2024

Product Guide

12.3"/14.9" Vehicle Mounted Computers & UAV GCS Series

Winmate's 12.3"/14.9" Panel PC series: Brilliant Screens, Rugged, Customizable, and User-Friendly Industrial Panel Computers for Diverse Applications.

Winmate's GCS: Elevate UAV operations with intuitive control, advanced monitoring, and rugged reliability.

Your mission, our technology.

WINMATE

Winmate Inc.

CONTENT

Why Winmate

- Depth of experience 30+ years
- Unmatched breadth of products and services
- More investments in R&D
- Market leader in multiple categories
- Extensive partner ecosystem
- Multiple innovation and workplace awards

Extensive Reach

Scalable to meet any enterprise demands

$200M (USD)
Global Sales

15+
Offices
Across 45 countries

400+
Patents
US and INTL patents issued and pending

1,500+
Employees Worldwide

5,000+
Channel Partners
In over 100 countries

50+
Distribution Channels
ODM, OEM, Direct, SI

Co-creating for SaaS Business

Artificial intelligence

Dashboard Editor

Android APP design

Ensure you get the most out of AI, RFID and Winmate SW solutions

Workflow and Design Consulting

Uncover critical business requirements

Solution Jumpstart

Design a tangible proof-of-concept that visualizes what is possible

Solution Validation

Assure that your existing systems are compatible with Winmate solutions

Program Management

Speed up execution with administration, coordination, and customized project management

Software Integration

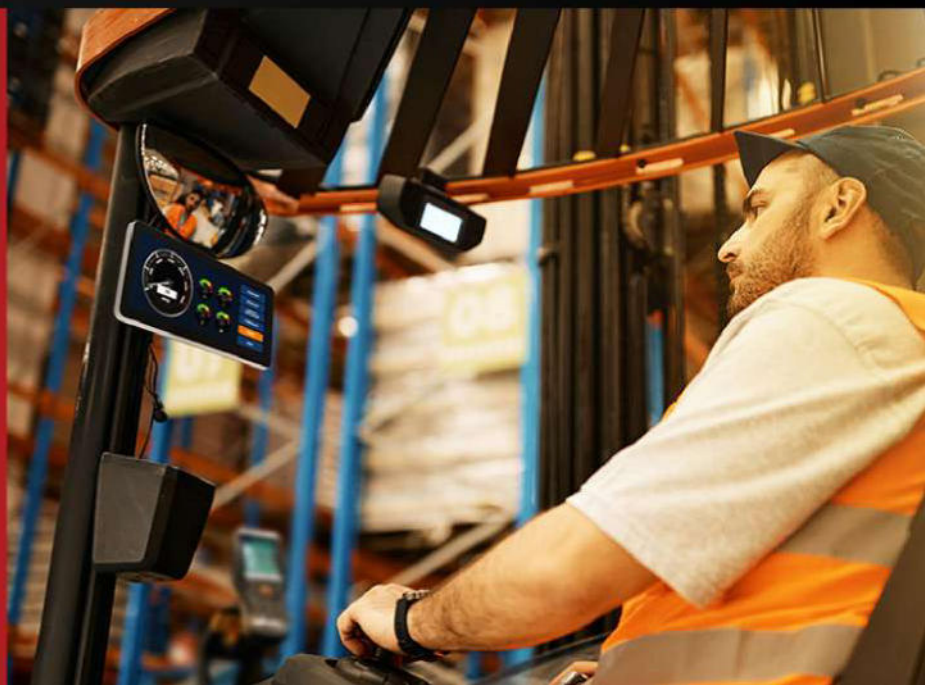
Ensure the software powering your winmate solutions works seamlessly with your back-end IT systems

Learning as a Service

Speed up user adoption with the training and support you need to get the most from your solution

Pioneering Automotive Innovation

12.3"/ 14.9" Vehicle Mounted Computers
Product guide



Success Stories

Transforming Southeast Asian Rice Fields

Winmate's 12.3” Panel PC
Driving Smart Automated Farming

Background

In the heart of Southeast Asia's lush landscapes, a quiet revolution is unfolding in the realm of agriculture. The utilization of Winmate's 12.3” Panel PC in smart automated farming is not only boosting efficiency but also addressing the impending labor shortage caused by an aging workforce. This article delves into the success story of Southeast Asian rice fields, where the integration of Winmate's technology has led to 20 cycles of plowing within 30 minutes, all managed by operators stationed at the fields' edge.

Core Products

- W12MG3S-GSB1 - 12.3” ARM A78+A55 G-WIN GS-Series Full IP65 PCAP Panel PC
- E430RQ8 - 4.3” Qualcomm® Snapdragon™ 660 Rugged handheld PDA
- L156 Series - 15.6” Rugged Laptop

Main Challenges

Southeast Asia's agrarian traditions have long been the backbone of its economy. However, as the region's population ages and younger generations migrate to urban centers in search of alternative livelihoods, a pressing concern has emerged—the shortage of skilled agricultural workers. As the average age of farmers increases, the need for innovative solutions to maintain productivity becomes paramount.

Why Winmate

Enter Winmate's 12.3” Panel PC—a technological marvel designed to revolutionize the way Southeast Asian rice fields are cultivated. This advanced panel PC serves as the brain behind an ingenious automated farming system. Operated by personnel stationed at the fields, this system has become a lifeline for the region's agriculture, ensuring that the impending labor shortage does not translate into reduced yields.

L156AD

W12MG3S-GSB1

E430RQ8

Driving Agricultural Innovation in South America

Winmate 12.3” Panel PC Revolutionizes Farming Practices

Background

In the heart of South America, where agriculture plays a vital role in the economy and sustenance of nations, a revolutionary transformation has taken place. A visionary partnership between a local farming cooperative and Winmate, a global leader in rugged computing solutions, has brought cutting-edge technology to the fields, reshaping the way crops are cultivated and harvested.

Core Products

- W12IM3S-GCB1 - 12.3” ARM A53 G-WIN GC-Series Front IP65 PCAP Panel PC
- G101TG - 10.1” Intel® Tiger Lake Rugged Ground Control Station

Main Challenges

South American agriculture faces its share of challenges: unpredictable weather patterns, varying soil conditions, and the need to optimize resources while meeting growing demands for food production. In such a context, technological innovation becomes a beacon of hope, offering solutions to enhance efficiency, increase yields, and ensure sustainable farming practices.

Why Winmate

Enter the Winmate 12.3” Panel PC, a game-changing innovation that combines advanced computing power with intuitive multitouch capabilities. Designed to thrive in rugged environments, this Panel PC proved to be the perfect fit for the demanding conditions of South American farms.

G101TG

W12IM3S-GCB1

Overview

Winmate, a leading provider of industrial display solutions, introduces their groundbreaking 12.3" 1920 x 720 panel PC with a projected capacitive multitouch screen. This advanced panel is specifically designed to revolutionize smart personalized cockpits and haptic center console displays in farming and logistics. The 12.3" panel PC offers a high-resolution display with crystal-clear visuals, thanks to its 1920 x 720 resolution. The projected capacitive multitouch screen allows for seamless and precise touch inputs, enabling users to interact effortlessly with the displayed content.

