

MISSION CRITICAL

**Marine/
Defence**

**BUILT TO SURVIVE
EXTREME WORKING CONDITIONS**

Q1 - 2023



About Winmate

Founded in 1996, Winmate Inc. is a pioneer in rugged computing technology. Winmate has provided business leaders worldwide with reliable, robust solutions for the most challenging industrial conditions for over two decades. From R&D to manufacturing to in-house testing, Winmate Inc. manages the entire product development process with ready-made products available for quick deployment. Today Winmate's innovative approach has helped countless enterprises at every level with equipment automation and seamless Industrial Internet of Things (IIoT) integration.

From the industrial display, panel PC, HMI, embedded systems to rugged mobile devices, Winmate caters to industries ranging from transportation and logistics to marine and military, railway, oil, and gas, and provides customization services to create a unique solution for specific customer requirements.

The Winmate Difference

Innovation and Ruggedness

With innovation and ruggedness, our products are designed to meet the requirements of vertical markets' environmental standards.

Engineering Intelligence

We are committed to maintaining the highest standards in engineering excellence to ensure our products deliver reliability, durability, and optimized performance.

Quality Commitment

Quality assurance and entire engineering processes are conducted in-house. It is why we invested significantly in our state-of-the-art testing facility with additional global support.

“
**INNOVATIVE
TECHNOLOGY FOR
OPERATIONAL
EXCELLENCE.**
”

Efficiency

Our team is committed to efficiency and maintaining the shortest possible development cycles. The whole development process is conducted in-house to achieve the market advantage in speed and quality from design to testing.

Reliability

Reliability, service, and support are part of our foundation. Every product scrutinizes industrial standards testing to verify electrical, mechanical, thermal, and firmware design performance.

Customized Solutions

Years of experience allow Winmate to offer customized solutions for different applications.

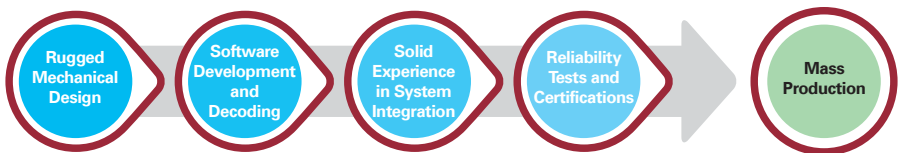
From product design to accessories, our engineering team designs and support the system integration process.

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

Technical Know-How

We understand that access to cutting-edge solutions purposely built for their applications is imperative for enterprises operating in rugged or potentially hazardous environments. As a result, Winmate locates its resources from project research and design, software development and customization, product verification and validation, and in-house testing to research and implement the latest technologies available.

The latest technologies we deploy for our rugged products:



- Dry and wet optical bonding
- Panel enhancement for sunlight readability
- Anti-reflection (AR) and anti-glare (AG) glass protection coating
- Light sensor
- Hyper dimming
- Electronic potting
- Touch screen integration: projected capacitive, resistive, or SAW touch
- Waterproof enclosure
- Military EMI and mesh coating
- Wireless capabilities
- Data capture devices integration
- Defroster for ultra-low temperature environments
- Stainless steel SUS 316/ AISI 316
- Shock and vibration resistance
- Wide-range operation temperature

Marine



Overview

Winmate understands the marine industry's needs 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 display and touch technologies and backlight intensities help enable sunlight viewability.
- **Design and Electronics:** Powder-coated aluminum housings feature anti-corrosion protection.

Industrial Challenges

To meet the marine industry's regulatory requirements, Winmate offers certified solutions for shipping navigation, monitoring and surveillance, and ship automation systems. Winmate understands the needs of the marine industry and provides solutions to industrial challenges:

- **Extreme environments**
Marine equipment faces extreme temperature changes, strong vibration, water drops.
- **Accurate chart depiction**
An accurate chart displaying is crucial in maritime applications.
- **Day, night, and dusk**
On-board computers must provide viewability in a day, night, and dusk conditions.




Technology

ECDIS Color Calibration

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

Certificate

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

	<p>DNV GL is an independent foundation to safeguard life, property, and the environment at sea and onshore. 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.</p>
	<p>The International Association of Classification Societies (IACS) is a technology-based non-governmental organization that currently consists of twelve member marine classification societies. More than 90% of the world's cargo-carrying ships' tonnage is covered by the classification standards set by member societies of IACS.</p> <p>Marine classification is a system for promoting the safety of life, property, and the environment primarily through establishing and verifying compliance with technical and engineering standards for the design, construction, and life-cycle maintenance of ships, offshore units, and other marine-related facilities.</p>
	<p>Equipment wished to be used in navigation and radio communication systems comply with IEC 60945, "Maritime navigation and radio communication equipment and systems – General Requirements- Method of testing and required test results."</p>

Innovative Solutions

All Winmate marine products are built and tested according to DNV GL, IEC60945, and IACS-E10.

