

# PUBLIC SAFETY

**Government/  
Safety & Security**



**MISSION CRITICAL PUBLIC SAFETY**

**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.

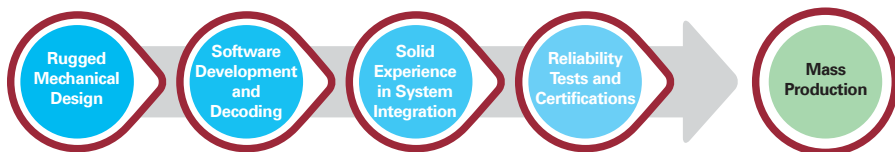
From product design to accessories, our engineering team designs and support the system integration process.

- 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

# Government, Safety & Security

## Overview

To ensure that Public Safety agencies such as Police, Fire, and EMS Emergency Medical services can operate effectively, public safety responders rely on radio communications.

### **Our rugged mobile computers include:**

- Radio Gateway - RG 100
- 4" ARM A73 + A53 Rugged Handheld Computer - P400M9
- 4" Multi-mode PoC Radio with Barcode Reader-P400M9-DMRBH
- 4" Multi-mode PoC Radios-P400M9-DMR
- Larzio Cloud Service solution (powered by Winmate)

## Industrial Challenges

### **As cities continue to develop, rapid increase in population poses new challenges to public safety management:**

- A single emergency event involves many teams from the fire department, police, emergency medical services, civilians using different radio networks ranging from VHF, UHF to LTE/ 4G phones, integrate them into a network system is a challenge.
- The simple voice communication can no longer meet the diverse needs of users, there are future requirement for multimedia service applications such as images, videos, and positioning.
- Achieve long-distance communication and get rid of the shackles of distance between command center and field.
- Need a way to record all the communication history for tracking in case.

## Technology

### **Application-focused features:**

- Customer-oriented services
- Integrate legacy and modern devices
- Closing the boundaries of the radio network
- Supports wide applications



## THE FUTURE OF CRITICAL COMMUNICATIONS WITH MULTI-MODE ADVANCED POC RADIOS



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### MULTI-MODE ADVANCED POC RADIOS

Built around the Android platform, Winmate PoC solutions gives the best of a modern mobile phone, including an intuitive and familiar interface. Access to all your favorite utilities and the ability to make mobile calls also browse the web. The P400M9 also incorporates all the essential features you would expect from a PoC radio, including dedicated PTT and emergency buttons, a talkgroup rocker switch, and long battery life.



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### RADIO GATEWAY

Wimate solves interoperability challenges with RG100 with voice and radio interoperability in a single tiny box. By connecting up to two donor radios directly to the RG100, users can instantly bridge the gap between disparate radio networks, endpoints, or frequencies, allowing seamless communications between.



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### RUGGED LAPTOP

Wimate Rugged Laptop is an innovative solution designed to help the challenging work of the public sector, where other technology often fails. It can easily tolerate the harshest environments while sustaining its function.

# Application Story

## Empowers Fire and EMS Departments



### Background

Major forest fires involve multiple civil defense teams from the fire department, police, and medical services. Intercommunication between all emergency response teams is essential for coordinating rescue operations and timely medical assistance. However, the fire, police, and medical services use different communication devices on various radio networks, which results in a lack of interconnection between the teams.

Winmate Radio gateway RG100 solves this problem by interconnecting both narrowband and broadband communication devices. With RG100 Radio Gateway and Larzio, the operator and Command can directly contact teams in different channels to organize the best rescue operations.

### Core Products

- Winmate Radio Gateway - RG100
- Winmate Multi-mode PoC Radios - P400M9
- Larzio Cloud Service solution (powered by Winmate)

“  
PROVIDING  
REAL TIME  
SITUATIONAL  
UPDATES.  
”

### Main Challenges

- Diversified communication devices
- Integration with legacy radio equipment
- Radio communications are limited by coverage distance
- No option to record radio conversations

### Why Winmate

- Customer-oriented services
- Integrate legacy and modern devices
- Closing the boundaries of the radio network
- Supports wide applications



Application Diagram: Winmate radio solutions are applicable in various challenging scenarios.

# Application Story

## Tunnel Operation



### Background

The 500km tunnels is vital to the Northern Ireland economy and has transported IoT sensor data. For its cable tunnels operation, customers require seamless communication solutions to connect teams at any time. With Larzio APP cloud service and RG100 Radio Gateway, the events hosting staffs can contact the team with high efficiency and flexibility. With radios, telephones, and Apps, the team members can react promptly to any situation.

Combines the benefits of radio and the Internet without changing the user pattern. Through Digital Signal Processor (DSP) and communication protocol technology, the radio audio can be encoded, compressed, and sent through Internet as an information packet. Then, the information packet on the Internet can be decompressed, decoded, and sent through public telecom networks as audio.

