVDS 24bit & eDP Mini-PCIe (Halfsize/Fullsize Support) & M.2 SSD (PCIe), GPIO (8Bit) COM: RS-232/-422/-485 Supported	yes No Legacy OS Support 4x COM (1x incl. RS-232/-422/ -485 Support)	yes No Legacy OS Support COM: RS-232/-422/-485 Supported	yes mSATA & Mini-PCIe Socket	yes No Legacy OS Support 4x COM (1x incl. RS-232/-422/-485 Support) GPIO

MOTHERBOARDS

Extended Lifecycle Series

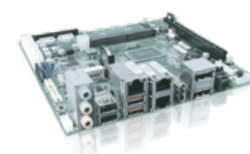
Designed by
Fujitsu



		D3598-B ATX	D3598-G ATX	D3642-B µATX	D3643-H µATX	D3644-B µATX	D3674-B Thin mITX	D3654-B mSTX	D3664-B mSTX
BASEBOARD	DIMENSIONS	9.6" x 12" (243.8 x 304.8 mm)	9.6" x 12" (243.8 x 304.8 mm)	9.6" x 9.6" (243.8 x 243.8 mm)	9.6" x 9.6" (243.8 x 243.8 mm)	9.6" x 9.6" (243.8 x 243.8 mm)	6.7" x 6.7" (170 x 170 mm)	5.5" x 5.8" (140 x 148 mm)	5.5" x 5.8" (140 x 148 mm)
	CHIPSET	Intel® C422	Intel® X299	Intel® Q370	Intel® B360	Intel® C246	Intel® H310	Intel® H310	Intel® Q370
CPU SUPPORT	PROCESSOR	Intel® Xeon® W-21xx/-22xx Processors Future Intel® Xeon® W Processors	Intel® Core™ i7-78xxX/-98xxX processors Intel® Core™ i9-79xxX/-98xxX/-99xxX/-109xxX Processors Future Intel® Core™ X-Series Processors	Intel® Core™ 8th/9th Gen Processor Series	Intel® Core™ 8th/9th Gen Processor Series	Intel® Core™ 8th/9th Gen & Xeon® Processor Series	Intel® Core™ 8th/9th Gen Processor Series	Intel® Core™ 8th/9th Gen Processor Series	Intel® Core™ 8th/9th Gen Processor Series
	PROCESSOR SOCKET	Intel LGA2066	Intel LGA2066	Intel® LGA1151	Intel® LGA1151	Intel® LGA1151	Intel LGA1151	Intel LGA1151	Intel LGA1151
	MAX. PROCESSOR POWER CONSUMPTION	165 W	165 W	95 W	95 W	95 W	65 W	65 W	65 W
	CPU TDP LIMITING OPTION	-	-	yes	yes	yes	yes	yes	yes
	HIGH EFFICIENCY CORE VOLTAGE REGULATOR	yes	yes	yes	yes	yes	yes	yes	yes
MEMORY	MAX. CAPACITY/ NUMBER OF SOCKETS	512 GByte/8 ECC Support	128 GByte/8	64 GByte/4	64 GByte/4	64 GByte/4	32 GByte SO/2	32 GByte SO/2	32 GByte SO/2
	RAM SPEED	DDR4 2666/2933 SDRAM (Quad Channel)	DDR4 2666/2933 SDRAM (Quad Channel)	DDR4 2400/2666	DDR4 2400/2666	DDR4 2400/2666 ECC support	DDR4 2400/2666	DDR4 2400/2666	DDR4 2400/2666
GRAPHICS	ONBOARD GRAPHICS	-	-	Intel® UHD Graphics; DX 12	Intel® UHD Graphics; DX 12	Intel® UHD Graphics; DX 12	Intel® UHD Graphics; DX 12	Intel® UHD Graphics; DX 12	Intel® UHD Graphics; DX 12
	GRAPHICS INTERFACES	-	-	DVI-D/2x DP V 1.2 Optional VGA-Ext. D3653	DVI-D/2x DP V 1.2 Optional VGA-Ext. D3453	DVI-D/2x DP V 1.2 Optional VGA-Ext. D3453	HDMI V 1.4/DP V 1.2	HDMI V 1.4/DP V 1.2	HDMI V 1.4/DP V 1.2 /USB 3.1 Gen2 Type-C (DP Alt Mode)
