



- ▶ **Smart Automation**  
Industrial IoT applications, edge computing
- ▶ **Maintenance free**  
Reducing TCO – driving system availability
- ▶ **Forever young**  
Maximum innovation – minimum investment

Kontron's KBox family offers intelligent gateways for IoT edge applications including fieldbus connectivity. For control, inspection and data collection tasks on the factory floor powerful and maintenance-free Box PCs with a maximum of flexibility and expansion capabilities are provided.

The KBox A-Series is designed for a variety of applications in the industrial environment. It comprises intelligent IoT gateways for edge analytics or remote monitoring as well as systems for control and process optimization. All systems feature a fanless design which ensures a significantly prolonged lifespan and high system availability.



### ▶ KBox A-Series Compact and flexible Box PC for IoT Gateway Applications

- ▶ Intelligent IoT gateways for edge analytics, data acquisition & remote monitoring
- ▶ Scalable processor performance from Intel Atom® to 11th Gen Intel® Core™ i series
- ▶ Compact, fanless system designs
- ▶ Broad range of interfaces and expansion capabilities
- ▶ Options for Fieldbus, WIFI, LTE/5G
- ▶ Various mounting options e.g. DIN rail, desktop, wallmount, cabinet

The KBox B-Series is based on Kontron's mini-ITX motherboard family offering highest performance with desktop CPUs. Kontron's KBox B-Series can be used for various applications such as medical, gaming, process control, wherever high performance is needed.



### ▶ KBox B-Series High Performance Embedded Box PC with Versatile Expansion Capabilities

- ▶ High processing capability: 13th Gen Intel® Core™ i3/i5/i7/i9
- ▶ Whisper quiet operation <34 dB (A)
- ▶ Small form factor based on mITX motherboard
- ▶ Several storage options incl. RAID
- ▶ PCIe expansion slots for graphics, network cards or other PCIe cards
- ▶ Smart Storage version with additional 2.5" SSD or 3.5" HDD up to 12 TByte
- ▶ WiFi option

Kontron's KBox C-Series is designed for the industrial control cabinet environment. Based on COMe modules the KBox C-Series is highly scalable and ensures simple upgrades whenever needed. The availability of different housing options guarantees mounting even when space is limited.

With its broad range of interfaces, various storage capabilities and expansion slots, the KBox C-Series maximizes flexibility and eases adaptation to the specific application needs.



### ▶ KBox C-Series Powerful Industrial Box PC for Control, Inspection & Data Collection

- ▶ Processor performance up to 11th Generation Intel® Core™ or Xeon® W for demanding applications
- ▶ Highest system availability: Fanless up to 65 °C, redundant PSU option, recovery button, goldcap backup
- ▶ Optimized for control applications: Fieldbus integration & NVRAM option
- ▶ High flexibility and expandability: Up to 4x PCIe Slots, mPCIe & M.2, 4x GbE/2.5 GbE, 6x USB, up to 3x DP, ...



## About Kontron

Kontron is a global leader in IoT/Embedded Computing Technology (ECT) and offers individual solutions in the areas of Internet of Things (IoT) and Industry 4.0 through a combined portfolio of hardware, software and services. With its standard and customized products based on highly reliable state-of-the-art technologies, Kontron provides secure and innovative applications for a wide variety of industries. As a result, customers benefit from accelerated time-to-market, lower total cost of ownership, extended product lifecycles and the best fully integrated applications.

For more information, please visit: [www.kontron.com](http://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.

Intel and Atom are registered trademarks of Intel Corporation in the U.S. and other countries.