### Core Products

- Winmate Radio Gateway - RG100
- Winmate Multi-mode PoC Radios - P400M9
- Larzio Cloud Service solution (powered by Winmate)

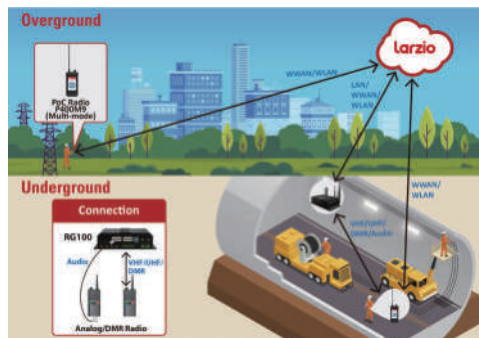
“  
**GET STARTED  
WITH A RADIO  
EXPERIMENT.**  
”

### Main Challenges

- APP SW Teamwork Cloud application
- Extra ESD protection required
- Provides a digital radio solution to secure voice and data communications along the international route of the power pipeline

### Why Winmate

- Enhanced compatibility and APP SW powered by Larzio
- Larzio Teamwork Cloud



Application Diagram: Through Larzio Group Chat, there's no need to make multiple calls and transfers to the people in charge.

# Application Story

## Rugged and Reliable



### Background

Law enforcement officers are constantly in motion and essentially require fast and reliable information and communications. Winmate's L140TG rugged laptop makes it possible for police officers to turn their cars into mobile workplaces.

When selecting a laptop, law enforcement agencies need to consider how this particular gadget works with all the applications they need to use for the task. These agile products enable officers to investigate and document an incident or accident, record witness accounts, and seamlessly retrieve and share this information. Winmate 14" L140TG robust notebook computer can lead to improved security as well. For example, officers may work more quickly when filing an accident report and spend less time on the road.

### Core Products

- Winmate L140TG-4: 14" convertible rugged laptop

### Main Challenges

- Certified IP65 rating and MIL-STD-810H for public safety and military applications
- Enterprise mobility solution

“  
**ARDUOUS  
WORK OF  
PUBLIC SAFETY  
AGENCIES.**  
”

### Why Winmate

- Rugged modular design
- MIL-STD 810H and IP65 rating define
- Large 14" inch display with a convertible form factor
- Easy deployment and maintenance



Application Diagram: Easy maintenance



# Application Story

## Advanced Deployment



### Background

The old Hotel in Hualien, Taiwan, suddenly collapsed during the demolition. The whole building was lying horizontally across the street. With the casualties unknown, The Hualien County Police Department urgently reviewed footage of CCTV cameras along the road following reports that the building had crushed a scooter rider. Meanwhile, the Hualien County Fire Department's Special Search Brigade activated the search and rescue plan program using a life detector to confirm the location.

Winmate offers a rugged tablet computer that supports in-car mounting and carry-on hand; it is user-friendly and easy to use. It provides 4G LTE WWAN, WLAN, GPS, and BT for better communication; also certified by MIL-STD-810G and IP65 standards. Winmate solution brings you ruggedness and helps to increase productivity.

### Core Products

- 10.4" Ultra Rugged Tablet R10IP8M-RTT2GP

### Main Challenges

- Fast signal transmissions and powerful performance
- Easy to carry and use IT devices in any challenging conditions
- Strongly made Tablet PCs and capable of withstanding rough handling

### Why Winmate

- Implement the latest technologies to support user's needs
- Design to survive harsh environment
- Robust communication anytime and anywhere
- Easy deployment and maintenance

“**SUPPORT URBAN SEARCH AND RESCUE TO SAVE LIVE SAFELY AND EFFICIENTLY.**”



Application Diagram: Onsite officers are using the rugged tablet

# Application Story

## Access Critical Information



### Background

According to information gathered by the United States Fire Administration, Fire kills over 3,000 people each year in America and causes billions of dollars in damage. Firefighters must constantly monitor the situation while getting relevant information from the central command center and local fire stations directly to the fire trucks.

Attracted by Winmate's credibility as the premier supplier of rugged enterprise mobility and industry-leading services, a fire department of metropolitan areas in Northern Europe bought Winmate's rugged laptop to provide real-time info to the fire department and emergency medical services.

### Core Products

- Winmate 13.3" Rugged Laptop L140TG-3

### Main Challenges

- Greater Comfort
- Hot-swappable battery design for uninterrupted operation in the field

“  
**ANTI GLARE  
TECHNOLOGY  
FOR SUNLIGHT  
READABILITY.**  
”

### Why Winmate

- Rugged and versatile with a sunlight-readable display
- MIL-STD 810H and IP65 rating defines how resistant the laptop is when subjected to a dirty/dusty environment, moisture, and water splash
- Large 13.3" inch display with a convertible form factor
- Easy deployment and maintenance



Application Diagram: Large 13.3" inch display with a convertible form factor.

