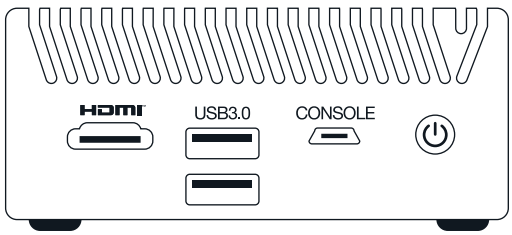
extremeEDGE Server™

1000 Series



Products Overview

The 1000 series brings powerful processing to the extreme edge, enabling remote system monitoring and management via the built-in NANO-BMC (Baseboard Management Controller).

The fanless enclosure offers scalability with memory and storage configurations.

The EE-1000 offers memory and storage configurations, while the EE-1100 models offers memory, storage, Wi-Fi, and LTE configurations.

Common IO features include USB 3.2 and 2.0, as well as HDMI, Dual 2.5GbE, and dedicated BMC GbE Ports.

Remote control in any environment

The first of its kind, offering NANO-BMC out-of-band management in a small form factor enables remote management of edge devices in extreme conditions, worldwide.

Functionality Overview: Monitor, control, and manage hardware health and performance.

NANO-BMC Features:

Features	Function	Notes
Remote Console Access:	Accessing the system console for diagnostics and troubleshooting	Serial over IP
Remote Power Management:	Power-on/off control, power cycling reset	Hard & soft
Virtual Drive:	Make a local file or directory appear as a Drive on the Remote System	This allows updating the BIOS, installing an OS, or loading files remotely onto the Remote System
Firmware Updates	Updating firmware remotely	Remotely maintain device security and functionality

BMC Benefits:

- **Remote access to hardware even when the main system is powered off.**
- **Increased system uptime and faster problem resolution.**
- **Improved power management and resource utilization.**
- **Remote Management reduces technical support cost.**

Remote Access Methods:

- **Dedicated BMC management interface.**
- **Integration with system management software via APIs.**
- **In-band management through OS applications (SSH, Telnet, etc). * Excludes Windows**

Architecture

Featuring advanced Intel processors, the 1000 series delivers exceptional performance.

Features	EE-1000	EE-1110	EE-1130	EE-1170
Processor	Intel N5105	Intel N100	Intel N100	Intel N100
BMC	MOS-BMC	NANO-BMC	NANO-BMC	NANO-BMC
Console Port, Mini-USB	1x Micro-USB	1x Mini-USB	1x Mini-USB	1x Mini-USB
TPM (Discrete)	TPM 2.0	TPM 2.0	TPM 2.0	TPM 2.0
Max Memory	32 GB	32 GB	32 GB	32 GB
Max Storage*	2 TB	4 TB	4 TB	4 TB
Max Drives	1x 2242	1x 2280	1x 2280	1x 2280
USB	2x USB-A 3.0	2x USB-A 3.2 3x USB-C 2.0	2x USB-A 3.2 3x USB-C 2.0	2x USB-A 3.2 3x USB-C 2.0
Network	2x 2.5GbE, 1x 1GbE BMC	2x 2.5GbE, 1x 1GbE BMC	2x 2.5GbE, 1x 1GbE BMC	2x 2.5GbE, 1x 1GbE BMC
Wifi-AC + Bluetooth	N/A	N/A	Included	Included
LTE/4G Modem	N/A	N/A	N/A	Included
PoE+ Input	Optional	N/A	N/A	N/A
Display Out	1x HDMI	1x HDMI 1x mDP	1x HDMI 1x mDP	1x HDMI 1x mDP
Video Chipset	Intel UHD	Intel UHD	Intel UHD	Intel UHD
AI Accelerator	N/A	N/A	N/A	N/A
Operating Temperature Range	-40°C to 60°C (Optional)			
Mounting (Optional)	DIN-Rail	DIN-Rail	DIN-Rail	DIN-Rail

*Note: the EE-1100 Series supports an access panel to easily remove the 2280 SSD Device.

Product Differentiating Features

Built for the Edge: Power and Efficiency in a Compact Design

The 1000 series thrives in edge computing applications where space is limited and on-site processing is crucial. Its ultra-compact size brings powerful computing to the edge of your network, while remote monitoring and management capabilities enhance security and simplified control.

