

# Karbon 803

## High-Performance Rugged Computer With PCIe

A versatile rugged computer with available PCIe Gen 4 expansion.

[onlogic.com/k803](https://onlogic.com/k803)



### Advanced Processing Performance

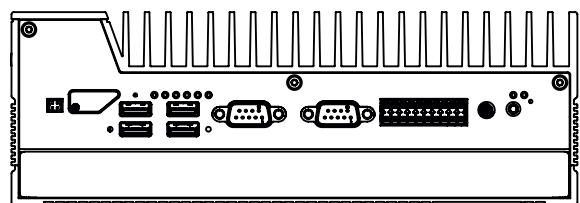
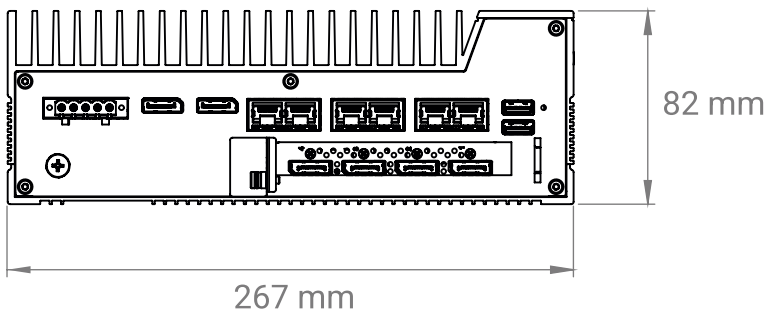
Powered by 12th Gen Intel Core processing, Karbon 802 leverages Intel's unique hybrid core architecture, which adapts to your needs. PCIe Gen 4 expansion, optional ECC memory, 4G and Wi-Fi compatibility give you the capabilities you need now, and set your project up for success well into the future

### Engineered for the Edge

The Karbon 803 is equipped with an actively cooled PCIe Gen 4 x16 expansion slot to let you customize its capabilities to suit your project. Rugged features include 12 to 48 V DC power input, an operating temperature range of -40 to 70°C, and testing to MIL-STD-810 shock and vibration standards.

### Connect to Anything, Anywhere

The Karbon 803 can be configured with up to 6x 2.5 GbE LAN ports, two of which can provide power (PoE+) and include Intel vPro support for remote out-of-band (OOB) management of the system. Other connectivity includes dual DisplayPorts, 2x COM, 6x USB 3.2 Gen 2, dual SIM slots and integrated 18-pin GPIO.



#### North America

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| System              |  |
|---------------------|--|
| Processor           | Intel® 12th Gen Alder Lake S<br>Core i3-12100E<br>Core i3-12100TE<br>Core i5-12500E<br>Core i5-12500TE<br>Core i7-12700E<br>Core i7-12700TE<br>Core i9-12900E<br>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 2666 ECC or non-ECC   |

| Rear I/O |   |
|----------|---|
| Ethernet | 1x 2.5 GbE LAN with Intel I225-LM controller and AMT support<br>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)<br>Automotive Ignition Power Sensing                                 |

| 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)<br>1x 3.5 mm audio jack<br>2x 3FF Mini-SIM slots<br>1x External fan connector<br>8x Status LEDs<br>1x Power button |

| Expansion & Features        |  |
|-----------------------------|--|
| Expansion Options & Storage | 1x M.2 2280 M-key (PCIe Gen 4 x4)<br>1x M.2 2280 M-key (PCIe Gen 4 x4, SATA)<br>1x M.2 3042/3052/2280 B-key (PCIe x2, SATA, USB 3.0, USB 2.0)<br>1x M.2 2230 E-key (PCIe x1, USB 2.0)<br>1x mPCIe (PCIe x1, USB 2.0)<br>1x PCIe Gen 4 x16 slot<br>1 x 2.5" SATA SSD/HDD drives 0-15mm max (hot-swap optional, 7-9.5mm max)<br>1x PCIe x16 in x16 PCIe slot with single slot height (4.4" H x 9.5" L) |
| Features                    | User-Programmable OnLogic Microcontroller (MCU)<br>Automotive Ignition Power Sensing<br>Optional TPM 2.0 module (Nuvoton NPCT750)  |