## 4" Multi-mode PoC Radio with Barcode Reader

# P400M9-DMRBH/ P400M9-DMR



“**COMMUNICATIONS  
WITHOUT BARRIERS.**”

- Multi-mode PoC Radios
- Cortex-A73 + Cortex-A53 (Octa-core up to 2.0 GHz)

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4", 800 x 480 Panel with direct optical bonding

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Supports Android 11

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Support DMR and optional VHF/ UHF radio

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Optional 1D/2D barcode reader for data collection

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### Custom configuration



VHF/ UHF  
Radio



Barcode  
Reader

### Application



### **No longer limited**

“FAST COMMUNICATIONS  
WITH WIDE RANGE  
NETWORKS”

P400M9 fits a wide variety of networks. The user is no longer limited to a specific mobile operator, delivering more flexibility and convenience for use in any harsh environment. A higher data transfer rate and reduced latency thus enable the user to communicate with unprecedented speed and efficiency.

## 4" ARM A73 + A53 Rugged Handheld Computer

# P400M9



### Application



### **Easy to Use, Easy to Operate**

“ INFINITE APPLICATIONS  
WITH THE OPEN  
PLATFORM ”

P400RM9 features high compatibility and security performance with rear HD and front cameras for real-time image service and video monitoring. With SOTIMobiControl compliance and support third-party applications for developing customized applications. Suitable for many industries, such as transportation and logistics, retail, security, energy and utilities, construction, councils and local government organizations, hospitality, manufacturing, and others.



“ **RESILIENT AND RUGGED.** ”

- Compatible PoC application
- Cortex-A73 + Cortex-A53 (Octa-core up to 2.0 GHz)

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4", 800 x 480 Panel with direct optical bonding

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Supports Android 11

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Sunlight readable touch screen

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Easy to use, easy to operate

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# Radio Gateway RG100



FCCE

“OPTIMIZE RESCUE  
EFFICIENCY.”

- Wireless connection (WWAN/WLAN) radio gateway
- Secured recording (Inbox/ Larzio cloud)

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Radio interoperability (Narrowband and Broadband)

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Migrate existing analog or digital radio systems with ease

---

Interoperable communication platform

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Connecting public safety radios with IP devices

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## Application



## **Interoperability Challenges**

“CONNECTING  
PUBLIC SAFET”

Winmate solves interoperability challenges with RG100 with voice and radio interoperability in a single tiny box. By connecting up to two donor radios directly to the RG100, users can instantly bridge the gap between disparate radio networks, endpoints, or frequencies, allowing seamless communications between organizations.

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



## Custom configuration

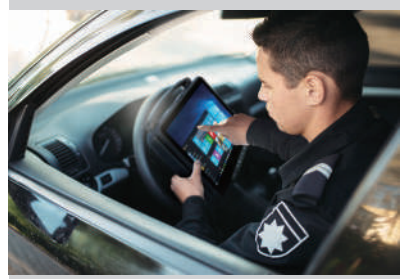
<b>Up to 32 GB</b>	<b>Up to 2 TB</b>	
Memory	Storage	Camera
Smart Card Reader	Fingerprint Scanner	HF RFID Reader



**“ 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

## Application



### On Field Communication

**"ARDUOUS WORK OF FIELD WORK"**

Winmate's L140TG rugged laptop makes it possible for staff member officers to turn their workbenches into mobile workplaces.

- 
- 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 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

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Anti-glare technology for sunlight readability

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Flip design for quick switching between laptop and tablet modes

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

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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

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## Custom configuration



Memory



Storage



Camera



Smart Card  
Reader



Fingerprint  
Scanner



HF RFID  
Reader

## Application



## **Semi Rugged Laptop**

“MILITARY LAPTOP WITH  
AMD RYZEN V2516”

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

# 13.3" / 14" Windows Rugged Laptop L140AD Series



## Custom configuration



Memory



Storage  
W1 2nd SSD



Camera



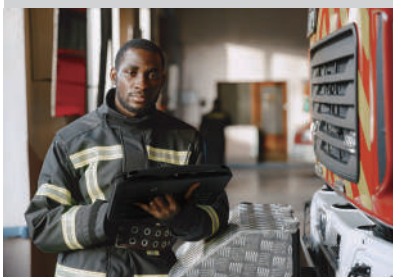
Fingerprint  
Scanner



HF RFID  
Reader



## 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.

## “ 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

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Anti-glare technology for sunlight readability

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Projective capacitive touch supporting switchable rain/ glove/ stylus modes

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

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Magnesium alloy enclosure with double injection for drop protection

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IP65 waterproof and dustproof

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WiFi-6E & optional WWAN 5G support

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

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Optional discrete Nvidia Graphic box

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# 15.6" 4K Windows Rugged Laptop L156AD Series



## “ 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

### 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 12<sup>th</sup> Gen Intel<sup>®</sup> Core™ Processors, growing 35% in performance from the previous generations, reaching the highest clock rate of 5.0GHz – achieving premium multitasking performance.