Quiet Operation, Lower Costs

These fanless systems operate silently and consume minimal power, significantly less than traditional edge servers which translates to lower energy costs and a reduced environmental footprint.

Flexible Mounting, Scalable Performance

The 1000 series adapts to diverse environments with its DIN rail compatibility, making installation a breeze. Additionally, it supports memory and storage configurations, allowing you to tailor the system to your specific data storage and management requirements.

NANO-BMC (Baseboard Management Controller)

The 1000 series of products incorporate a Patent Pending technology, which redefines remote management with its built-in NANO-BMC module. This module enables secure out-of-band access for monitoring, control, and power management, including remote power cycling, reboots, virtual drive and critical BIOS updates.

Display Support

The EE-1000 system supports Intel UHD Graphics and drives a single monitor up to 4096x2160@60Hz using an HDMI 2.1 connector.

The EE-1110, EE-1130, and EE-1170 systems support Intel UHD Graphics and drive three monitors up to 4096x2160@60Hz each using an HDMI 2.1 and MST Hub on mDP Port driving two displays.

Network Connectivity

All 1000 series systems support 2x RJ-45 2.5GbE for the Host and 1x RJ-45 GbE for the remote management and control through the BMC.

The EE-1130 supports Wireless-AC + BT radio, and the EE-1170 supports Wireless-AC+BT radio and a 4G (LTE) Modem.

Two RP-SMA and two SMA (1170 only) antennas complete the support for the wireless network.

Model	Description
All Models	2x RJ-45 Ports, 2.5 Gb/s Intel i226
All Models	BMC LAN 1x RJ-45 Port, 1 Gb/s
EE-1130	Wi-Fi + Bluetooth (1x 2230 M.2 E-Key + Antennas)
EE-1170	Wi-Fi + Bluetooth (1x 2230 M.2 E-Key + Antennas) | LTE Modem w/ Dual-SIM slots | (1x 3042 M.2 B-Key + Antennas)

Expandable Memory Options

The 1000 Series of Products allows for a range of memory and storage configurations.

Model	Maximum Configurations	Supported Types
EE-1000	8 GB, 16 GB, or 32 GB	Soldered down LPDDR4-2933 DRAM / Dual-Channel
EE-1110	8 GB, 16 GB, or 32 GB	DDR5-4800 1x SODIMM / Single-Channel
EE-1130	8 GB, 16 GB, or 32 GB	DDR5-4800 1x SODIMM / Single-Channel
EE-1170	8 GB, 16 GB, or 32 GB	DDR5-4800 1x SODIMM / Single-Channel

Additional Product Protection

The 1000 series of products can be treated with a “Conformal Coating” at the PCBA level allowing for a higher level of protection against dust, moisture, and harsh chemical intrusion. Contact sales for volume order.

Power Supply

Specification	Specification Limits	Notes
AC Input Range	100 - 240 VAc	50 Hz to 60 Hz
DC Voltage Out	12.0 VDc	+/- 5%
Amperage	4.0 Amps (EE-1000) 2.5 Amps (EE-1100 Series)	Maximum
Wattage Out	48 Watts (EE-1000) 30 Watts (EE-1100 Series)	Maximum
System Connection	5.5 x 2.1 mm	Lockable Barrel (5.5 mm)

System Dimensions & Weight

Dimensions	Weight
88.9 mm (W) x 88.9 mm (L) x 38 mm (H) 3.5" (W) x 3.5" (L) x 1.5" (H)	1Lb / 0.45 Kg, Final weight based on configuration

