

RUGGED MOBILE INTELLIGENCE SOLUTIONS

BUILT TO PERFORM, DESIGNED TO ENDURE.



CONTENT

ABOUT WINMATE3

Founded in 1996, Winmate is a pioneer in rugged computing solutions for wide vertical markets & challenging applications.

RUGGED TABLETS5

Wimate rugged tablets come in various sizes and customizable options, trusted globally for enterprise mobility solutions.

LARGE-SCREEN RUGGED TABLET27

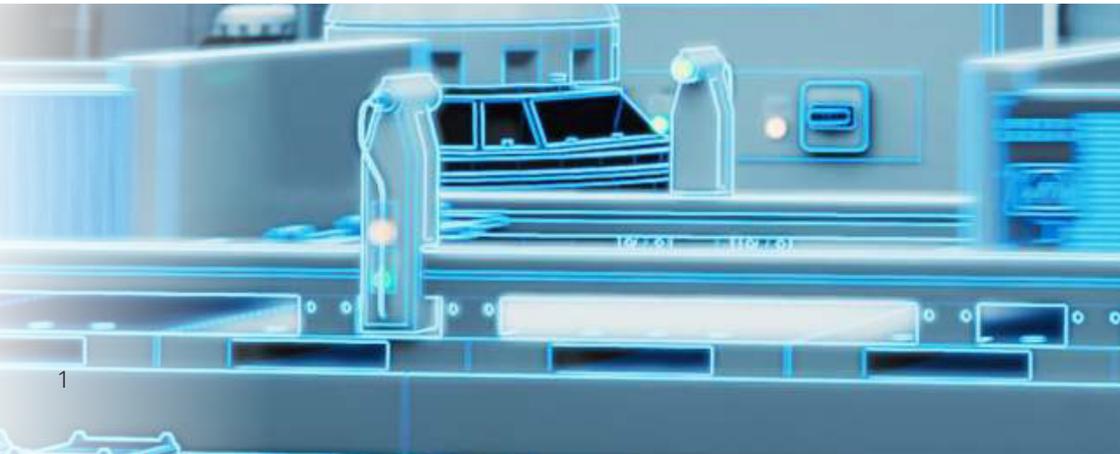
Wimate large-screen rugged tablets (13.3"-15.6") offer AI GPU support and high flexibility for industrial applications.

RUGGED LAPTOP33

Wimate rugged laptops support field, defense, and AI computing needs in tough industrial and outdoor environments.

ROBOTICS CONTROLLER41

Wimate robotic controllers feature handheld & portable sizes, custom RF modules, built for unmanned applications.





Industrial Mobility,
Rugged Reliability.

About Winmate

Founded in 1996, Winmate Inc. is a global pioneer in rugged computing technology. For over two decades, we've delivered reliable, robust solutions tailored to withstand the world's most demanding industrial environments.

With full control over the product development process, from Research & Development and manufacturing to in-house testing, Winmate ensures high quality and rapid deployment of ready-made and customized solutions. Our innovative technologies empower businesses across all levels to automate operations and seamlessly integrate with the Industrial Internet of Things (IIoT).

Winnate's comprehensive product portfolio includes robotic controller, industrial displays, panel PCs, HMIs, embedded systems, and rugged mobile devices. Serving a wide range of sectors, such as, transportation, logistics, marine, military, oil and gas, we also offer extensive customization to meet specific application needs and deliver industry-focused solutions.

Our Commitment to Excellence

Innovation Meets Rugged Design

We build rugged products with cutting-edge technology to meet the toughest industry standards across vertical markets.

Engineering Intelligence

Our team focuses on engineering excellence, delivering reliable, durable, and high-performing solutions that work wherever you need them.

Built-In Quality

All development and quality checks are done in-house. We've invested in advanced testing facilities and global support to ensure every product meets the highest standards.

Fast and Efficient

From design to testing, everything is done under one roof. This keeps our development cycles short and helps us deliver fast, without compromising on quality.

Trusted Reliability

Every product goes through strict testing, for example, electrical, mechanical, thermal, and firmware, to ensure dependable performance in critical environments.

Customized Solutions for Every Application

With years of industry experience, Winmate specializes in delivering customized solutions to meet unique application needs. From system design to accessories, our engineering team supports every step of the integration process—ensuring seamless performance and compatibility.

Our customization capabilities include:

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

**INNOVATIVE
TECHNOLOGY FOR
OPERATIONAL
EXCELLENCE.**

Technical Know-How

We understand that enterprises operating in rugged or hazardous environments require access to advanced solutions specifically engineered for their applications. That's why Winmate dedicates resources across the entire development cycle, from project research and design, software customization, and product validation to in-house testing. Our goal is to continuously research, adopt, and implement the latest technologies to deliver reliable, purpose-built solutions that meet real-world demands.



Technologies Driving the Performance of Our Rugged Solutions:

- 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

RUGGED TABLETS

Winmate Rugged Tablets are built for mobility, efficiency, and durability, empowering workers across industries to stay connected and productive in any environment. With a wide range of sizes, operating systems, and customizable features, they're the ideal solution for field service, logistics, manufacturing, public safety, and more.



Size Options
7"-15.6"



Rugged &
Certified



Customizable &
Modular



Multiple OS
Support



Hot-Swappable
Battery Design



Real-Time
Connectivity







Rugged Tablet M700 Series

Overview

The Winmate M700 Series is a compact 7" Android rugged tablet built for demanding field applications. It features a 1280 × 720 TFT display with optical bonding and anti-glare treatment, IP65 and MIL-STD-810H certifications for durability, and runs on ARM or Qualcomm processors with Android 9/11/13. With 4G/5G, RFID, barcode scanning, and ATEX-certified options, it ensures reliable performance anywhere.



