Karbon 802

High-Performance Rugged Computer With ModBay

Rugged performance and dual ModBay expansion with optional hot swap.

onlogic.com/k802

Advanced Processing Performance

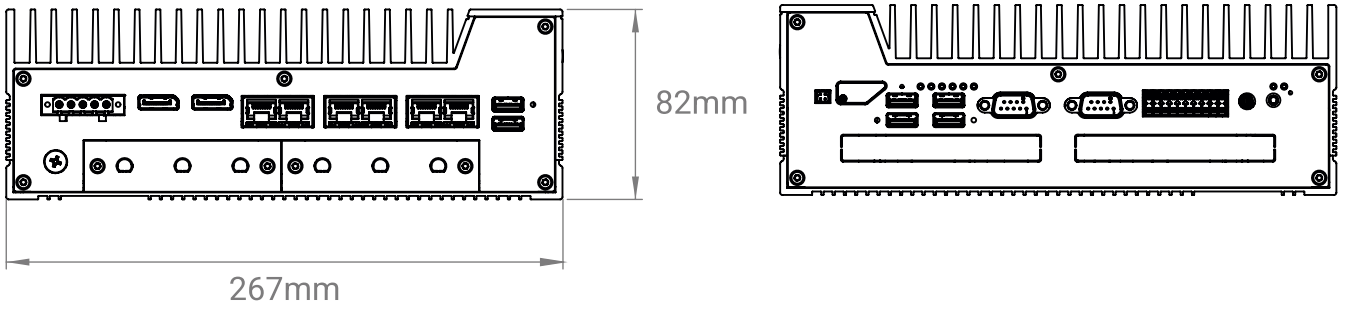
Powered by 12th Gen Intel Core processing, Karbon 802 leverages Intel's unique hybrid core architecture, which adapts to your needs. PCIe Gen 4 expansion, optional ECC memory, 4G and Wi-Fi compatibility give you the capabilities you need now, and set your project up for success well into the future.

Engineered for the Edge

The Karbon 802 features 12 to 48V DC power input, an operating temperature range of -40 to 70°C and has been tested to MIL-STD-810 shock and vibration standards. Available wall, DIN rail and vibration isolating mounting kits give you a range of installation options.

Connect to Anything, Anywhere

The Karbon 802 can be configured with up to 14x LAN (6x 2.5GbE, 8x 1GbE), and PoE+ support on up to 10x of those ports. Other connectivity includes dual DisplayPorts, 2x COM, 6x USB 3.2 Gen 2, dual SIM slots and integrated 18-pin GPIO (16-bit DIO, CAN bus, External Switch).



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System

Processor	Intel® 12th Gen Alder Lake S Core i3-12100E Core i3-12100TE Core i5-12500E Core i5-12500TE Core i7-12700E Core i7-12700TE Core i9-12900E Core i9-12900TE
Processor Speed	Up to 5 GHz (processor dependent)
Processor Cores	Up to 16 (processor dependent)
Integrated Graphics	Intel UHD Graphics 730/770
Chipset	Intel W680
Memory	Up to 64 GB DDR4 3200 ECC or non-ECC

Rear I/O

Ethernet	1x 2.5 GbE LAN with Intel I225-LM controller and AMT support 1x or 5x 2.5 GbE LAN with Intel I225-IT controllers
USB	2x USB 3.2 Gen 2 Type-A
Display	2x DisplayPort (Full-size, DP 1.4, DP++, HDMI 1.4)
Power	5-Pin Terminal Block Power Input (12 ~ 48V DC) Automotive Ignition Power Sensing
Other	2x OnLogic ModBays for I/O Expansion including 4x LAN/PoE, 3x M12 LAN/PoE, 2x 10Gb LAN, 4x USB 3.0

Front I/O

USB	4x USB 3.2 Gen 2 Type-A
Serial	2x RS-232/422/485 COM
Other	20-Pin Terminal Block Header (DIO, CAN bus, Ext. Switch) 1x 3.5 mm audio jack 2x 3FF Mini-SIM slots 1x External fan connector 8x Status LEDs 1x Power button 2x Hot-swap drive bays (optional)

Expansion & Features

Expansion Options & Storage	1x M.2 2280 M-key (PCIe Gen 4 x4) 1x M.2 2280 M-key (PCIe Gen 4 x4, SATA) 1x M.2 3042/3052/2280 B-key (PCIe x2, SATA, USB 3.0, USB 2.0) 1x M.2 2230 E-key (PCIe x1, USB 2.0) 1x mPCIe (PCIe x1, USB 2.0) 2x 2.5" SATA (optional hot-swap)
Features	User-Programmable OnLogic Microcontroller (MCU) Automotive Ignition Power Sensing Optional TPM 2.0 module (Nuvoton NPCT750)

