Marine

RELIABLE COMPUTING FOR SAFE MARITIME OPERATIONS.
About Winmate

Headquartered in Taipei, Taiwan, Winmate Inc. has been dedicated to researching, developing and manufacturing the latest in industrial displays and rugged devices for 20 years.

Today, Winmate creates intelligent systems that advance the Internet of Things (IoT) and enterprise-level communications across the globe for industrial and high-tech clients. High standards for technology and quality control have established Winmate as a leader for the last 20 years and set the standard for continued excellence.

Value-added partner

Strong Rugged Design Team
To Meet Environmental Challenges (EE, ME)

Talented Software Team
To Enable IoT & Industrial Application

System Integration Experience
For Rugged & Industrial Mobile Devices

Customized solutions

Years of experience allow Winmate to offer customized solutions for different applications. From product design to creating accessories, our engineering team designs and supports your needs throughout the whole system integration process.

CUSTOMIZED INTERFACES
CUSTOM OS IMAGE
CUSTOM BIOS
ENCLOSURE DESIGN
PERIPHERALS AND OPTIONS
CUSTOM-DESIGNED ACCESSORIES
Marine

Overview

Winmate understands the needs of the marine industry and provides solutions to the unique challenges that the industry faces.

- **Ruggedness:** Winmate reliability tests ensure optimal performance in harsh environments, including exposure to humidity, shock and vibration.

- **Panel Options:** Transflective screen or a high brightness display.

- **Viewability:** Numerous combinations of display and touch technologies as well as backlight intensities help enable sunlight viewability.

- **Design and Electronics:** Powder coated aluminum housings feature anti-corrosion protection.

Technology

Certificate

Winmate marine products are built and tested according to the DNV 2.4 Standard, IEC60945 and IACS-E10.

<table>
<thead>
<tr>
<th>Certificate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNV GL</td>
<td>DNV GL is an independent foundation with the objectives of safeguarding life, property and the environment at sea and on shore. DNV certification pertains to the quality of ships, offshore units and installations of the system and components. DNV requirements are harmonized with IACS Unified Requirements E10 and IEC publication 60945.</td>
</tr>
<tr>
<td>IEC 60945</td>
<td>International Association of Classification Societies (IACS) is an organization that provides technical support and guidance for promoting the safety of life, property and the environment through the verification of compliance with technical and engineering standards for the design, construction and life-cycle maintenance of ships, offshore units and other marine-related facilities.</td>
</tr>
<tr>
<td>IACS-E10</td>
<td>Equipment wished to be use in navigation and radio communication systems is to comply with IEC 60945, “Maritime navigation and radio communication equipment and systems – General Requirements- Method of testing and required test results.”</td>
</tr>
</tbody>
</table>

ECDIS Color Calibration

Winmate Marine Displays and Panel PCs can be adjusted to day, dusk or night mode to accommodate any lighting situation. Color settings are calibrated at the factory for the accurate color reproduction according to the IEC 61174 ECDIS Standard.
Marine Display
ECDIS Series

- 15/19/24/26-inch screen with P-Cap touch
- Color calibrated for ECDIS compliance
- IEC 60945, DNVGL-CG-0339, IACS E10

Color Calibration for ECDIS Compliance.

- HDMI, VGA, Display Port, DVI-D
- Capacitive touch keys for display control
- Day, dusk, and night mode
- 0%~100% backlight brightness dimming control
- Panel mount, VESA mount
- Vibration resistant DNV 2.4 (Class A)
- Wide power input 9-36V DC with isolation
- Front IP66 waterproof and dustproof
- Wide operating temperature -15~55°C

Accessories

<table>
<thead>
<tr>
<th>Standard</th>
<th>AC Adapter</th>
<th>Power Cord</th>
<th>3pin Terminal Block</th>
<th>HDMI Cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>VGA Cable</td>
<td>Display Port Cable</td>
<td>RS232 Cable</td>
<td>DVI Cable</td>
<td></td>
</tr>
</tbody>
</table>
Marine Panel PC
ECDIS Series

"PROCESSING POWER AND USER-FRIENDLY INTERFACE."

• 15/19/24/26-inch screen with P-Cap touch
• Intel® Core™ i5-5250U
• Windows 10/8/7
• IEC 60945, DNVGL-CG-0339, IACS E10

RS-232/422/485, RS-232, two USB 3.0
Capacitive touch keys for display control
Day, dusk, and night mode
0%~100% backlight brightness dimming control
Panel mount, VESA mount
Vibration resistant DNV 2.4 (Class A)
Wide power input 9~36V DC with isolation
Front IP66 waterproof and dustproof
Wide operating temperature -15~55°C

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<tr>
<td>Power Cord</td>
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<tr>
<td>3pin Terminal Block</td>
</tr>
<tr>
<td>Black Screw Bolts</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four 5-pin Terminal Block 3.81(Phoenix Type)</td>
</tr>
</tbody>
</table>

Custom configuration

- Color Calibration
- AR Glass

Application

Bridge System

“ECDIS COMPLIANCE TO REPRODUCE ACCURATE CHART DISPLAY.”

Marine panel PC featuring a flat edge-to-edge surface and projected capacitive multitouch screen. Large screen and responsive touch allow for intuitive user controls of the bridge system.
Marine Panel PC
W10IB3S-MRH2

“FITS IN CONFINED SPACES.”

