

KBox B-202-CFL



High-end computing with expansion capabilities –
for noise sensitive environments

- ▶ High performance: 8th/9th Gen Intel® Core™ i3/i5/i7
- ▶ Low noise design
- ▶ RAID with up to four storage devices
- ▶ Two PCIe expansion slots
- ▶ Removable 2.5" SSD

POSSIBILITIES START HERE

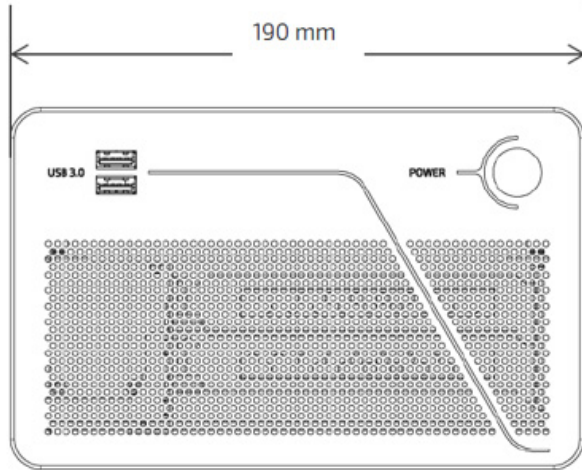


TECHNICAL INFORMATION

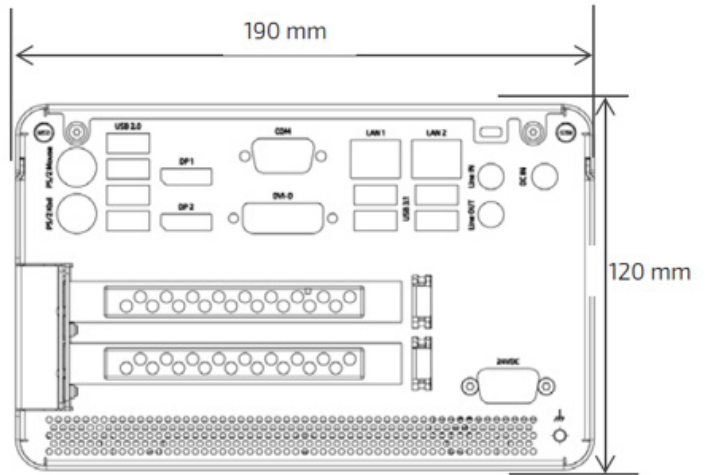
PROCESSOR SYSTEM	CPU	8th Gen Intel® Core™ i3/i5/i7 Socket LGA1151, max. 65 W TDP Intel® i3-8100 4x 3.6 GHz Intel® i5-8500 6x 3.0 GHz (Max. Turbo 4.1 GHz) Intel® i7-8700 6x 3.2 GHz (Max. Turbo 4.6 GHz) 9th Gen Intel® Core™ i3/i5/i7 Intel® i3-9100E 4x 3.1 GHz (Max. Turbo 3.7 GHz) Intel® i5-9500E 6x 3.0 GHz (Max. Turbo 4.2 GHz) Intel® i7-9700E 8x 2.6 GHz (Max. Turbo 4.4 GHz) SYSTEM CHIPSET Intel® Q370 Express Chipset (Smart line) Intel® H310 Express Chipset (Value line) BIOS AMI® Aptio 5.x
MEMORY	TECHNOLOGY CAPACITY SOCKET	DDR4-2666 MHz non ECC 8/16/32 GByte 2x SODIMM
GRAPHICS	GRAPHICS CORE MAX. RESOLUTION	Internal Intel® UHD 630 Graphics, DX12 4096x2304 @60 Hz
FRONT I/O	POWER ON/OFF USB	Power Button with status LED 2x USB 3.0
REAR I/O	GRAPHICS PORTS AUDIO	1x DVI-D, 2x DisplayPort V1.2 1x Line in, 1x Line out
	USB	Realtek ALC671, 5,1-channel, High Definition Audio Codec 4x USB 2.0, 2x USB 3.1 Gen 1, 2x USB 3.1 Gen 2 (Smart) 3x USB 2.0, 2x USB 3.1 Gen1 (Value) 2x LAN 10/100/1000 MBit/s
	ETHERNET CONTROLLER FEATURES	Intel® i219LM & i210AT AMT 12.0* / vPro Support*, Wake-on-LAN, PXE Support, BIOS MAC Address Display, Teaming Support
	PS/2 SERIAL PORTS	1x PS/2 Mouse, 1x PS/2 Keyboard 1x Serial (COM1, RS232)
INTERNAL CONNECTORS	M.2	1 x M.2 Key-M for PCIe-based SSD NVME modules; 4x PCIe Gen3 lanes (for 2280, 2260 or 2242 modules)
	mPCIe PCIe	1x Mini-PCIe supporting PCIe Gen3 & USB 2.0 (half-size / full size) 1x PCIe x16 or 2x PCIe x8* (full-height, half-length)