| Mechanical         |   |
|--------------------|---|
| Dimensions (WxHxD) | 240 x 82 x 267 mm<br>9.45 x 3.23 x 10.51 in                         |
| Mounting Options   | Wall Mount<br>Wall Mount with Vibration Isolation<br>DIN Rail Mount |

| Environmental & Regulatory |  |
|----------------------------|--|
| Operating Temperature      | -40 ~ 70°C (w/ 35W CPU)<br>-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)<br>UL/IEC/EN 63268-1 (UL Listed & CB)<br>CISPR 32 / EN 55032<br>CISPR 35 / EN 55035<br>Radio Equipment Directive (2014/53/EU)<br>RoHS 3 (2015/863/EU)<br>WEEE Directive (2012/19/EU)<br>Power Immunity According to E-Mark ISO 7637-2 & ISO 16750-2<br>EN 50121-3-2<br>IEC 60601-1-2, 4th ed.<br>IEC 60945, 4th ed. |

## US Office

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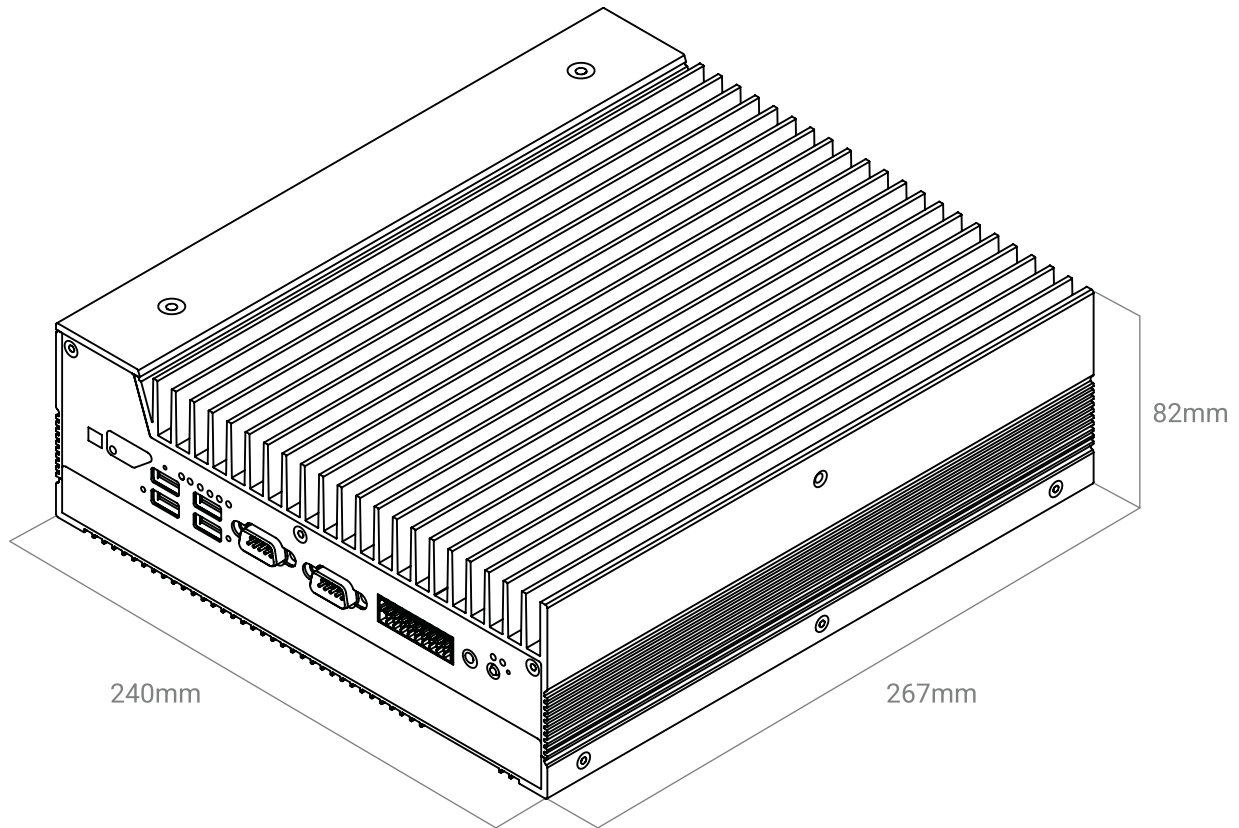
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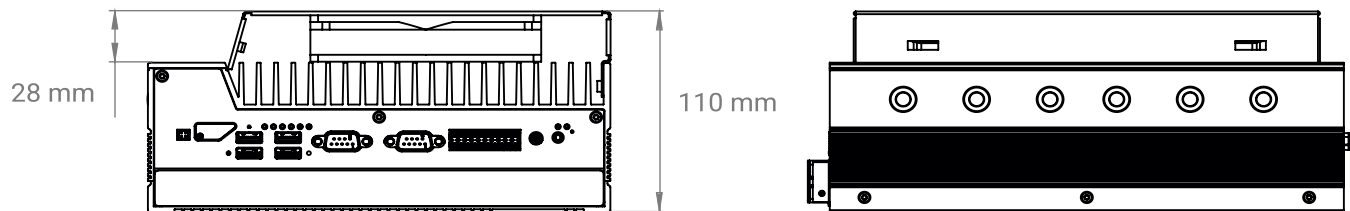
## Karbon 803 Dimensional Drawings