ETHERNET	ONBOARD LAN CONTROLLER	Intel® i219LM Intel® i210AT	Intel® i219LM Intel® i210AT	Intel® i219LM	Intel® i219LM	Intel® i219LM	Realtek RTL 8111G	Realtek RTL 8111E	Intel® i219LM
	IAMT/VPRO	yes/-	-/-	yes/yes	-/-	yes/yes	-/-	-/-	yes/(yes)
AUDIO	TYPE	5.1 Multich.	5.1 Multich.	5.1 Multich.	5.1 Multich.	5.1 Multich.	5.1 Multich.	Stereo	Stereo
	ONBOARD CONTROLLER	Realtek ALC671	Realtek ALC671	Realtek ALC671	Realtek ALC671	Realtek ALC671	Realtek ALC255	Realtek ALC671	Realtek ALC671
	BUZZER/SPEAKER/ S/PDIF HEADER	yes/yes/-	yes/yes/-	-/yes/-	-/yes/-	-/yes/-	-/yes (Stereo)/-	-/yes/-	-/yes/-
EXTENSION SLOTS	PCIe X16/X8/X4/ X1/PCI	2/5/-/-/-	2/5/-/-/-	2/-/-/2/-	2/-/-/2/-	2/-/-/2/-	-/-/-/-/-	-/-/-/-/-	-/-/-/-/-
	MINI-PCIe/MSATA	yes/-	yes/-	-	-	-	-	-	-
	M.2 SSD (PCIe AND/OR SATA)	PCIe @ 4lanes; Key-M (2280)	PCIe @ 4lanes; Key-M (2280)	1x M.2 Key M Socket (2280) for PCIe (4 lanes) based M.2 Modules	1x M.2 Key M Socket (2280/22110) for PCIe (4 lanes) based M.2 Modules	1x M.2 Key M Socket (2280) for PCIe (4 lanes) based M.2 Modules	1x M.2 Key M Socket (2280) for PCIe based M.2 Modules (4 lanes)	1x M.2 Key M Socket (2280) for PCIe based M.2 Modules (4 lanes)	1x M.2 Key M Socket (2280) for PCIe based M.2 Modules (4 lanes)
	M.2 WLAN (KEY-E)	-	-	yes	yes	yes	yes	yes	yes
EXTERNAL/ INTERNAL CONNECTORS	USB PORTS 3.1 GEN2/3.1 GEN1/2.0/ STICK SOCKET	2/10/2/yes	2/10/2/yes	2/6/4/yes	2/4/4/-	2/6/4/yes	-/4/5/-	-/4/4/-	2/5/2/-
	SATA PORTS/SATA RAID COM PORT INT. HEADER/ EXT. // PARALLEL PORT INT. HEADER	8/yes 1/- // -	8/yes 1/- // -	6/yes -/1//	4/- -/1//	6/yes -/1//	2/- 1/-//	1/- -/1//	1/- -/1//
POWER SUPPLY OPTIONS	EXTERNAL SUPPLY	-	-	-	-	-	19-24 V	19 V	19 V
	INTERNAL SUPPLY	ATX PSU	ATX PSU	ATX PSU	ATX PSU	ATX PSU	12 V or 19-24 V	-	-
MISCELLANEOUS	FAN SPEED CUSTOMIZING	yes	yes	yes	-	yes	yes	yes	yes
	TPM V2.0	yes (Infineon)	yes (Infineon)	yes (Infineon)	yes (Intel®)	yes (Infineon)	yes (Intel®)	yes (Intel®)	yes (Intel®)
	CHASSIS INTRUSION SUPPORT	yes	yes	yes	-	yes	yes	-	-
	HW WATCHDOG	yes	yes	yes	-	yes	yes	yes	yes
	MISCELLANEOUS	Intel® VROC Support USB 3.1 Gen2 Type-C, Win7 & Win10 Support 2x PCIe x16 (@16 Lanes) 1x USB Type-C (Rear)	Intel® VROC Support USB 3.1 Gen2 Type-C, Win10 Support 2x PCIe x16 (@16 Lanes) 1x USB Type-C (Rear)	-	M.2 - 2280/2210	-	Onboard LVDS 24bit, M.2 (WLAN/Bluetooth) Key E M.2 SSD - PCIe Key M, GPIO (8Bit) Dual-Range DC Power Supply 12 V/19-24 V	19 V DC Power Supply 1x USB Type-C (Front)	19 V DC Power Supply 1x USB Type-C (front) 1x USB Type-C (Rear, incl. DP Alt Mode)

