K430

Karbon 430 Intel® Elkhart Lake Compact Rugged Computer with Expansion

The power and IoT capabilities of the latest Intel Atom® x6000E processors in a compact, rugged, fanless system built for the challenges of the IoT Edge.

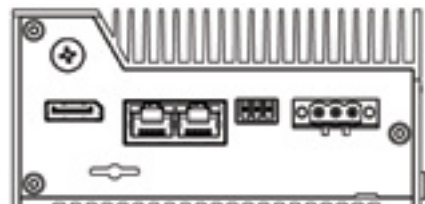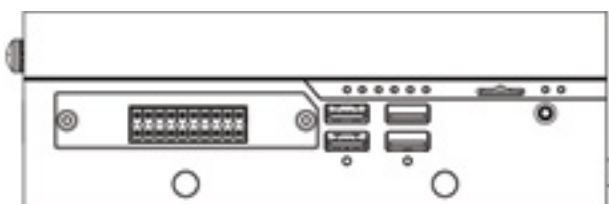onlogic.com/k430

Powered By Intel Elkhart Lake

Powered by a Dual-Core Intel Atom x6211E, or Quad-Core x6425E processor, which have been specifically designed for the IoT, Karbon 430 offers a unique combination of features, power and connectivity. The integrated Intel® Programmable Services Engine enables support for a host of connectivity and power management functions, including CAN bus and automotive power control. The Karbon 430 is perfect as a rugged Industrial IoT gateway, edge device, embedded controller or the backbone for medical, energy management or industrial control applications.

Protected From Damage In Edge Environments

Measuring just over 2" tall, and with support for Wall, DIN Rail or VESA mounting, the Karbon 430 was designed to be installed anywhere you need it. Its rugged design, -40° to 70°C operating temperature range, 9-48V power input, and the absence of any moving parts dramatically improve lifespan and reliability. Environmental testing is in process for Medical EMC (EN 60601-1), Rail EMC (EN 50121), Maritime EMC (EN 60945), Automotive E-mark, as well as IEC and MIL-STD-810 shock and vibration. All of this performance is safely delivered inside a system NRTL listed to UL 62368-1, accompanied by a CB Scheme to IEC 62368-1.

Customizable And Expandable

The Karbon 430 was designed from the ground up to give you the capabilities you need for your IIoT project. Standard I/O includes 2 USB 3.2 & 2 USB 2.0 ports, dual LAN (with optional PoE+), CAN bus (via 3-pin terminal block) and a DisplayPort. The system's integrated SIM slot and optional WiFi and 4G LTE give you wireless access to your critical data from anywhere. You can also use OnLogic's unique ModBay expansion capabilities to add dual COM or GPIO, and the system's five internal expansion slots can be leveraged for additional storage, I/O or functionality including AI accelerators and GPS.

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System

Processor	Intel Atom x6425E Intel Atom x6211E
Processor Speed	1.80 GHz to 3.0 GHz
Processor Socket	Onboard (BGA)
Processor Generation	Elkhart Lake
Processor Cores	2 4
Chipset	Shared with CPU
Graphics/GPU	Intel UHD Graphics
Memory Type	DDR4 SO-DIMM (non-ECC)
Memory Capacity	32 GB
Memory Speed	3200 MHz
Memory Slot Count	2
Number of Displays Supported	1 direct output (3 with MST hub)

Top I/O

Other	4 SMA Antenna ports

Bottom I/O

Ethernet	2 GbE LAN ports (PoE+ optional)
Video	1 DisplayPort connector
Other	1 3-pin Terminal Block power connector 1 CAN bus 1 3FF Micro-SIM

Front I/O

USB	2 USB 3.2 Gen 2 ports 2 USB 2.0 ports
Other	1 Power button 1 ModBay expansion slot 1 3FF Micro-SIM 2 SMA Antenna ports

Expansion & Features

Expansion Options	1 Full-size mPCIe slot (PCIe x1, SATA, USB 2.0) 1 M.2 2230 E-Key slot (PCIe x1, USB 2.0) 1 M.2 3052/2280 B-key (PCIe x1, USB 3.0, USB 2.0) 1 M.2 2280 B-key (PCIe x1, USB 3.0, USB 2.0)
Storage Options	1 M.2 3042/2280 B-Key slot (PCIe x2, SATA, USB 2.0)
LAN Controller	Intel I210-IT GbE
System Monitoring	Intel PTT support TPM 2.0 Module (optional)
Input Voltage	9 - 48 VDC
Power Input	3-pin Terminal Block connector

Mechanical

Dimensions (WxHxD)	180 x 123 x 60 mm 7.09 x 4.84 x 2.36 in
Case Type	Ruggedized
Mounting Options	DIN-mount VESA-mount Wall-mount

Environmental & Regulatory

Operating Temperature	-40 - 70°C
Operating Humidity	10% - 95% (non-condensing)
Certifications	FCC 47 CFR Part 15 CE CB scheme RoHS 3 (2015/863/EU) EN 55024 EN 55032 EN 62368-1 IEC 60068-2-27 IEC 60068-2-64 VCCI RCM EN 60945 Ed. 4 EN 50121-3-2 EN 60601-1-2 4th ed.

Other

Hardware Type	Edge Devices and IoT Gateways
Warranty	2 Year Limited Warranty on parts and services

ONLOGIC

K430 Dimensional Drawings

Rugged Expandable Computer

All measurements in mm

DETAIL A

M3X0.5 120° FLAT HEAD SCREW
MAXIMUM SCREW DEPTH INTO CHASSIS 5.5mm