

# MC-5150-AC/DC

**x86 ECDIS computers with Intel® Core™ i5 520E, 4 serial ports, 2 Gigabit Ethernet ports, 6 USB hosts, 8 NMEA ports, storage, VGA/DVI**



- > High performance Intel® Core™ i5 520E processor, 3 MB L2 cache
- > Built-in 2 GB DDR3 memory, supports up to 4 GB
- > Dual independent displays (DVI-I + VGA)
- > 2 Gigabit Ethernet ports for network redundancy
- > 2 RS-232/422/485 serial ports
- > 2 RS-232 ports
- > 8 NMEA ports
- > 6 USB 2.0 hosts
- > 1 internal SATA solid state drive storage slot
- > 1 external solid state drive storage slot
- > 1G anti-vibration design for system reliability
- > Compact, fanless design
- > 24 VDC or 110 to 230 VAC power input models available
- > Supports Windows XP Embedded, XP Professional, Windows 7



## Overview

The MC-5150-AC/DC computers feature the Intel® Core™ i5 520E processor and come with 4 serial ports, 2 Gigabit Ethernet ports, 6 USB hosts, and 8 NMEA ports. The computers offer high performance and versatile peripherals for marine applications.

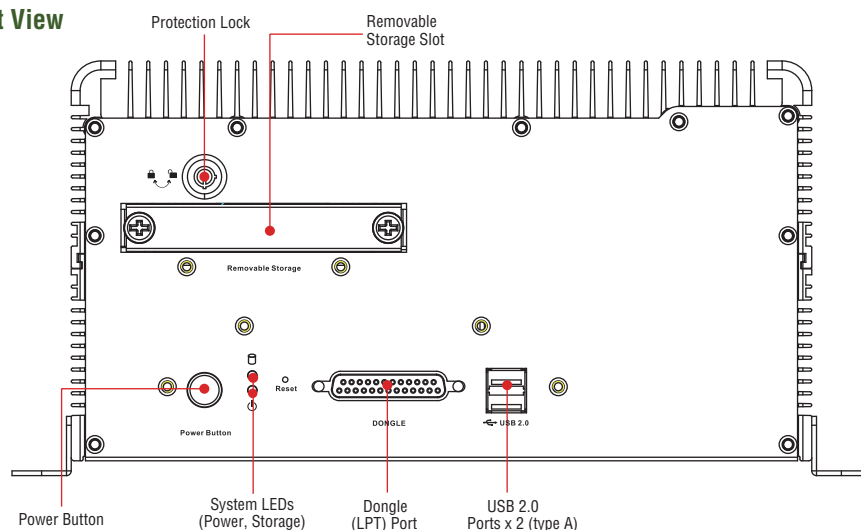
Designed with highest quality and durability in mind, the marine-grade MC-5150-AC/DC computers feature a rugged chassis proven against 1G anti-vibration, providing a most reliable platform even in harsh

environments. In addition, the compact size, fanless design, and low power consumption deliver an optimal thermal solution, making installations easy for bridge systems in marine applications.

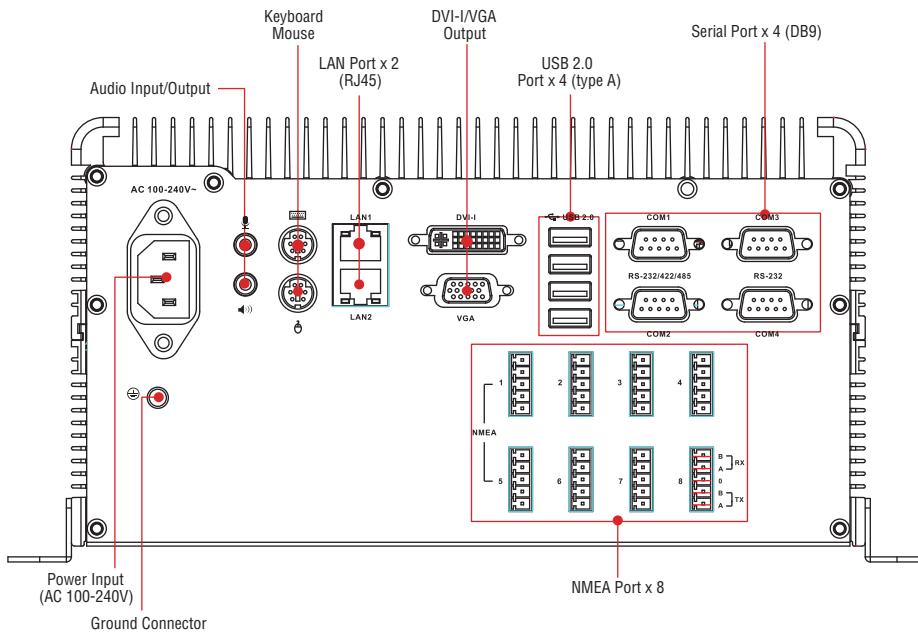
Users can easily install Windows XP Embedded, XP Professional, or Windows 7 for a flexible and friendly system development and user environment.