MOTHERBOARDS

Industrial Series



mITX-CFL-5

PROCESSOR	Intel® 8th Generation Core™ CPUs, Intel® Xeon® E3 CPUs
SOC	-
MEMORY	2x DDR4 2400/2666 U-DIMM
GRAPHICS INTERFACE	1x eDP 1.4 (4096 x 2304 @ 60 Hz) 1x HDMI 1.4 (on rear, 4096 x 2160 @ 24 Hz / 2560 x 1600 @ 60 Hz) 2x DP (on rear, 4096 x 2304 @ 60 Hz)
SPECIAL	-
ETHERNET	3x GbE LAN (RJ45 on rear, 1x Intel® I219-LM, 1x Intel® I210-AT, 1x Intel® I211-AT)
ONBOARD FLASH	5.1 Multich.
SATA PORTS	2x SATA 3.0 (Raid 0/1 support)
MPCIe / MSATA SLOT	-
SERIAL PORTS	2x RS232/422/485 (DB9 on rear with 5 V/12 V power output support) 2x RS232 (by wafer)
LAN PORTS	3x GbE LAN (RJ45 on rear)
USB PORTS	6x USB 3.1 (rear, w/C246/Q370 chipset) 2x USB 3.1 (Trear, w/C242 chipset) 4x USB 3.0 (rear, w/C242 chipset) 4x USB 2.0 (by header)
AUDIO	Realtek ALC662 1x Line-out (by header) 1x Mic-in (by header) 1x S/PDIF (by header)
PCIe SLOTS	1x PCIe x16 (PEG Port)
TPM	TPM 2.0 support (Infineon SLB 9665)
I/O FEATURES	1x 8-bit DIO (by wafer)
POWER SUPPLY	DC 12 V (2x 4-pin ATX Connector)
MTBF	-
SAFETY	CE, FCC Class A
COOLING SOLUTIONS	1x Wafer for CPU Smart Fan 1x Wafer for System Smart Fan
OPERATING TEMPERATURE	0 °C ~ 60 °C (Standard) -20 °C ~ 70 °C (Extended)
REGUALTORY	-
DIMENSIONS	Mini-ITX (170 x 170 mm)
OPERATING SYSTEMS	Windows 10, Linux
TDP	65 W/95 W

mITX-DNV

PROCESSOR	Intel® Atom™ C3338, Intel® Atom™ C3538
SOC	-
MEMORY	1x DDR4 1866 UDIMM (Atom™ C3338 model) 2x DDR4 2133 UDIMM (Atom™ C3538 model)
GRAPHICS INTERFACE	RDC® C6139 1x VGA (on rear, 1024 x 768 @ 60 Hz)
SPECIAL	-
ETHERNET	6x GbE LAN (RJ45 on rear, 2x Intel® I210-AT, 4x Marvell® 88E1543)
ONBOARD FLASH	-
SATA PORTS	6x SATA 3.0
MPCIe / MSATA SLOT	1x mPCIe/mSATA
SERIAL PORTS	2x RS232/422/485 (1x DB9 on rear w/5 V/12 V output support, 1x by wafer)
LAN PORTS	6x GbE LAN (RJ45 on rear)
USB PORTS	4x USB 3.0 (Type A on rear from HUB) 2x USB 2.0 (by wafer from SoC)
AUDIO	-
PCIe SLOTS	1x mPCIe/mSATA, 1x PCIe x8 for expansion
TPM	TPM 2.0 support (Infineon SLB 9665)
I/O FEATURES	1x 8-bit DIO (by wafer) 1x PS/2 Keyboard/Mouse (by wafer)
POWER SUPPLY	2x 12-pin ATX connector
MTBF	-
SAFETY	CE, FCC Class A
COOLING SOLUTIONS	1x Wafer for CPU Smart Fan 1x Wafer for System Smart Fan
OPERATING TEMPERATURE	0 °C ~ 60 °C (Standard) -20 °C ~ 70 °C (Extended)
REGUALTORY	-
DIMENSIONS	Mini-ITX (170 x 170 mm)
OPERATING SYSTEMS	Windows Server, Linux
TDP	9-24 W