Processing Power Options: ARM A53 Quad-core or A78+A55 Processor Combo

With this advanced computing power at your fingertips, you can expect exceptional performance and efficiency from your device. Whether you're tackling everyday tasks or engaging in multimedia activities, the Winmate Panel PC's processors ensure a smooth and seamless user experience. Additionally, the flexibility of these processors caters to your specific needs, whether you require high-speed processing or energy efficiency. Experience effortless productivity and entertainment with the Winmate 12.3" Panel PC, and immerse yourself in a world of seamless technological excellence.

Unlocking Intuitive Control with Multi-Touch Capabilities on the Panel PC

12.3" panel pc allowing users to navigate menus, adjust settings, and interact with applications effortlessly. From controlling the infotainment system to managing climate settings and accessing navigation functions, the 12.3" panel PC offers a user-friendly interface.

Enhanced Productivity in Farming and Logistics

The 12.3" Panel PC is perfectly suited for agricultural machinery and warehouse forklifts. Its rugged construction ensures durability even in demanding outdoor conditions. Equipped with advanced processing power and a user-friendly interface, this Panel PC streamlines operations, providing real-time data and efficient control over machinery and inventory.

Features:

- Front IP65 water and dust proof
- 12.3” 1920 x 720 wide viewing angle with PCAP touch
- 9~36V DC Power input acceptable
- Dual Gigabit Ethernet
- Fanless cooling system and ultra-low power consumption

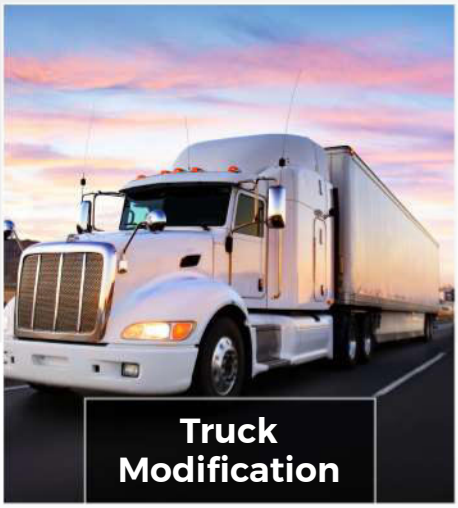
Application

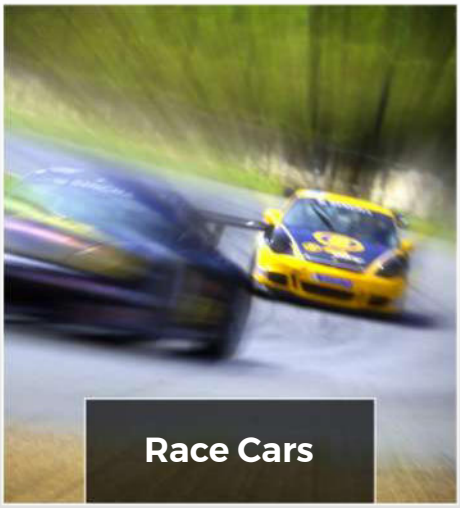
The Winmate 12.3" Panel PC can be applied to various types of vehicles, including private cars, commercial vehicles, taxis, trucks, and more. It can be used for vehicle control, entertainment systems, navigation, monitoring, and other purposes. Additionally, it is suitable for public transportation vehicles like buses, where it can be used for vehicle monitoring, passenger information systems, payment systems, and more.

For cargo trucks and transportation vehicles, this Panel PC can be used for route planning, inventory management, cargo tracking, and delivery management. Similarly, it supports emergency response, information sharing, and task scheduling in public service vehicles such as police cars, ambulances, and fire trucks. Even in specialized vehicles like construction machinery, agricultural equipment, and mining vehicles, this Panel PC can be used for machine control, operation monitoring, and data logging. Likewise, it is applicable to electric vehicles for energy management, battery monitoring, and charging control. Finally, Panel PCs can also be applied to ships and aircraft for navigation, monitoring, communication, and entertainment systems.

Furthermore, if you have specific requirements for modified vehicles, the Winmate 12.3” Panel PC can also be used in various modified vehicles such as Truck Modification, Special Purpose Vehicle Customization, Airport Ground Support Vehicle Modification and Agricultural Machinery Retrofit.

Whether you aim to provide a better entertainment experience, enhance performance, or achieve specific functionalities, the Winmate 12.3" Panel PC offers flexible solutions to meet the requirements of various modified vehicles. Make sure to choose the appropriate Panel PC configuration based on your specific use case and performance needs.





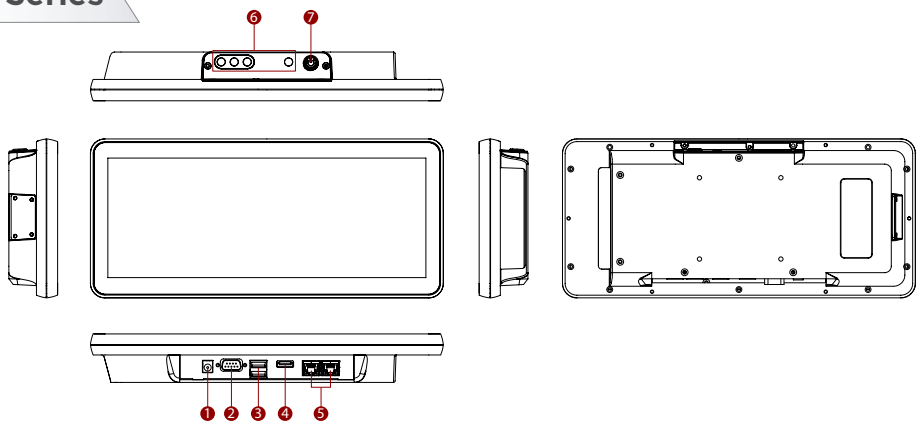
12.3" Panel PC & Display Product Family

	Windows	Android	Display
Open Frame	N/A	N/A	**W12L100-POB1/ W12L100-OFB1**  Display with P-Cap Touch
Panel Mount	**W12IE3S-PPB1**  Intel® Celeron N6211 Elkhart lake	**W12IM3S-PPB1**  A53 Quad Core 2.0GHz MediaTek Genio 350	**W12L100-PPB1**  Display with P-Cap Touch
GC Series	**W12IE3S-GCB1**  Intel® Celeron N6211 Elkhart lake	**W12IM3S-GCB1**  A53 Quad Core 2.0GHz MediaTek Genio 350	**W12L100-GCB1**  Display with P-Cap Touch
GS Series	**W12IE3S-GSB1**  Intel® Celeron N6211 Elkhart lake	**W12MG3S-GSB1**  2 x A78 2.2GHz + 6 x A55 2.0GHz MediaTek Genio 700	**W12L100-GSB1**  Display with P-Cap Touch

Form Factor

W12IE3S-GCB1

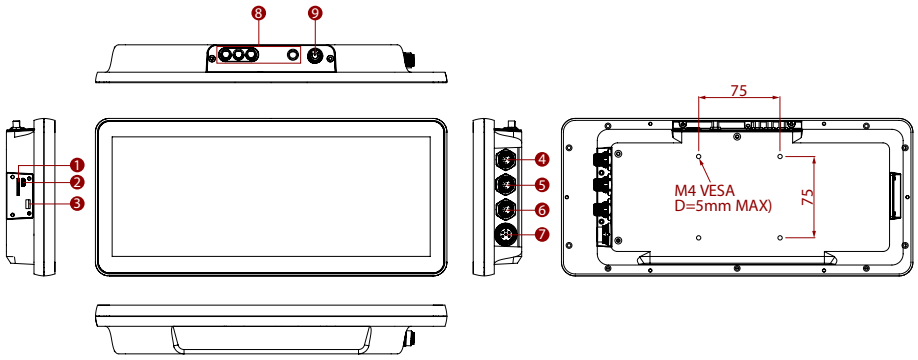
GC Series



No.	Description	No.	Description
1	Power Input	5	LAN
2	COM	6	Reserved Antennas
3	USB Type-A	7	Power Button
4	HDMI		