Key Features

- Compact, Lightweight and Portable
- Sunlight-Readable TFT Display with Optical Bonding
- ATEX Zone 2 Certified Model (M700DQ8-EX)
- Versatile I/O and Vehicle Integration (D-Sub Port)
- Optional RFID, 1D/2D Barcode, Smart Card Reader,



M700DM9

7" Android Rugged Tablet

- ARM A73x4 (2.0 GHz) + A53x4 (2.0 GHz)
- 1280 x 720 TFT Panel with direct optical bonding
- IP65 Waterproof and Dustproof, MIL-STD-810H Shock, Vibration and Drop Resistance
- Sunlight readable with anti-glare solution
- Support Android 11.0
- Optional RFID, 4G/LTE and 1D/2D Barcode Reader



M700DQ8-EX

7" Android Rugged Tablet

- Qualcomm® Snapdragon™ 660, Octa-core up to 2.2 GHz
- 1280 x 720 TFT Panel with direct optical bonding
- ATEX Zone 2 application certification
- IP65 Waterproof and Dustproof, MIL-STD-810G Shock, Vibration and Drop Resistance
- Sunlight readable with anti-glare solution
- Support Android 9.0
- Optional RFID, 4G/LTE and 1D/2D Barcode Reader



M700DQ8

7" Android Rugged Tablet

- Qualcomm® Snapdragon™ 660, Octa-core up to 2.2 GHz
- 1280 x 720 TFT Panel with direct optical bonding
- IP65 Waterproof and Dustproof, MIL-STD-810H Shock, Vibration and Drop Resistance
- Sunlight readable with anti-glare solution
- Support Android 9.0
- Optional RFID, 4G/LTE and 1D/2D Barcode Reader



M700DQ9

7" Android Rugged Tablet

- Qualcomm® QCS6490, OctaCore, up to 2.7GHz
- 1280 x 720 TFT Panel with direct optical bonding
- IP65 Waterproof and Dustproof, MIL-STD-810H Shock, Vibration and Drop Resistance
- Sunlight readable with anti-glare solution
- Support Android 13.0
- Optional RFID, 4G/5G and 1D/2D Barcode Reader



Application Story

Boosting Warehouse Efficiency with Rugged Mobility

A global logistics company struggled with slow order fulfillment and inefficient inventory tracking due to outdated mobile devices that frequently failed in high-activity environments. Their team needed a compact, connected, and rugged solution that could withstand drops, offer real-time communication, and support scanning and data input directly from the warehouse floor or loading docks.

Main Challenges

- Device failures from drops, dust, and constant movement
- Limited connectivity for real-time inventory updates
- Lack of barcode scanning and RFID integration

Core Products

- 7-inch Android Rugged Tablet - M700DQ8

How Winmate Helps:

- Compact 7" rugged design withstands drops, dust, and daily warehouse use
- Optional 4G/5G ensures real-time data syncing and remote access
- Built-in 1D/2D barcode and optional RFID streamline inventory tasks
- Sunlight-readable, anti-glare screen supports both indoor and outdoor visibility



Application Diagram: Smart Warehousing



Application Story

Safe and Reliable Field Operation in Hazardous Zones

A field team working in an oil refinery required a certified rugged tablet for use in ATEX Zone 2 hazardous areas. Their existing consumer-grade tablets couldn't meet safety standards and often failed due to extreme conditions like vibration, moisture, and exposure to chemicals. The team also needed reliable data entry, connectivity, and integration with field sensors and operating systems.

Main Challenges

- Non-compliance with ATEX Zone 2 safety regulations
- Frequent equipment failures from harsh environmental exposure
- Lack of reliable connectivity in remote field locations

Core Products

- ATEX Rugged Tablet - M700DQ8-EX

How Winmate Helps:

- ATEX Zone 2 certified for safe use in explosive environments
- IP65 and MIL-STD-810G ruggedness resists moisture, shock, and vibration
- Optional 4G LTE enables remote field communication and data reporting



Application Diagram: Oil & Gas Fieldwork



Rugged Tablet M900 Series



Overview

The Winmate M900 Series Rugged Tablets are built for mobile professionals in tough environments. Available with Android or Windows OS, they feature a 1280 × 800 IPS display with optical bonding and PCAP touch. IP65-rated, with USB 3.0 Type-A/C and a default D-Sub for vehicle gateway integration for M900P/M900PT. Optional barcode and smart card readers make them ideal for logistics and field service.



Key Features

- High-Visibility Display with PCAP Touch
- Available in Both Windows and Android OS
- Vehicle Gateway Integration (M900P/M900PT)
- IP65-Rated Rugged Design
- Optional Smart Card and Barcode Reader



M900EKN

8" Windows Rugged Tablet

- Intel Celeron N6211 Elkhart Lake Processor
- 1280 x 800 IPS LED panel with direct optical bonding
- Integrated GigaLAN Port (RJ45)
- USB 3.0 type A, USB 3.0 type C connectors
- Sunlight readable with anti-glare solution
- Projected capacitive (PCAP) multi-touch
- IP65 Waterproof and Dustproof, MIL-STD-810H Shock, Vibration and Drop Resistance



M900EK

8" Windows Rugged Tablet

- Intel Celeron N6211 Elkhart Lake Processor
- 1280 x 800 IPS LED panel with direct optical bonding
- Optional Expansion Port DB15 Connector for (USB 3.0 type A, USB 3.0 type C connectors)
- Sunlight readable with anti-glare solution
- Projected capacitive (PCAP) multi-touch
- IP65 Waterproof and Dustproof, MIL-STD-810H Shock, Vibration and Drop Resistance