- Winmate reliability test ensures optimal performance in harsh maritime environments
- Powder-coated aluminum housing feature anti-corrosion protection, handle significant vibration and shock, and operation in high humidity
- Enhanced panel viewability and backlight intensity
- Transflective screen or a high brightness display
- ECDIS color calibration to accurately display navigational charts

Application Story

Bridge Workstation



Background

Winmate's marine panel PC was installed as a part of a navigational bridge system designed to plot and monitor a vessel's position. The system features the Automatic Identification System (AIS) Class B transport and electronic chart system. The updates of charting material are distributed to the craft through a WIFI router installed onboard.

Core products

- 10"~26" ECDIS Panel PC

Main Challenges

- Customized software settings



Application Diagram: Bridge System

Why Winmate

- Certified DNV GL for marine applications
- ECDIS calibrated display with multitouch
- NMEA 0183 and DIDO interfaces for marine devices communication
- Vibration, shock, corrosion resistance



Winmate's DNV GL Certified Panel PC

Application Story

Command Center



Background

Modern ships has several advanced navigation equipment systems which give accurate data for the voyage. Winmate's panel PC and HMI feature brilliant display with projected capacitive touch screen and several features tailored for marine applications. Convenient user interface and functionality of application-focused marine panel PC and HMI give ship navigation officer precise location information and details of the journey. The use of the electronic chart system, allow ship's navigating crew to pinpoint locations, and attaining directions much easier than before.

Core products

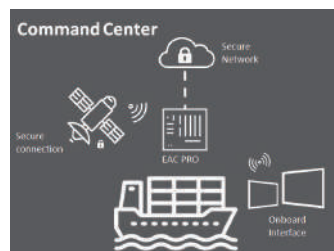
- 10.4~26" Marine Panel PC
- Marine EAC Box PC I330EAC-ITW

Main Challenges

- Customized software
- Local language support

Why Winmate

- Multiple panel PC sizes for dashboard visualization
- Customizability and ability to work with SW provider for best product result
- Maritime certified devices



Navigation and dashboard visualization for your safe voyage at the sea

Marine Embedded Computing I330EAC-ITWE

Custom configuration



Memory



Storage

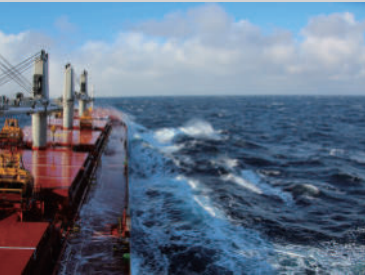


HDMI Output



FC CE

Application



Vessel Communication Solution

“EFFECTIVE
MARINE DEVICES
COMMUNICATION”

High-performance embedded system that feature an NMEA 0183 interface and digital input/output for effective marine device communication.

“ **ABUNDANT INTERFACES
AND RUGGED CONSTRUCTION.** ”

- Intel® Tiger Lake Celeron® 6305
- RAM 4G DDR4L (Up to 32G)
- Removable 2.5" SSD drive bay

Multi Video Output, DVI/ HDMI/ Display Port

Isolation Power Protection 1.5KV

4 x Digital Input/ 4 x Digital Output

8 x NMEA Port 0183

Marine computer I330EAC-ITW



FC CE

“COMPACT MARINE EMBEDDED PC.” ”

- Intel® Tiger Lake Core™ i5-1135G7
- RAM 4G DDR4L (Up to 32G)
- Removable 2.5” SSD drive bay

Multi Video Output, DVI/ HDMI/ Display Port

Isolation Power Protection 1.5KV

4 x Digital Input/ 4 x Digital Output

8 x NMEA Port 0183

DNVGL-CG-0339, IEC60945 Certificate

Custom configuration

Up to
32 GB

Memory

Up to
512 GB

Storage



HDMI Output

Application



Marine Embedded PC

“FANLESS COOLING
SYSTEM”

The I330EAC-ITW marine embedded PC is designed with a wide operating temperature range, supports 24V DC power input or 9 to 36 V DC in, and comes with a fanless minimalistic enclosure.