W12IE3S-GSB1

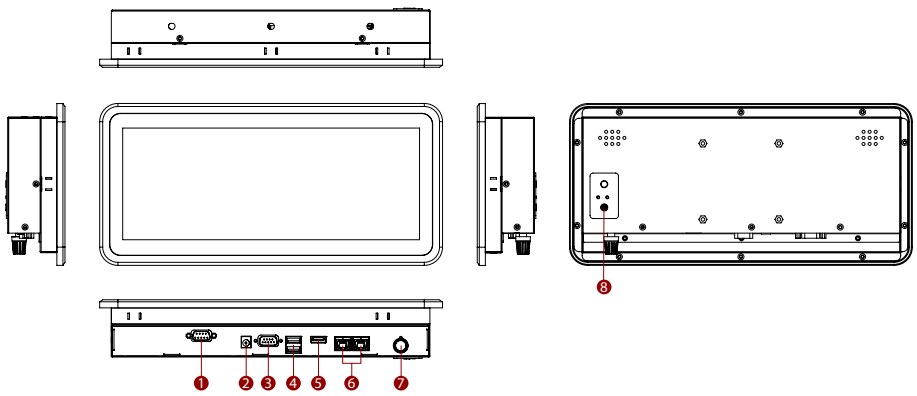
GS Series



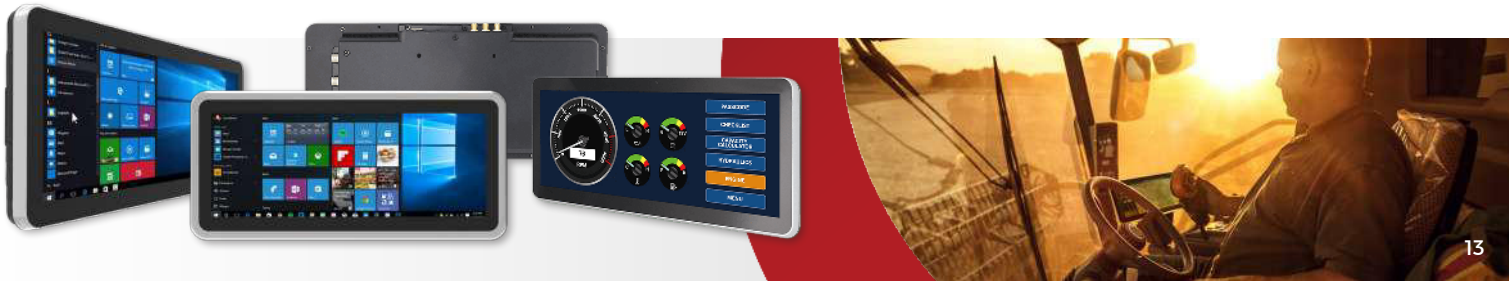
No.	Description	No.	Description
1	SIM Card Slot	6	M12 with 6xDI+CANBUS
2	Micro USB	7	Power Input
3	Reset Key	8	Reserved Antennas
4	M12 with LAN+USB	9	Power Button
5	M12 with COM+CANBUS		

W12IE3S-PPB1

Panel Mount Series



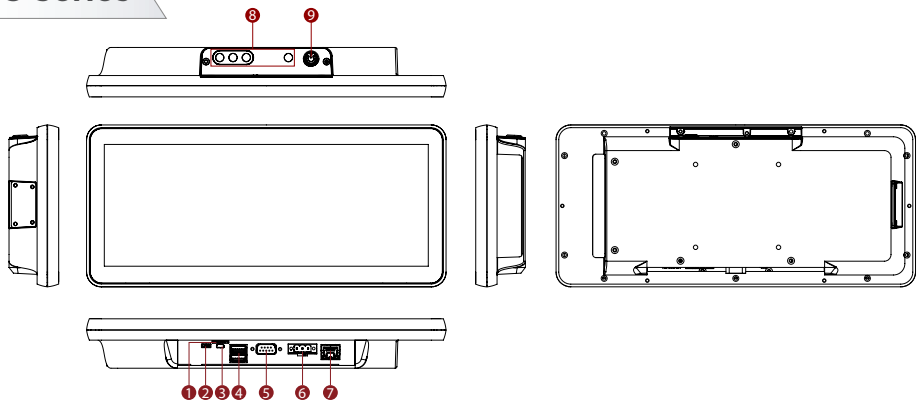
No.	Description	No.	Description
1	COM	5	HDMI
2	Power Input	6	LAN
3	COM	7	Brightness Adjustment Knob
4	USB Type-A	8	OSD Control Panel



Form Factor

W12IM3S-GCB1

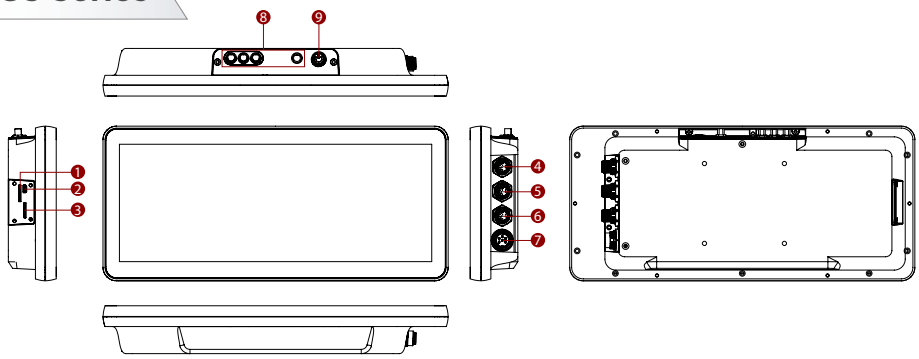
GC Series



No.	Description	No.	Description
1	Micro SD Card Slot	6	Power Input
2	Micro USB	7	LAN
3	Micro HDMI (Optional)	8	Reserved Antennas
4	USB Type-A	9	Power Button
5	RS232		

W12MG3S-GSB1

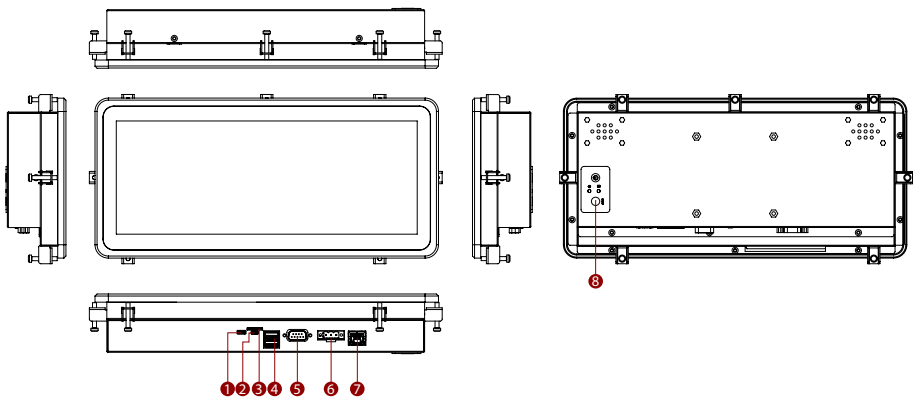
GS Series



No.	Description	No.	Description
1	SIM Card Slot	6	M12 with 6xDI+CANBUS
2	Micro USB	7	Power Input
3	SD Card Slot	8	Reserved Antennas
4	M12 with LAN+USB	9	Power Button
5	M12 with COM+CANBUS		

W12IM3S-PPB1

Panel Mount Series



No.	Description	No.	Description
1	Micro USB	5	RS232
2	Micro HDMI (Optional)	6	Power Input
3	Micro SD Card Slot	7	LAN
4	USB Type-A	8	OSD Control Panel

Dashboard Editor

The Winmate Dashboard SW offers user-friendly customization, dynamic visuals, and versatile data integration, making it a powerful dashboard solution for businesses and professionals. Compatible with popular browsers for seamless access.