High-Performance Rugged Computing, Evolved

All measurements in mm



### Dimensions with Optional External Fan



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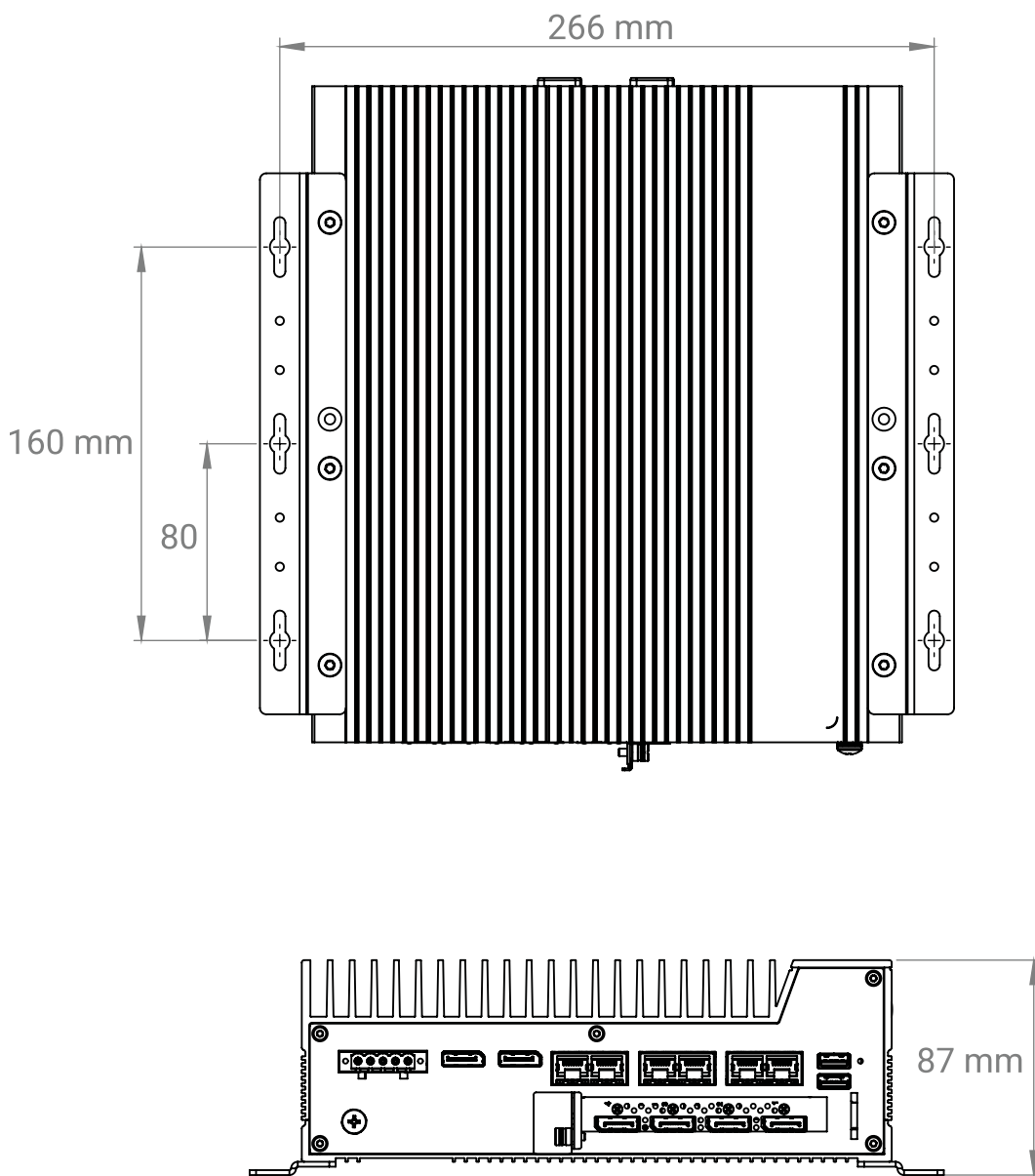
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## Karbon 803 Wall Mount