# 10.1" Windows Rugged Tablet M101TG



## Custom configuration



Memory



Storage



Barcode Reader



WWAN



HF RFID Reader



Micro HDMI Port



High Capacity Battery 16hr



## Application



## Quality Inspection

“THE PERFECT BALANCE BETWEEN FUNCTIONALITY AND FORM FACTOR”

The M101TG rugged tablet computers with the quality inspection software app installed serve at the quality inspection department. Maintenance of department, premises, equipment, and learning is now easier than ever with the M101TG.

“ OPTIMUM SIZE, MAXIMUM PRODUCTIVITY. ”

- 10.1", 1920 x 1200 IPS LED Panel with direct optical bonding
- Intel® Core™ i5-1135G7 Tiger Lake processor

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IP65 waterproof

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Dustproof, MIL-STD-810H shock, vibration and drop resistance

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Sunlight readable with anti-glare solution

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Hot-swappable battery design

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USB Type-C port support power delivery 20V-in

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# 11.6" Windows Rugged Tablet M116TG



“ **HIGH PROCESSING POWER  
IN A RUGGED ENCLOSURE.** ”

- 11.6", 1920 x 1080, 850 nits IPS LED Panel with direct optical bonding
- Intel® Core™ i5-1135G7 Tiger Lake processor

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IP65 waterproof

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Dustproof, MIL-STD-810H shock, vibration and drop resistance

---

Sunlight readable with antiglare solution

---

Hotswappable battery design

---

USB Type-C port support power delivery 20V-in

---

## Custom configuration



Memory



Storage



WWAN



Gigabit LAN Port



Barcode Reader



HF RFID Reader



Micro HDMI Port

## Application



### Machinery & Equipment Inspections

“HIGH PROCESSING POWER AND BRILLIANT TOUCH SCREEN”

The M116TG features high processing power and a brilliant 11.6" touch screen, ideal for checking operation manuals and SOP procedures for live inspection and production supervision.

# 10.1" Windows Rugged Tablet S101TG/ S101EK



## Custom configuration

Up to **16 GB**    Up to **2 TB**    Up to **512 GB**

Memory

Storage (S101TG)

Storage (S101EK)



WWAN



Micro HDMI Port



Expansion Port



Battery Hotswap



Barcode Reader

## Application



## R&D and Engineering

“TOUGH ENOUGH TO WITHSTAND REGULAR DROPS”

Light and rugged

Windows-based tablet computer with rear camera and wireless capabilities provide fast, accurate data collection and analytics for public safety officers.

“ **OPTIMUM SIZE, MAXIMUM PRODUCTIVITY.** ”

- 10.1", 1920 x 1200 WUXGA with PCAP touch
- 11th generation Intel® Tiger Lake processor (S101TG)
- Intel® Elkhart Lake Celeron® N6210 (S101EK)

4 GB DDR4, 128 GB SSD, micro SDXC card slot

Light sensor/ g-sensor/ Gyro

2MP Webcam , 8MP Auto-focus rear camera

Anti-glare touch treatment

USB 3.0 Type-A, USB 3.0 Type-C, RJ45-10/100/1000 GigaLAN port, Micro SDXC slot, docking connector

WLAN, BT, GPS, GLONASS

Support hand/ gloves and rain mode

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



**IP65** **CE FC**  
**PoC Radio**  
**P400M9 Series**

**MISSION  
 CRITICAL PUBLIC  
 SAFETY RADIO  
 COMMUNICATIONS**



**CE FC**  
**Radio Gateway**  
**RG100**



The logo for Winmate, featuring a stylized 'W' with red, white, and green vertical stripes on the left, followed by the word 'WINMATE' in a bold, white, sans-serif font.

**WINMATE**

A man in a light blue shirt and dark vest is looking at a rugged laptop. A woman in a camouflage military uniform is also looking at the laptop. The laptop screen displays the Windows 10 desktop. The background is dark and industrial, with some blue lighting.

**13.3" / 14"  
WINDOWS RUGGED LAPTOP**



**CE FCC IC**



**L140TG-3/ L140TG-4**  
**L140V2-3/ L140V2-4**  
**L140AD-3/ L140AD-4**