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# KBox Family

## IoT Gateways/Embedded Box PC



<b>PLATFORM</b>	<b>KBox A-203-sXAL4</b>
<b>MAINTENANCE-FREE</b>	5MARC™ 1) 2) 4) 6)

<b>KBox A-250</b>	<b>KBox A-150-APL</b>	<b>KBox A-151-EKL</b>
p1TX 1) 4) 6)	3.5" 5BC 1) 4) 6)	3.5" 5BC 1) 4) 6)

<b>KBox A-150-WKL</b>	<b>KBox A-151-TGL</b>	<b>KBox B-201-CFL</b>
3.5" 5BC 1) 4) 6)	3.5" 5BC 1) 4) 6)	m1TX 2) 4) 6)

<b>KBox B-202-CFL</b>	<b>KBox B-201-RPL</b>	<b>KBox B-202-RPL</b>
m1TX 2) 4) 6)	m1TX 2) 4) 6)	m1TX 2) 4) 6)

<b>KBox C-103-CFL Series</b>
COM Express™ 1) 2) 3) 4) 5) 6)

<b>KBox C-104-TGL Series</b>
COM Express™ 1) 2) 3) 4) 5) 6)

<b>Processor System</b>	<b>CPU</b>	Intel Atom® E3930/E3950
	<b>Max. Number of Cores</b>	Quad-Core
	<b>Max. Speed</b>	1.6 GHz/2.0 GHz (Burst)
	<b>System Chipset</b>	Integrated
	<b>BIOS</b>	AMI® Aptio V5
<b>Memory</b>	<b>Memory Technology</b>	DDR4
	<b>Max. Capacity</b>	8 GByte
	<b>Socket</b>	Soldered
<b>Graphics</b>	<b>Graphics Core</b>	Intel® HD Graphics 500
	<b>Max. resolution</b>	4096 x 2160
	<b>HDMI/DVI/DP/VGA</b>	0/0/1/0
	<b>Controller</b>	2x GbE: 2x Intel® I210-IT, 1x Fast Ethernet
<b>Ethernet</b>	<b>IEEE1588</b>	yes
	<b>Teaming/Failover</b>	yes/yes
<b>Fieldbus</b>	<b>Standard</b>	PROFIBUS*
<b>Miscellaneous Features</b>	<b>RS232 / RS422 / RS485</b>	1 (2*)/1/1
	<b>USB Type-C</b>	-
	<b>USB 3.0/2.0</b>	2/0
	<b>Audio</b>	-
	<b>Others</b>	-
<b>Expansion</b>	<b>Watchdog timer</b>	yes
	<b>Mini PCIe/PCIe/M.2</b>	2/0/0
	<b>SIM CARD</b>	yes
<b>Storage</b>	<b>2.5" SSD</b>	1
	<b>mSATA/M.2</b>	1/0
	<b>mSD Card</b>	1
	<b>Onboard Flash</b>	1
<b>Software Support</b>	<b>Microsoft Windows</b>	Win 10 IoT LTSC 2019
	<b>Linux</b>	yes
<b>Security</b>	<b>Security</b>	TPM 2.0
<b>Middleware</b>	<b>Hypervisor</b>	on request
	<b>KEAPI</b>	yes
<b>Power</b>	<b>Input Voltage</b>	24 V DC (+/- 20 %)
	<b>AC Adapter</b>	External AC/DC adapter optional, 90 to 264 V AC, 70 W
<b>Mechanical</b>	<b>Mounting</b>	DIN RAIL, Desktop, Cabinet, Book mount
	<b>Dimension (W x H x D)</b>	150 x 58 x 100 mm (5.91" x 2.28" x 3.94")
<b>Environment</b>	<b>Weight</b>	1 kg (2.20 lbs)
	<b>Cooling</b>	Fanless
	<b>Operating Temperature</b>	0 °C to +50 °C (32 °F to 140 °F)
	<b>Relative Humidity</b>	93 % @ 40 °C non-condensing
	<b>Vibration</b>	Vibration operational: IEC 60068-2-6: 10-500 Hz, 1 G
	<b>Shock</b>	Shock operational: IEC 60068-2-27: half sine 11 ms 15 G
<b>Approvals</b>	<b>IP Protection Class</b>	IP 20
	<b>Certifications</b>	UL/CB/FCC/CE/UKCA