M900P

8" Windows Rugged Tablet

- Intel® Pentium® N4200 Apollo Lake Processor
- 1280 x 800 IPS LED Panel with direct optical bonding
- Projected capacitive (PCAP) multi-touch
- Default D-Sub for vehicle gateway connection
- USB 3.0 Type A, USB 3.0 Type C connectors
- IP65 waterproof and dustproof



M900PT

8" Windows Rugged Tablet

- Intel® Pentium® N4200 Apollo Lake Processor
- 1280 x 800 IPS LED Panel with direct optical bonding
- Default D-Sub for vehicle gateway connection
- Built-in Smart Card Reader
- Optional Barcode Reader



FC CE



M900MGN

8" Android Rugged Tablet

- ARM Genio 510, 2 x A78 2.0GHz + 4 x A55 2.0GHz
- 1280 x 800 IPS LED panel with direct optical bonding
- IP65 waterproof and dustproof, MIL-STD-810H shock, vibration and drop resistance
- Support Android 13.0
- Optional NFC, 4G/LTE and 1D/2D Barcode Reader
- Support Hand, Gloves and Rain Touch Mode



Application Story

Smart Coordination for Shuttle Bus Operations

A city-based shuttle bus service provider needed a reliable in-vehicle computing solution to improve coordination between drivers and central control systems. Their previous devices struggled with connectivity issues, limited integration with navigation tools, and poor durability in constant vehicle use. To maintain operational efficiency and deliver timely service, they required a rugged tablet and a vehicle gateway that could act as an intelligent hub, enabling real-time updates, route guidance, and seamless communication with the scheduling platform.

Main Challenges

- Inconsistent Data Integration with Central Systems
- Limited Navigation Support
- Environmental and Vehicle-Related Stress
- Lack of Real-Time Fleet Visibility

Core Products

- 8" Windows Rugged Tablet - M900P

How Winmate Helps:

- Real-Time Location Updates via GPS & 4G LTE
- Intelligent Fleet Hub with Seamless Connectivity
- Compact and Rugged Design
- Streamlined Integration with Scheduling & Navigation Tools



Application Diagram: Shuttle Bus Operation



Rugged Tablet M101 Series

Overview

The Winmate M101 Series features 10.1" rugged tablets powered by Intel® or Qualcomm® processors, with Android or Windows OS support. Built for field and industrial use, they offer 1920 × 1200 sunlight-readable displays, IP65 and MIL-STD-810G/H durability, hot-swappable batteries, and optional 4G/5G, RFID, and barcode scanning. CID2/ATEX models suit oil & gas, factory, and public safety use.

Key Features

- Built for Tough Environments
- Non-Stop Operation with Hot-Swappable Battery Design
- Optional 4G/5G and Wi-Fi 6E for Seamless Connectivity
- Flexible for Different Industrial Applications
- ATEX/IECEX and CID2 certified models (M101S-EX and M101AD-EX)





M101AD-EX

10.1" ATEX Rugged Tablet

- Intel® Core™ i5-1235U Alder Lake Processor
- 1920 x 1200 IPS LED Panel with direct optical bonding
- Ex Certificate: Class I Division II (CID2), ATEX/IECEX Zone 2
- Sunlight readable with anti-glare solution
- Allows cross-zone operations in hazardous and explosive environments
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant



M101AD

10.1" Windows Rugged Tablet

- Intel® Core™ i5-1235U Alder Lake Processor
- 1920 x 1200 IPS LED Panel with direct optical bonding
- Sunlight readable with anti-glare solution
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant, MIL-STD-461G EMI Compliance
- Optional 4G/5G Connectivity and HF RFID Reader
- Hot-swappable Battery Design



M101S-EX

10.1" ATEX Rugged Tablet

- Intel Core i5-7300U 2.6GHz (up to 3.5GHz) Processor
- 1920 x 1200 IPS LED Panel with direct optical bonding
- Ex Certificate: Class I Division II (CID2), ATEX/IECEX Zone 2
- IP65 Waterproof & Dustproof, MIL-STD-810G Shock, Vibration & Drop Resistant
- Optional 4G Connectivity and HF RFID Reader



M101EK

10.1" Windows Rugged Tablet

- Intel® Elkhart Lake Celeron® N6211 Processor
- 1920 x 1200 IPS LED Panel with direct optical bonding
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Hot-swappable Battery and Fanless Design
- Optional 4G/5G Connectivity, RFID and Smart Card/Barcode Reader



M101TG

10.1" Windows Rugged Tablet

- Intel® Core™ i5-1135G7 2.4 GHz Processor
- 1920 x 1200 IPS LED Panel with direct optical bonding
- Hot-Swappable Battery Design
- USB Type-C port support power delivery 20V In, 1 x USB 3.0 (Type A)
- Optional 4G/5G Connectivity, RFID and 1D/2D Barcode Reader
- IP65 Waterproof & Dustproof, MIL-STD-810G Shock, Vibration & Drop Resistant, MIL-STD-461G Compliance



M101P

10.1" Windows Rugged Tablet

- Intel® Pentium® N4200 1.1GHz (up to 2.5GHz) Processor
- 1920 x 1200 IPS LED Panel with direct optical bonding
- Sunlight readable with antiglare solution
- Hot-Swappable Battery Design
- USB Type-C port support PD 3.0 Charging; 1 x USB 3.0 (Type A)
- IP65 Waterproof & Dustproof, MIL-STD-810G Shock, Vibration & Drop Resistant