Marine Embedded Computer EACIL20-MR

Custom configuration



Storage



WLAN



WWAN



HDMI
Output



DIN-Rail
Mounting



VESA
Mounting



FC CE

“ COMMUNICATION WITH
ISOLATING PROTECTION. ”

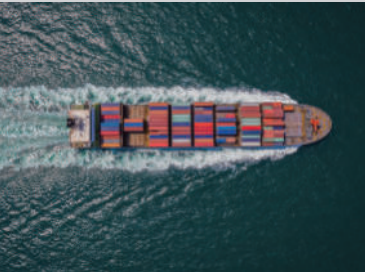
- Intel® Apollo Lake N3350 1.1 GHz Marine Embedded Computer
- Fanless cooling system

Compact size 100 x 70 x 31 mm (without mounting bracket)

Expansion module design

Various mounting options: desk, wall, VESA, DIN-Rail

Application



Bridge System

“EASY MOUNTING”

Winmate marine embedded computers is a plug & play IoT gateway to simplify your deployment with multi-connectivity, optimized thermal solution, and easy mounting with various universal mounting options.

Marine Industrial Box pc I330EAC-IK3



“INDUSTRIAL IOT EMBEDDED COMPUTERS.”

- Design for M2M application
- 7th Generation (kaby Lake) Intel® Core™ i5-7200U 2.5GHz (turbo to 3.1GHz)

1 x SODIMM DDR4 2133 MHz (max, 16GB)

3 x RS422/485 serial ports with isolation protection

1 x RS232 serial ports

2 x Giga LAN, 2 x USB, 1x HDMI, 1 x VGA

Fanless, High efficiency thermal design with sealed construction

1500V DC power isolation resistance

Custom configuration



Memory



Storage



WLAN



HDMI
Output

Application



Boat Command Center

“FANLESS COOLING DESIGN”

Winmate use well-defined thermal analysis procedures to verify IPC systems to meet the harsh environment applications.

Marine computer I330EAC-ID3



Custom configuration

Up to
512 GB

Storage

Application



Isolation Protection

“MARINE CERTIFIED
FOR HEAVY-DUTY
APPLICATING”

Marine Grade Computers are becoming very important in applications ranging from basic monitor to surveillance navigation and complex ship automation.



“**DESIGN FOR INDUSTRIAL
AUTOMATION.**”

- Design for industrial automation, M2M application, marine computer
- Onboard Intel® Atom® N2600 1.6GHz

1 x DDR3 SODIMM, max. 4GB

3 x RS422/485 communication with isolation protection

Support 8 x GPIO with Phoenix type terminal block

2x Giga LAN, 2x USB, 1xVGA, Line in, Line out, Micro In

Fanless, high efficiency thermal design with sealed construction

1500V DC power isolation resistance

10.1" ~ 26" Marine Panel PC ECDIS Series



“ PROCESSING POWER AND USER-FRIENDLY INTERFACE. ”

- 10.1"/15"/19"/24"/26", PCAP touchscreen
- IEC 60945, DNVGL, IACS E10
- Windows 10 IoT Enterprise (Optional),
Linux Ubuntu 20.04 (Optional)

Capacitive touch keys for display controls

Day, dusk, and night mode

0%~100% backlight brightness dimming control

Panel mount, support VESA mount

Vibration resistant DNVGL CG-0339 (Class A)

Front IP66 waterproof and dustproof (front side)

Custom configuration



Storage



AR
Glass



Color
Calibration



NMEA 0183



DI/DO

Application



Bridge System

“ECDIS COMPLIANCE TO
REPRODUCE ACCURATE
CHART DISPLAY”

Marine panel PC featuring a flat edge-to-edge surface and PCAP touchscreen was installed in a bridge system. A large screen and responsive touch allow for intuitive user controls of the bridge system.

10.4"~24" Marine Panel PC

Marine Panel PC Series

Custom configuration



Storage



AR
Glass



FC CE

Application



“ **BRIGHTNESS CONTROL WITH DIMMING KNOB.** ”

- 10.4"~24", resistive touchscreen
- IEC 60945, DNV 2.4, IACS-E10 certified
- Windows 7 Embedded Systems (Optional), Linux Ubuntu 16.04 (Optional)

Intel® Atom® N2600 dual-core processor Marine Panel PC

Dimming knob control backlight brightness from nearly 0% to 100%

Transflective film technology enhances visibility

Panel (flush) mount IP66 aluminum housing with powder coating design (IP54 rear)

9~36V DC power input acceptable

Navigation Simulator

“FAST DEPLOYMENT WITH EXISTING NAVIGATION SYSTEM”

Winmate 24-inch marine monitor with the resistive touchscreen was installed in a navigation system of a maritime training center. Transmission of RGB and composite video signal was required to integrate with existing systems.

