

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
- ▶ PCIe expansion slots for additional graphics or network cards
- ▶ Smart Storage version with 2 additional 2.5" SSD or a 3.5" HDD up to 12 TByte

POSSIBILITIES START HERE



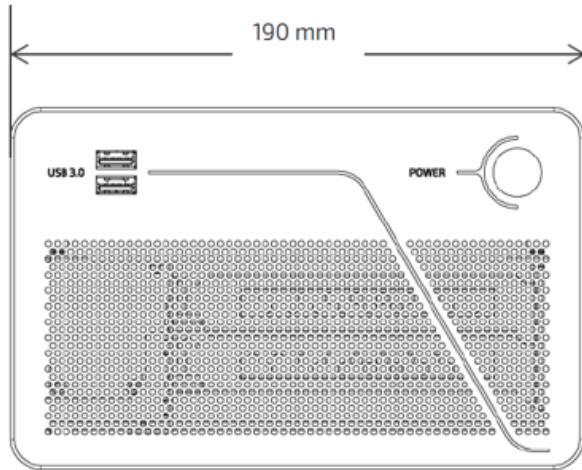
kontron
S&T Group

► TECHNICAL INFORMATION

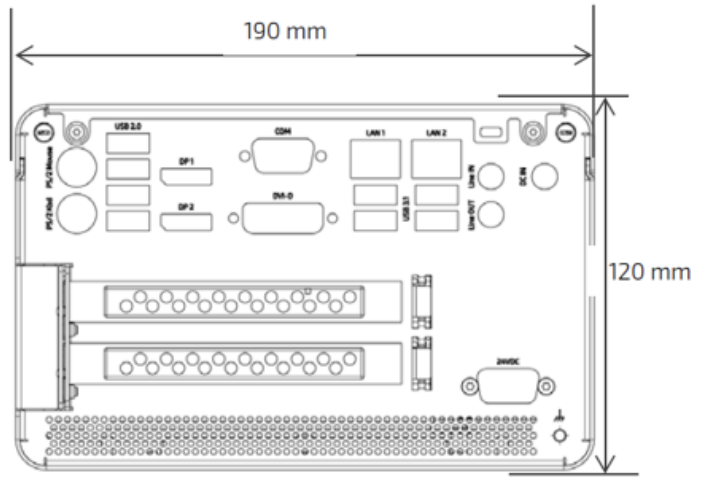
| | | VALUE / SMART | SMART STORAGE | SMART PERFORMANCE |
|--------------------------|--|---|---|---|
| PROCESSOR SYSTEM | CPU | 8th Gen Intel® Core™ i3/i5/i7 Socket LGA1151, max. 65 W TDP Intel® i3-8100 4x 3.6 GHz Intel® i5-8500 6x 3.0 GHz (Max. Turbo 4.1 GHz) Intel® i7-8700 6x 3.2 GHz (Max. Turbo 4.6 GHz) | | |
| | SYSTEM CHIPSET | 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) 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 | 1x DVI-D, 2x DisplayPort V1.2 | | |
| | AUDIO | 1x Line in, 1x Line out Realtek ALC671, 5.1-channel, High Definition Audio Codec | | |
| | USB | 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) | | |
| | ETHERNET CONTROLLER FEATURES | 2x LAN 10/100/1000 Mbit/s Intel® i219LM & i210AT AMT 12.0* / vPro Support*, Wake-on-LAN, PXE Support, BIOS MAC Address Display, Teaming Support | | |
| INTERNAL EXPANSION SLOTS | PS/2 SERIAL PORTS | 1x PS/2 Mouse, 1x PS/2 Keyboard 1x Serial (COM1, RS232) | | |
| | M.2 | 1x M.2 Key-M (2242/2260/2280) for PCIe-based SSD NVME modules; 4x PCIe Gen3 | | |
| | mPCIe PCIe | 1x Mini-PCIe supporting PCIe Gen3 & USB2.0 (half-size / full size) 1x PCIe x16 or 2x PCIe x8* (full-height, half-length) | 1x PCIe x16 (full-height, half-length) | 1x PCIe x16 (full-height, half-length) |
| STORAGE | REMOVABLE DRIVE | 1x 2.5" SSD SATA III/SATA-600 | Up to 3x 2.5" SSD SATA III/SATA-600 | 1x 2.5" SSD SATA III/SATA-600 |
| | INTERNAL DRIVES | Up to 3x M.2 SSD | Up to 3x M.2 SSD, 2x 2.5"SSD/1x 3.5" HDD RAID 0/1 | Up to 3x M.2 SSD |
| SOFTWARE SUPPORT | OPERATING SYSTEM | Windows® 10 IoT Enterprise LTSC 2019 pre-installed Linux | | |
| 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) | | |
| MIDDLEWARE | KEAPI | Kontron KEAPI board support package | | |
| POWER SUPPLY (EXTERNAL) | INPUT VOLTAGE | 90 to 264 VAC (150 W) 24 VDC (160 W) | 90 to 264 VAC (150 W) 24 VDC (160 W) | 90 to 264 VAC (270 W) |
| 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) 250 W max. provided by the external power supply on Smart Performance | | |
| 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 | | |

