

Marine Embedded Box Series

SBOX-100-QM87

Intel® Core™ i5 Dual-core Processor



Features

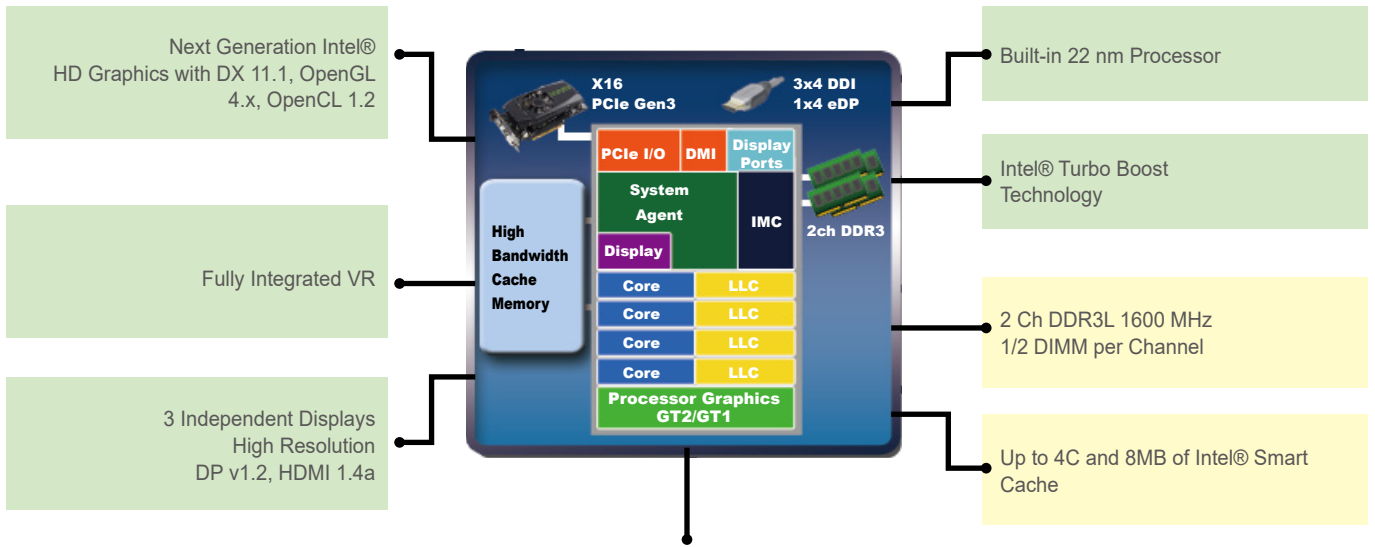
- Fanless marine computer with 4th Generation Intel® Core™ i5 dual-core processor
- -15°C ~ +55°C wide temperature
- Isolation protection
 - » 4 x RS-232/422/485 isolated serial ports
 - » Isolated 18 V~24 V DC input
 - » 2 x Isolated CAN-bus 2.0B
- 2 x 2.5" SSD bay with RAID 0/1 function



■ Intel® Core™ i5 High Performance Computing Power in a Fanless Design

IEI's high performance marine solutions are built with the powerful Intel® Core™ i5 CPU within a fanless system architecture. No matter your applications are general marine system management, monitoring or conning systems, radar systems, or ECDIS navigation, IEI's marine computers will give you the most stability than ever.

- Improved CPU performance with Intel® 22nm 4th Generation Mobile Core™ i5-4400E 2.7 GHz processor
- Two 204-pin 1600/1333MHz dual-channel DDR3 SDRAM support up to 16 GB



Intel® AVX 2.0 + Intel® AES New Instructions and Improvements

-15°C ~ 55°C FANLESS!