15"~26" ECDIS Marine Display

ECDIS Series



“ ECDIS COMPLIANCE. ”

- Projective capacitive multi-touch screen ECDIS Marine Display
- Edge-to-edge narrow bezel design

Fanless cooling system

Color calibrated for ECDIS compliance (Optional)

Capacitive touch keys for quick function access and display control (Support DAY, DUSK, and NIGHT mode switching)

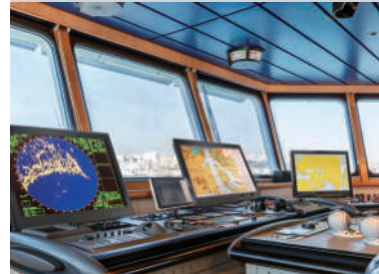
Meet the requirements of industrial marine standards, including IEC60945 4th Edition, DNVGL-CG-0339, IACS E10

Custom configuration



AR
Glass

Application



Navigation System

“ECDIS RELIABILITY
FOR THE REAL
MARINE COLORS
REPRESENTATION”

On Winmate ECDIS, Marine display users can adjust to a day, dusk, or night mode through the capacitive touch key to accommodate any lighting situation.

23.8" ~32" Marine Display

Marine Display Series

Custom configuration



Storage



AR
Glass



FC CE

“

SLEEK DESIGN.

”

Application



Color Calibrated for ECDIS

“SLEEK DESIGN FOR
MODERN BRIDGE
WORKSTATIONS”

Easy to maintain and clean.

The glass cover lens provides excellent protection from scratch and reduces the gap for a possible accumulation of dust and liquid.

- 4K UHD with projective capacitive multi-touch screen
- Multi video output ,VGA+DVI+HDMI+DP
- 24V DC power input

Fanless cooling system

Reliable computing certified for marine applications

Sleek design for modern bridge workstations

Video input consists of DVI-D, HDMI, and VGA connectors.

Defence



Overview

Winmate's rugged computing devices for military applications are designed to be tough and durable and undergo rigorous testing to ensure safety and performance, going beyond military standard compliance.

Winmate understands the needs of the military industry and provides solutions that can overcome these industrial challenges:

- MIL-STD 810-G Testing: For MIL-STD 810G compliance, Winmate tests the product against extreme environmental conditions (temperature, shock, vibration, humidity).
- MIL-STD 461-F Testing: For MIL-STD 461F compliance, detailed testing specification ensures that the product meets the requirements for controlling electromagnetic interference.




Built to survive drops, shocks, liquid spills, vibrations, dust, salt, and extreme temperatures, our specially designed military line of products has been tested for compliance to military MIL-STD-810G environmental and MIL-STD 461F EMC standards.



Technology

Military Certifications

All Winmate military products are built and tested according to military standards MIL-STD-810 and MIL-STD-461. Some of the selected products meet MIL-STD-3009 compliance of Type 1 (Direct View Image) Class B NVIS requirements

 <p>MIL-STD-3009</p>	<p>MIL-STD-3009, DEPARTMENT OF DEFENSE INTERFACE STANDARD establishes aircraft lighting and displays equipment emission requirements. It is intended for use with night vision imaging systems (NVIS). It applies to all systems, subsystems, component equipment, and hardware that provide the lighting environment on aircraft where NVIS is employed.</p>
 <p>MIL-STD-461E/F</p>	<p>MIL-STD-461 is a United States Military Standard that describes testing equipment for electromagnetic compatibility.</p> <p>Specifically, MIL-STD-461F details testing specifications to ensure the conducted emissions (CE), showed susceptibility (CS), radiated emissions (RE), and radiated susceptibility (RS) of a system can meet the requirements for the control of electromagnetic interference.</p> <ul style="list-style-type: none">• MIL-STD-461 Method - CE101/CE102: Conducted Emissions• MIL-STD-461 Method - RE101/RE102: Radiated Emissions• MIL-STD-461 Method - CS101/CS106/CS109/CS114/CS115/CS116: Conducted Susceptibility• MIL-STD-461 Method - RS101/RS103: Radiated Susceptibility
 <p>MIL-STD-810F/G</p>	<p>The MIL-STD-810 test series are approved for use by all departments and agencies of the United States Department of Defense (DoD).</p> <p>The standard describes environmental management and engineering processes that can enormously value to generate confidence in a system's environmental worthiness and overall durability.</p> <ul style="list-style-type: none">• MIL-STD-810 Method 501.4: High Temperature• MIL-STD-810 Method 502.4: Low Temperature• MIL-STD-810 Method 507.4: Humidity• MIL-STD-810 Method 514.5: Vibration• MIL-STD-810 Method 516.5: Shock

Military Connectors

Winmate military panel PC and display come with MIL-DTL-38999 type I and III connectors – high-performance cylindrical connectors for cable-to-panel applications in military, air traffic control, or other mission-critical situations.