mITX-VR1000 2.0

PROCESSOR	AMD Ryzen™ V1807B (Quad Core, 4M Cache, up to 3.80 GHz, FP5, 45 W TDP) AMD Ryzen™ V1756B (Quad Core, 4M Cache, up to 3.60 GHz, FP5, 45 W TDP) AMD Ryzen™ V1605B (Quad Core, 4M Cache, up to 3.60 GHz, FP5, 15 W TDP) AMD Ryzen™ V1202B (Dual Core, 4M Cache, up to 3.20 GHz, FP5, 15 W TDP)
SOC	-
MEMORY	2x DDR4 3200 SO-DIMM up to 32 GByte (V1807B & V1756B) 2x DDR4 2400 SO-DIMM up to 32 GByte (V1605B & V1202B)
GRAPHICS INTERFACE	AMD Radeon™ Vega 11 (for models w/ V1807B) AMD Radeon™ Vega 8 (for models w/ V1756B, V1605B) AMD Radeon™ Vega 3 (for models w/ V1202B) Configurations 1: 1x LVDS (24-bit, 2-ch, 1920 x 1200 @ 60 Hz) 1x DP++ (on rear, 4096 x 2160 @ 60 Hz) 2x DP (on rear, 4096 x 2160 @ 60 Hz) Configuration 2: 2x DP++ (on rear, 4096 x 2160 @ 60 Hz) 2x DP (on rear, 4096 x 2160 @ 60 Hz)
SPECIAL	Quadruple display support
ETHERNET	3x GbE LAN (RJ45 on rear, 2x Intel® I211-AT, 1x Intel® I210-AT)
ONBOARD FLASH	-
SATA PORTS	1x SATA 3.0
MPCIe / MSATA SLOT	1x mPCIe (full size, mixed w/ PCIe x1, USB 2.0) 1x M.2 Key B (type 2242/ 2280, w/ USB 3.0, SATA & PCIe x2, NVMe support) 1x M.2 Key M (type 2280) 2x SIM Cage (1x Micro type linked to M.2 Key B, 1x by wafer linked to mPCIe)
SERIAL PORTS	2x RS232/422/485 (by header) 4x RS232 (by header)
LAN PORTS	3x GbE LAN (RJ45 on rear)
USB PORTS	2x USB 3.1 (Type A on rear) 5x USB 2.0 (2x Type A on rear, 3x by header)
AUDIO	Realtek ALC662 2x Speaker-out (3 W) 1x Line-in (on rear) 2x Line-out (1x on rear, 1x by header) 2x Mic-in (1x on rear, 1x by header) 2x S/PDIF (1x on rear, 1x by header)
PCIe SLOTS	1x PCIe x16 (x8 signal)
TPM	TPM 2.0 support (Infineon SLB 9665)
I/O FEATURES	1x 8-bit DIO (by wafer) 1x PS/2 Keyboard/Mouse (by wafer)
POWER SUPPLY	DC 12 V (2x 4-pin ATX Connector)
MTBF	-
SAFETY	CE Class B, FCC Class B, UL, RoHS, REACH
COOLING SOLUTIONS	1x Wafer for CPU Smart Fan 1x Wafer for System Smart Fan
OPERATING TEMPERATURE	0 °C ~ 60 °C (Standard) -40 °C ~ 85 °C (Extreme)
REGUALTORY	-
DIMENSIONS	Mini-ITX (170 x 170 mm)
OPERATING SYSTEMS	Windows 10, Linux
TDP	15 W/45 W

Learn more about Kontron motherboards:
<https://www.kontron.com/products/boards-and-standard-form-factors/motherboards>