M101PR

10.1" Windows Rugged Tablet

- Intel® Pentium® N4200 Apollo Lake Processor
- 1920x1200 IPS LED Panel with direct optical bonding
- 4-wire Resistive Touch
- Optional 1D/2D Barcode Reader and HF RFID for data collection
- Hot-swappable Battery Design
- IP65 Waterproof & Dustproof, MIL-STD-810G Shock, Vibration & Drop Resistant



M101Q9

10.1" Android Rugged Tablet

- Qualcomm® 6490, Octa-Core, up to 2.7GHz
- 1920x1200 LED Panel with PCAP Touch
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Support Android 13.0 and Wi-Fi 6E (upgradable to Android)
- Optional Barcode Reader, NFC Reader and 4G/5G Connectivity



Application Story

Equipment Diagnostics in Oil & Gas

A maintenance service provider supporting offshore platforms and oil refineries needed a reliable computing device for equipment diagnostics, inspection logging, and maintenance scheduling. Previous devices failed due to harsh conditions, poor connectivity, and lack of compliance with hazardous zone safety standards. The team required a rugged, certified tablet that ensured safety, mobility, and uninterrupted field operation.

Main Challenges

- Risk of ignition in explosive environments without proper certifications
- Frequent exposure to dust, oil, moisture, and vibration
- Limited device compatibility with industrial sensors and data tools

Core Products

- ATEX Rugged Tablet - M101AD-EX

How Winmate Helps:

- ATEX/IECEx Zone 2 and C1D2 Certified
- Rugged Design for Industrial Reliability
- Sunlight-Readable Display with PCAP Touch
- Stable Performance in Remote Sites
- Secure Wireless Communication



Application Diagram: Equipment Diagnostics



Rugged Tablet S101 Series

Overview

When work takes you into warehouses, field sites, or industrial zones, you need a tablet built to endure. The Winmate S101 Series offers 10.1" rugged tablets with Android or Windows OS, designed for harsh environments and long shifts. With sunlight-readable displays, IP65 and MIL-STD-810H durability, optional hot-swappable batteries, and optional data capture tools, it's ideal for logistics, public safety, and field operations.



Key Features

- Clear Visibility with Sunlight-Readable PCAP Display
- Hot-Swappable Battery Design (Optional)
- Rugged and Reliable for Harsh Environments
- Optional 4G/5G, RFID, and Barcode Reader
- Windows & Android OS Options



S101MT

10.1" Windows Rugged Tablet

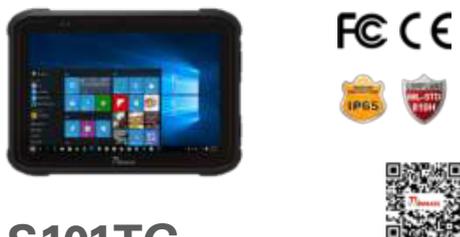
- Intel® Core™ Ultra 5 Processor 125U
- 1920 x 1200 WUXGA with PCAP Touch
- Sunlight readable with anti-glare solution
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- 2MP Webcam , 8MP Auto-Focus Rear Camera, Ethernet Giga LAN (RJ45)
- Optional 1D/2D Barcode Reader
- Removable battery with an optional hot-swap for all-day productivity



S101EK

10.1" Windows Rugged Tablet

- Intel® Celeron® N6211 @1.20GHz (up to 3.00GHz) Processor
- 1920 x 1200 WUXGA with PCAP Touch
- Sunlight readable with anti-glare solution
- 2MP Webcam , 8MP Auto-Focus Rear Camera, Ethernet Giga LAN (RJ45)
- Removable battery with an optional hot-swap for all-day productivity
- Optional 1D/2D Barcode Reader



S101TG

10.1" Windows Rugged Tablet

- Intel® Core™ i5-1135G7 Processor
- 1920 x 1200 WUXGA with PCAP Touch
- Sunlight readable with antiglare solution
- Optional Hot-Swappable Battery Design
- 1 x USB 3.0 (Type A), 1 x USB 3.0 (Type-C support Power Delivery 20V In)
- Integrated GigaLAN Port
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant



FC CE



S101G7

10.1" Android Rugged Tablet

- ARM Genio 700, Octa-core, up to 2.2 GHz
- 1920x1200 LED Panel with PCAP Touch
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Support Android 13.0 (upgradable to Android)
- Optional RFID, 4G/5G and 1D/2D Barcode Reader
- Support Hand, Gloves and Rain Touch Mode



FC CE



S101M9L

10.1" Android Rugged Tablet

- ARM A73x4 (2.0 GHz) + A53x4 (2.0 GHz)
- 1280x800 LED Panel with PCAP Touch
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Support Android 11.0
- Optional RFID, 4G Connectivity and 1D/2D Barcode Reader
- Support Hand, Gloves and Rain Touch Mode
- 8.0 MP Camera in Front Side and 13.0 MP Rear Camera



FC CE



S101M9

10.1" Android Rugged Tablet

- ARM A73x4 (2.0 GHz) + A53x4 (2.0 GHz)
- 1920x1200 TFT LCD Display with PCAP Touch
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Support Android 11.0
- Optional RFID, 4G Connectivity and 1D/2D Barcode Reader
- 8.0 MP Camera in Front Side and 13.0 MP Rear Camera



Application Story

High-Performance Rugged Mobility for Smarter Factory

A leading electronics manufacturer was transitioning to a smart factory model, integrating IoT sensors, real-time monitoring, and digital work instructions. However, their standard tablets couldn't withstand the factory's temperature fluctuations, dust, and vibration. Frequent device failures and poor visibility under industrial lighting conditions led to delays and rising maintenance costs.