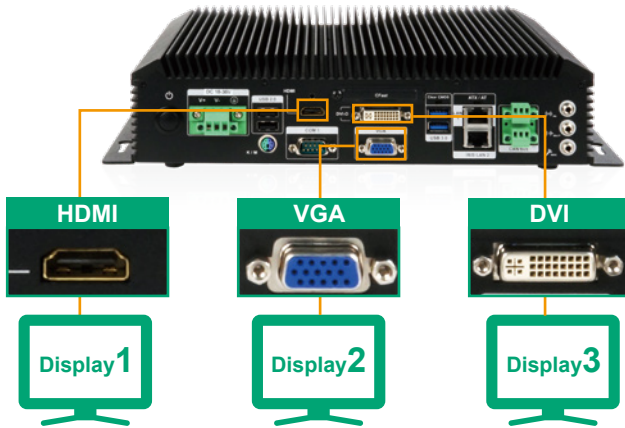


With IEI's fanless solutions, your vessels can avoid the bothersome of replacement of fan, increasing safety and efficiency for the crew and the entire ship.

Three independent aluminum heat sinks help the heat dissipate averagely, and help the system efficiently achieve wide operating temperature range between -15°C~55°C.

■ 3 independent displays: HDMI, DVI, and VGA

The three simultaneously independent displays are supported via the on-board video output combinations of VGA, DVI and HDMI. This versatile combination of display output options make the marine system ideal for multi-monitor required applications in the bridge room.



■ Multiple Isolated Ports for Comprehensive Protection against Electrical Surges

Ground loop and electric surges are common in the marine applications of electronic products due to the dense placement of devices. These stray electrical signals can cause equipment damage or malfunction.

■ Isolated 18 V~24 V DC power 2250 V DC Input to Output Basic Insulation



■ 2.5 kV isolation protection on the RS-232/422/485

IEI marine computer is protected from any stray electrical signals from other devices on the ship. Electric surges that were generated from other electronic devices which often passed through serial lines to the marine computer can cause severe damage and malfunction to the computers.

■ Two independent CAN 2.0B channels with 2.5 kV isolation protection

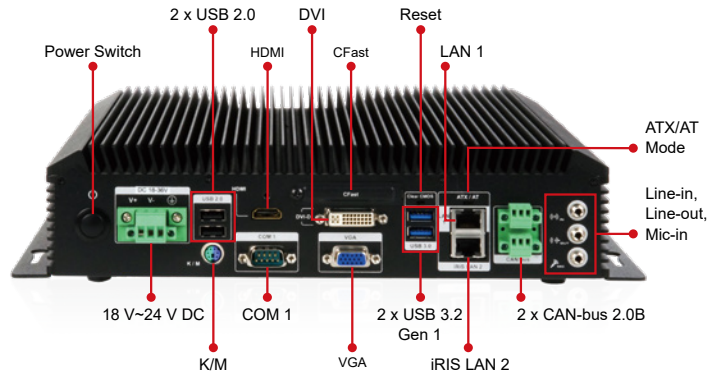
CAN 2.0B is a kind of marine electronic data network for communication between marine electronic devices such as chart plotters, navigation instruments, GPS receivers, etc.