Mechanical

Dimensions (WxHxD)	240 x 82 x 267 mm 9.45 x 3.23 x 10.51 in
Mounting Options	Wall Mount Wall Mount with Vibration Isolation DIN Rail Mount

Environmental & Regulatory

Operating Temperature	-40 ~ 70°C (w/ 35W CPU) -40 ~ 50°C (w/ 65W CPU)
Shock Tolerance	Tested according to IEC 60068-2-27 and MIL-STD-810G (516.6)
Vibration Tolerance	Tested according to IEC 60068-2-64 and MIL-STD-810G (514.6)
Certifications	FCC 47 CFR Part 15 Subpart B (Class A) UL/IEC/EN 63268-1 (UL Listed & CB) CISPR 32 / EN 55032 CISPR 35 / EN 55035 Radio Equipment Directive (2014/53/EU) RoHS 3 (2015/863/EU) WEEE Directive (2012/19/EU) Power Immunity According to E-Mark ISO 7637-2 & ISO 16750-2 EN 50121-3-2 IEC 60601-1-2, 4th ed. IEC 60945, 4th ed.

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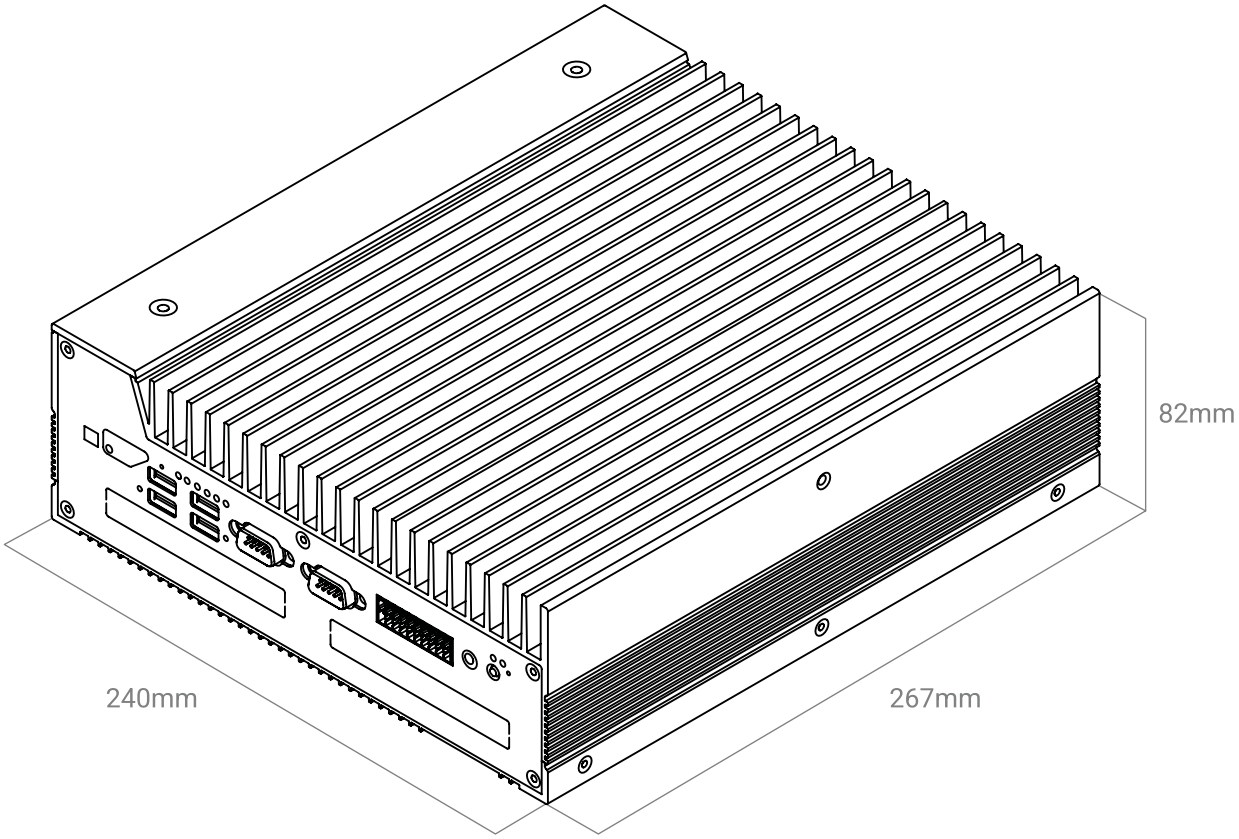
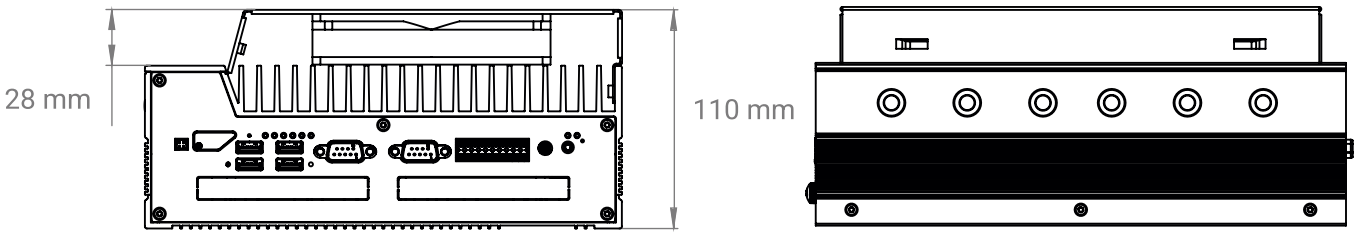
Karbon 802 Dimensional Drawings