Main Challenges

- Downtime caused by short battery life during multi-shift use
- Inconsistent connectivity to factory networks and control systems
- Insufficient processing performance for modern industrial software and control systems

Core Products

- 10.1" Windows Rugged Tablet - S101MT

How Winmate Helps:

- High-performance processor for seamless multitasking and industrial control
- Supports multi-shift usage with zero downtime
- Provides sharp visuals and reliable touch performance, even under factory lighting.



Application Diagram: Smart Factory Operations



Rugged Tablet M116 Series

Overview

The Winmate M116 Series is built for professionals needing reliable computing in tough environments. It features an 11.6" Full HD sunlight-readable touchscreen, hot-swappable battery, and IP65/ Military Standards certification. Powered by Intel® processors with Windows OS, it supports real-time data, diagnostics, and digital workflows in logistics, manufacturing, and public safety.



Key Features

- Brilliant Visibility Anywhere
- Hot-swappable Battery Design for Uninterrupted Operation
- Built to Run Your Critical Workflows
- Rugged by Design, Reliable by Nature
- Ready to Connect and Integrate with Flexible Connectivity



M116AD

11.6" Windows Rugged Tablet

- Intel® Core™ i5-1235U Alder Lake Processor
- 1920 x 1080, 850 nits IPS LED Panel with direct optical bonding
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Sunlight readable with anti-glare solution
- Hotswappable battery design
- USB Type-C port support power delivery 20V In



M116TG

11.6" Windows Rugged Tablet

- Intel® Core™ i5-1135G7 Tiger Lake Processor
- 1920 x 1080, 850 nits IPS LED Panel with direct optical bonding
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant, MIL-STD-461G EMI Compliance
- Sunlight readable with anti-glare solution
- Hotswappable battery design
- USB Type-C port support power delivery 20V In



M116P

11.6" Windows Rugged Tablet

- Intel® Pentium® N4200 1.1GHz (Turbo up to 2.5 GHz Processor
- 1920 x 1080 LED Panel with PCAP Touch and Optical Bonding
- Sunlight readable with anti-glare solution
- Hot-Swappable Battery Design
- Optional 1D/2D Barcode Reader and HF RFID for data collection
- 802.11ac WiFi, BT 5.0, 4G LTE, GPS Wireless Connectivity



M116PT

11.6" Windows Rugged Tablet

- Intel® Pentium® N4200 1.1GHz (Turbo up to 2.5 GHz Processor
- 1920 x 1080 FHD Panel with PCAP Touch and Optical Bonding
- Sunlight readable with anti-glare solution
- Hot-Swappable Battery Design
- Optional Integrated 1D/2D Barcode Reader and HF RFID for Data Collection
- Integrated Smart Card Reader



Application Story

Field-Ready Computing for Infrastructure Inspections

A national infrastructure management team responsible for bridges, tunnels, and public utilities needed a rugged mobile solution to support their on-site inspections and maintenance workflows. Their teams often operate in remote or outdoor environments with unpredictable weather, strong sunlight, and rough terrain. Consumer tablets proved too fragile, frequently failing due to exposure to dust, vibration, and moisture. Delays in reporting and data collection were impacting project timelines and compliance documentation.

Main Challenges

- Device failures due to water, dust, and vibration exposure
- Poor screen readability under direct sunlight during inspections
- Limited power endurance for full-day field work
- Incompatibility with legacy inspection tools and field data logging systems

Core Products

- 11.6" Windows Rugged Tablet - M116AD

How Winmate Helps:

- Engineered for Harsh Environments
- 11.6" Full HD Touchscreen with Optical Bonding and Anti-Glare Technology
- Hot-Swappable Battery Design without Interruption



Application Diagram: Infrastructure Inspections



Application Story

Automotive Diagnostics and In-Vehicle Integration

An automotive diagnostics service provider operating across multiple garages and field service units needed a robust and mobile device for vehicle system diagnostics, software flashing, and maintenance reporting. Their technicians struggled with consumer-grade devices that lacked the ports, ruggedness, and power to support full diagnostic software in real-world garage conditions. Additionally, mechanics needed a tool that could integrate with older vehicles via serial connections and withstand everyday workshop hazards like vibration, oil, and drops.

Main Challenges

- Inadequate processing power for high-demand diagnostic applications
- Physical damage from drops, vibration, and workshop contaminants
- Lack of LAN ports for integration with vehicle diagnostic interfaces
- Downtime caused by battery failure during long diagnostics or remote service calls



Core Products

- 11.6" Windows Rugged Tablet - M116TG

Application Diagram: Vehicle Diagnostics

How Winmate Helps:

- High-Performance Processor to Run Diagnostics Smoothly
- Rugged Design for Workshop Environments
- Hot-Swappable Battery Design without Interruption

LARGE-SCREEN RUGGED TABLET

Winmate's Large Screen Rugged Tablets offer powerful performance and visibility for smart factory control, military use, and AI diagnostics. With sizes up to 15.6", hot-swappable batteries, and full I/O support, they enable real-time monitoring and processing in harsh, data-intensive environments.



Size Options
13.3"-15.6"



Rugged & Certified



Customizable & Modular



Multiple OS Support



Hot-Swappable Battery Design



Real-Time Connectivity







Rugged Tablet Large Screen Series

Overview

Winmate's Large Screen Rugged Tablet Series (13.3", 14", 15.6") offers powerful performance and durability for professionals needing more display space in harsh environments. Equipped with Intel® Core™ processors, optional discrete GPUs, full I/O, hot-swappable batteries, and sunlight-readable screens, they're ideal for military, AI diagnostics, and smart factory data monitoring.