WinDash Pro & WinDash Hub Connectivity

WinDash Pro

Unlocking Efficiency and Versatility: Winmate Dashboard SW Web Application

Winmate Dashboard SW Web Application is a versatile and user-friendly tool designed to provide an exceptional user experience. Its compatibility with popular browsers like Edge, Chrome, Firefox, and Safari ensures seamless access for a wide range of users.

One of its standout features is the capability for project and pages editing within a user's account. This empowers users to customize their dashboards to meet their specific needs, enhancing usability and flexibility. The application offers a rich array of visual elements, including 15 gauges and 12 static graphics that can be continuously updated to reflect real-time data. This dynamic approach allows users to monitor and track data with precision. Data is sourced from a variety of channels, including CANBus, Modbus TCP/RTU, RESTful API, MySQL (MariaDB), and MSSQL. This extensive data source compatibility ensures that users can integrate data from various systems, making it a powerful tool for data visualization and analysis.

Winmate Dashboard SW Web Application offers compatibility, customization, dynamic visuals, and versatile data source integration. It is a valuable tool for businesses and professionals seeking an efficient and comprehensive dashboard solution.

Features:

- The Web Application
- Ensures compatibility with Edge, Chrome, Firefox, and Safari
- Facilitates project and page editing within user accounts
- Offers a collection of 15 gauges and 12 static graphics that continuously evolve
- Supports multiple display ratios, including 4:3, 16:9, and 8:3
- Adopts the same implementation as the WinDash Hub, providing a WYSIWYG experience
- Sources data from CANBus, Modbus TCP/RTU, RESTful API, MySQL (MariaDB), and MSSQL

WinDash Hub

Your All-in-One Solution

Winmate's WinDash Hub comes equipped with an Android App pre-installed directly on the product, streamlining your operations. This dynamic hub effortlessly collaborates with a wide spectrum of communication interfaces, from CANBus and RS232/RS485 to LAN, Wi-Fi, 4G, and touch input, ensuring seamless connectivity for your devices.

But it doesn't stop there. WinDash Hub is designed to harness data from multiple sources, including CANBus, Modbus RTU/TCP, and versatile databases like MySQL, MariaDB, and MSSQL. This comprehensive approach empowers you with the insights and control you need for efficient and effective operations. Winmate WinDash Hub: Your ultimate solution for connectivity and data management.

Communication Interfaces

Data sources

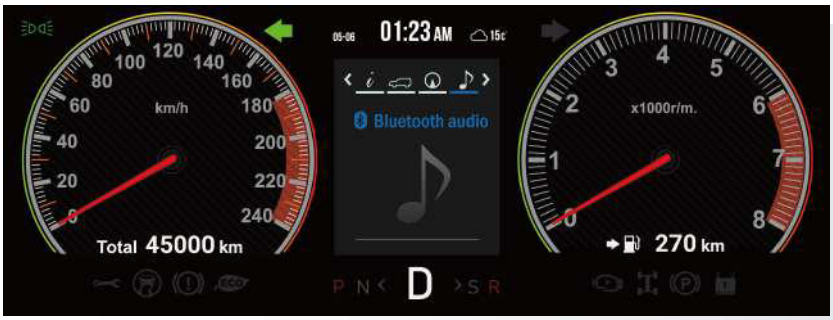
Features:

- The Android App is pre-installed on the product
- It seamlessly collaborates with various communication interfaces, including CANBus, RS232/RS485, LAN, Wi-Fi, 4G, and touch input
- Data sources for the app include CANBus, Modbus RTU/TCP, and databases such as MySQL, MariaDB, and MSSQL

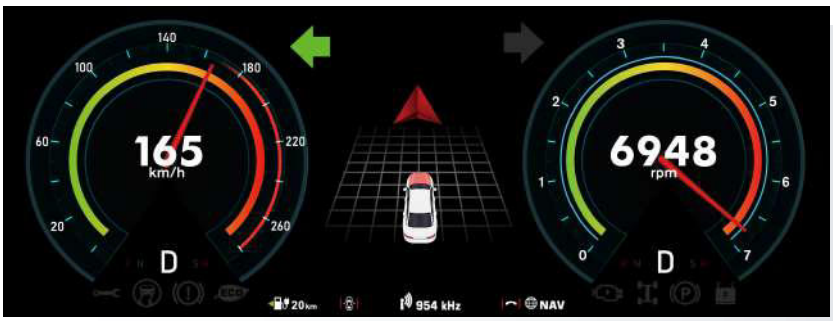
Software Template
Normal Dashboard Design

Digital

Pointer



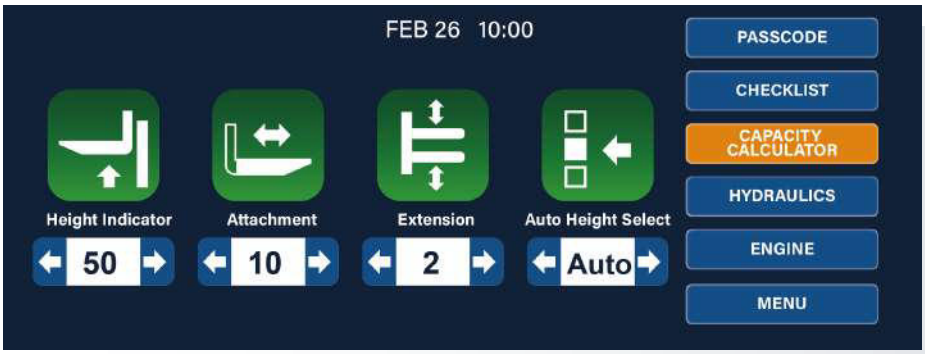
Pointer + Digital



Normal Dashboard Design

Speedometer/
Rev Counter/
Battery Efficient
Engine Temperature/
Fuel Level/
Oil Pressure/
Battery Voltage

Software Template
Industrial UI Layout



Industrial UI Layout

Dashboard can customize the UI layout for different applications, such as adding Map, Menu, LOGO and other diversified functions.

