

# KBox E-110 SERIES

## FANLESS & RUGGED

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### FANLESS BOX PC WITH INTEL® APOLLO LAKE SOC PROCESSORS

- ▶ 1x HDMI, 1x DP for display output
- ▶ 2x GbE LAN for Ethernet
- ▶ 4x USB 3.0, 2x RS232/422/485, 2x RS-232, 1x DIO for peripherals
- ▶ 1x 2.5" SATA 3.0 HDD / SSD Slot for storage
- ▶ 1x mPCIe, 1x M.2 Key B for expansion

POSSIBILITIES START HERE



## KBox E-110 SERIES

### FANLESS BOX PC WITH INTEL® APOLLO LAKE SOC PROCESSORS

KBox E-110 Series is a box PC powered by high-performance power-efficient Intel® Apollo Lake SoC Processors. Enclosed within a rugged housing without ventilation holes and fan placement, it can provide reliable operation in tough environments.

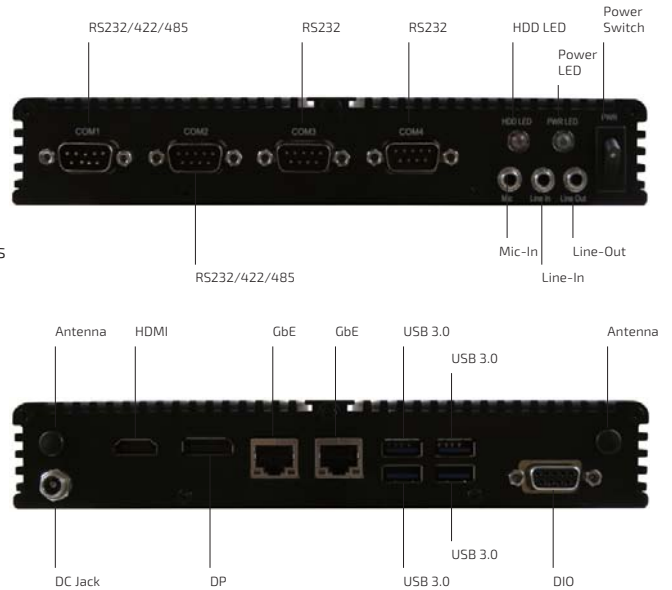
In addition to HDMI, DP, GbE LAN and USB ports, it has four serial ports on the front I/O panels and thus it is very suitable for the applications that communicate with numerous serial devices, for

example, PLCs, sensors, meters, motors, barcode readers and operator displays in automation application; cameras, sensors and card readers in surveillance application.

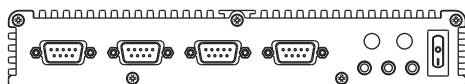
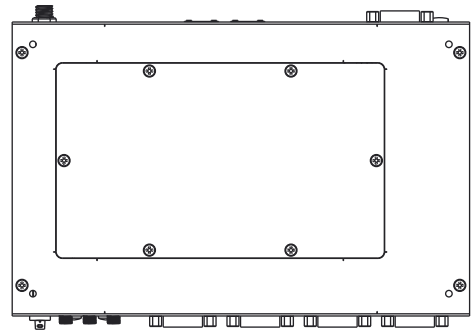
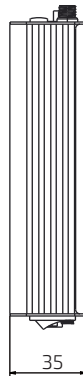
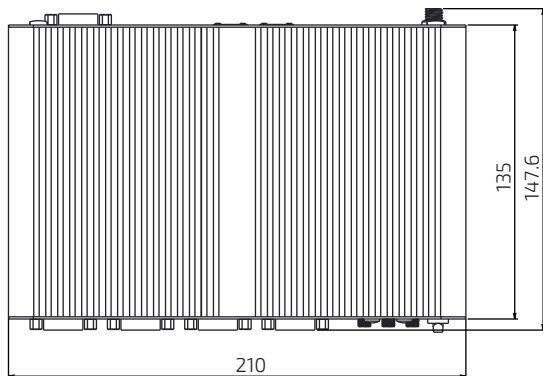
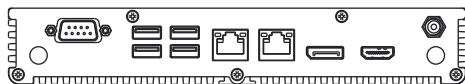
KBox E-110 Series reserves one mPCIe slot and one M.2 Key B slot, allowing wireless connection, additional SSD storage or additional hardware upgrades.