<b>Processor System</b>	<b>CPU</b>	Intel Atom® E3930/E3950, Celeron® J3455, Pentium® N3350/ N4200
	<b>Max. Number of Cores</b>	Quad-Core
	<b>Max. Speed</b>	1.6 GHz/2.0 GHz (Burst)
	<b>System Chipset</b>	Integrated
	<b>BIOS</b>	AMI® Aptio V5
<b>Memory</b>	<b>Memory Technology</b>	DDR4
	<b>Max. Capacity</b>	8 GByte
	<b>Socket</b>	2x SODIMM
<b>Graphics</b>	<b>Graphics Core</b>	Intel® HD Graphics 500
	<b>Max. resolution</b>	4096 x 2160
	<b>HDMI/DVI/DP/VGA</b>	0/0/1/0
	<b>Controller</b>	1x GbE: Intel® I210-IT, 1x Fast Ethernet
<b>Ethernet</b>	<b>IEEE1588</b>	yes
	<b>Teaming/Failover</b>	yes/yes
<b>Fieldbus</b>	<b>Standard</b>	PROFIBUS*
<b>Miscellaneous Features</b>	<b>RS232 / RS422 / RS485</b>	1 (2*)/1/1
	<b>USB Type-C</b>	-
	<b>USB 3.0/2.0</b>	2/0
	<b>Audio</b>	4/0
	<b>Others</b>	option
<b>Expansion</b>	<b>Watchdog timer</b>	yes
	<b>Mini PCIe/PCIe/M.2</b>	2/0/0
	<b>SIM CARD</b>	yes
<b>Storage</b>	<b>2.5" SSD</b>	1
	<b>mSATA/M.2</b>	1/1
	<b>mSD Card</b>	1
	<b>Onboard Flash</b>	1
<b>Software Support</b>	<b>Microsoft Windows</b>	Win 10 IoT LTSC 2019
	<b>Linux</b>	yes
<b>Security</b>	<b>Security</b>	TPM 2.0
<b>Middleware</b>	<b>Hypervisor</b>	on request
	<b>KEAPI</b>	yes
<b>Power</b>	<b>Input Voltage</b>	24 V DC (+/- 20 %)
	<b>AC Adapter</b>	External AC/DC adapter optional, 90 to 264 V AC, 70 W
<b>Mechanical</b>	<b>Mounting</b>	DIN RAIL, Desktop, Wallmount, Cabinet
	<b>Dimension (W x H x D)</b>	150 x 58 x 100 mm (5.91" x 2.28" x 3.94")
<b>Environment</b>	<b>Weight</b>	1.3 kg (2.9 lbs)
	<b>Cooling</b>	Fanless
	<b>Operating Temperature</b>	0 °C to +40 °C/+50 °C with opt. heat sink (32 °F to 122 °F)
	<b>Relative Humidity</b>	10 % - 90 % @39 °C (non-condensing)
	<b>Vibration</b>	Vibration operational: IEC 60068-2-6: 10-500 Hz, 1 G
	<b>Shock</b>	Shock operational: IEC 60068-2-27: half sine 11 ms 15 G
<b>Approvals</b>	<b>IP Protection Class</b>	IP 20
	<b>Certifications</b>	UL/CB/FCC/CE/UKCA