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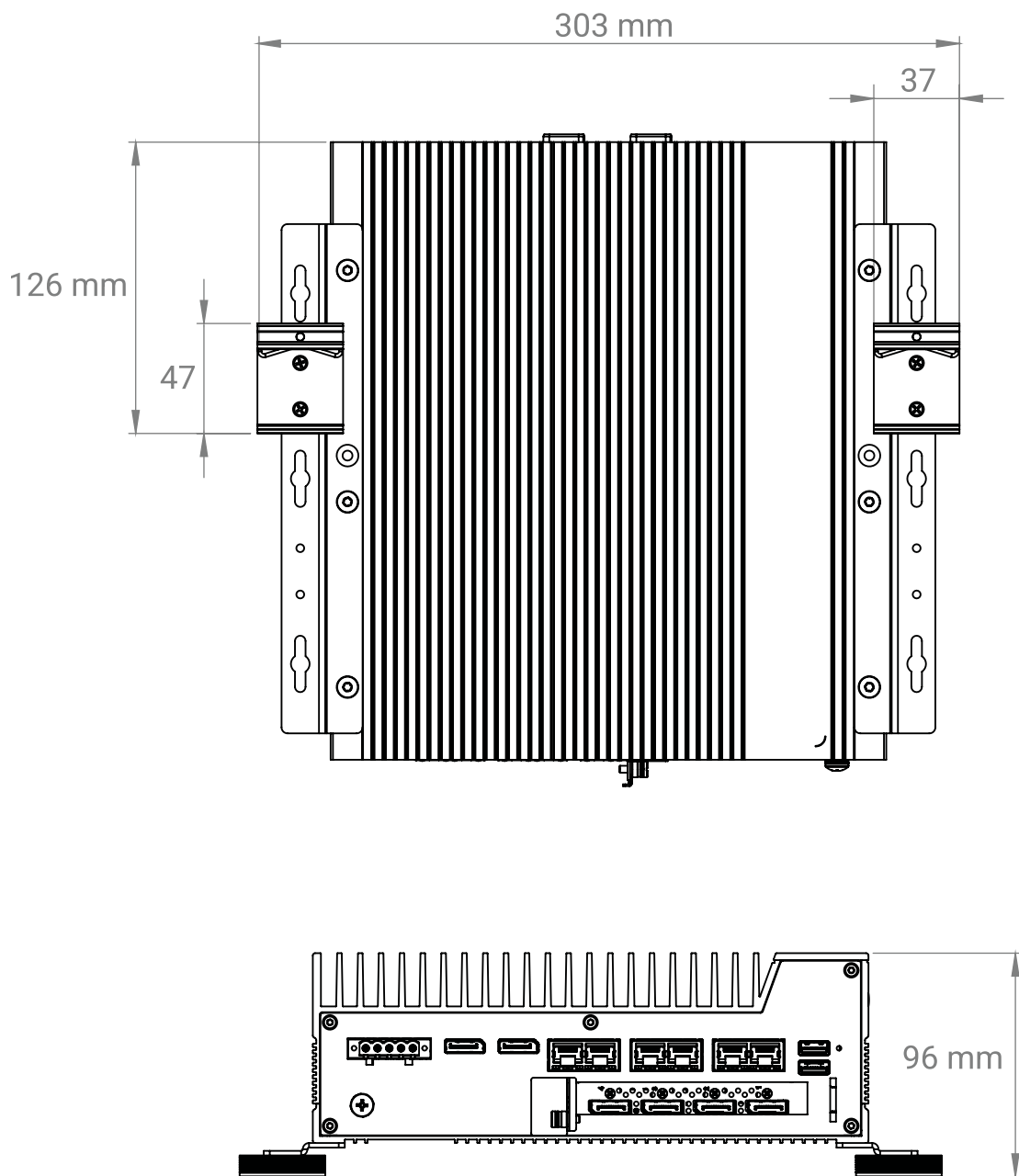
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## Karbon 803 DIN Mount

