

KBox A-251-AML/ADN

Embedded Box PC



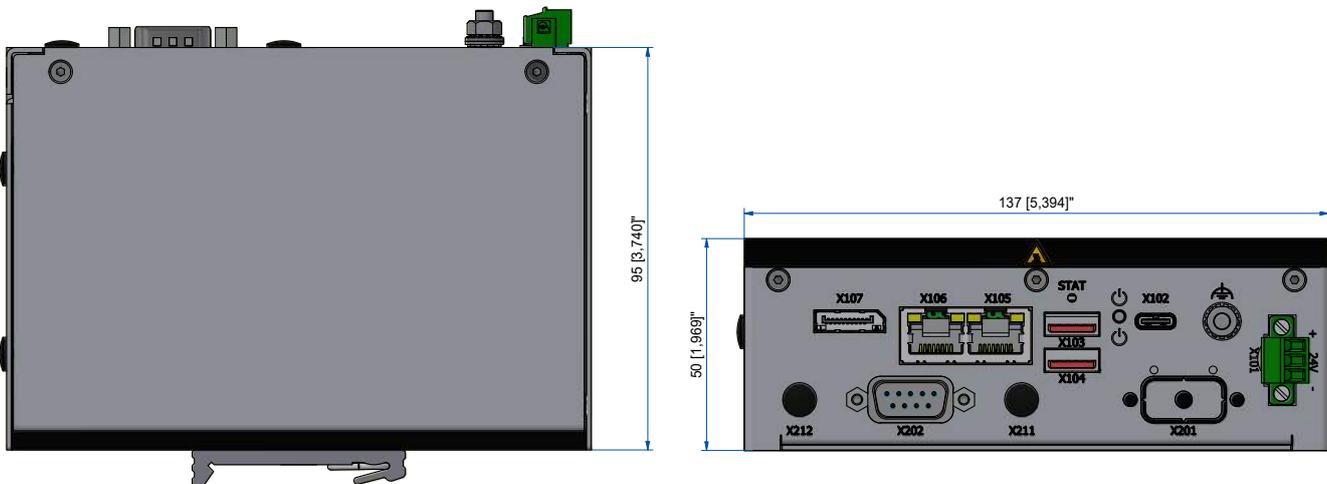
Compact Industrial Box PC for Edge Gateway Applications

- ▶ Compact & highly flexible IoT Edge Gateway
- ▶ Based on powerful 2.5" Single Board Computer
- ▶ Intel® N97, Intel® Core™ i3-N305 or Intel Atom® x7000 series
- ▶ Options for Wi-Fi, LTE/5G, additional GbE, serial ports, GPIOs ...

PROCESSOR	CPU	Intel® Processor N97 (Quad-Core 2.0 / 3.6 GHz, 12W) Intel® Core™ i3-N305 (Octa-Core 1.8 / 3.8 GHz, 15W) Intel Atom® x7211RE (Dual-Core 1.0 / 3.2 GHz, 6W), TCC/TSN Support Intel Atom® x7433RE (Quad-Core 1.5 / 3.4 GHz, 9W), TCC/TSN Support Intel Atom® x7835RE (Octa-Core 1.8 / 3.6 GHz, 12W), TCC/TSN Support Octa-Core up to 3.8 GHz (Burst) AMI® Aptio V5
MEMORY	SPEED BIOS	DDR5 up to 16 GByte
GRAPHICS	TECHNOLOGY MAX. CAPACITY	Intel® UHD Graphics 4096 x 2160 @ 60Hz
INTERFACES	GRAPHICS CORE MAX. RESOLUTION	1x DisplayPort 2x USB 3.2 (Type A) 1x USB-C with USB and DP signals (DP-Alt-Mode) 2x 2.5 GbE Intel® I226-V/IT 1x COM port RS232 Power Button & Status LED
OPTIONAL INTERFACES	GRAPHICS PORTS	
	USB	
	USB-C	
	ETHERNET	
	SERIAL PORTS	
	BUTTONS/LED	
OPTIONAL INTERFACES	WIRELESS TECHNOLOGY EXPANSION VIA I/O DOOR	Option for WI-FI 6 and LTE, 5G Option for Ethercat, Dual CAN, Dual 2.5 GbE, 2x COM ports non-isolated, 8x GPIO/DIO
STORAGE	eMMC	Up to 128 GByte 5.1 eMMC
	M.2	Up to 2 TByte via M.2 Key B
EXPANSION SLOT	M.2	1x M.2 Key E 2230 socket 1x M.2 Key B 2242/3042/3052/2280 socket
SOFTWARE SUPPORT	OPERATING SYSTEM TOOLSET	Win 11 IoT Enterprise LTSC, Linux Debian KontronOS* KontronGrid** Kontron FabEagle®Connect***
MECHANICAL	CONSTRUCTION MOUNTING DIMENSIONS (W x H x D) WEIGHT	Steel DIN RAIL, Rugged DIN RAIL, Desktop 137 x 50 x 95 mm (5.39" x 1.97" x 3.73") Approx. 1.0 kg (2.20 lbs)
ENVIRONMENTAL	COOLING OPERATING TEMPERATURE	Fanless Standard: 0 °C to +60 °C (32 °F to 140 °F) Extended: -40 °C to +60 °C (-40 °F to 140 °F)
	RELATIVE HUMIDITY	93 % RH at 40 °C, non-condensing
APPROVALS	CERTIFICATIONS	CE, UL 61010-1, CB, FCC, UKCA

