

# EVP-1000-E4

1U Edge AIoT System with Intel® 12/13th Gen Core™ Processor and PCIe x4 Expansion

## Features

- 12/13th Intel® Core™ Processor with Intel® Q670 Chipset, up to 65W CPU
- Compact design: 254 x 230 x 44.4 mm
- Non-ECC DDR5 SO-DIMM 4800, 2x DisplayPort, 4x USB 3.2, 2x GbE ports (2.5G), 1x COM ports (RS-232)
- Supports one PCIe x4 on PCIe x8 slot



## Ordering Information

| P/N           | Model Name                     | Chipset | Memory | PCIe x16 | PCIe x4 | PCI | DP | DVI | VGA | eDP | LAN | COM | SATA | M.2 | USB2.0 | USB 3.2 Gen 2x1 |
|---------------|--------------------------------|---------|--------|----------|---------|-----|----|-----|-----|-----|-----|-----|------|-----|--------|-----------------|
| 93-F0109-0220 | EVP-1000-E4 Bare Bone IPC      | Q670    | 8G     | 0        | 1       | 0   | 2  | 0   | 0   | 0   | 2   | 1   | 1    | 2   | 0      | 4               |
| 93-F0109-0120 | EVP-1000-E4 Pre-configured IPC | Q670    | 8G     | 0        | 1       | 0   | 2  | 0   | 0   | 0   | 2   | 1   | 1    | 2   | 0      | 4               |

## Packing List

| PN            | Description               | QTY |
|---------------|---------------------------|-----|
| 93-F0109-0220 | EVP-1000-E4 Bare Bone IPC | 1   |
| 93-F0109-0120 | EVP-1000-E4 IPC System    | 1   |
| N/A           | I/O Bracket               | 1   |

## Embedded OS

| PN            | Description                           |
|---------------|---------------------------------------|
| 92-56094-0010 | Win10 IoT Ent LTSC 2021 High End PKEA |
| 92-56094-2010 | Win10 IoT Ent LTSC 2021 Value PKEA    |
| 92-56094-4010 | Win10 IoT Ent LTSC 2021 Entry PKEA    |
| 92-56101-0010 | Win11 IoT Ent LTSC 2024 High End PKEA |
| 92-56101-2010 | Win11 IoT Ent LTSC 2024 Value PKEA    |
| 92-56101-4010 | Win11 IoT Ent LTSC 2024 Entry PKEA    |

## Specifications

| Model            |                          | EVP-1000-E4                                                                  |                                                            |
|------------------|--------------------------|------------------------------------------------------------------------------|------------------------------------------------------------|
| Sku              |                          | Pre-configured                                                               | Barebone System<br>(User Configurable)                     |
| Processor System | CPU                      | Intel® Core™ i9-12900E                                                       | Support Intel® Core™ 12/13/14th Gen Processors (up to 65W) |
|                  | Chipset                  | Q670                                                                         |                                                            |
|                  | Memory                   | 1x DDR5 4800 non-ECC SO-DIMM 8GB                                             | 2x DDR5 4800 SO-DIMMs slots<br>(non-ECC, up to 64GB)       |
|                  | OS Support               | Windows 10/11 IoT, Linux                                                     |                                                            |
| Display          | VGA                      | -                                                                            |                                                            |
|                  | HDMI                     | -                                                                            |                                                            |
|                  | DisplayPort              | 2x DP1.2++ (rear I/O),<br>resolution up to 4096 x 2304 @ 60Hz                |                                                            |
|                  | DVI-D                    | -                                                                            |                                                            |
|                  | No. of Displays          | Dual Displays                                                                |                                                            |
| Ethernet         | Gbe Port                 | 2                                                                            |                                                            |
|                  | Controller/<br>Frequency | 2x Intel® i225-IT (2.5 GbE )                                                 |                                                            |
| I/O Interfaces   | USB                      | 4x USB 3.2 Gen 2x1 ports (Rear IO)                                           |                                                            |
|                  | Serial Ports             | 1 x RS-232 (Rear IO)                                                         |                                                            |
|                  | M.2                      | 2 x M.2 M-Key 2280, support PCIe Gen 4 x 4                                   |                                                            |
|                  | SATA                     | 2                                                                            |                                                            |
|                  | GPIO                     | -                                                                            |                                                            |
|                  | Expansion Slots          | 1x PCIe x4 on PCIe x8 slot                                                   |                                                            |
|                  | TPM                      | Yes (TPM 2.0, Infineon SLB9670/ Nuvoton co-lay)                              |                                                            |
|                  | Dimension                | 254 (W) x 229.3 (D) x 44.4 (H) mm                                            |                                                            |
|                  | Power Supply             | 24V (+/- 10% tolerance)                                                      |                                                            |
|                  | Operating Temperature    | 0°C to 50°C (32°F to 122°F)<br>Add-on cards depend on the spec sheet thermal |                                                            |
|                  | Vibration Operating      | OP: 5-500 Hz, 1 Grams<br>Non-OP: 5-500 Hz, 2 Grams                           |                                                            |
|                  | Shock Operating          | OP shock test: 20 G, 11m duration                                            |                                                            |
| Certification    | EMC                      | CE and FCC Class A                                                           |                                                            |
|                  | Safety                   | EN 62368-1:2014+A11:2017                                                     |                                                            |