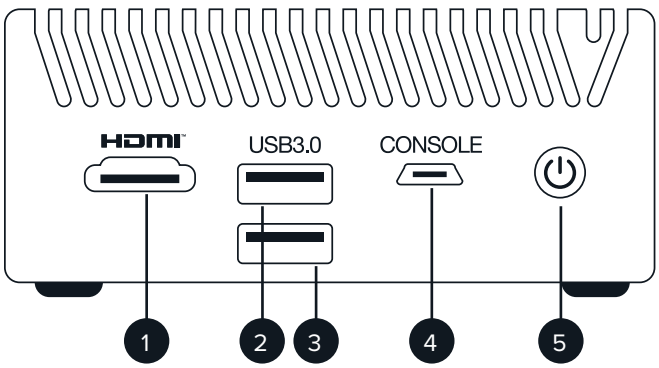
Certifications

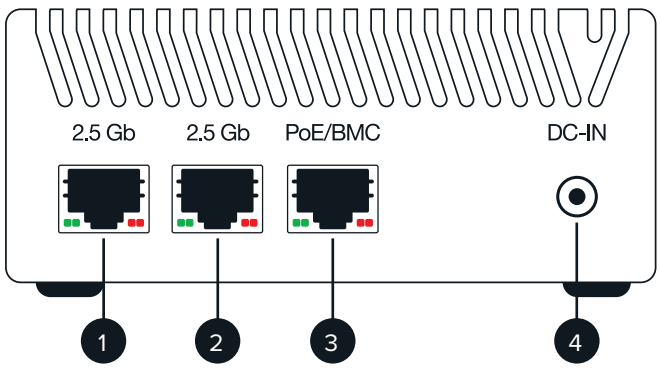
Certifications	Notes
FCC	Federal Communication Commission
CE	Consumer Electronics
ROHS	Restriction Of Hazardous Substances
REACH	Registration / Evaluation / Authorization / Restriction Of Chemicals

Service & Support

Global	
Integration Services	Custom Configuration Service - BIOS Settings, Imaging, System Configuration & Labeling
Deployment Services	Field Deployment Management
Support	Local support in multiple geos.