- 10.1-inch, 1280 x 800 with P-Cap touch
- Intel® Celeron® N2930 Bay Trail-M
- Windows 10/ 8/ 7
- IEC 60945 Test Report

4 GB DDR3L
64 GB mSATA SSD
Two RS-422, USB 2.0
Gigabit LAN
Panel mount, VESA mount
Vibration resistant DNV 2.4 (Class A)
Wide power input 9~36V DC with isolation
Front IP65 waterproof and dustproof
Wide operating temperature -15~55°C

Accessories

**Standard**
- AC Adapter
- M12 USB/LAN Cable
- M12 Power Cable
- M12 RS-422 Cable
- 3-pin Terminal Block
- I/O Protective Caps

**Optional**
- External Wi-Fi Antenna
- External WWAN Antenna

**Custom configuration**

- GPS
- Wi-Fi
- 3G

**Application**

**Yacht Navigation System**

“COMPACT WATERPROOF DESIGN AND WIRELESS CONNECTIVITY.”

10.1-inch rugged marine HMI was installed in a space-restricted yacht as a part of navigation system. The customer installed GPS and Wi-Fi for wireless connectivity.

“FITS IN CONFINED SPACES.”
Marine Display
VR Knob Series

“BRIGHTNESS CONTROL WITH DIMMING KNOB.”

- 10.4~24-inch screen with resistive touch
- IEC 60945, DNV 2.4, IACS-E10 certified

RGB, composite video
VGA, S-Video, DVI-D
PIP function
RAM mount, VESA mount
Vibration, shock resistant DNV 2.4 (Class A)
Power input 24V DC with isolation
Front IP66 waterproof and dustproof
Wide operating temperature -15~55°C

Accessories

<table>
<thead>
<tr>
<th>Standard</th>
<th>VGA Cable</th>
<th>RS232 Cable</th>
<th>S-Video Cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVI Cable</td>
<td>Screw bolts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composite Cable</td>
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<th>Optional</th>
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<tbody>
<tr>
<td>Power Cord</td>
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</table>

Custom configuration

- Resistive Touch
- SAW Touch
- AR Glass
- Mounting Bracket

Application

Navigation Simulator

“FAST DEPLOYMENT WITH EXISTING NAVIGATION SYSTEM.”

Winmate 24-inch marine monitor with resistive touch was installed in a navigation system of a marine training center. Transmission of RGB and composite video signal was required to integrate with existing systems.
Marine Panel PC
VR Knob Series

Custom configuration

- Up to 8 GB Memory
- AR Glass
- Resistive Touch
- Mounting Bracket
- RS-422/485

Application

- 10.4~24-inch screen with resistive touch
- Intel® Dual Core Atom N2600
- Intel® Core i7-3517UE
- Windows 10/8/7
- IEC 60945, DNV 2.4, IACS-E10 certified

- 4 GB SODIMM DDR3
- VGA
- Two USB 2.0
- Two RS-232, RS-232/422/485
- RAM mount, VESA mount
- Vibration, shock resistant DNV 2.4 (Class A)
- Power input 9-36V DC with ignition
- Front IP65 waterproof and dustproof
- Wide operating temperature -15~55°C

Accessories

- Standard
  - Screw bolts
- Optional
  - Power Cord

"CORROSION RESISTANT."

Boat Command Center

"GREAT VIZUALIZATION. OF THE DASHBOARD."

The marine panel PC installed in a boat command center allows you to view all of your boat’s vital signs directly from your computer. Customized dimming setting increase the visibility in dusk or night time.
Marine EAC Box PC
I330EAC-IKW

“ABUNDANT INTERFACES AND RUGGED CONSTRUCTION.”

- Intel® Core™ i5-7200U Kaby Lake
- Windows 10
- IEC 60945 Test Report

64 GB mSATA SSD
Four USB 3.0
HDMI, VGA, DVI output
RS-232/422/485
Two LAN ports
Aluminum housing
Power input 9~36V DC with 1.5KV isolation
Vibration, shock resistant DNV 2.4 (Class A)
Wide operating temperature -15~55°C

Application

Bridge System

“EFFECTIVE MARINE DEVICES COMMUNICATION.”
High-performance embedded system that feature an NMEA 0183 interface and digital input/output for effective marine device communication.

Accessories

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</thead>
<tbody>
<tr>
<td>AC Adapter</td>
<td>Power Cord</td>
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</tbody>
</table>

Custom configuration

- Memory 16 GB
- 2nd Storage 2.5 SSD
- NMEA 0183
- DIDO

"EFFECTIVE MARINE DEVICES COMMUNICATION."
Marine EAC Box PC
I330EAC-ID3

Custom configuration

<table>
<thead>
<tr>
<th>Memory</th>
<th>Up to 4 GB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td>Up to 128 GB</td>
</tr>
<tr>
<td>2nd Storage</td>
<td>2.5 SSD</td>
</tr>
</tbody>
</table>

Application

• Intel Atom® D2550
• Windows 10/8/7
• IEC 60945, DNV 2.4, IACS-E10

32GB mSATA SSD
Two USB 2.0
VGA output
RS-232/422/485
Two LAN ports
8 Channel GPIO
PS/2 interface for keyboard and mouse
Aluminum housing
Power input 9~36V DC with 1.5KV isolation
Vibration, shock resistant DNV 2.4 (Class A)
Wide operating temperature -15~55°C

Engine Room

“SURVIVE DUST, VIBRATION AND HIGH TEMPERATURE.”

Electronic components installed in an engine room must be able to survive in extreme conditions. Our fanless EAC box PC feature efficient heat dissipation and ensures reliable operation in engine rooms with vibration resistance. An Ethernet switch allows working in a single network.

Accessories

Standard
AC Adapter  PS/2 Y Cable
MARINE SOLUTIONS
SAFE SEALING WITH WINMATE RUGGED COMPUTING.
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