Key Features

- Expansive Full HD Displays (13.3" to 15.6")
- High-Performance Computing with Optional Discrete GPU (M156AD-M3)
- Rich I/O Connectivity
- Long Battery Life with Hot-Swappable Design
- Rugged Durability, Certified Protection



M133TG

13.3" Windows Rugged Tablet

- Intel® Core™ i5-1135G7 Tiger Lake Processor
- 1920 x 1080 IPS wide viewing angle LED panel and optical bonding
- IP65 Waterproof & Dustproof, MIL-STD-810G Shock, Vibration & Drop Resistant
- Removable kickstand and fanless cooling system
- Optional RFID Reader, 4G/LTE and 1D/2D Barcode Reader



M133MT

13.3" Windows Rugged Tablet

- Intel® Core™ ultra 5 125U Meteor Lake Processor
- 1920 x 1080 IPS wide viewing angle LED panel and optical bonding
- IP65 Waterproof & Dustproof, Fanless cooling system
- Removeable kickstand usable as carrying handle
- Optional 4G/LTE Connectivity
- Magnesium alloy housing with all around elastomeric rubber



M133WK

13.3" Windows Rugged Tablet

- Intel® Core™ i5-8265U Whiskey Lake Processor
- 1920 x 1080 IPS wide viewing angle LED panel and optical bonding
- IP65 waterproof and dustproof, MIL-STD-810G shock, vibration and drop resistance
- Removable kickstand and fanless cooling system
- Optional 4G/LTE Connectivity



D140

14" Windows Rugged Tablet

- Intel® Core™ i5-1235U Processor
- 1920 x 1080 WUXGA with PCAP Touch
- Optical bonding for sunlight readability Built in stylus holder for left/right hand usage
- ABS Composite Material housing with All-Around Elastomeric Rubber
- Optional 8 MP Rear Camera and 4G/LTE
- Thermal Design with Fan cooling system
- Built in stylus holder for left/right hand usage



M140TG

14" Windows Rugged Tablet

- Intel® Core™ i5-1135G7 Processor
- 1920 x 1080 wide viewing angle LED Panel
- Optical bonding and Antiglare technology for sunlight readability
- IP65 waterproof and dustproof, MIL-STD-810H shock, vibration and drop resistance
- Hot-swappable battery design
- Optional integrated Smart Card Reader
- Integrated 75x75 VESA mounting solution
- Optional Kick-stand / Hard Handle



M156AD

15.6" Windows Rugged Tablet

- Intel® Core™ i5-1235U Processor
- 1920 x 1080 IPS wide viewing angle LED panel and optical bonding
- IP65 waterproof and dustproof, MIL-STD-810H shock, vibration and drop resistance
- Hot-swappable battery design
- Integrated GigaLAN Port, USB Type-C port support PD 3.0 and ALT mode
- Optional RFID Reader and 4G/5G



M156AD-M3

15.6" Windows Rugged Tablet

- Intel® Core™ i5-1235U Processor
- 1920 x 1080 IPS wide viewing angle LED panel and optical bonding
- IP65 waterproof and dustproof, MIL-STD-810H shock, vibration and drop resistance
- Hot-swappable battery design
- Integrated GigaLAN Port, 3 x USB 3.0 (Type A), 1 x USB 3.0 (Type C)
- Discrete MXM GPU (NVIDIA A500 MXM Graphic Card)
- Optional RFID Reader and 4G/5G



Application Story

Smarter Underground Inspections with Rugged Tablet

Maintaining underground infrastructure, such as water, sewage, and utility systems, is critical to preventing failures and service disruptions in urban environments. Traditional inspection methods are often labor-intensive and rely on outdated equipment that delays analysis and exposes workers to hazardous conditions.

To improve efficiency and safety, inspection teams are now adopting camera-based systems paired with the Winmate 14" Rugged Tablet for real-time remote monitoring and streamlined field operations.

Main Challenges

- Worker Safety in Confined Spaces
- Lack of Real-Time Analysis
- Difficult integration between cameras and tablets
- Harsh Working Conditions

Core Products

- 14" Windows Rugged Tablet - D140

How Winmate Helps:

- Clear Visualization with a 14" Full HD Display
- Portable and Field-Ready Form Factor
- Long Battery Life for All-Day Inspections
- Rugged Design with Waterproof I/O Ports



Application Diagram: Underground Inspection

RUGGED LAPTOP

Winmate's Rugged Laptop Series delivers high-performance computing for harsh environments. The compact L140 Series combines flexibility and durability with its 2-in-1 tablet mode, making it perfect for defense, logistics, and field operations. The L156 Series features a 15.6" 4K touchscreen, optional NVIDIA or Intel GPU, and dual hot-swappable batteries, ideal for AI computing and engineering tasks.



Size Options
13.3" - 15.6"



Rugged &
Certified



Customizable &
Modular



Optional GPU



Hot-Swappable
Battery Design



Real-Time
Connectivity







Rugged Laptop L140 Series

Overview

When your job requires portable performance and rugged durability, the Winmate L140 Series delivers. Built for defense, logistics, and industrial fieldwork, it features a compact design, MIL-STD-810H and IP65 protection, and hot-swappable batteries. The L140 Series ensures uninterrupted productivity in mission-critical and demanding environments.