Illustrated I/O Port Overview EE-1000

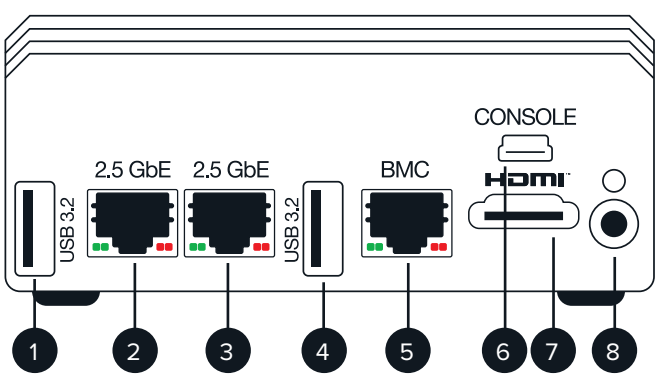


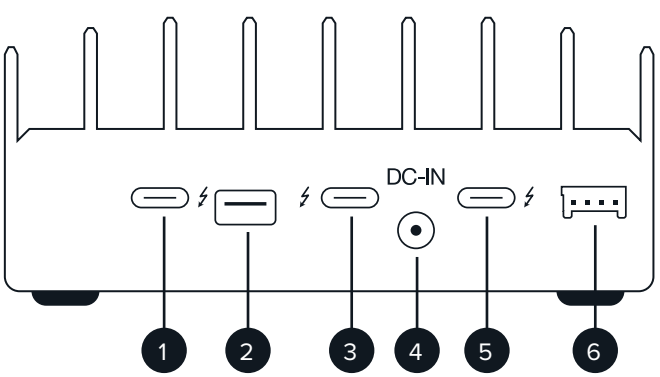


FRONT			
1	HDMI™	4	BMC CONSOLE
2	USB-A 3.0	5	POWER BUTTON
3	USB-A 3.0		

REAR			
1	2.5 GbE	3	POE/BMC
2	2.5 GbE	4	DC-IN

Illustrated I/O Port Overview EE-1110

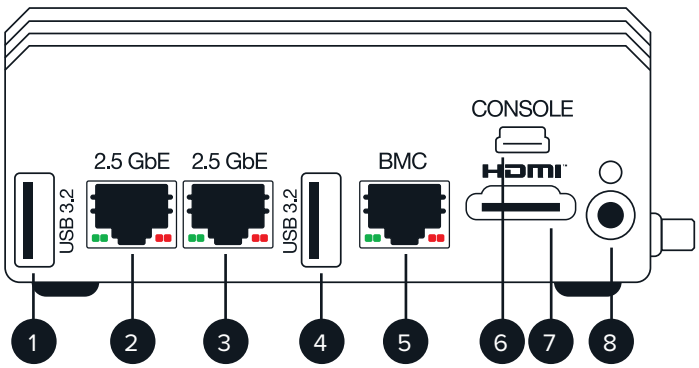


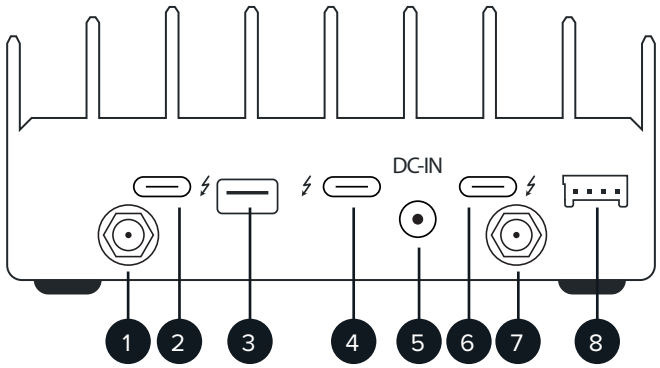


FRONT			
1	USB-A 3.2	5	BMC
2	2.5 GbE	6	BMC CONSOLE
3	2.5 GbE	7	HDMI™
4	USB-A 3.2	8	POWER BUTTON

RIGHT			
1	USB-C 2.0	4	DC-IN
2	MINI-DP	5	USB-C 2.0
3	USB-C 2.0	6	REMOTE POWER

Illustrated I/O Port Overview EE-1130

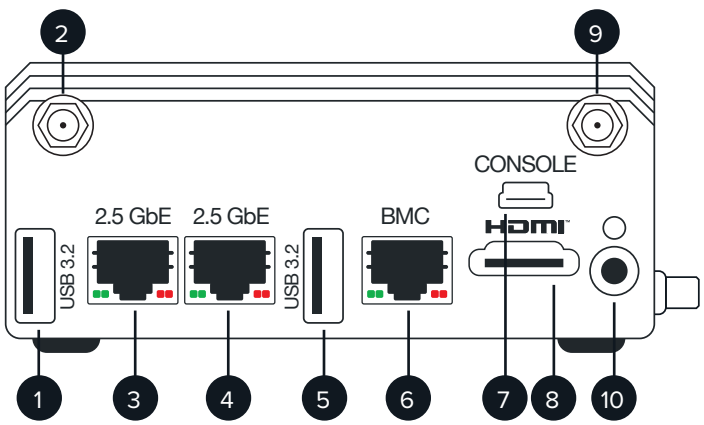


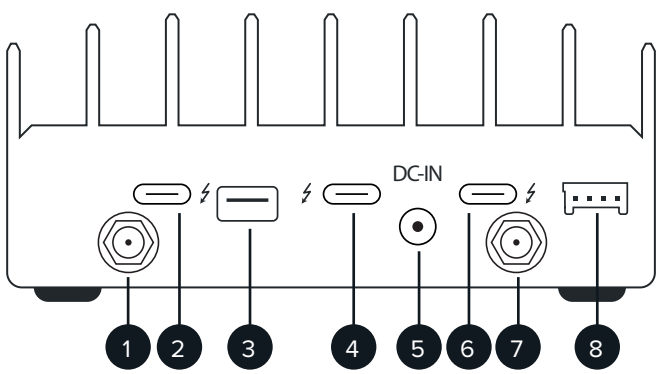


FRONT			
1	USB-A 3.2	5	BMC
2	2.5 GbE	6	BMC CONSOLE
3	2.5 GbE	7	HDMI™
4	USB-A 3.2	8	POWER BUTTON

RIGHT			
1	WI-FI ANTENNA	5	DC-IN
2	USB-C 2.0	6	USB-C 2.0
3	MINI-DP	7	WI-FI ANTENNA
4	USB-C 2.0	8	REMOTE POWER

Illustrated I/O Port Overview EE-1170





FRONT			
1	USB-A 3.2	6	BMC
2	LTE ANTENNA	7	BMC CONSOLE
3	2.5 GbE	8	HDMI™
4	2.5 GbE	9	LTE ANTENNA
5	USB-A 3.2	10	POWER BUTTON

RIGHT			
1	WI-FI ANTENNA	5	DC-IN
2	USB C 2.0	6	USB-C 2.0
3	MINI-DP	7	WI-FI ANTENNA
4	USB-C 2.0	8	REMOTE POWER

Learn more about SNUC BMC-ENABLED extremeEDGE Servers™

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