<b>Processor System</b>	<b>CPU</b>	Intel Atom® x6212RE/x6425RE or Celeron® J6413
	<b>Max. Number of Cores</b>	Quad-Core
	<b>Max. Speed</b>	1.9 GHz
	<b>System Chipset</b>	Integrated
	<b>BIOS</b>	AMI® Aptio V5
<b>Memory</b>	<b>Memory Technology</b>	DDR4
	<b>Max. Capacity</b>	32 GByte
	<b>Socket</b>	2x SODIMM
<b>Graphics</b>	<b>Graphics Core</b>	Intel® UHD Graphics for 10th Gen Intel® Core™ Processors
	<b>Max. resolution</b>	4096 x 2304
	<b>HDMI/DVI/DP/VGA</b>	0/0/2/0
	<b>Controller</b>	2x 2.5 GbE: 2x Intel® I226-IT, 1x 2.5 GbE*
<b>Ethernet</b>	<b>IEEE1588</b>	yes
	<b>Teaming/Failover</b>	yes/yes
<b>Fieldbus</b>	<b>Standard</b>	CAN*/EtherCAT*
<b>Miscellaneous Features</b>	<b>RS232 / RS422 / RS485</b>	2 (4*)/2/2
	<b>USB Type-C</b>	-
	<b>USB 3.0/2.0</b>	4/0
	<b>Audio</b>	option
	<b>Others</b>	Line-Out*, Speaker Out*, Power Button & LED, 8x Digital I/Os*
<b>Expansion</b>	<b>Watchdog timer</b>	yes
	<b>Mini PCIe/PCIe/M.2</b>	0/0/2
	<b>SIM CARD</b>	yes
<b>Storage</b>	<b>2.5" SSD</b>	2
	<b>mSATA/M.2</b>	0/1
	<b>mSD Card</b>	-
	<b>Onboard Flash</b>	-
<b>Software Support</b>	<b>Microsoft Windows</b>	Win 10 IoT LTSC 2021
	<b>Linux</b>	yes
<b>Security</b>	<b>Security</b>	TPM 2.0
<b>Middleware</b>	<b>Hypervisor</b>	on request
	<b>KEAPI</b>	yes
<b>Power</b>	<b>Input Voltage</b>	24 V DC (9...30 V DC)
	<b>AC Adapter</b>	External AC/DC adapter optional, 90 to 264 V AC, 65 W
<b>Mechanical</b>	<b>Mounting</b>	DIN RAIL, Book mount
	<b>Dimension (W x H x D)</b>	180 x 70 x 123 mm (7.09" x 2.76" x 4.84")
<b>Environment</b>	<b>Weight</b>	approx 2.0 kg (4.41 lbs)
	<b>Cooling</b>	Fanless
	<b>Operating Temperature</b>	Standard: 0 °C to +40 °C/+50 °C with opt. heat sink (32 °F to 140 °F) Extended: -40 °C to +60 °C (-40 °F to 140 °F)
	<b>Relative Humidity</b>	93 % @ 40 °C non-condensing
	<b>Vibration</b>	Vibration operational: IEC 60068-2-6: 10-150 Hz, 1 G
	<b>Shock</b>	Shock operational: IEC 60068-2-27: half sine 11 ms 15 G
<b>Approvals</b>	<b>IP Protection Class</b>	IP 20
	<b>Certifications</b>	UL/CB/FCC/CE/UKCA