Product Specifications

Specifications: W12IE3S-PPB1/ W12IM3S-PPB1

Model Name		W12IE3S-PPB1	W12IM3S-PPB1
Display	Resolution	1920x720	1920x720
	Contrast Ratio	1000:1	1000:1
	View Angles	88,88,88,88	88,88,88,88
	Size	12.3 inches	12.3 inches
	Panel Brightness	1000.0 nits	1000.0 nits
	Touch / Glass	Projected Capacitive Multi Touch	Projected Capacitive Multi Touch
System Specification	Processor	Intel® Celeron® N6211 (up to 3.0GHz) Intel® Celeron® N6210 (up to 2.6GHz) (Optional)	ARM A53 (Quad Core 2.0GHz)
	Storage	1 x M.2 2242 Bkey SSD 128GB M.2 2242 Bkey SSD up to 512GB (Optional) 1 x SATA III for 2.5" SSD/HDD up to 1TB (Optional)	eMMC: Onboard 32 GB
	Security	TPM 2.0	-
	BT	Support (Optional)	Support (Optional)
	WLAN	Support (Optional)	Support (Optional)
	Memory	1 x SODIMM, DDR4 3200 MHz, 4GB 8GB (Optional) 16GB (Optional)	4GB LPDDR4
	Ethernet controller	2 x Intel® Ethernet Controller	-
	Operating System	Windows 11 IoT Enterprise (64 bit) (Optional) Windows 11 Pro 64 bit (Optional) Windows 10 IoT Enterprise (64 bit) (Optional) Linux Ubuntu 22.04 (Optional)	Android 11 (Upgradeable to Android 13) Linux Yocto 5.10.104 with QT 5.15 (Optional) Linux Ubuntu (Optional)
Mechanical	Dimension	338.3 x 159.8 x 56.5 mm	334.3 x 155.8 x 57 mm
	Enclosure	Metal Housing	Metal Housing
	Cut out	240 x 165mm	312x140mm
	Mounting	Panel mount VESA Mount	Panel mount VESA Mount
	Cooling System	Fanless design	Fanless design
Environment	Operating Humidity	10% to 90% RH, Non-Condensing	10% to 90% RH, Non-Condensing
	Storage Temperature	-10°C to 60°C	-20°C to 60°C
	Operating Temperature	0°C to 50°C	0°C to 50°C
	Vibration	MILSTD810G Method 514.6 Procedure I	MILSTD810G Method 514.6 Procedure I
	Shock	MILSTD810G Method 516.6 Procedure I	MILSTD810G Method 516.6 Procedure I
	IP rating	Front IP65	Front IP65
Certification	Certification	CE, FCC	CE, FCC
IO Ports	Power Input	1 x 12V DC, 2.5φ DC jack	12V DC with Terminal Block
	Serial Port	1 x RS232/422/485 (Default RS232) 1 x RS232	1 x RS232/422/485 (Default RS232)
	USB Port	1 x USB3.2 Gen1x1 (TypeA) 1 x USB2.0 (TypeA)	2 x USB 2.0 Type A 1 x Micro USB 2.0 OTG
	Video	1 x HDMI 1.4 (Optional)	1 x Micro HDMI Output (Optional)
	Audio	2 x Speaker	2 x Speaker (Optional)
	LAN	2 x Giga LAN RJ45 Connector	1 x LAN 10/100/1000 Mbps
	Brightness Knob	1 x Brightness Adjustment Knob	-
	Expansion Port	1 x mPCIe slot(for half size Wifi module) (Optional)	-
	Indicator	1 x LED Indicator for power 1 x LED Indicator for storage	-
	mini PCIe	1 x Mini PCIE(For WLAN) (Optional)	-
	SD Card Slot	-	1 x Micro SD card slot (Max to 32GB)
Control	Button	1 x Power Button 1 x Reset Button	1 x Power Button (Optional)
Accessory	Accessory	100~240V AC to DC Adapter Power Cord VESA screws Mounting clips	100~240V AC to DC Adapter Power Cord VESA screws Manual Mounting clips
Power	Power Rating	12V DC	12V DC with Terminal Block
	Adapter	12V 50W	12V 50W

Specifications: W12IE3S-GCB1/ W12IM3S-GCB1

Model Name		W12IE3S-GCB1	W12IM3S-GCB1
Display	Resolution	1920x720	1920x720
	Size	12.3 inches	1000:1
	Contrast Ratio	1000:1	88,88,88,88
	Panel Brightness	1000.0 nits	12.3 inches
	View Angles	88,88,88,88	1000.0 nits
	Touch / Glass	Projected Capacitive Multi Touch	Projected Capacitive Multi Touch
	Active Area	-	292.92×110.22 mm
System Specification	WLAN	Support (Optional)	Support (Optional)
	BT	Support (Optional)	Support (Optional)
	Processor	Intel® Celeron® N6211 (up to 3.0GHz) Intel® Celeron® N6210 (up to 2.6GHz) (Optional)	ARM A53 (Quad Core 2.0GHz)
	Memory	1 x SO-DIMM, DDR4 3200 MHz, 4GB 8GB (Optional) 16GB (Optional)	4GB LPDDR4
	Storage	1 x M.2 2242 B-key SSD 128GB M.2 2242 B-key SSD up to 512GB (Optional) 1 x SATA III for 2.5" SSD/HDD up to 1TB (Optional)	eMMC: Onboard 32 GB
	Ethernet controller	2 x Intel® Ethernet Controller	-
	Security	TPM 2.0	-
	Operating System	Windows 11 IoT Enterprise SAC (64 bit) (Optional) Windows 11 Pro 64 bit (Optional) Windows 10 IoT Enterprise (64 bit) (Optional) Linux Ubuntu 22.04 (Optional)	Android 11 (Upgradeable to Android 13) Linux Yocto 5.10.104 with QT 5.15 (Optional) Linux Ubuntu (Optional)
Mechanical	Dimension	325.02 x 146.5 x 44.9 mm	325.02 x 146.5 x 45 mm
	Mounting	VESA Mount/ Panel Mount	VESA Mount
	Enclosure	Plastic Bezel & Aluminum back cover	Plastic Bezel & Metal back cover
	Cooling System	Fanless Design	Fanless Design
Environment	Operating Humidity	10% to 90% RH, Non-Condensing	10% to 90% RH, Non-Condensing
	Operating Temperature	0°C to 50°C	0°C to 50°C
	Storage Temperature	-20°C to 60°C	-20°C to 60°C
	Shock	MIL-STD-810G Method 516.6 Procedure I	MIL-STD-810H Method 516.8 Procedure I
	Vibration	MIL-STD-810G Method 514.6 Procedure I	MIL-STD-810H Method 514.8 Procedure I
	IP rating	Front IP65	Front IP65
Certification	Certification	CE, FCC	CE, FCC
IO Ports	USB Port	1 x USB2.0 1 x USB3.0	2 x USB 2.0 Type A 1 x Micro USB 2.0 OTG
	Serial Port	1 x RS232(Default)/422/485	1 x RS232/422/485 (Default RS232)
	Video	1 x HDMI (Optional)	1 x Micro HDMI Output (Optional)
	Audio	1 x Speaker	-
	LAN	2 x RJ45	1 x LAN 10/100/1000 Mbps
	SD Card Slot	-	1 x Micro SD card slot (Max to 32GB)
Control	Button	1 x Power Button 1 x Reset Button	1 x Power Button (Optional)
Accessory	Accessory	Quick Start Guide(Hardcopy) AC Adapter Power Cable	Quick Start Guide(Hardcopy) AC Adapter 12V/50W Power Cord 3 Pin Terminal Block to DC Jack
Power	Power Rating	12V DC	12V DC with Terminal Block
	Adapter	-	12V 50W