## Appearance

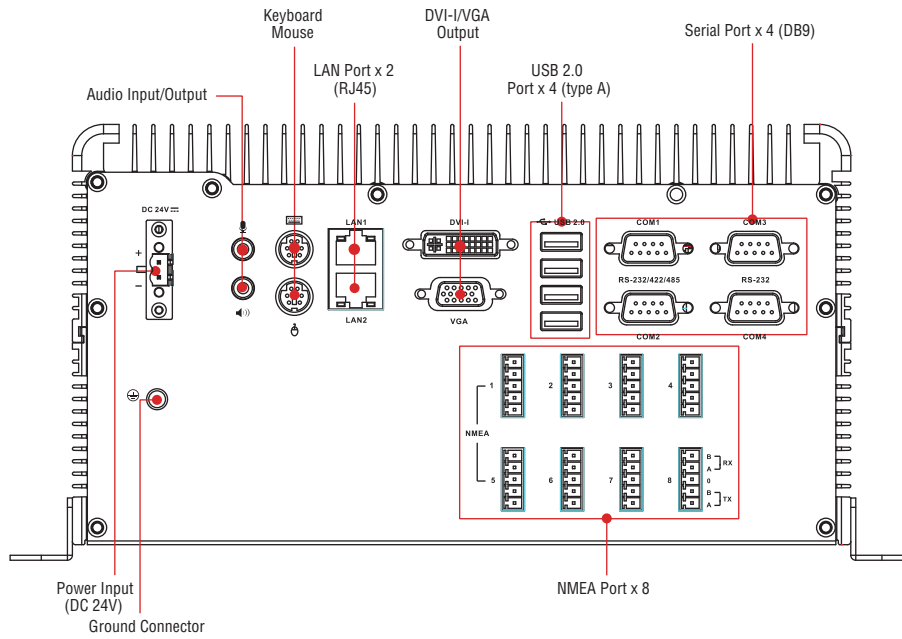
### AC/DC Model Front View



### AC Model Rear View

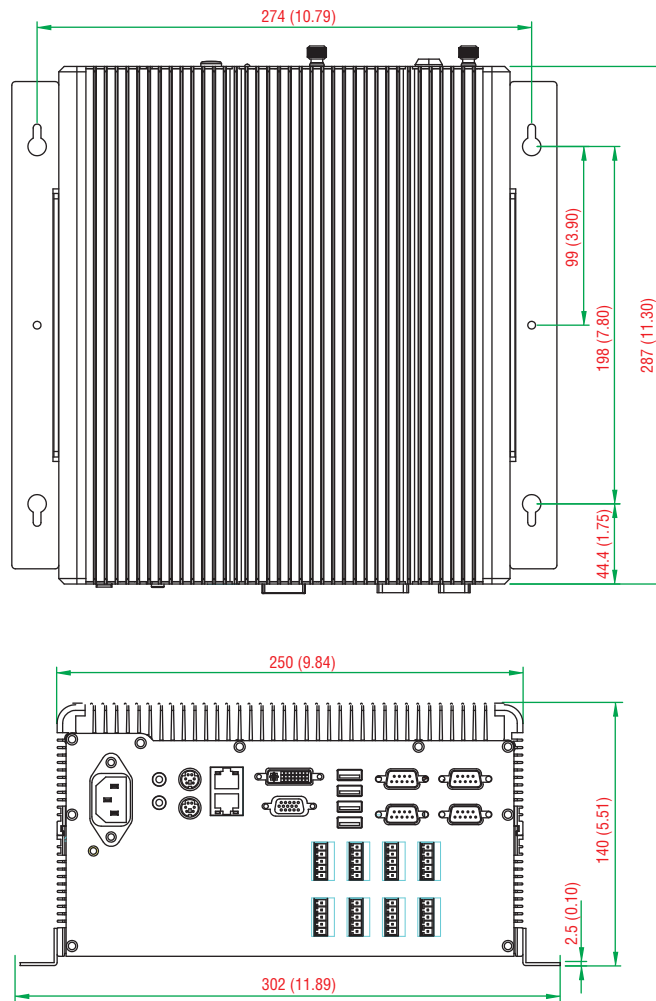


### DC Model Rear View



## Dimensions

Unit: mm (inch)



## Specifications

### Computer

**CPU:** Intel® Core™ i5 520E (BGA CPU package), 2.4 GHz processor  
**OS:** Windows 7, Windows XP SP3, Windows XP Embedded (must be installed by the user)  
**System Chipset:** Intel® QM57 Express Chipset  
**DRAM:** 2 GB DDR3 SDRAM onboard  
**USB:** USB 2.0 hosts x 6, Type A connectors