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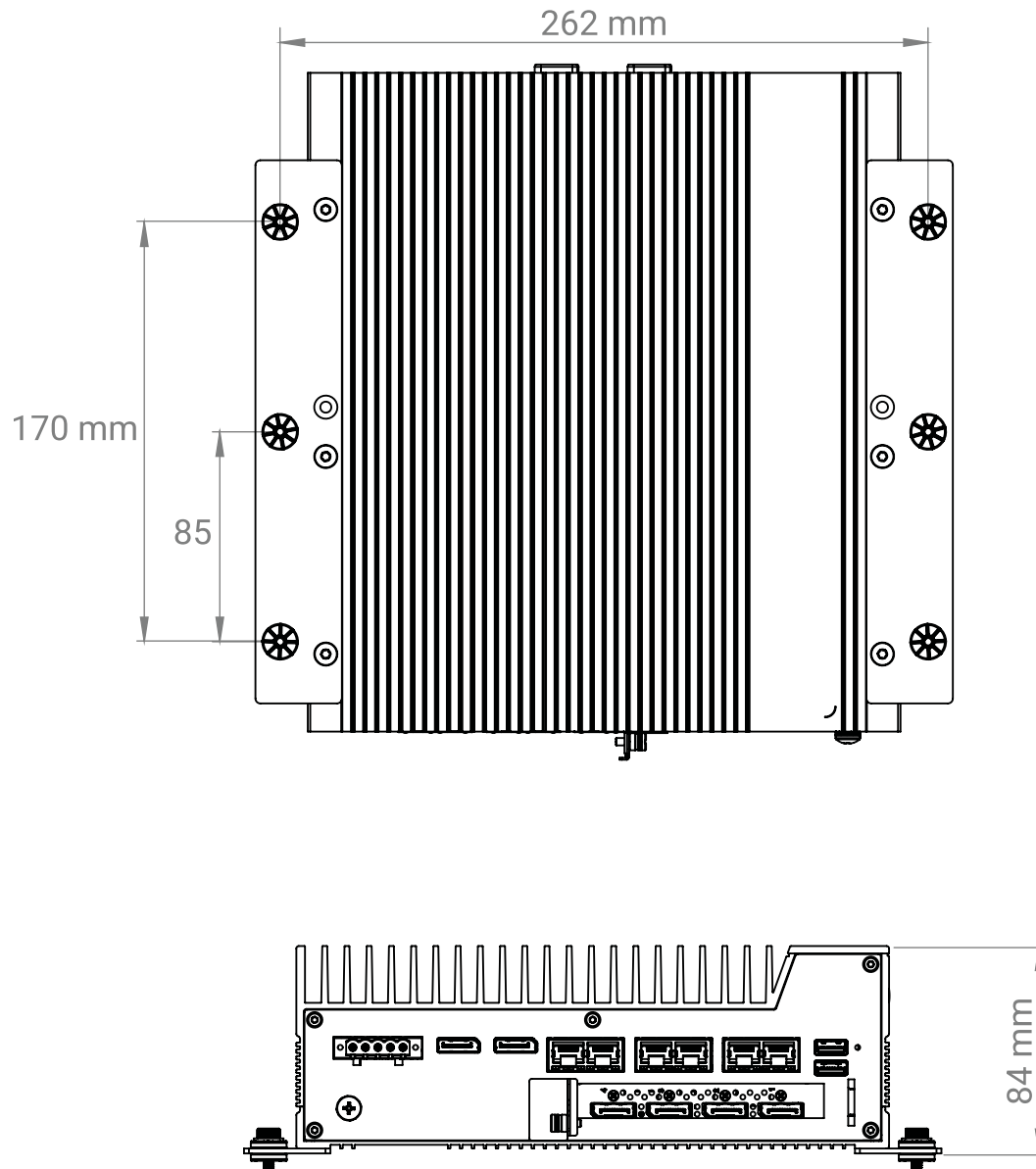
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## Karbon 803 Vibration Isolation Mount

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All measurements in mm



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