## CPU Support List

| Family      | Number     | CPU Core | Frequency | Cache | Processor Base Power | Since BIOS |
|-------------|------------|----------|-----------|-------|----------------------|------------|
| Raptor Lake | i9-13900E  | 24 Cores | 5.2 GHz   | 36 MB | 65 W                 | 1.00.10    |
| Raptor Lake | i9-13900TE | 24 Cores | 5.0 GHz   | 36 MB | 35 W                 | 1.00.10    |
| Raptor Lake | i9-13900   | 24 Cores | 5.6 GHz   | 36 MB | 65 W                 | 1.00.10    |
| Raptor Lake | i7-13700E  | 16 Cores | 5.1 GHz   | 30 MB | 65 W                 | 1.00.10    |
| Raptor Lake | i7-13700TE | 16 Cores | 4.8 GHz   | 30 MB | 35 W                 | 1.00.10    |
| Raptor Lake | i7-13700   | 16 Cores | 5.2 GHz   | 30 MB | 65 W                 | 1.00.10    |
| Raptor Lake | i7-13700T  | 16 Cores | 4.9 GHz   | 30 MB | 35 W                 | 1.00.10    |
| Raptor Lake | i5-13500E  | 14 Cores | 4.6 GHz   | 24 MB | 65 W                 | 1.00.10    |
| Raptor Lake | i5-13500TE | 14 Cores | 4.5 GHz   | 24 MB | 35 W                 | 1.00.10    |
| Raptor Lake | i5-13500   | 14 Cores | 4.8 GHz   | 24 MB | 65 W                 | 1.00.10    |
| Raptor Lake | i5-13500T  | 14 Cores | 4.6 GHz   | 24 MB | 35 W                 | 1.00.10    |
| Raptor Lake | i5-13400E  | 10 Cores | 4.6 GHz   | 20 MB | 65 W                 | 1.00.10    |
| Raptor Lake | i3-13100E  | 4 Cores  | 4.4 GHz   | 12 MB | 65 W                 | 1.00.10    |
| Raptor Lake | i3-13100TE | 4 Cores  | 4.1 GHz   | 12 MB | 35 W                 | 1.00.10    |
| Raptor Lake | i3-13100   | 4 Cores  | 4.5 GHz   | 12 MB | 60 W                 | 1.00.10    |
| Raptor Lake | i3-13100T  | 4 Cores  | 4.2 GHz   | 12 MB | 35 W                 | 1.00.10    |
| Alder Lake  | i9-12900E  | 16 Cores | 5.0 GHz   | 30 MB | 65 W                 | 1.00.10    |
| Alder Lake  | i9-12900TE | 16 Cores | 4.8 GHz   | 30 MB | 35 W                 | 1.00.10    |
| Alder Lake  | i7-12700E  | 12 Cores | 4.8 GHz   | 25 MB | 65 W                 | 1.00.10    |
| Alder Lake  | i7-12700TE | 12 Cores | 4.7 GHz   | 25 MB | 35 W                 | 1.00.10    |
| Alder Lake  | i7-12700   | 12 Cores | 4.9 GHz   | 25 MB | 65 W                 | 1.00.10    |
| Alder Lake  | i5-12500E  | 6 Cores  | 4.5 GHz   | 18 MB | 65 W                 | 1.00.10    |
| Alder Lake  | i5-12500TE | 6 Cores  | 4.3 GHz   | 18 MB | 35 W                 | 1.00.10    |
| Alder Lake  | i5-12500   | 6 Cores  | 4.6 GHz   | 18 MB | 65 W                 | 1.00.10    |
| Alder Lake  | i5-12400   | 6 Cores  | 4.4 GHz   | 18 MB | 65 W                 | 1.00.10    |
| Alder Lake  | i3-12100E  | 4 Cores  | 4.2 GHz   | 12 MB | 65 W                 | 1.00.10    |
| Alder Lake  | i3-12100TE | 4 Cores  | 4.0 GHz   | 12 MB | 35 W                 | 1.00.10    |
| Alder Lake  | G7400E     | 2 Cores  | 3.6 GHz   | 6 MB  | 46 W                 | 1.00.10    |
| Alder Lake  | G7400TE    | 2 Cores  | 3.0 GHz   | 6 MB  | 35 W                 | 1.00.10    |
| Alder Lake  | G6900E     | 2 Cores  | 3.0 GHz   | 4 MB  | 46 W                 | 1.00.10    |
| Alder Lake  | G6900TE    | 2 Cores  | 2.4 GHz   | 4 MB  | 35 W                 | 1.00.10    |