Front view



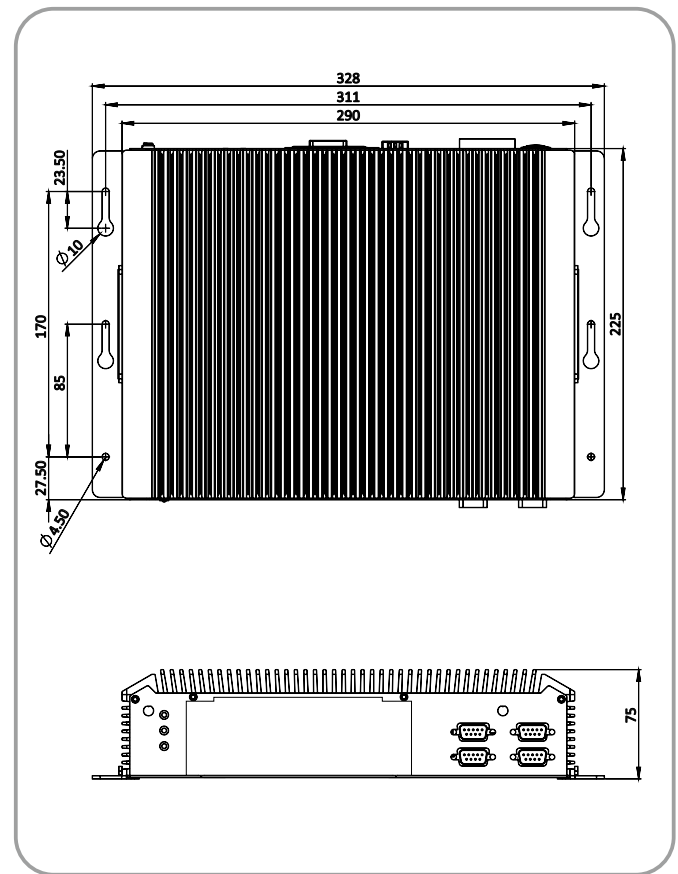
Rear view



Specifications

| Model | | SBOX-100-QM87 |
|------------------------|-------------------------|---|
| Chassis | Color | Black |
| | Dimensions (WxHxD) (mm) | 290 x 75 x 225 |
| | System Fan | Fanless |
| | Chassis Construction | Extruded aluminum alloy |
| Motherboard | CPU | Intel® mobile Core™ i5-4400E (2.7 GHz, 37W) |
| | Chipset | Intel® QM87 |
| | System Memory | 2 x 204-pin DDR3 SO-DIMM slot (system max. 16 GB) Pre-installed 4 GB DDR3 SO-DIMM |
| IPMI | iRIS Solution | iRIS-2400 |
| Storage | Hard Drive | 2 x 2.5" SATA 6Gb/s SSD bay with RAID 0/1 function |
| | CF Card/CFast | 1 x CFast |
| | PS2 (KB/MS) | 1 |
| I/O Interfaces | USB 3.2 Gen 1 | 2 |
| | USB 2.0 | 2 |
| | Ethernet | 2 x RJ-45 with teaming support 1 x PCIe GbE by Intel® I217LM 1 x PCIe GbE by Intel® I210-AT (2 with 2 kV isolation) |
| | COM Port | 1 x DB-9 (non-isolated) 4 x RS-232/422/485 (with 2.5 kV isolation) |
| | CAN-bus/OBD-II | 2 x CAN-bus (with 2.5 kV isolation) |
| | Display | 1 x VGA, 1 x DVI-D, 1 x HDMI |
| | Resolution | VGA: Up to 1920 x 1200 @ 60 Hz HDMI: Up to 2500 x 1600 @ 60 Hz DVI-D: Up to 2500 x 1600 @ 60 Hz |
| | Audio | 1 x Line-out, 1 x Line-in, 1 x Mic-in |
| | Wireless | 2 x Antenna SMA hole (reserved) |
| | Expansions | PCIe Mini |
| LED Indicator & Button | Indicator | Power (power on: green, power off: orange), storage (red, blinking), IPMI (blue) |
| Power | Power Input | Terminal block: Isolated 24V DC (18~31.2 V DC) |
| | Consumption | 100 W (Intel® mobile Core™ i5-4400E with 4 GB DDR3 memory) |
| Reliability | Mounting | Wall mount |
| | Operating Temperature | -15°C ~ 55°C (5°F ~131°F) with air flow (SSD) |
| | Storage Temperature | -20°C ~ 60°C (-4°F ~140°F) |
| | Humidity | 5% ~ 95%, non-condensing |
| | Operating Shock | IEC 60945 and DNV 2.4 IASC-E10 compliant |
| | Operating Vibration | |
| | Weight (Net/Gross) | 4.08 kg / 6.03 kg |
| OS | Safety/EMC | EMC/CE/FCC/DNV GL CG-0339, IEC 60945 4th, IACS-E10, IEC 61174 compliant IP rating: IP22 compliant rear cover |
| | Supported OS | Microsoft® Windows® Embedded 8, Microsoft® Windows® Embedded Standard 7 E |

Dimensions (Unit: mm)



Ordering Information

| Part No. | Description |
|--------------------------|--|
| SBOX-100-QM87i-i5/4G-R10 | Fanless marine computer with Intel® Mobile Core™ i5-4400E 2.7 GHz processor, 4 GB DDR3 memory, iRIS-2400 supported, isolated 18 V~36 V DC, R10 |

Packing List

| Item | P/N | Qty | Remark |
|-------------------------|---------------------|-----|-------------------------|
| PS/2 cable | 32006-000300-100-RS | 1 | PS/2 cable |
| Rubber pad & screw pack | | 1 | Rubber pad & screw pack |