**MIL-DTL-38999/I
Power Connector**



**MIL-DTL-38999/III
VGA/RS232/USB-A/LAN**



Panel Viewability & OSD Control

The high-resolution display is fully rugged, offering optimized visibility with optical bonding and easy-to-use front panel control. The advanced computing platform enables faster searches and real-time information, providing rapid response capabilities.

Application Story

Military Vehicle Computer



Background

Precise navigation and robust communications are essential for safe tactic operations in modern military vehicles. Winmate provides rugged, vibration, and shock-resistant computing solutions that are designed to be mounted inside military vehicles.

Core products

- G-WIN Military Panel PC/ Display
- Military Console Rack Panel PC/ Display
- 4K UHD Military Display
- Military Tablet

Main Challenges

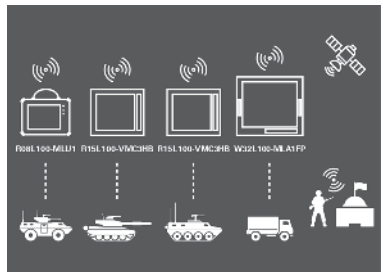
- Strong vibration
- Mounting solution in confined space

Why Winmate

- Wireless communications WWAN, WLAN, and GPS
- Tested for vibration, shock resistance MIL-STD-810G
- Tested for EMI MIL-STD-461



Tank Navigation



Application Diagram: Military Vehicle

Application Story

Military Rugged Laptop



Background

Warfighters also need mobile computing to work basically in the middle of nowhere, which maintains connectivity in remote locations. The better the technology the soldier, airman, marine, or sailor has in the field, the better their decision making and effectiveness. When deciding the right products for military and defense, you should be armed with the right information that leads to better choices.

Winmate L140V2 series pass the drop test from a meter high and impact resistance with performance assurance according to the US Military Standard MIL-STD-810G and certified by IP65 ingress protection to ensure no environment is too hazardous for these fully rugged notebooks.

Core products

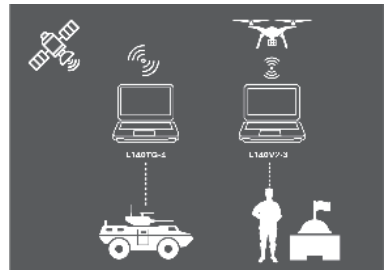
- Flexible storage:
- Versatile performance:
- Long battery life
- Sunlight readable

Main Challenges

- Strong vibration
- Mounting solution in confined space

Why Winmate

- Winmate help to design and manufacture your unique armed forces and defense solutions



Application Diagram: Military laptop

13.3"/14" Windows Rugged Laptop L140V2-3/ L140V2-4



“**COGNITIVE DOMINANCE
BUILT ON MOBILITY.**”

- 13.3", 1920 x 1080, LED Panel (L140V2-3)
- 14", 1920 x 1080, LED Panel (L140V2-4)
- AMD RYZEN V2516 @2.1GHz , up to 3.95GHz
- Fanless cooling system
- Full-scale QWERTY layout keyboard

Anti-glare technology for sunlight readability

Flip design for quick switching between laptop and tablet modes

Dual battery with hot-swappable design for whole-day-work

Expansion slot supporting optional 2nd removable SSD and smart card reader

IP65 rating and MIL-STD-810H suitable for public safety, vehicle diagnostic and military application

Custom configuration



Memory



Storage



Camera



Smart Card
Reader



Fingerprint
Scanner



HF RFID
Reader

Application



Military/ Semi Rugged Laptop

“MILITARY LAPTOP WITH
AMD RYZEN V2516”

Winmate L140V2 series rugged laptop Includes 1920 x 1080 LED panel with direct optical bonding, Thrive beneath daylight conditions with anti-glare technology for an outdoor viewable FHD display with up to 1000 nits of brightness.

13.3"/14" Windows Rugged Laptop L140TG-3/ L140TG-4



Custom configuration



Memory



Storage



Camera



Smart Card Reader



Fingerprint Scanner



HF RFID Reader

Application



Rugged Military Laptop

“PLANNING AND PRODUCTION DEMAND”

With Winmate rugged laptop, the use of armed forces in Europe - can be adapted to a motherboard, dimensions, screen, internal interfaces and accessories.