* Feature only supported by Q370 Chipset

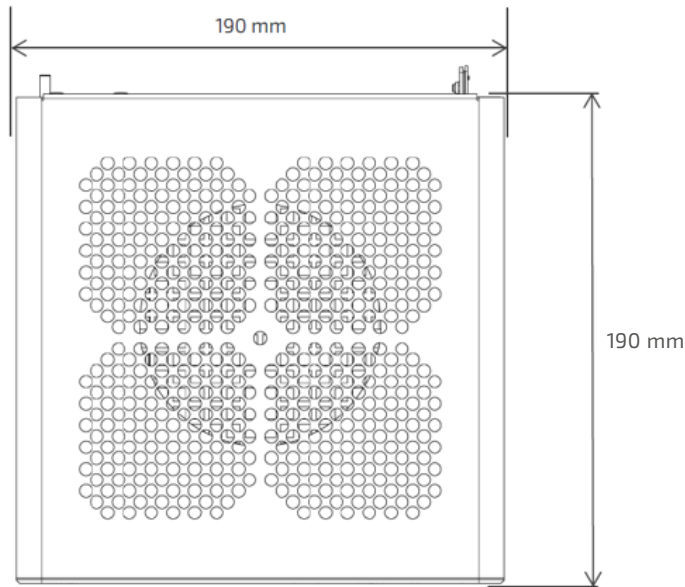
► DIMENSIONS



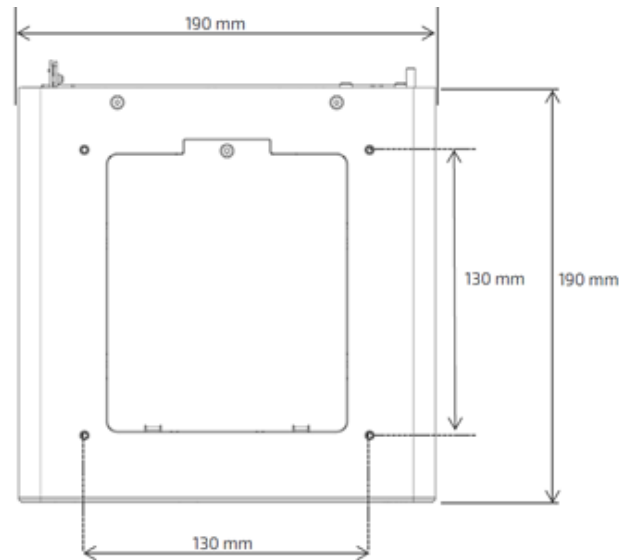
// Front Panel



// Rear Panel (example)