Key Features

- Military-Grade Ruggedness
- Compact, Field-Ready Form Factor
- Sunlight-Readable Display with Anti-Glare Coating
- Hot-Swappable Dual Battery



IC FC CE



L140AD-3

13.3" Rugged Laptop

- Intel® Core™ i5-1235U Processor
- 1920 x 1080 LED panel with direct optical bonding
- Dual battery with hot-swappable design
- Integrated Smart Card Reader
- Optional 2nd GigaLAN Support
- 2MP Front Camera



IC FC CE



L140AD-4

14" Rugged Laptop

- Intel® Core™ i5-1235U Processor
- 1920 x 1080 FHD LED panel with direct optical bonding
- Dual battery with hot-swappable design
- Integrated Smart Card Reader
- Optional 2nd GigaLAN Support
- 2MP Front Camera



IC FC CE



L140AD-4L

14" Rugged Laptop

- Intel® Core™ i5-1235U Processor
- 1920 x 1080 FHD LED Panel
- Dual battery with hot-swappable design
- Optional Smart Card Reader, 4G/5G, and 2nd SSD



Rugged Laptop L156 Series

Overview

For professionals in AI, defense, or industrial diagnostics, the Winmate L156 Series Rugged Laptop offers powerful performance in a durable 15.6" design. Featuring a 4K PCAP touchscreen, optional NVIDIA® discrete GPU, and dual hot-swappable batteries, it handles demanding tasks with ease. IP65 and MIL-STD-810H certified, it ensures reliable operation and visibility in any environment.



Key Features

- Ultra-HD 4K Display with PCAP Touch
- AI-Ready Graphics with Discrete GPU Options
- Dual Hot-Swappable Battery System
- Rugged Design for Harsh Environments
- Comprehensive I/O for Seamless Integration



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L156AD

15.6" Rugged Laptop

- Intel® Core™ i5-1235U Processor
- 1920 x 1080 FHD Panel resolution with PCAP Touch
- Dual battery with hot-swappable design
- Anti-glare technology for sunlight readability
- Integrated Smart Card Reader
- Optional RFID Reader and Fingerprint Scanner



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L156AD-M1

15.6" AI Rugged Laptop

- Intel® Core™ i7-12700H (up to 4.7GHz) Processor
- 1920 x 1080 FHD Panel resolution with PCAP Touch
- Support various GPU MXM Graphic Cards (NVIDIA A500, NVIDIA A1000 and NVIDIA A2000)
- Dual battery with hot-swappable design
- Anti-glare technology for sunlight readability
- Integrated Smart Card Reader
- Optional RFID Reader, Fingerprint Scanner and 4G/LTE



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L156AD-4KM1

15.6" 4K AI Rugged Laptop

- Intel® Core™ i7-12700H (up to 4.7GHz) Processor
- 3840 x 2160 4K Panel resolution with PCAP Touch
- Support various GPU MXM Graphic Cards (NVIDIA A500, NVIDIA A1000 and NVIDIA A2000)
- Dual battery with hot-swappable design
- Anti-glare technology for sunlight readability
- Integrated Smart Card Reader
- Optional RFID Reader, Fingerprint Scanner and 4G/LTE



Application Story

Mission-Ready Laptop for Modern Defense Operations

A defense force supporting both tactical ground units and command center operations needed a mobile computing solution that could bridge the gap between field performance and real-time operational coordination. Traditional laptops lacked durability in harsh terrain and didn't offer the flexibility for dynamic environments where rapid deployment, communication, and situational awareness were essential.

Main Challenges

- Frequent device failures due to shock, dust, and water in rugged field conditions
- Need for convertible operation for flexibility in vehicles, on foot, or at base
- Power interruptions during extended operations without access to charging
- Lack of secure connectivity and integration with military systems and networks

Core Products

- 14" Defense Rugged Laptop - L140AD-4

How Winmate Helps:

- Military-Grade Ruggedness
- Hot-Swappable Dual Battery for Continuous Uptime
- Secure, Reliable Connectivity and Full I/O Support



Application Diagram: Defense Operations



Application Story

Predictive Maintenance and Digital Twin Operations

A large-scale manufacturing company was investing in Industry 4.0 technologies to reduce downtime, improve asset performance, and enable real-time system monitoring. The team needed a rugged, high-performance laptop capable of running AI models for predictive maintenance and interacting with real-time digital twin platforms on the shop floor. Existing commercial laptops lacked the durability, GPU acceleration, and connectivity required for industrial deployment.

Main Challenges

- Lack of GPU performance to support AI model training and inference at the edge
- Incompatibility with machine interfaces and sensor systems for real-time data input
- Inability to operate continuously during long shifts or in mobile plant setups

Core Products

- 15.6" AI Rugged Laptop - L156AD-4KM1

How Winmate Helps:

- AI-Capable GPU Performance
- Full I/O Support for Machine Integration
- Industrial-Grade Durability
- Sunlight-Readable 4K Display
- Hot-Swappable Dual Battery Design



Application Diagram:
Predictive Maintenance & Digital Twin

ROBOTIC CONTROLLERS

Winmate's Robotic Controllers Series is built for precision control in rugged, mission-critical environments. Available in 5.5", 8", 10.1", and 15.6" models, the series supports Windows, Android, and Linux OS, offering real-time responsiveness, customizable interfaces, and military-grade durability, ideal for robotics, AI, and unmanned system operations.



Size Options
5.5"-15.6"



Rugged & Certified



Customizable & Modular



Multiple OS Support



Hot-Swappable Battery Design



Real-Time Connectivity







Rugged Robotic Controllers

Handheld Robotic Controller Series

Overview

Winmate's Robotic Controller Series empowers unmanned and AI-driven operations with rugged, mission-ready control. Available in 5.5", 8", 10.1", and 15.6" sizes, they feature sunlight-readable touchscreens, multi-OS support (Windows, Android, Linux), IP-rated ruggedness, modular control interfaces, and wireless/wired connectivity, built for precision in any environment.



