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 storage drive slot
- 1 removable SATA storage drive tray
- 1G anti-vibration design for system reliability
- Compact, fanless design
- 24 VDC or 100 to 240 VAC power input models available
- Supports Windows XP Embedded, XP Professional, Windows 7

Overview

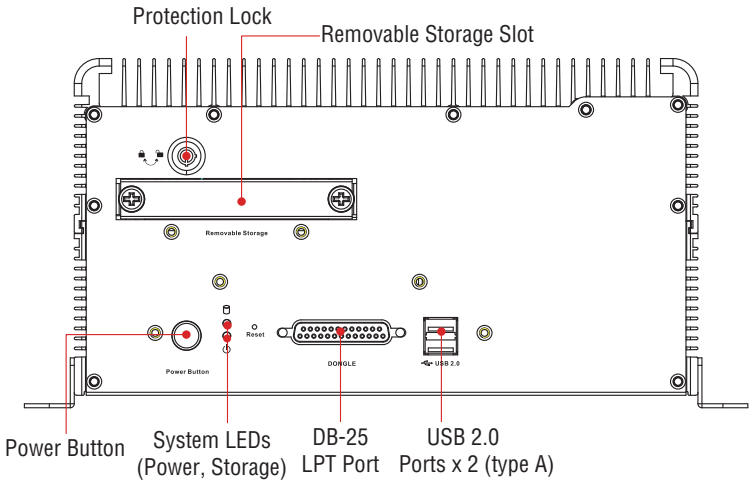
The MC-5150-AC/DC computers feature the Intel® Core™ i5 520E processor and come with 4 serial ports, 2 Gigabit Ethernet ports, 6 USB hosts, and 8 NMEA ports. The computers offer high performance and versatile peripherals for marine applications.

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.

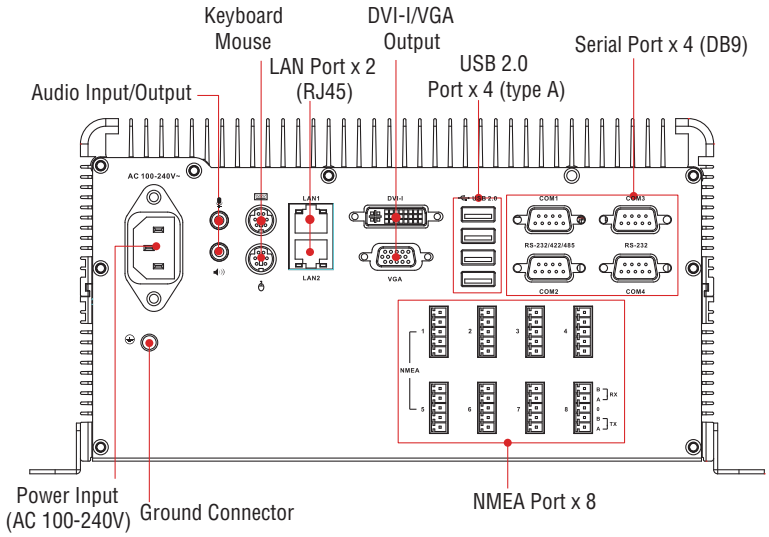
Users can easily install Windows XP Embedded, XP Professional, or Windows 7 for a flexible and friendly system development and user environment.

Appearance

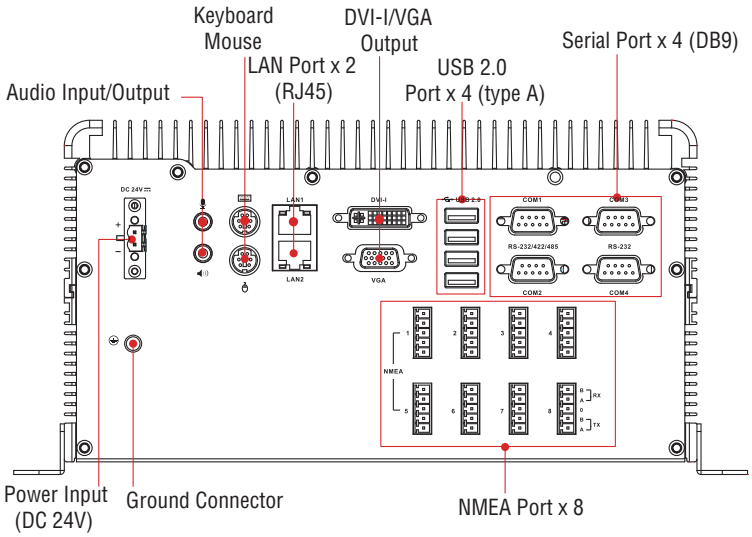
AC/DC Model Front View



AC Model Rear View



DC Model Rear View



Specifications

Computer

CPU: Intel® Core™ i5-520E (BGA CPU package), dual core threaded 64 bit 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
FSB: 1066
System Memory: 8 GB capacity, 2 GB pre-installed: 2 slots 4 GB DDR3-1066 204 pin SO-DIMM SDRAM
USB: USB 2.0 hosts x 6, Type A connectors

Storage

Storage Support:
• 1 internal SATA storage tray
• 1 removable SATA storage drive tray

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)
• 8 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:
• Without ears: 287 x 250 x 135 mm (11.30 x 9.84 x 5.31 in)
• With ears: 287 x 290 x 140 mm (11.30 x 11.42 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 G_{rms} @ 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, IEC 60945 (4th), IACS E10, CCC (GB4943, GB9254, GB17625.1)
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, IACS E10
Green Product: RoHS, cRoHS, WEEE

Reliability

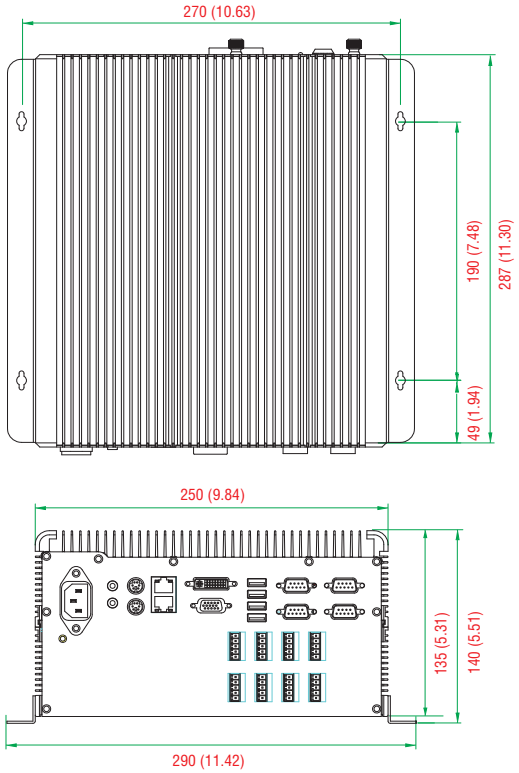
MTBF (mean time between failures): 220,490 hrs

Warranty

Warranty Period: 3 years
Details: See www.moxa.com/warranty

Dimensions

Unit: mm (inch)



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
- 8 screws for internal and removable HDD
- Terminal block for power input (DC model only)
- 8 terminal blocks for NMEA ports
- Documentation and driver CD
- Quick installation guide (printed)
- Warranty card