#### ▶ PRODUCT HIGHLIGHTS

- ▶ Intel® Apollo Lake SoC Processors
- ▶ 1x DDR3L SO-DIMM memory socket
- ▶ 1x HDMI, 1x DP for video output
- ▶ 2x GbE LAN for Ethernet
- ▶ 4x USB 3.0, 2x RS232/422/485, 2x RS232, 1x DIO for peripherals
- ▶ 1x 2.5" SATA 3.0 HDD / SSD slot for storage
- ▶ 1x mPCIe, 1x M.2 Key B for expansion
- ▶ Passive cooling design without fans nor vents



#### ▶ MECHANICAL DIMENSIONS



unit: mm

## ► TECHNICAL INFORMATION

<b>System</b>	<b>Processor</b>	Intel® Celeron® N3350 (Dual Core, 2M Cache, up to 2.40 GHz, FCBGA1296, 6 W TDP) Intel® Pentium® N4200 (Quad Core, 2M Cache, up to 2.50 GHz, FCBGA1296, 6 W TDP)
	<b>Memory</b>	1x DDR3L 1867 50-DIMM
<b>Video</b>	<b>Graphics</b>	Intel® HD Graphics 500 (Celeron® N3350) Intel® HD Graphics 505 (Pentium® N4200)
	<b>Display Interface</b>	1x HDMI (3840 x 2160 @ 30 Hz, on rear) 1x DP (4096 x 2160 @ 60 Hz, on rear)
	<b>Multiple Display</b>	Dual
<b>Audio</b>	<b>Audio Codec</b>	Realtek ALC662
	<b>Audio Interface</b>	1x Line-in (on front) 1x Line-out (on front) 1x Mic-in (on front)
<b>Network Connection</b>	<b>Ethernet</b>	2x GbE LAN (RJ45 on rear, Intel® I210-AT)
<b>Peripheral Connection</b>	<b>USB</b>	4x USB 3.0 (Type A on rear)
	<b>Serial Port</b>	2x RS232/422/485 (DB9 on front, auto flow control function for RS485) 2x RS232 (DB9 on front)
	<b>Other I/O Port</b>	1x DIO (DB9 Female on rear)
<b>Storage &amp; Expansion</b>		1x 2.5" SATA 3.0 HDD / SSD 1x mPCIe (full size) 1x M.2 Key B 1x SIM Card Cage (optional, switchable between mPCIe and M.2)
<b>Power</b>	<b>Connector</b>	Lockable DC Jack (on rear)
	<b>Input Voltage</b>	DC 12 V
	<b>Power Adapter</b>	AC to DC, 100 V - 240 V
<b>Firmware</b>	<b>BIOS</b>	AMI uEFI BIOS w/ 128 Mb SPI Flash
	<b>Watchdog</b>	Programmable WDT to generate system reset event
	<b>H/W Monitor</b>	Voltages, Temperatures
	<b>Real Time Clock</b>	Processor integrated RTC
	<b>TPM</b>	Optional (Infineon SLB 9665 TPM 2.0)
<b>System Control &amp; Monitoring</b>	<b>Button, Switch &amp; Indicator</b>	1x Power Switch (on front) 1x Power LED (on front) 1x Storage LED (on front)
<b>Cooling</b>	<b>Cooling Method</b>	Passive
<b>Software</b>	<b>OS Support</b>	Windows 10, Linux
<b>Mechanical</b>	<b>Construction</b>	Aluminum Chassis
	<b>Dimensions (W x D x H)</b>	210 mm x 135 mm x 35 mm / 8.27" x 5.31" x 1.38"
	<b>Weight</b>	1200 g / 2.65 lb
	<b>Mounting</b>	VESA Mount
<b>Environmental</b>	<b>Operation Temperature</b>	0 °C ~ 50 °C / 32 °F ~ 122 °F
	<b>Storage Temperature</b>	-20 °C ~ 80 °C / -4 °F ~ 176 °F
	<b>Humidity</b>	0 % ~ 90 %
<b>Certification</b>	<b>EMC &amp; Safety</b>	CE, FCC Class A

## ▶ ORDERING INFORMATION

ARTICLE	DESCRIPTION
KBox E-110	Intel® Celeron® N3350
KBox E-111	Intel® Pentium® N4200
<b>OPTIONAL ACCESSORIES</b>	
VESA MOUNTING KIT	Hole pattern: 100 mm x 100 mm & 75 mm x 75 mm

## ▶ GLOBAL HEADQUARTERS

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