<b>Processor System</b>	<b>CPU</b>	8th/9th Gen Intel® Core™ i3-8145UE/i5-8365UE/i7-8665UE or Celeron® 4305UE
	<b>Max. Number of Cores</b>	Quad-Core
	<b>Max. Speed</b>	1.7 GHz/4.4 GHz (Burst)
	<b>System Chipset</b>	Integrated
	<b>BIOS</b>	AMI® Aptio V5
<b>Memory</b>	<b>Memory Technology</b>	DDR4
	<b>Max. Capacity</b>	32 GByte
	<b>Socket</b>	2x SODIMM
<b>Graphics</b>	<b>Graphics Core</b>	Intel® Core™ i3/i5/i7: Intel® UHD Graphics 620 Intel® Celeron®: Intel® UHD Graphics 610
	<b>Max. resolution</b>	4096 x 2304
	<b>HDMI/DVI/DP/VGA</b>	0/1/2/0
	<b>Controller</b>	2x GbE: Intel® I210-IT, 1x I219-LM
<b>Ethernet</b>	<b>IEEE1588</b>	yes
	<b>Teaming/Failover</b>	yes/yes
<b>Fieldbus</b>	<b>Standard</b>	CAN*/EtherCAT*
<b>Miscellaneous Features</b>	<b>RS232 / RS422 / RS485</b>	2 (4*)/2/2
	<b>USB Type-C</b>	-
	<b>USB 3.0/2.0</b>	4/0
	<b>Audio</b>	option
	<b>Others</b>	Line-Out*, Speaker Out*, Power Button & LED, 8x Digital I/Os*
<b>Expansion</b>	<b>Watchdog timer</b>	yes
	<b>Mini PCIe/PCIe/M.2</b>	0/0/3
	<b>SIM CARD</b>	yes
<b>Storage</b>	<b>2.5" SSD</b>	2
	<b>mSATA/M.2</b>	0/2
	<b>mSD Card</b>	-
	<b>Onboard Flash</b>	-
<b>Software Support</b>	<b>Microsoft Windows</b>	Win 10 IoT LTSC 2019
	<b>Linux</b>	yes
<b>Security</b>	<b>Security</b>	TPM 2.0
<b>Middleware</b>	<b>Hypervisor</b>	on request
	<b>KEAPI</b>	yes
<b>Power</b>	<b>Input Voltage</b>	24 V DC (9...30 V DC)
	<b>AC Adapter</b>	External AC/DC adapter optional, 90 to 264 V AC, 65 W
<b>Mechanical</b>	<b>Mounting</b>	Desktop, Wallmount, VESA, Vertical Stand
	<b>Dimension (W x H x D)</b>	190 x 60 x 190 mm (7.48" x 2.36" x 7.48")
<b>Environment</b>	<b>Weight</b>	2 kg (4.4 lbs)
	<b>Cooling</b>	With fan
	<b>Operating Temperature</b>	Standard: 0 °C to +45 °C (32 °F to 113 °F) Extended: -40 °C to +60 °C (-40 °F to 140 °F)
	<b>Relative Humidity</b>	93 % @ 40 °C non-condensing
	<b>Vibration</b>	Vibration operational: IEC 60068-2-6: 5-500 Hz, 1G
	<b>Shock</b>	Shock operational: IEC 60068-2-27: half sine 11 ms 15 G
<b>Approvals</b>	<b>IP Protection Class</b>	IP40 on top/IP30 on sides
	<b>Certifications</b>	CE/UKCA/CB/NRTL

<b>Processor System</b>	<b>CPU</b>	8th/9th Gen Intel® Celeron® G4930E, Core™ i3-9100H/i5-8400H/i7-9850HE, Xeon® E-2276ME
	<b>Max. Number of Cores</b>	Octa-Core
	<b>Max. Speed</b>	2.6 GHz/4.4 GHz (Burst)
	<b>System Chipset</b>	Intel® H310 or Q370
	<b>BIOS</b>	AMI® Aptio 5.x
<b>Memory</b>	<b>Memory Technology</b>	DDR5
	<b>Max. Capacity</b>	32 GByte
	<b>Socket</b>	2x SODIMM
<b>Graphics</b>	<b>Graphics Core</b>	Intel® UHD Graphics 630, DX12
	<b>Max. resolution</b>	4096 x 2304
	<b>HDMI/DVI/DP/VGA</b>	0/1/2/0
	<b>Controller</b>	2x GbE: 1x Intel® I210-AT, 1x I219-LM
<b>Ethernet</b>	<b>IEEE1588</b>	yes
	<b>Teaming/Failover</b>	yes/yes
<b>Fieldbus</b>	<b>Standard</b>	CAN, 1x PROFIBUS/PROFINET/EtherCAT*
<b>Miscellaneous Features</b>	<b>RS232 / RS422 / RS485</b>	1 (2*)/1 (2*)/1
	<b>USB Type-C</b>	1
	<b>USB 3.0/2.0</b>	6/4
	<b>Audio</b>	1x Line in, 1x Line out
	<b>Others</b>	Power Button, PS2 for keyboard/mouse
<b>Expansion</b>	<b>Watchdog timer</b>	yes
	<b>Mini PCIe/PCIe/M.2</b>	0/0/1
	<b>SIM CARD</b>	-
<b>Storage</b>	<b>2.5" SSD</b>	1
	<b>mSATA/M.2</b>	1/1
	<b>mSD Card</b>	-
	<b>Onboard Flash</b>	-
<b>Software Support</b>	<b>Microsoft Windows</b>	Win 10 IoT LTSC 2021
	<b>Linux</b>	yes
<b>Security</b>	<b>Security</b>	TPM 2.0
<b>Middleware</b>	<b>Hypervisor</b>	on request
	<b>KEAPI</b>	yes
<b>Power</b>	<b>Input Voltage</b>	24 V DC* (external AC/DC adapter provided)
	<b>AC Adapter</b>	External AC/DC adapter optional, 90 to 264 V AC, 150 W
<b>Mechanical</b>	<b>Mounting</b>	Desktop, Wallmount, VESA, Vertical Stand
	<b>Dimension (W x H x D)</b>	190 x 120 x 190 mm (7.48" x 4.72" x 7.48")
<b>Environment</b>	<b>Weight</b>	3 kg (6.6 lbs)
	<b>Cooling</b>	With fan
	<b>Operating Temperature</b>	0 °C to +45 °C (32 °F to 113 °F)
	<b>Relative Humidity</b>	93 % @ 40 °C non-condensing
	<b>Vibration</b>	Vibration operational: IEC 60068-2-6: 10-150 Hz, 1 G
	<b>Shock</b>	Shock operational: IEC 60068-2-27: half sine 11 ms 15 G
<b>Approvals</b>	<b>IP Protection Class</b>	IP40 on top/IP30 on sides
	<b>Certifications</b>	CE/UKCA/CB/NRTL