“ **EMPOWER THE PUBLIC SECTOR WITH POWERFUL, RUGGED LAPTOPS.** ”

- 13.3", 1920 x 1080, PCAP touchscreen (L140TG-3)
- 14", 1920 x 1080, PCAP touchscreen (L140TG-4)
- 11th Gen. Intel® Processor Family – Tiger Lake Processor
- Fanless cooling system
- Full-scale QWERTY layout keyboard

Anti-glare technology for sunlight readability

Flip design for quick switching between laptop and tablet modes

Dual battery with hot-swappable design for whole-day-work

Expansion slot supporting optional 2nd removable SSD and smart card reader

IP65 rating and MIL-STD-810H suitable for public safety, vehicle diagnostic and military application

13.3" / 14" Windows Rugged Laptop L140AD Series



Custom configuration



Memory



Storage
W1 2nd SSD



Camera



Fingerprint
Scanner



HF RFID
Reader



“ INTELLIGENT WORKLOAD OPTIMIZATION. ”

- 12th generation Intel Processor Family – Alder Lake Processor
- Rugged extreme with 13.3" / 14", 1920 x 1080 LED panel with direct optical bonding

Anti-glare technology for sunlight readability

Projective capacitive touch supporting switchable rain/glove/ stylus modes

Flip design for quick switching between rugged laptop and rugged tablet modes

Magnesium alloy enclosure with double injection for drop protection

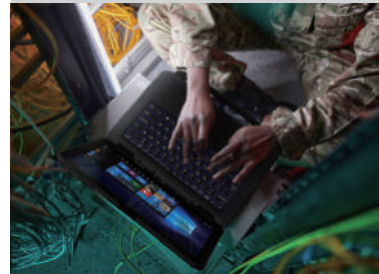
IP65 waterproof and dustproof

WiFi-6E & optional WWAN 5G support

Dual battery with hot-swappable design for whole-day-work

Optional discrete Nvidia Graphic box

Application



Built On Advanced Hybrid Architecture

“SUPPORTING FUTURE
BEST-IN-CLASS
PERIPHERALS”

Winmate 13.3" rugged laptop with 12th Gen Intel® Core™ Processors provide support for PCIe 4.0 and DDR5 memory, as well as security and manageability features workload optimization, enhanced graphics and enhanced peripheral, connectivity, and fast memory access capabilities.

15.6" 4K Windows Rugged Laptop L156AD Series

NEW
PRODUCT



Custom configuration



Memory



Storage
W1 2nd SSD



Camera



Fingerprint
Scanner



HF RFID
Reader

Application



Crank up the Resolution for an Even Better Visual Experience

“PLANNING AND
PRODUCTION DEMAND”

Winmate 15.6" rugged laptop is upgraded with the latest 12th Gen Intel® Core™ Processors, growing 35% in performance from the previous generations, reaching the highest clock rate of 5.0GHz – achieving premium multitasking performance.

“ BOOST PERFORMANCE WITH AI. ”

- 12th generation Intel Processor Family – Alder Lake Processor
- Optional discrete Nvidia Graphic card

15.6" FHD and 4K Panel resolution options to fulfill diverse applications

Anti-glare technology for sunlight readability

Projective capacitive touch supporting switchable rain/glove/ stylus modes

Magnesium alloy enclosure with double injection for drop protection

IP65 waterproof and dustproof

WiFi-6E & optional WWAN 5G support

Dual battery with hot-swappable design for whole-day-work

5" Rugged Handheld Computer E500QK-ML



Custom configuration



Docking
Connector



NFC
Reader



Expansion
Port

Application



Field Training Exercises

“COMPACT AND DURABLE
HANDHELD COMPUTER”

Rugged specifications of the compact E500QK handheld computer mean that military personnel can take photos, enter data, and take photos in any harsh environment. The latest Android operating system offers tremendous potential for developing or adapting mobile computer applications, allowing the military to acquire the newest technology rapidly.



FC CE

“ **RUGGED DESIGN
BUILT TO SURVIVE.** ”

- 5", 1280 x 720, touchscreen
- Qualcomm® Snapdragon™ 660 (Octa-core 2.2 GHz)
- Android 9.0

Optical bonding for sunlight viewability

8 MP webcam, 13 MP rear camera with autofocus

WLAN, BT, GPS/ AGPS

19 keypad include power key

Military standard connector (Optional)

Ambient light sensor, E-Compass, Gyro,
acceleration sensors

IP67 waterproof and dustproof

MIL-STD-810G shock, vibration and drop resistance

10.4" / 12.1" Vehicle Mounted Defence Panel PC



FM10E-VML/ FM12E-VML



Custom configuration



Memory



Storage



GPS/ GLONASS



WWAN



EMI Glass/
Touch

Application



Temperature Tolerance

“BUILT-IN BACKUP
BATTERY”

The FM10E-VML contains a backup battery (minimum 30 minutes) that enables the device to be seamlessly swappable from one dock to another, keeping your tasks going on without interruption.



