

CE-CL-AC



CE-CL-DC

## Main Features

- The 8th/9th Gen Intel® Core™ Coffee Lake-S processor
- DDR4 supported
- M.2 SATA supported
- 2 x 1G SFP
- 4 x Gigabit Ethernet
- 3 x DPs
- 4 x USB 3.0 type A, 1 x USB 3.0 type C
- 1 x RS232/422/485 isolated
- 1 x Fan/buzzer
- Onboard TPM
- Built in 24VDC or 115~230VAC power input
- IEC-60945 maritime standards compliance

## Product Overview

CE-CL computer features the 8th generation Intel® Core™ Coffee Lake-S processor with low power consumption, delivering a reliable, durable, high-performance platform of wide versatility for use in maritime and offshore environments. It has an isolated RS-232/422/485 port, four gigabit Ethernet LAN ports, five USB ports, and supports independent displays through DP outputs.

The CE-CL series computers are fanless minimalistic enclosure designed with a rugged anti-vibration chassis. It features a wide -10°C to 55°C temperature range while supporting 24VDC (or 115~230VAC) power input. Compliant to IEC-60945 maritime standards, the CE-CL series computers are reliable even in the harshest environments.

## Specifications

### System

- CPU: The 8th/9th Gen Intel® Core™ Coffee Lake-S processor
- BIOS AMI BIOS
- Ethernet
  - LAN chip: 4 x Intel® I210-IT Gigabit LAN + 2 x Intel® 210-IS 1Gb SFP
  - Ethernet interface: 10/100/1000 Mbps
  - Support wake up on LAN
- System memory: 2 x DDR4-2666 SO-DIMM socket, support up to 32GB, non-ECC and un-buffered
- Graphics: Intel® HD Graphics
- Watchdog timer: Watchdog timeout can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (tolerance 15% under room temperature 25°C)
- H/W status monitor: monitoring system temperature, and voltage

### I/O Interface-Front

- 2 x USB 3.0 type A connector
- Power on/off switch

### I/O Interface-Rear

- Ethernet: 4 x RJ45/2 x 1Gb SFP
- DisplayPort: 2 x DP port, 1 x type C connector
- COM: 1 x RS232/422/485
- Fan/buzzer connector: 4-pin Phoenix terminal blocks
- Power input connector: 3-pin Phoenix terminal blocks

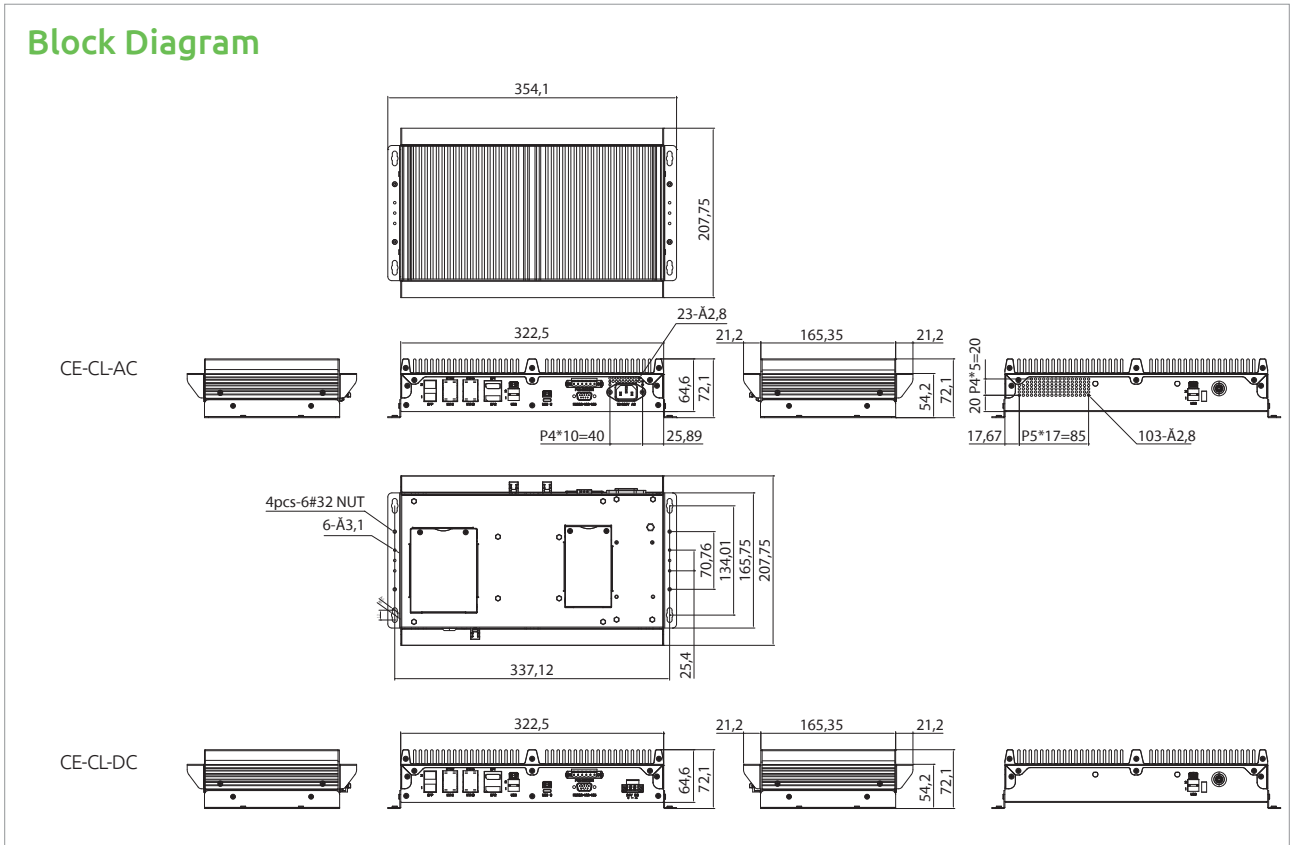
### Device

- 1 x SATA M.2 connector
- 1 x mini-PCIe connector

### Power Requirements

- DC power input
  - Input voltage: 24VDC
  - Reverse polarity protection
  - Galvanic isolated
  - Power consumption: 100W (max)

## Block Diagram



### Mechanical & Environment

- Fanless system design
- Pantone black RAL9005, extruded and painted aluminum housing
- IP protection: IP20 top cover
- Vibration
  - 1Grms @ random condition, 5~500Hz, 2hr/axis (operating/non-operating)
- Shock
  - IEC 68 2-27
  - 30G @ wall mount, half sine, 11ms
- Operating temperature: -10°C to 55°C
- Storage temperature: -25°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 332.4 x 208.15 x 59 mm
- Weight: 5 KG

### Certifications

- CE approval
- FCC Class A
- IEC-60945 maritime standards compliance

## Ordering Information

### Barebone

- CE-CL-AC (P/N: 10Q000CE02X0)
- CE-CL-DC (P/N: 10Q000CE03X0)