High-Performance Rugged Computing, Evolved

All measurements in mm



Dimensions with Optional External Fan



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Karbon 802 Wall Mount

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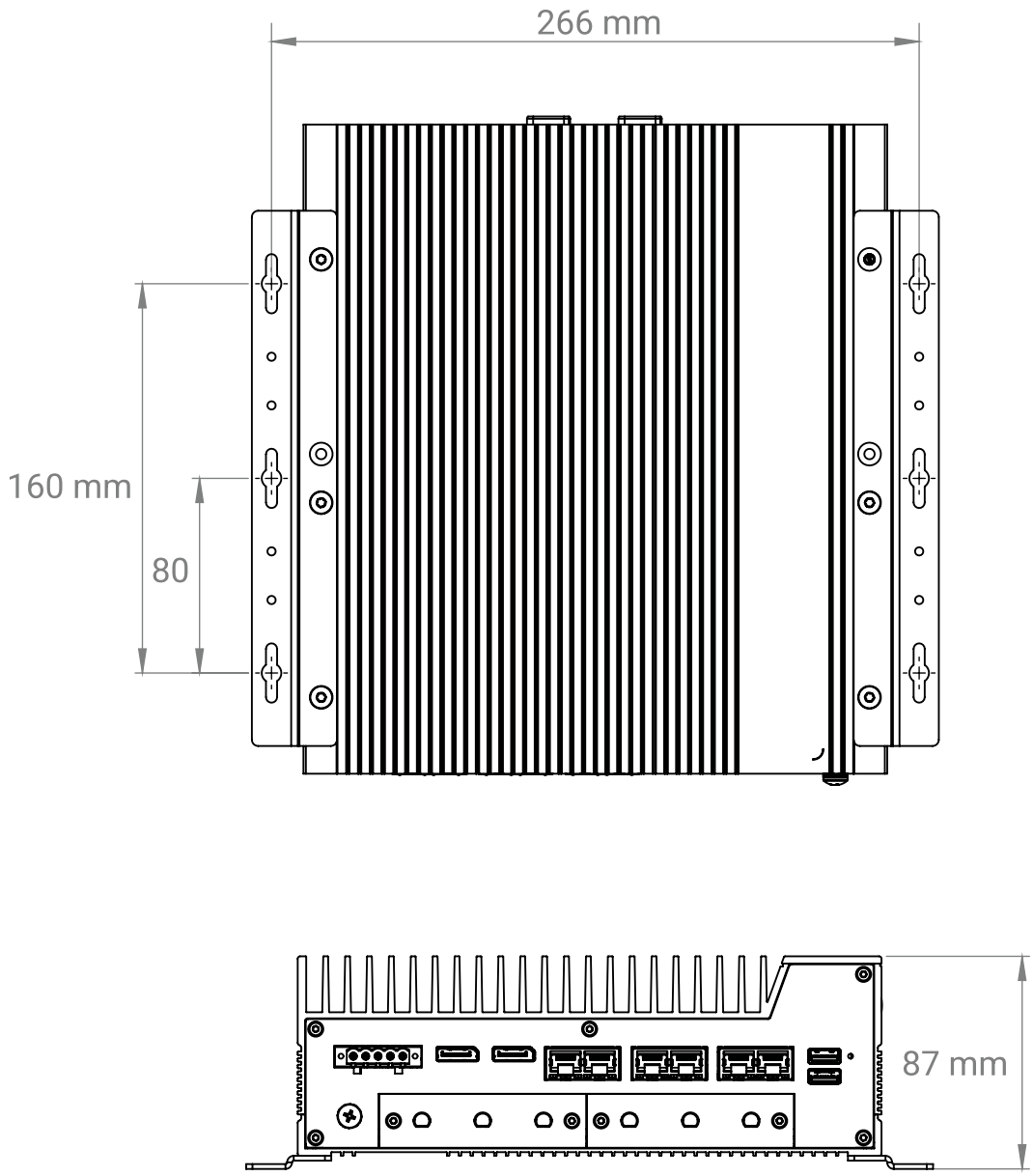
All measurements in mm