<b>Processor System</b>	<b>CPU</b>	11th Gen Intel® Celeron® 6600HE, Core™ i3-11100HE/i5-11500HE/i5-1145GRE/i7-11850HE/i7-1185GRE, Xeon® W-11555MRE / W-11865MRE
	<b>Max. Number of Cores</b>	Octa-Core
	<b>Max. Speed</b>	2.6 GHz / 4.7 GHz (Burst)
	<b>System Chipset</b>	Intel® Q670E
	<b>BIOS</b>	AMI® Aptio V5
<b>Memory</b>	<b>Memory Technology</b>	DDR4 non ECC/ECC
	<b>Max. Capacity</b>	64 GByte
	<b>Socket</b>	2x SODIMM
<b>Graphics</b>	<b>Graphics Core</b>	Intel® Xeon®: Intel® UHD Graphics P630, Intel® Core™: Intel® UHD Graphics 630, Intel® Celeron®: Intel® UHD Graphics 610
	<b>Max. resolution</b>	4096 x 2304
	<b>HDMI/DVI/DP/VGA</b>	0/0/2 (3*)/0
	<b>Controller</b>	4x GbE: 3x Intel® I210-IT, 1x I219-LM
<b>Ethernet</b>	<b>IEEE1588</b>	yes
	<b>Teaming/Failover</b>	yes/yes
<b>Fieldbus</b>	<b>Standard</b>	1x CAN, 1x PROFIBUS/PROFINET/EtherCAT*
<b>Miscellaneous Features</b>	<b>RS232 / RS422 / RS485</b>	1 (3*)/1 (3*)/1 (3*)
	<b>USB Type-C</b>	-
	<b>USB 3.0/2.0</b>	3/3
	<b>Audio</b>	-
	<b>Others</b>	4x GPIO LEDs, 2x Buttons: Power / Reset & Recovery, 8x Digital I/Os*, 1 MByte NVRAM*
<b>Expansion</b>	<b>Watchdog timer</b>	yes
	<b>Mini PCIe/PCIe/M.2</b>	0/0/1
	<b>SIM CARD</b>	-
<b>Storage</b>	<b>2.5" SSD</b>	2
	<b>mSATA/M.2</b>	1
	<b>mSD Card</b>	-
	<b>Onboard Flash</b>	-
<b>Software Support</b>	<b>Microsoft Windows</b>	Win 10 IoT LTSC 2021
	<b>Linux</b>	yes
<b>Security</b>	<b>Security</b>	TPM 2.0
<b></b>		