Key Features

- Multi-Platform OS Support
- Custom RF Module Integration
- Extended Battery Life for Field Operations
- Seamless Wireless and Wired Connectivity
- Rugged, Mission-Ready Durability



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G500G7

5.5" Android Robotic Controller

- Genio 510 2 x A78 2.0 GHz + 4 x A55 2.0 GHz
- 1920 x 1080 TFT LCD Panel with direct bonding and PCAP Touch
- Support High Brightness, up to 1000 nits
- Compact and ergonomic design
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Support Android 13.0



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G900G7

8" Android Robotic Controller

- Genio 510 2 x A78 2.0 GHz + 4 x A55 2.0 GHz
- 1920 x 1200 IPS LED Panel with direct optical bonding and PCAP Touch
- Support High Brightness, up to 1000 nits
- Compact and ergonomic design
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Optional 4G/5G Connectivity
- Support Android 13.0



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G900AD

8" Windows Robotic Controller

- Intel® Core™ i5-1235U Processor
- 1920 x 1200 IPS LED Panel with direct optical bonding and PCAP Touch
- Support High Brightness, up to 1000 nits
- Compact and ergonomic design
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Optional Linux Ubuntu OS and 4G/5G Connectivity



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G101Q9-A

10.1" Android Robotic Controller

- Qualcomm® 6490 (Octa-core 2.7 GHz) Processor
- 1920 x 1200 IPS LED Panel with direct optical bonding and PCAP Touch
- Support Android 13.0
- Compact and ergonomic design
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Optional 4G/5G Connectivity



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G101AD-A

10.1" Windows Robotic Controller

- Intel® Core™ i5-1235U Processor
- 1920 x 1200 IPS LED Panel with direct optical bonding and PCAP Touch
- Compact and ergonomic design
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Optional Linux Ubuntu OS and 4G/5G Connectivity



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G101G7

10.1" Android Robotic Controller

- Genio 510 2 x A78 2.0 GHz + 4 x A55 2.0 GHz
- 1920 x 1200 IPS LED Panel with direct optical bonding and PCAP Touch
- Compact and ergonomic design
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Optional Linux Ubuntu OS and 4G/5G Connectivity



FC CE



G101TG

10.1" Windows Robotic Controller

- Intel® Core™ i5-1135G7 2.4 GHz Processor
- 1920 x 1200 IPS LED Panel with direct optical bonding and PCAP Touch
- Compact and ergonomic design
- IP65 Waterproof & Dustproof, MIL-STD-810H Shock, Vibration & Drop Resistant
- Optional Linux Ubuntu 22.04 OS, 4G/5G Connectivity and High Brightness Panel (up to 1200 nits)



Application Story

Smart Agriculture with AI and Robotics in Taiwan

Taiwan has become a leader in smart agriculture, using technologies like AI, IoT, drones, and robotics to modernize farming practices. These innovations help farmers optimize resources, improve crop yields, and enhance efficiency despite challenges such as limited arable land and unpredictable weather. Precision farming leverages real-time data from IoT sensors and AI to monitor soil, weather, and crop health. Drones and robots automate tasks like irrigation and pest control, reducing labor needs and minimizing environmental impact.

Main Challenges

- Compatibility and Communication Integration
- Weather-Resistant Design
- Multi-Source Data Integration
- Real-Time Data Processing

Core Products

- 10.1" Robotics Controller - G101TG

How Winmate Helps:

- Advanced Robotics Controller
- Precision Monitoring
- Facilitated Real-time Identification



Application Diagram:
Smart Agriculture with AI and Robotics



Application Story

Enhancing Underwater Drone Control

Unmanned devices like drones and robotics have transformed industries by enabling operations in challenging environments. Underwater drones have revolutionized subaquatic exploration, allowing detailed surveys, inspections, and research in hazardous marine conditions. Nordic Robotics and Winmate have partnered to enhance underwater exploration, integrating advanced drones with cutting-edge robotics controllers. This collaboration delivers greater precision, efficiency, and reliability, setting a new benchmark for underwater robotics.

Main Challenges

- Implementing Robotics Live Remote Control
- Compatibility with Hybrid Systems
- Environmental Resilience
- Low-Latency, High-Resolution Video Streaming

Core Products

- 10.1" Robotics Controller - G101TG

How Winmate Helps:

- Reliable Operation in Extreme Conditions
- Customizable and Secure
- Real-Time Video Performance
- Rugged Durability
- Advanced Connectivity



Application Diagram:
Remote Monitoring for Underwater Safety



Application Story

Reliable Robotic Control for UGV in Defense Missions

A defense technology contractor developing unmanned ground vehicles (UGVs) needed a robust and portable control interface that could operate reliably in remote and harsh conditions. These UGVs were deployed for reconnaissance and logistics support, often in environments with extreme vibration, dust, and potential electromagnetic interference. The control unit had to be compact, MIL-certified, and capable of delivering smooth command transmission with minimal latency.

Main Challenges

- Need for real-time control and high-speed data transmission to UGV systems
- Compact yet high-performance design for easy integration into mobile defense units
- Compliance with military-grade standards for field deployment

Core Products

- 10.1" Robotics Controller - G101AD-A

How Winmate Helps:

- Rugged Military-Grade Design
- Integrated I/O and Communication Ports
- Customizable Joysticks
- Sunlight-Readable Touchscreen with Physical Buttons



Application Diagram:
Advanced Control for UGV Operations



***WHEN CONDITIONS
GET TOUGH,
OUR TECHNOLOGY
GETS GOING.***





WINMATE