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Karbon 802 DIN Mount

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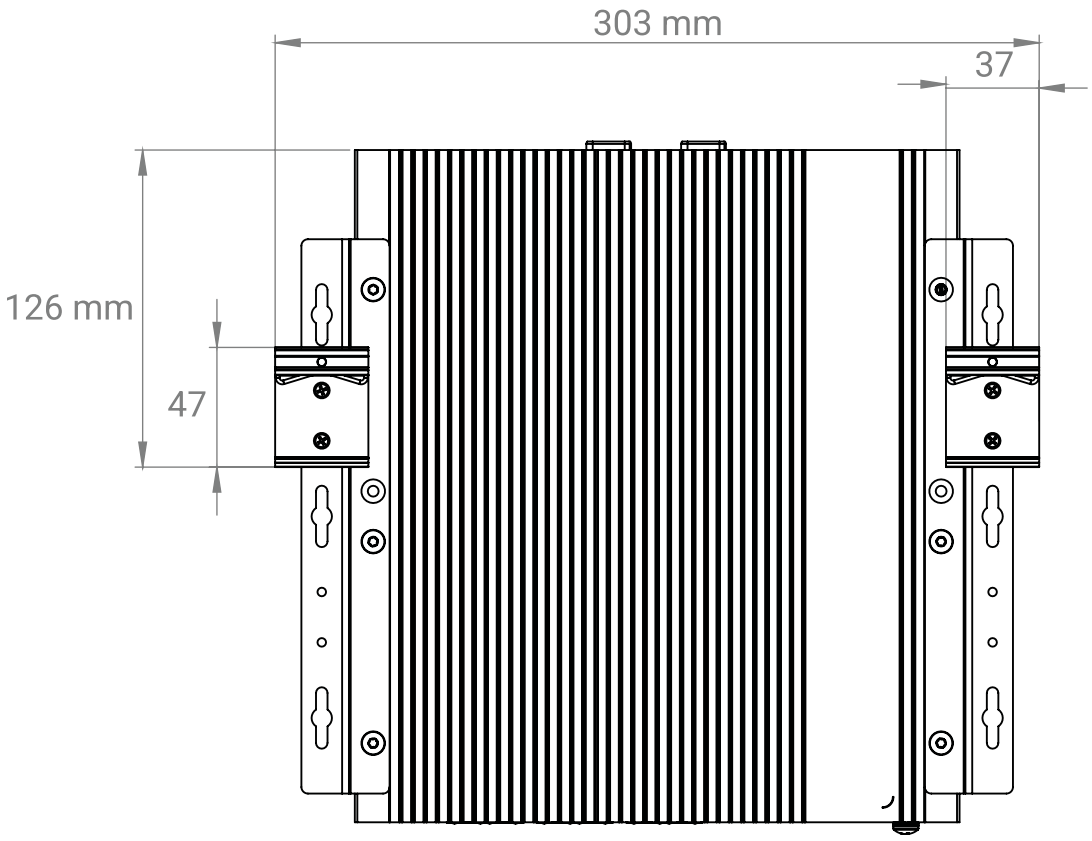