Specifications: W12IE3S-GSB1/ W12MG3S-GSB1

Model Name		W12IE3S-GSB1	W12MG3S-GSB1
Display	Resolution	1920x720	1920x720
	Size	12.3 inches	12.3 inches
	Contrast Ratio	1000:1	1000:1
	Panel Brightness	1000.0 nits	1000.0 nits
	View Angles	88,88,88,88	88,88,88,88
	Touch / Glass	Projected Capacitive Multi Touch Screen	Projected Capacitive Multi Touch Screen
	Active Area	292.92×110.22 mm	292.92×110.22 mm
System Specification	Processor	Intel Celeron N6211 1.2GHz (up to 2.6GHz)	ARM 2 x A78 2.2GHz + 6 x A55 2.0GHz
	Memory	1 x SO-DIMM, DDR4 3200 MHz, 4GB 8GB (Optional) 16GB (Optional)	4GB LPDDR4
	Storage	1 x M.2 2242 SSD 128GB	Onboard 32 GB
	Ethernet controller	1 x Intel® Ethernet Controller	-
	Operating System	Windows 10 IoT Enterprise (64 bit) Linux Ubuntu 20.04 (Optional)	Android 13
	WLAN	Support (Optional)	Support (Optional)
	BT	Support (Optional)	Support (Optional)
	WWAN	Support (Optional)	Support (Optional)
	GNSS	GPS, GLONASS (Optional)	GPS/GLONASS (Optional)
Mechanical	Dimension	325.02 x 146.5 x 45 mm	325.02 x 146.5 x 45 mm
	Mounting	VESA Mount	VESA Mount
	Cooling System	Fanless Design	Fanless Design
Environment	Operating Humidity	5% to 95% RH	5% to 95% RH
	Operating Temperature	-20°C to 60°C	-20°C to 60°C
	Storage Temperature	-30°C to 70°C	-30°C to 70°C
	Shock	MIL-STD-810H Method 516.8 Procedure I	MIL-STD-810H Method 516.8 Procedure I
	Vibration	MIL-STD-810H Method 514.8 Procedure I	MIL-STD-810H Method 514.8 Procedure I
	IP rating	IP65	IP65
Certification	Certification	CE, FCC	CE, FCC
IO Ports	USB Port	1 x USB 2.0 (M12 type) 1 x Micro USB (Host)	1 x USB 2.0 (M12 type) 1 x Micro USB OTG
	Serial Port	1 x RS232/422/485 (Default RS232)	1 x RS232/422/485 (Default RS232)
	SD Card Slot	-	1 x Micro SD Card Slot
	SIM Card Slot	1 x SIM card slot (Optional)	1 x SIM card slot (Optional)
	LAN	1 x LAN 10/100/1000 Mbps (M12 type)	1 x LAN 10/100/1000 Mbps (M12 type)
	DIDO	6 x Digital Input (M12 type)	6 x Digital Input (M12 type)
	CANBUS	2 x CANBus (M12 type)	2 x CANBus (M12 type)
Control	Button	1 x Power Button	1 x Power Button
Accessory	Accessory	Quick Start Guide M12 Power Cable M12 COM Port/CANBus Cable M12 Digital Input/CANBus Cable M12 USB/ LAN Cable	Quick Start Guide M12 Power Cable M12 COM Port/CANBus Cable M12 Digital Input/CANBus Cable M12 USB/ LAN Cable
	Optional Accessory	WWAN Antenna x 2 (Optional) GPS Antenna, 3m (Optional)	WWAN Antenna x 2 (Optional) GPS Antenna, 3m (Optional)
Power	Power Rating	10V~60V with ignition control	10V~60V with ignition control
	Adapter	12V 50W	12V 50W

Specifications: W12L100-POB1/ W12L100-OFB1

Model Name		W12L100-POB1	W12L100-OFB1
Display	Resolution	1920x720	1920x720
	Size	12.3 inches	12.3 inches
	Contrast Ratio	1000:1	1000:1
	Panel Brightness	1000.0 nits	1000.0 nits
	Display Color	16.7M Colors	16.7M Colors
	View Angles	88,88,88,88	88,88,88,88
	Touch / Glass	Projected Capacitive Multi Touch	Protection Glass
	Active Area	-	292.92×110.22 mm
Mechanical	Dimension	344.3 x 167.8 x 43.5 mm	344.3 x 167.8 x 40.5 mm
	Mounting	Panel Mount	Panel Mount
	Enclosure	Metal	Metal
	Cooling System	Fanless Design	Fanless Design
Environment	Operating Humidity	10% to 90% RH, Non-Condensing	10% to 90% RH, Non-Condensing
	Operating Temperature	0°C to 50°C	0°C to 50°C
	Storage Temperature	-10°C to 60°C	-10°C to 60°C
Certification	Certification	CE, FCC	CE, FCC
IO Ports	USB Port	1 x USB for Touch Screen	1 x USB for Touch Screen (Optional)
	Video	1 x VGA 1 x HDMI (Optional) 1 x DVI (Optional)	1 x VGA 1 x HDMI (Optional) 1 x DVI (Optional)
	Audio	Audio line in (3.5mm) (Optional) 2 x Speaker (Optional)	Audio line in (3.5mm) (Optional) 2 x Speaker (Optional)
Control	Button	5 Keys: - , + , Power , Esc , Enter	5 Keys: - , + , Power , Esc , Enter
Accessory	Accessory	1 x VGA cable 1 x HDMI cable 100~240V AC to DC Adapter Power Cord Manual VESA screws(Varies by product)	1 x VGA cable 1 x HDMI cable 100~240V AC to DC Adapter Power Cord Manual VESA screws(Varies by product)
	Optional Accessory	Remote Controller (Optional,Varies by product)	Remote Controller (Optional,Varies by product)
Power	Power Rating	12V DC in 24V DC in (optional)	12V DC in 24V DC in (optional)

Specifications: W12L100-GCB1/ W12L100-GSB1

Model Name		W12L100-GCB1	W12L100-GSB1
Display	Resolution	1920x720	1920x720
	Size	12.3 inches	12.3 inches
	Contrast Ratio	1000:1	1000:1
	Panel Brightness	1000.0 nits	1000.0 nits
	Display Color	16.7M Colors	16.7M Colors
	View Angles	88,88,88,88	88,88,88,88
	Touch / Glass	Projected Capacitive Multi Touch	Projected Capacitive Multi Touch
Mechanical	Dimension	325.02 x 146.5 x 44.9 mm	325.02 x 146.5 x 44.9 mm
	Mounting	VESA Mount/ Panel Mount	VESA Mount/ Panel Mount
	Enclosure	Plastic Bezel & Metal back cover	Metal Housing with Aluminum Bezel
	Cooling System	Fanless Design	Fanless Design
Environment	Operating Humidity	10% to 90% (Non-Condensing)	10% to 95% RH
	Operating Temperature	0°C to 50°C	-15°C to 55°C
	Storage Temperature	-20°C~60°C	-30°C to 60°C
	Shock	MIL-STD-810G Method 516.6	40g for 11ms
	Vibration	MIL-STD-810G Method 514.6	1.48/1.90/2.24 g rms for XYZ/ 5-500Hz
	IP rating	Front IP65	IP65, Dustproof and Waterproof
Certification	Certification	CE, FCC	CE, FCC
IO Ports	USB Port	1 x USB for Touch Screen	1 x USB for Touch Screen
	Video	1 x VGA 1 x HDMI (Optional) 1 x DVI (Optional)	1 x VGA
Control	Button	5 Keys: - , + , Power , Esc , Enter	5 Keys: - , + , Power , Esc , Enter
Accessory	Accessory	1 x VGA cable 1 x HDMI cable 100~240V AC to DC Adapter Power Cord Manual VESA screws(Varies by product)	Quick Start Guide (Hardcopy) AC Adapter (For 7'' Display only) M12 Power Cable(Not Supplied with 7" Display) VGA Cable USB for Touch Cable I/O Protective Cap x 3
	Optional Accessory	Remote Controller (Optional,Varies by product)	-
Power	Power Rating	12V DC in 24V DC in (optional)	9-36V DC (M12 type)