SMARTCASE™ FAMILY



SMARTCASE™ S500

CHASSIS DATA	FORMFACTOR DIMENSIONS	Mini-STX 36 x 147 x 165 mm (W x H x D) 0.87 l black ~ 0.4 kg
CPU SUPPORT	PROCESSOR SOCKET	Intel® BGA
SUPPORTED MOTHERBOARDS		D3544-S1, D3544-S2, D3544-S3
ENVIRONMENTAL CONDITIONS	OPERATING TEMPERATURE	Passive heatsink (fanless): 0 °C - 40 °C* Active heatsink (with Fan): 0 °C - 50 °C*
	HUMIDITY	5 % - 85 %
CHASSIS/SYSTEM FAN SPECIFICATION	MTBF	-
	OPERATING TEMPERATURE	-
REQUIREMENTS FOR AC ADAPTER	DC INPUT DC PLUG	8-24 V +/- 5 % 2.5 mm/5.5 mm
APPROVALS & CERTIFICATIONS	CE CLASS B INDUSTRIAL IMMUNITY FCC CLASS B (VERIFIED)	yes yes yes
CHASSIS FEATURES	THEFT PROTECTION	Kensington lock support
	MOUNTING OPTIONS	Internal WLAN kit (Intel® M.2 WLAN module plus 2 antennas - integrated in chassis front) Internal speaker kit Rear COM port (incl. RS-232, RS-422, RS-485) Rear USB Type-C connector (USB 3.1 gen1) Wall Mount Kit, VESA Kit, DC-In Holder

SMARTCASE™ S520

CHASSIS DATA	FORMFACTOR DIMENSIONS	Mini-STX 36 x 147 x 165 mm (W x H x D) 0.87 l black ~ 0.4 kg
CPU SUPPORT	PROCESSOR SOCKET	Intel® LGA
SUPPORTED MOTHERBOARDS		D3654-B, D3664-B
ENVIRONMENTAL CONDITIONS	OPERATING TEMPERATURE	0 °C - 40 °C*
	HUMIDITY	5 % - 85 %
CHASSIS/SYSTEM FAN SPECIFICATION	MTBF	-
	OPERATING TEMPERATURE	-
REQUIREMENTS FOR AC ADAPTER	DC INPUT DC PLUG	19 V +/- 10 %/-15 % 2.5 mm/5.5 mm
APPROVALS & CERTIFICATIONS	CE CLASS B INDUSTRIAL IMMUNITY FCC CLASS B (VERIFIED)	yes yes yes
CHASSIS FEATURES	THEFT PROTECTION	Kensington lock support
	MOUNTING OPTIONS	Internal WLAN kit (Intel® M.2 WLAN module plus 2 antennas - integrated in chassis front) Internal speaker kit Wall Mount, VESA Kit, DC-in holder

SMARTCASE™ S700

CHASSIS DATA	FORMFACTOR DIMENSIONS	Mini-ITX 250 x 52 x 191 mm (W x H x D) 2.48 l satin black ~ 1 kg
CPU SUPPORT	PROCESSOR SOCKET	Intel® BGA
SUPPORTED MOTHERBOARDS		D3543-S1, D3543-S2, D3543-S3
ENVIRONMENTAL CONDITIONS	OPERATING TEMPERATURE	Passive heatsink (fanless): 0 °C - 35 °C* Active heatsink (with Fan): 0 °C - 50 °C*
	HUMIDITY	5 % - 85 %
CHASSIS/SYSTEM FAN SPECIFICATION	MTBF	-
	OPERATING TEMPERATURE	-
REQUIREMENTS FOR AC ADAPTER	DC INPUT DC PLUG	8-24 V +/- 5 % 2.5 mm/5.5 mm
APPROVALS & CERTIFICATIONS	CE CLASS B INDUSTRIAL IMMUNITY FCC CLASS B (VERIFIED)	yes yes yes
CHASSIS FEATURES	THEFT PROTECTION	Two front USB ports Kensington lock support Mechanical lock for DC-In connector Intrusion Support
	MOUNTING OPTIONS	Rear WLAN antenna PCIe riser (PCIe x4, low profile) Two rear COM ports (COM3, COM4); one port incl. RS-232, RS-422, RS-485 Rear USB Type-C connector (USB 3.1 Gen1)

SMARTCASE™ S710

CHASSIS DATA	FORMFACTOR DIMENSIONS	Mini-ITX 250 x 52 x 191 mm (W x H x D) 2.48 l anthracite ~ 1 kg
CPU SUPPORT	PROCESSOR SOCKET	AMD® BGA
SUPPORTED MOTHERBOARDS		D3313-S1, D3313-S4, D3313-S6
ENVIRONMENTAL CONDITIONS	OPERATING TEMPERATURE	Passive heatsink (fanless): 0 °C - 35 °C* Active heatsink (with Fan): 0 °C - 50 °C*
	HUMIDITY	5 % - 85 %
CHASSIS/SYSTEM FAN SPECIFICATION	MTBF	70.000 hours @ 40 °C PWM (4 pin), 40 x 40 x 10 mm 1750 - 5.500 rpm (nominal) Two ball bearing
	OPERATING TEMPERATURE	-
REQUIREMENTS FOR AC ADAPTER	DC INPUT DC PLUG	12 V +/- 10 %/19-24 V +/- 10 %/-15 % 2.5 mm/5.5 mm
APPROVALS & CERTIFICATIONS	CE CLASS B INDUSTRIAL IMMUNITY FCC CLASS B (VERIFIED)	yes - -
CHASSIS FEATURES	THEFT PROTECTION	Kensington lock support Mechanical lock for DC-In connector Intrusion Support
	MOUNTING OPTIONS	Rear WLAN antenna PCIe riser (low profile) Additional serial port 2.5" Drive