“VIBRATION AND SHOCK
PROOF DESIGN.”

- Intel® Elkhart lake x6425E Processor
- 1024 x 768 Panel with PCAP touch screen
- IP65 waterproof and dustproof

Wide power input 9-36V DC with ignition

Wide range operating temperature

Support VESA Mount

IO ports with Military grade 38999 connectors

Compliant MIL-STD 810H/ MIL-STD 461F

8.4" / 10.4" Defence Rugged Tablet Intel® Pentium® N4200 Series



“ **BUILT TO HANDLE THE
TOUGHEST TASKS.** ”

- 8.4" / 10.4", resistive touchscreen
- Intel® Pentium® N4200 Apollo Lake 1.1 GHz (up to 2.5 GHz)
- Windows 10 IoT Enterprise

With daylight-readable screen 700 nits, optical bonding for clarity increasing and readability enhancing

Ecological seals protect ports as well as connectors from moisture and dust

Adjustable kickstand that is convertible to a handle

Magnesium alloy housing with all-around elastomeric rubber

MIL-STD-38999 connector for LAN/USB2.0, RS232/RS422 and DC Power Input

IP54 waterproof and dustproof

MIL-STD-810G shock, vibration, and drop resistance

Custom configuration

Up to
8 GB

Memory

Up to
512 GB

Storage



GLONASS



WWAN

Application



Military Field Exercises

“RUGGED AND
ERGONOMIC”

With military application-tailored accessories, the 10.4-inch Ultra-Rugged Tablet R08IP8M-RTU1ML offers an ultimate solution for military training. The tablet withstands the rigors of harsh environments: dust, rain, and drops on the ground.

8.4"/ 10.1"/10.4" Defence Rugged Tablet Intel® Core i5 Series

Custom configuration

Up to
16 GB

Memory

Up to
512 GB

Storage



WWAN



GLONASS



FC CE

“FEATURES MILITARY-SPECIFIC INTERFACES.”

Application



Tactical Operations

“POWERFUL, COMPACT,
AND RUGGED.”

Durable housing of 10.1-inch Rugged Tablet R10IW8M is strong enough to withstand shocks, jolts, drops, and prolonged vibration. And impervious to incursion by dust, dirt, water and other liquids, or any contaminant.

- 8.4"/ 10.1" /10.4" Panel with direct optical bonding
- 8th Gen. Intel® Core™ i5-8265U, 1.6 GHz (turbo up to 3.90 GHz)
- Adjustable Kickstand that is Convertible to a handle

Ecological seals protect ports as well as connectors from moisture and dust

MIL-STD-38999 connector for Giga LAN, RS232/RS422 and Power Input

With daylight-readable screen 800 nits optical bonding for clarity increasing and readability enhancing

Sunlight readable display with touchscreen

Supports GPS GLONASS, Galileo, BeiDou (Optional)

Magnesium alloy housing with all-around elastomeric rubber

13.3" Defence Rugged Tablet M133KML(HB)



Custom configuration



Memory



Storage



2nd Storage



WWAN



Battery
Hotswap



“ **FIELD MOBILITY FOR MISSION
CRITICAL.** ”

- 13.3", Resolution Transflective TFT-LCD Panel
- Intel® Core™ i5-7200U 2.5 GHz, up to 3.10 GHz
- Windows 10 IoT Enterprise

4 GB SODIMM DDR4-2400

128 GB M.2 SSD

MIL-STD-38999 connectors: RJ45/ USB 2.0/ RS-232

2 x USB 3.0, 1 x USB 3.1(Type C)

2 MP front camera, 5 MP rear camera with autofocus

WLAN, BT, GPS/ GLONASS

Battery operating time up to 11 hours

IP65 waterproof and dustproof

MIL-STD-810G shock, vibration, and drop resistance

Application



Combat Mission Navigation

“BRILLIANT LARGE
SUNLIGHT READABLE
SCREEN”

Ranger commander uses the M133KML ultra-rugged tablet to explain the combat mission and points. Designed for those in the field, the M133KML features an adjustable handle easily convertible to a kickstand for extra convenience.