Specifications: W12L100-PPB1

Model Name		W12L100-PPB1
Display	Resolution	1920x720
	Size	12.3 inches
	Contrast Ratio	1000:1
	Panel Brightness	1000.0 nits
	Display Color	16.7M Colors
	View Angles	88,88,88,88
	Touch / Glass	Projected Capacitive Multi Touch
Mechanical	Dimension	338.3 x 159.8 x 48.5 mm
	Mounting	Panel Mount
	Enclosure	Metal Housing with Aluminum Bezel
	Cooling System	Fanless Design
	Cut out	318 x 140 mm
Environment	Operating Humidity	10% to 90% RH, Non-Condensing
	Operating Temperature	0°C to 50°C
	Storage Temperature	-10°C to 60°C
	IP rating	Front IP65
Certification	Certification	CE, FCC
IO Ports	USB Port	1 x USB for Touch Screen
	Video	1 x VGA 1 x HDMI (Optional) 1 x DVI (Optional)
	Audio	Audio line in (3.5mm) (Optional) 2 x Speaker (Optional)
Control	Button	5 Keys: - , + , Power , Esc , Enter
Accessory	Accessory	1 x VGA cable 1 x HDMI cable 100~240V AC to DC Adapter Power Cord Manual VESA screws(Varies by product)
	Optional Accessory	Remote Controller (Optional,Varies by product)
Power	Power Rating	12V DC in 24V DC in (optional)

14.9" Panel PC & Display Product Family

	Windows	Android	Display
Open Frame	N/A	N/A	**W15L100-POB2/ W15L100-OFB2**  Display with P-Cap Touch
Panel Mount	**W15IE3S-PPB2**  Intel® Celeron N6211 Elkhart lake	**W15IM3S-PPB2**  A53 Quad Core 2.0GHz MediaTek Genio 350	**W15L100-PPB2**  Display with P-Cap Touch

Specifications: W15IE3S-PPB2/ W15IM3S-PPB2

Model Name		W15IE3S-PPB2	W15IM3S-PPB2
Display	Resolution	1920x720	1920x720
	Size	14.9 inches	14.9 inches
	Contrast Ratio	1000:1	1000:1
	Panel Brightness	950.0 nits	950.0 nits
	View Angles	85,85,85,85	85,85,85,85
	Touch / Glass	Projected Capacitive Multi Touch	Projected Capacitive Multi Touch
	Active Area	355.68×133.38 mm	355.68×133.38 mm
System Specification	WLAN	Support (Optional)	Support (Optional)
	BT	Support (Optional)	Support (Optional)
	Processor	Intel® Celeron® N6211 (up to 3.0GHz) Intel® Celeron® N6210 (up to 2.6GHz) (Optional)	ARM A53 (Quad Core 2.0GHz)
	Memory	1 x SO-DIMM, DDR4 3200 MHz, 4GB 8GB (Optional) 16GB (Optional)	4GB LPDDR4
	Storage	1 x M.2 2242 B-key SSD 128GB M.2 2242 B-key SSD up to 512GB (Optional) 1 x SATA III for 2.5" SSD/HDD up to 1TB (Optional)	eMMC: Onboard 32 GB
	Ethernet controller	2 x Intel® Ethernet Controller	-
	Security	TPM 2.0	-
	Operating System	Windows 11 IoT Enterprise (64 bit) (Optional) Windows 11 Pro 64 bit (Optional) Windows 10 IoT Enterprise (64 bit) (Optional) Linux Ubuntu 22.04 (Optional)	Android 11 (Upgradeable to Android 13) Linux Yocto 5.10.104 with QT 5.15 (Optional) Linux Ubuntu (Optional)
Mechanical	Dimension	400.1 x 187.6 x 59 mm	400.2 x 187.6 x 59 mm
	Mounting	Panel Mount VESA Mount	Panel Mount VESA Mount
	Enclosure	Metal Housing	Metal Housing
	Cooling System	Fanless Design	Fanless Design
	Cut out	378.1 x 164.6mm	378.1 x 164.6mm
Environment	Operating Humidity	10% to 90% RH, Non-Condensing	10% to 90% RH, Non-Condensing
	Operating Temperature	0°C to 50°C	0°C to 50°C
	Storage Temperature	-10°C to 60°C	-20°C to 60°C
	Shock	-	MIL-STD-810G Method 516.6 Procedure I
	Vibration	-	MIL-STD-810G Method 516.6 Procedure I
	IP rating	Front IP65	Front IP65
Certification	Certification	CE, FCC	CE, FCC
IO Ports	Power Input	1 x 12V DC, 2.5φ DC jack	12V DC with Terminal Block
	USB Port	1 x USB3.2 Gen1x1 (Type-A) 1 x USB2.0 (Type-A)	2 x USB 2.0 Type A 1 x Micro USB 2.0 OTG
	Serial Port	1 x RS232/422/485 (Default RS232) 1 x RS232	1 x RS232/422/485 (Default RS232)
	Video	1 x HDMI 1.4 (Optional)	1 x Micro HDMI Output (Optional)
	Audio	2 x Speaker	2 x Speaker (Optional)
	Expansion Port	1 x mPCIe slot(for half size Wifi module) (Optional)	-
	LAN	2 x Giga LAN RJ45 Connector	1 x LAN 10/100/1000 Mbps
	Indicator	1 x LED Indicator for power 1 x LED Indicator for storage	-
	Brightness Knob	1 x Brightness Adjustment Knob	-
	mini PCIe	1 x Mini PCIE(For WLAN) (Optional)	-
	SD Card Slot	-	1 x Micro SD card slot (Max to 32GB)
Control	Button	1 x Power Button 1 x Reset Button	1 x Power Button (Optional)
Accessory	Accessory	100~240V AC to DC Adapter Power Cord VESA screws Mounting clips	100~240V AC to DC Adapter Power Cord VESA screws Manual Mounting clips
Power	Power Rating	12V DC	12V DC with Terminal Block
	Adapter	12V 50W	12V 50W