// Top Cover



// Bottom Side

► ORDERING INFORMATION

| ARTICLE | PART NO. SMART / VALUE LINE | SMART STORAGE | SMART PERFORMANCE | DESCRIPTION |
|--|----------------------------------|---|----------------------------------|---|
| KBOX B-202-CFL | B-202-CFL-V B-202-CFL-S | B-202-CFL-T | B-202-CFL-P | Value version (H310) Smart version (Q370) Smart Storage (Q370) Smart Performance (Q370) |
| POWER SUPPLY (CATEGORY B) | A I (on request) D | A I D | P | External PSU 240 V/150 W PSU AC internal 24 VDC internal PSU 160 W External PSU AC 240 V/270 W |
| PROCESSOR (CATEGORY C) | -1 -2 -3 -4 -5 -6 | -1 -2 -3 -4 -5 -6 | -1 -2 -3 -4 -5 -6 | i3-8100 4x 3.60 GHz, 65 W i5-8500 6x 3.00 GHz, 65 W i7-8700 6x 3.20 GHz, 65 W i3-9100E 4x 3.10 GHz, 65 W i5-9500E 6x 3.00 GHz, 65 W i7-9700E 8x 2.60 GHz, 65 W |
| MEMORY (CATEGORY D) | 1 2 3 | 1 2 3 | 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 | 0 1 2 3 4 5 | 0 1 2 3 4 5 | No M.2 Storage 128 GByte M.2 SSD, 2242 3D TLC 256 GByte M.2 SSD, 2242 3D TLC 512 GByte M.2 SSD, 2280 3D TLC 1 TByte M.2 SSD, 2280 3D TLC 2 TByte M.2 SSD, 2280 3D TLC |
| 2.5" SSD SLOT (CATEGORY F) | 0 1 2 3 4 5 | 0 1 2 3 4 5 | 0 1 2 3 4 5 | No 2.5" SSD Storage 512 GByte 2.5" SSD 3D TLC 1 TByte 2.5" SSD 3D TLC 2 TByte 2.5" SSD 3D TLC 2x 256 GByte M.2 SSD modules SATA RAID 1 2x 512 GByte M.2 SSD modules SATA RAID 1 |
| DRIVE EXPANSION (CATEGORY F) | | A B C D E F G H I J K L M | | No Drive Expansion 2x2.5" SSD 512 GB 3D TLC 2x2.5" SSD 1 TB 3D TLC 2x SSD 2 TB 3D TLC 3.5" HDD 4 TB 3.5" HDD 8 TB 3.5" HDD 12 TB DA225 2x2.5" SSD 512 GB 3D TLC DA225 2x2.5" SSD 1 TB 3D TLC DA225 2x2.5" SSD 2 TB 3D TLC DA225 RAID 2x2.5" SSD 512 GB 3D TLC DA225 RAID 2x2.5" SSD 1 TB 3D TLC DA225 RAID 2x2.5" SSD 2 TB 3D TLC |
| mPCIe CARD (CATEGORY G) | -0 -1 | -0 -1 | -0 -1 | No WiFi WiFi |
| RISER CARD (CATEGORY H) | 0 1 2 | 0 1 1 | 0 1 1 | No Riser Card 1x PCIe x16 2x PCIe x8 (only Smart line) |
| PCIe SLOT 1 (CATEGORY I) | 0 1 2 3 4 | 0 1 2 3 4 | 0 | No Expansion Card NVIDIA QUADRO P620 (PCIe x16) 2-Port 1GbBE RJ45 (PCIe x8) 2-Port 10GbBE 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 1GbBE RJ45 (PCIe x8) 2-Port 10GbBE RJ45 (PCIe x8) 4-Port 1 GbE RJ45 (PCIe x8) |
| SOFTWARE (CATEGORY K) | -0 -1 -2 -5 | -0 -1 -2 -5 | -0 -1 -2 -5 | No OS WIN10 IoT Enterprise Entry for i3/i5 WIN10 IoT Enterprise High End for i7 Linux |
| MOUNTING (CATEGORY L) | -0 -1 | -0 -1 | -0 -1 | Desktop Wall Mount |

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

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

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

▶ ORDERING INFORMATION

| ARTICLE | PART NO. | DESCRIPTION |
|--------------------|-------------|--------------------------|
| 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

Kontron Europe GmbH

Gutenbergstraße 2
85737 Ismaning, Germany
Tel.: +49 821 4086-0
Fax: +49 821 4086-111
info@kontron.com

www.kontron.com