STORAGE	REMOVABLE DRIVE INTERNAL DRIVES	1x 2.5" SSD SATA III / SATA-600 Up to 2x M.2 SSD, up to 2x 2.5" SSD (RAID support*)
SOFTWARE SUPPORT	OPERATING SYSTEM	Windows® 10 IoT Enterprise LTSC 2019 pre-installed Ubuntu Linux on request
SECURITY	FEATURES	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), TPM V2.0 (Infineon SLB9670SPI; TCG compliant) Based on WIBU Systems on request
	KONTRON APPROTECT	
MIDDLEWARE	KEAPI	Kontron KEAPI board support package
POWER SUPPLY (EXTERNAL)	INPUT VOLTAGE	90 to 264 VAC (external power supply) 24 VDC (on request)
MECHANICAL	CONSTRUCTION FRONT COOLING DIMENSIONS (WXHxD) WEIGHT	Continuously hot-dip zinc coated mild steel sheet, according EN10215 Aluminum Internal silent fan 190 x 120 x 190 mm Approx. 3 kg
ENVIRONMENT	OPERATING TEMPERATURE STORAGE TEMPERATURE RELATIVE HUMIDITY OPERATING VIBRATION OPERATING SHOCK ALTITUDE NOISE LEVEL MTBF MAX. POWER	0 °C to +45 °C (32 °F to 113 °F) -20 °C to +80 °C (-4 °F to 176 °F) 93 % @ 40 °C, non-condensing 5-500 Hz, 1G acc. IEC 60068-2-6 half sine, 15 g, 11 ms acc. IEC 60068-2-27 5000 m (16400 ft) ≤ 34 dB(A) at 25 °C, Sea level, 1 m, Full CPU/GPU load 62257h @40 °C Main board 96 W max., SSD 4 W (varies by processor type) 150 W max. provided by the external power supply
APPROVALS	CE, CB, NRTL	EMC: EN 55032:2012, class B, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 55024:2010 NOTE: with external power supply provided by Kontron Safety: IEC 62368-1:2014, EN 62368-1:2014, UL 62-368-1:2014-12, CAN/CSA-C22.2 No. 62368-1:2014-12 NOTE: with external power supply provided by Kontron
POWER SUPPLY (EXTERNAL)	INPUT VOLTAGE RANGE	90 to 264 VAC (external power supply) 24 VDC (on request)

* Feature only supported by Smart Line (Q370 Chipset); Value line (H310 chipset)