8.4"~15" G-WIN Military Panel PC

G-WIN Military Series

Custom configuration



Memory



Storage



EMI Mesh
Coating



RS232



DC Power
Input



AR
Glass



WLAN

WLAN



“ **WIRELESS CONNECTIVITY
AND RUGGED FORM FACTOR.** ”

Application



Military Vehicle

“FAST COMPUTING AND RICH CONNECTIVITY”

Compact and rugged G-WIN military panel PC with powerful processor and latest operating system now controls a military armored vehicle's navigation system.

- Military grade power connector
- Ultra Low Power and High Performance Intel® Celeron® Bay Trail N2930 1.83 GHz
- Fanless Design

Full IP65 dust/water resistant protection (except I/O parts)

Aluminum housing with anti-corrosion treatments

Anti-shock and vibration standard according to MIL-STD-810F/G & IEC60068-2-27

5 wire resistive touchscreen/ anti-reflection protection glass (Optional)

Wireless LAN with antenna (Optional)

Wide range 9 to 36 V DC input (Optional)

15" ~24" Defence Console Rack Panel PC Rack Mount Series



“ POWERFUL PROCESSING AND LATEST OS. ”

- Anti-Corrosion Housing/ Fanless
- Projective touch/ Resistive touch
- Compliant with MIL-STD-810G/F , MIL-STD-461E/F

Flush Rack / Rack Mount Mechanical Design

Convenient On-Screen Display Controls

AC 110~240 V Power input default

Isolation DC 9~36 V Power input (Optional)

Built-in Light Sensor for auto brightness control

Custom configuration



Memory



Storage



EMI Mesh
Coating



AR
Glass



DC Power
Input



RS232

Application



Military Training Center

“COMPATIBLE WITH
OUR EXISTING SYSTEM
DESIGN”

Military-grade panel PC was installed in a new military training center facility in Europe. The solution simulates real experience on the field.

15.6"~55" Defence 4K2K Display 4K2K UHD Rack Mount Series



“ 4K2K UHD TFT PALEL ”

- Display with 4K2K UHD Rack Mount Display (3840 x 2160) native resolution
- AC 100~240V, Universal, $\pm 10\%$; DC 9~36V, $\pm 10\%$ (Optional)

Compliant MIL-STD 810G/ MIL-STD 461E

Convenient on-screen display controls

Military-grade power connector (MIL-DTL-38999/1)

PCAP multi-touch screen

Rack mount mechanical design, supports VESA mount

Custom configuration



EMI Mesh
Coating



DC Power
Input



PCAP
Touch



RS232



AR
Glass

Application



Reliable Computing

“COMMAND CENTER
FOCUSED DESIGN”

Increase the efficiency of the command center and control room personnel. Built your ergonomic command console that complies with defence and defense precise needs with Defence Console Rack Displays that feature rack mount mechanical design (8U).

32" 4K UHD Chassis Defence Display M320TF-MIL



“RUGGED CONSTRUCTION AND RESPONSIVE TOUCH SCREEN.”

- 32" Display with 4K UHD native resolution
- Compliant MIL-STD 810G/ MIL-STD 461F
- Support VESA mount

Thin and compact design with impact resistant screen

AR glass, PCAP touch optional , 4K UHD chassis defence display

Fanless design, easy-to-clean

Compatible with existing imaging systems

Build-in light sensor for auto brightness control

Custom configuration



PCAP
Touch



Brightness
700 nits



EMI Glass/
Touch



RS232



USB for
Touch



HDMI

Application



Command Control Room

“MILITARY GRADE
COMPLIANCE”

The military console rack display was mounted in a command center on a military base. Full military compliance and ruggedness allow for easy implementation.



FIELD MOBILITY FOR MISSION CRITICAL.



**Rugged Handheld Computer
E500QK-ML**

The logo for Winmate, featuring the word "WINMATE" in a bold, white, sans-serif font. The letter "W" is stylized with a red top bar and a green bottom bar, while the remaining letters are white. The background of the entire advertisement is a dark, blurred image of a soldier in full combat gear, including a helmet and a rifle, looking at a rugged tablet computer. The tablet screen displays a map with various icons: a jet, a helicopter, a globe, a magnifying glass, and a close button.

WINMATE

A shield-shaped badge with a brown background and white text. It contains the text "COMPLIANT MIL-STD 461F".

**COMPLIANT
MIL-STD
461F**

A shield-shaped badge with a green background and white text. It contains the text "COMPLIANT MIL-STD 810G".

**COMPLIANT
MIL-STD
810G**

Defence Rugged Tablet M133KML(HB)