### Storage

**Storage Support:**

- 1 internal SATA storage tray for SSD
- 1 removable SATA storage tray for storage expansion with 60 GB SSD

### Other Peripherals

**KB/MS:** 2 PS/2 interfaces supporting standard PS/2 keyboard and mouse  
**Audio:** line-in/out interface

### Display

**Graphics Controller:** Onboard Intel® HD graphics  
**Display Interface:**

- VGA Interface: 15-pin D-Sub connector (female), with resolution up to 1920 x 1080
- DVI-I Interface: 29-pin DVI-I connector (female)

### Ethernet Interface

**LAN:** 2 auto-sensing 10/100/1000 Mbps ports (RJ45)  
**Magnetic Isolation Protection:** 1.5 KV built in

### Serial Interface

**Serial Standards:**

- 2 RS-232/422/485 ports, software-selectable (DB9 male)
- 2 RS-232 ports (DB9)
- 12 NMEA ports (Phoenix 3.81 mm compatible connector)

### Serial Communication Parameters

**Data Bits:** 5, 6, 7, 8  
**Stop Bits:** 1, 1.5, 2  
**Parity:** None, Even, Odd, Space, Mark  
**Flow Control:** RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485  
**Baudrate:** 50 bps to 230.4 Kbps

### Serial Signals

**RS-232:** TxD, RxD, DTR, DSR, RTS, CTS, DCD, GND  
**RS-422:** TxD+, TxD-, RxD+, RxD-, GND  
**RS-485-4w:** TxD+, TxD-, RxD+, RxD-, GND  
**RS-485-2w:** Data+, Data-, GND

## LEDs

**System:** Storage, Power

**LAN:** 100M/Link x 2, 1000M/Link x 2 (on connector)

## Physical Characteristics

**Housing:** Aluminum, sheet metal

**Weight:** 6.85 kg

**Dimensions:** 287 x 250 x 140 mm (11.30 x 9.84 x 5.51 in)

**Mounting:** Wall

## Environmental Limits

**Operating Temperature:** -15 to 55°C (5 to 131°F)

**Storage Temperature:** -20 to 60°C (-4 to 131°F)

**Ambient Relative Humidity:** 5 to 95% (non-condensing)

## Anti-vibration:

- 0.7 g @ DNV 2.4 (Class A), sine wave, 2-100 Hz, 1 Oct./min., 1.5 hr per axis
- 1 grms @ DNV 2.4, random wave, 3-100 Hz, 2.5 hr per axis
- 2.1 g @ DNV 2.4 (Class C), sine wave, 2-50 Hz, 1 Oct./min., 1.5 hr per axis

## Power Requirements

### Input Voltage:

- DC Model: 24 VDC (with tolerance from 18 to 30 VDC, 2-pin terminal block)
- AC Model: 100 to 240 VAC

**Power Consumption:** Less than 100 W, 2.5 A @ 24 VDC

## Standards and Certifications

**Safety:** UL 60950-1, DNV 2.4 (Pending), IEC 60945 (4th) (Pending), IACS-E10 (Pending)

**EMC:** EN 55022 Class B, EN 55024-4-2, EN 55024-4-3, EN 55024-4-4, FCC Part 15 Subpart B Class B

**Marine:** IEC 60945 4th. (Pending), IACS-E10 (Pending)

**Green Product:** RoHS, cRoHS, WEEE

## Reliability

**MTBF (mean time between failures):** 220,490 hrs

## Warranty

**Warranty Period:** 3 years

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

## Ordering Information

### Available Models

**MC-5150-AC:** x86-based ECDIS computer with Intel® Core™ i5 CPU processor, 4 serial ports, 8 NMEA ports, 2 Gigabit Ethernet ports, 6 USB hosts, storage, VGA/DVI, and AC power input

**MC-5150-DC:** x86-based ECDIS computer with Intel® Core™ i5 CPU processor, 4 serial ports, 8 NMEA ports, 2 Gigabit Ethernet ports, 6 USB hosts, storage, VGA/DVI, and DC power input

### Optional Accessories (for AC model only, can be purchased separately)

**PWC-C13US-3B-183:** Power cord with 3-pin connector, USA plug

**PWC-C13EU-3B-183:** Power cord with 3-pin connector, Euro plug

**PWC-C13UK-3B-183:** Power cord with 3-pin connector, British plug

**PWC-C13AU-3B-183:** Power cord with 3-pin connector, Australia plug

**PWC-C13CN-3B-183:** Power cord with 3-pin connector, China plug

### Package Checklist

- MC-5150 computer
- 2 removable storage protection keys
- Terminal block for power input (DC model only)
- 8 terminal blocks for NMEA ports
- Documentation and driver CD
- Quick installation guide (printed)
- Warranty card