*KontronOS: Hardened Linux®-based operating system for the reliable operation of customer applications on edge devices
 **KontronGrid: Complete fleet management solution for edge devices and container based applications
 ***FabEagle®Connect: Low-code integration solution for standardized data interfaces for machines and IoT applications
 More information: www.susietec.com/en/solutions/software

Dimensions



ARTICLE	PART NO.	DESCRIPTION
2.5"-SBC PITX incl. RAM & eMMC	AN-N97-08-64- AN-N97-08-128- AN-0i3-08-128- AL-721-08-064- AL-743-08-128- AL-783-16-128-	Intel® Core™ N97 (4x 2.0 / 3.6 GHz, 12W), 8GB RAM, 64GB eMMC Intel® Core™ N97 (4x 2.0 / 3.6 GHz, 12W), 8GB RAM, 128GB eMMC Intel® Core™ i3-N305 (8x 3.8 GHz, 15W), 8GB RAM, 128GB eMMC Intel Atom® x7211RE (2x3.2 GHz, 6W), 8GB RAM, 64GB eMMC Intel Atom® x7433RE (4x3.4 GHz, 9W), 8GB RAM, 128GB eMMC Intel Atom® x7835RE (8x3.6 GHz, 12W), 16GB RAM, 128GB eMMC
HOUSING	1- 2- 3- 4-	KBox A-251-AML/ADN Housing, 12VDC Power Input KBox A-251-AML/ADN Housing, 24VDC Power Input KBox A-251-AML/ADN Housing, 12VDC Power Input, Automotive Battery KBox A-251-AML/ADN Housing, 24VDC Power Input, Automotive Battery
M.2 #1 Storage or LTE/5G (KEY B)	0 1 2 3 4 5 L	No Storage or Cellular Module 128 GByte M.2 SATA 256 GByte M.2 SATA 512 GByte M.2 SATA 1 TByte M.2 SATA 2 TByte M.2 SATA LTE/4G Module, incl. antennas
M.2 #2 WI-FI (KEY E)	0 W D	w/o WI-FI WI-FI 6 only (w/o LTE, Dual CAN, Ethercat or Dual LAN) WI-FI 6 with additional M.2 (LTE/5G, Dual CAN, Ethercat or Dual LAN)
"IO Door" Expansion	0- C- R- N- E- D- G-	no Expansion Dual CAN (occupies M.2 #1, can't be used together with LTE, 5G or storage option) Two additional RS232 (occupies M.2 #1, can't be used together with LTE, 5G or storage option) 2x Additional RS232/422/485 ports, non-isolated (via USB to COM Adapter) EtherCAT via Hilscher (occupies M.2 #1, can't be used together with LTE, 5G or storage option) Dual LAN (occupies M.2 #1, can't be used together with LTE, 5G or storage option) 8x channel DIO/GPIO Module (via USB)
MOUNTING	0- 1- 2-	w/o Mounting Kit DIN Rail Rear Rugged DIN-Rail
SOFTWARE	0 W L	no Software Windows 11 IoT Ent. 2024 Debian Linux

Accessories

1075-4825	AC/DC Adapter 24V/60W KBox A-251, incl mating connector
1057-7077	AC/DC Adapter 24V/60W A-20X, open wires, w/o connector
1070-4091	AC/DC Adapter 12V/60W A-20X
840-0059	Powercord EU
840-0115	Powercord UK
0-0064-4317	Powercord US

Global Headquarters

Kontron Europe GmbH

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

www.kontron.com