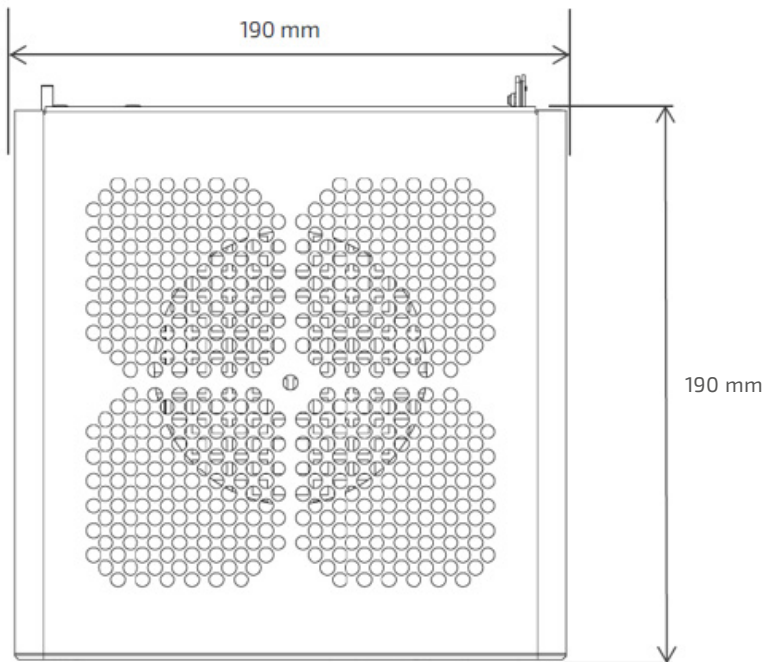
► DIMENSIONS



// Front Panel



// Rear Panel



// Top Cover



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ORDERING INFORMATION

ARTICLE	PART NO.	DESCRIPTION
KBOX B-202-CFL VERSION	KBox-B-202-CFL-V KBox-B-202-CFL-S	Value version Smart version
POWER SUPPLY (CATEGORY B)	A 1 D	External 150 W PSU Internal AC PSU (on project request) Internal 24 V DC PSU (on project request)
PROCESSOR (CATEGORY C)	- 1 - 2 - 3 - 4 - 5 - 6	i3-8100 Coffee Lake 4x 3.60 GHz, 65 W i5-8500 Coffee Lake 6x 3.00 GHz, 65 W i7-8700 Coffee Lake 6x 3.20 GHz, 65 W i3-9100E Coffee Lake 4x 3.10 GHz, 65 W i5-9500E Coffee Lake 6x 3.00 GHz, 65 W i7-9700E Coffee Lake 8x 2.60 GHz, 65 W
MEMORY (CATEGORY D)	1 2 3	8 GByte DDR4-2666 SODIMM 16 GByte DDR4-2666 SODIMM 32 GByte DDR4-2666 SODIMM
M.2 SSD (CATEGORY E)	0 1 2 3 4 5	No M.2 Storage 128 GByte M.2 SSD 256 GByte M.2 SSD 512 GByte M.2 SSD 1 TByte M.2 SSD 2 TByte M.2 SSD
2.5" SSD SLOT (CATEGORY F)	0 1 2 3 4 5 6 7	No 2.5" SSD Storage 512 GByte 2.5" SSD 1 TByte 2.5" SSD 2 TByte 2.5" SSD 2x 256 GByte M.2 SSD modules SATA RAID 1 2x 512 GByte 2.5" SSD (only Smart line) 2x 1 TByte 2.5" SSD (only Smart line) 2x 2 TByte 2.5" SSD (only Smart line)
mPCIe CARD (CATEGORY G)	- 0 - 1	No Wifi WIFI (on request)
RISER CARD (CATEGORY H)	0 1 2	No Riser Card 1x PCIe x16 2x PCIe x8 (only Smart line)
PCIe SLOT 1 (CATEGORY I)	0 1 2 3 4	No Expansion Card NVIDIA QUADRO P620 (PCIe x16) 2-Port 1 GBE RJ45 (PCIe x8) 2-Port 10 GBE RJ45 (PCIe x8) 4-Port 1 GbE RJ45 (PCIe x8)
PCIe SLOT 2 (SMART LINE ONLY) (CATEGORY J)	0 1 2 3	No Expansion Card 2-Port 1 GBE RJ45 (PCIe x8) 2-Port 10 GBE RJ45 (PCIe x8) 4-Port 1 GbE RJ45 (PCIe x8)
SOFTWARE (CATEGORY K)	- 0 - 1 - 2 - 5	No OS WIN10 IoT Enterprise Entry for i3/i5 WIN10 IoT Enterprise High End for i7 Linux Ubuntu 18.04 (on request)
MOUNTING (CATEGORY L)	- 0 - 1	Desktop Wall Mount

e.g. KBox B-202-CFL-S(B)-(CDEF)-(GHU)-(K)-(L)

e.g. KBox B-202-CFL-V(B)-(CDEF)-(GHU)-(K)-(L)

Notes: Letters in brackets are the category letters; due to mechanical limitations, configurations must be approved by sales support

ACCESSORIES

AC POWER SUPPLY	1064-8948	90 to 264 VAC, 150 W PSU
POWER CORD EU	0-0064-2173	Euro (Type A), 2.5 m
POWER CORD UK	0-0064-4173	UK (Type C), 2.5 m
POWER CORD US	0-0064-4317	US, 2 m

Global Headquarters

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