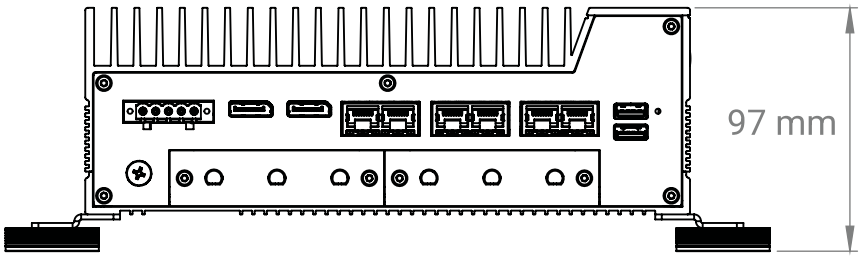

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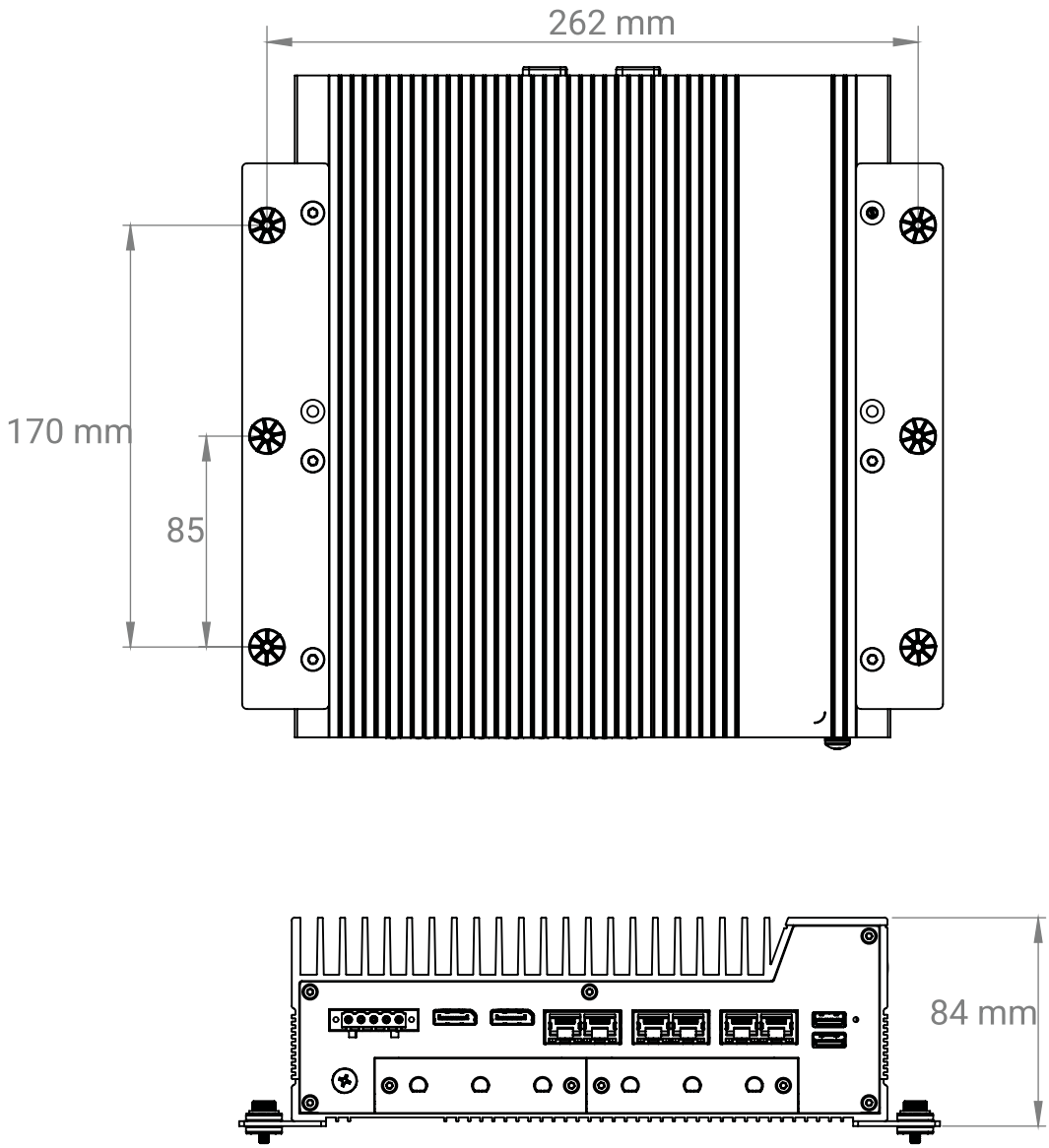
Karbon 802 Vibration Isolation Mount

High-Performance Rugged Computing, Evolved

All measurements in mm



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