SMARTCASE™ S711

CHASSIS DATA	FORMFACTOR DIMENSIONS	Mini-ITX 250 x 52 x 191 mm (W x H x D) 2.48 l satin black ~ 1 kg
CPU SUPPORT	PROCESSOR SOCKET	AMD® BGA
SUPPORTED MOTHERBOARDS		D3713-R, D3713-V
ENVIRONMENTAL CONDITIONS	OPERATING TEMPERATURE	Passive heatsink (fanless): -10 °C ... +35 °C (max. 15 W TDP, vertical/horizontal pos.)* -10 °C ... +40 °C (max. 12 W TDP, vertical position only)* Active heatsink (with Fan): -10 °C ... +45 °C (max. 35 W TDP, vertical/horizontal pos.)* 5 % - 85 %
	HUMIDITY	5 % - 85 %
CHASSIS/SYSTEM FAN SPECIFICATION	MTBF	70.000 hours @ 40 °C -10 °C - 70 °C PWM (4 pin), 40 x 40 x 10mm 1750 - 5.500 rpm (nominal) Two ball bearing
	OPERATING TEMPERATURE	-
REQUIREMENTS FOR AC ADAPTER	DC INPUT DC PLUG	8 V-36 V (5 A max./65 W max.) Ø 2.5 mm/5.5 mm
APPROVALS & CERTIFICATIONS	CE CLASS B INDUSTRIAL IMMUNITY FCC CLASS B (VERIFIED)	yes yes -
CHASSIS FEATURES	THEFT PROTECTION	Two front USB ports Kensington lock support Mechanical lock for DC-In connector Intrusion Support
	MOUNTING OPTIONS	WLAN antenna via (RP-) SMA connector PCIe riser (PCIe x4, low profile) Two rear COM ports (COM3, COM4) 2.5" Drive (HDD/SSD)

SMARTCASE™ S720

CHASSIS DATA	FORMFACTOR DIMENSIONS	Mini-ITX 250 x 52 x 191 mm (W x H x D) 2.48 l black ~ 1 kg
CPU SUPPORT	PROCESSOR SOCKET	Intel® LGA
SUPPORTED MOTHERBOARDS		D3433-S, D3434-S, D3633-S, D3634-S
ENVIRONMENTAL CONDITIONS	OPERATING TEMPERATURE	0 °C - 45 °C*
	HUMIDITY	5 % - 85 %
CHASSIS/SYSTEM FAN SPECIFICATION	MTBF	70.000 hours @ 40 °C PWM (4 pin), 40 x 40 x 10 mm 1750 - 5.500 rpm (nominal) Two ball bearing
	OPERATING TEMPERATURE	-
REQUIREMENTS FOR AC ADAPTER	DC INPUT DC PLUG	12 V +/- 5 % 5.5 x 2.5 x 12 mm Lockable DC Plug (optional)
APPROVALS & CERTIFICATIONS	CE CLASS B INDUSTRIAL IMMUNITY FCC CLASS B (VERIFIED)	yes yes yes
CHASSIS FEATURES	THEFT PROTECTION	Kensington lock support Mechanical lock for DC-In connector Intrusion Support
	MOUNTING OPTIONS	Rear WLAN antenna PCIe riser (PCIe x4, low profile) Additional serial port 2.5" Drive

*Chassis ambient temperature; upper limit depends on system configuration



D3544-S mSTX



D3664-B mSTX



D3543-S mITX



D3313-S mITX



D3713-V/R mITX



D3433-S mITX



D3654-B mSTX



D3713-V/R mITX



D3434-S mITX



D3633-S mITX



D3634-S mITX