Specifications: W15L100-POB2/ W15L100-OFB2

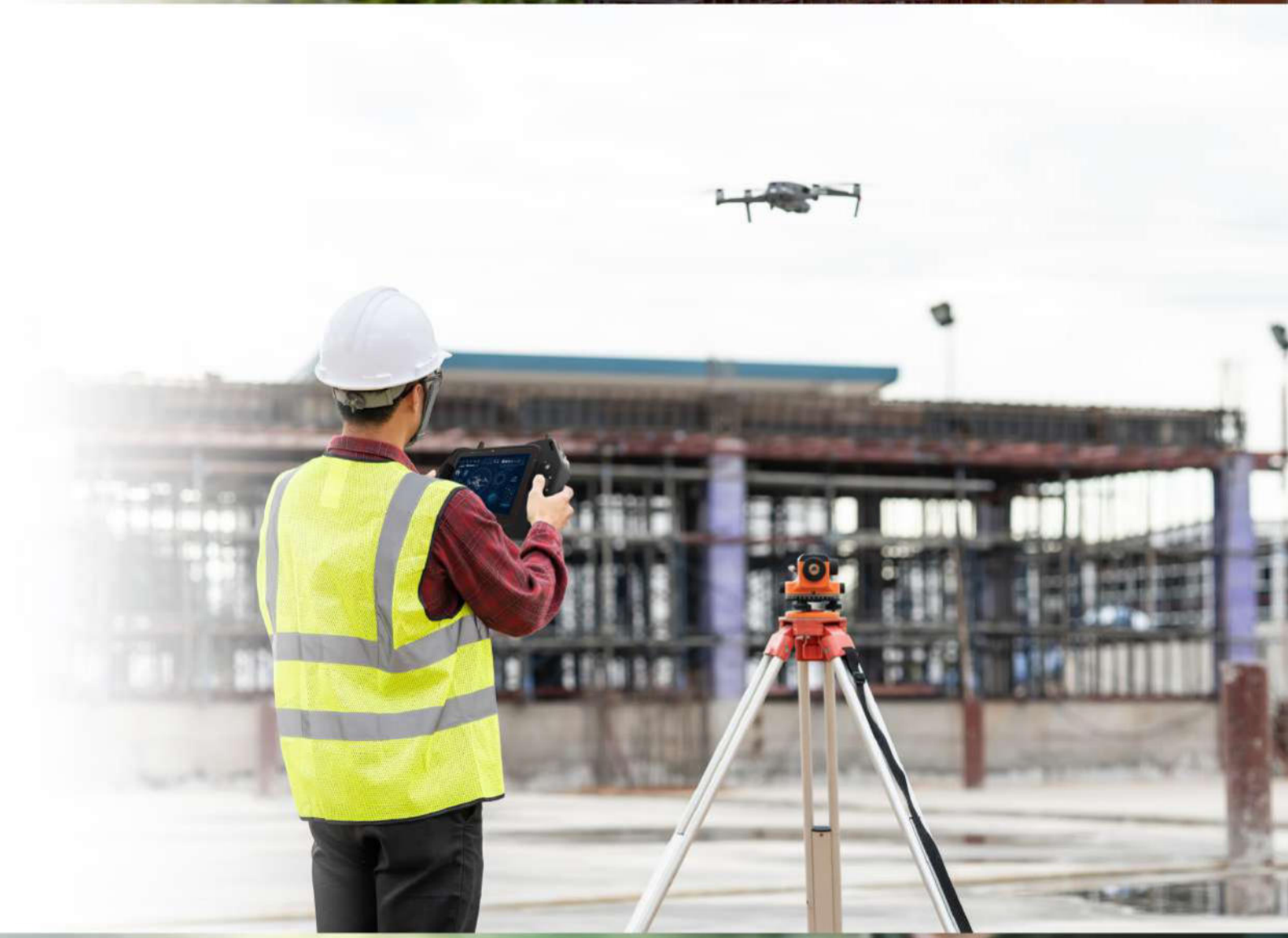
Model Name		W15L100-POB2	W15L100-OFB2
Display	Resolution	1920x720	1920x720
	Size	14.9 inches	14.9 inches
	Contrast Ratio	1000:1	1000:1
	Panel Brightness	950.0 nits	950.0 nits
	Display Color	16.7M Colors	16.7M Colors
	View Angles	85,85,85,85	85,85,85,85
	Touch / Glass	Projected Capacitive Multi Touch	Protection Glass (Optional)
	Active Area	355.68×133.38 mm	355.68×133.38 mm
Mechanical	Dimension	407 x 178 x 59 mm	391.1 x 178.6 x 56.2 mm
	Mounting	Panel Mount	Panel Mount
	Enclosure	Metal	Metal
	Cooling System	Fanless Design	Fanless Design
Environment	Operating Humidity	10% to 90% RH, Non-Condensing	10% to 90% RH, Non-Condensing
	Operating Temperature	0°C to 50°C	0°C to 50°C
	Storage Temperature	-10°C to 60°C	-10°C to 60°C
Certification	Certification	CE, FCC	CE, FCC
IO Ports	USB Port	1 x USB for Touch Screen	1 x USB for Touch Screen (Optional)
	Video	1 x VGA 1 x HDMI (Optional) 1 x DVI (Optional)	1 x VGA 1 x HDMI (Optional) 1 x DVI (Optional)
	Audio	Audio line in (3.5mm) (Optional) 2 x Speaker (Optional)	Audio line in (3.5mm) (Optional) 2 x Speaker (Optional)
Control	Button	5 Keys: - , + , Power , Esc , Enter	5 Keys: - , + , Power , Esc , Enter
Accessory	Accessory	1 x VGA cable 1 x HDMI cable 100~240V AC to DC Adapter Power Cord Manual VESA screws(Varies by product)	1 x VGA cable 1 x HDMI cable 100~240V AC to DC Adapter Power Cord Manual VESA screws(Varies by product)
	Optional Accessory	Remote Controller (Optional,Varies by product)	Remote Controller (Optional,Varies by product)
Power	Power Rating	12V DC in 24V DC in (optional)	12V DC in 24V DC in (optional)

Specifications: W15L100-PPB2

Model Name		W15L100-PPB2
Display	Resolution	1920x720
	Size	14.9 inches
	Contrast Ratio	1000:1
	Panel Brightness	950.0 nits
	Display Color	16.7M Colors
	View Angles	85,85,85,85
	Touch / Glass	Projected Capacitive Multi Touch
	Active Area	355.68×133.38 mm
Mechanical	Dimension	400 x 187.6 x 59 mm
	Mounting	Panel Mount
	Enclosure	Metal Housing with Aluminum Bezel
	Cooling System	Fanless Design
	Cut out	378.1 x 164.6 mm
Environment	Operating Humidity	10% to 90% RH, Non-Condensing
	Operating Temperature	0°C to 50°C
	Storage Temperature	-10°C to 60°C
	IP rating	Front IP65
Certification	Certification	CE, FCC
IO Ports	USB Port	1 x USB for Touch Screen
	Video	1 x VGA 1 x HDMI (Optional) 1 x DVI (Optional)
	Audio	Audio line in (3.5mm) (Optional) 2 x Speaker (Optional)
Control	Button	5 Keys: - , + , Power , Esc , Enter
Accessory	Accessory	1 x VGA cable 1 x HDMI cable 100~240V AC to DC Adapter Power Cord Manual VESA screws(Varies by product)
	Optional Accessory	Remote Controller (Optional,Varies by product)
Power	Power Rating	12V DC in 24V DC in (optional)

Enhanced Security Surveillance with Winmate UAV GCS

UAV GCS Product Guide



Success Stories

Enhanced Security Surveillance with Winmate UAV GCS

Winmate Selected as the Supplier for the UAV Ground Control System in Industrial Inspection Drones

Background

In modern industrial inspection and security applications, unmanned aerial vehicles (UAVs) have emerged as powerful tools. Drones can access narrow and hazardous environments, utilizing sensors and communication technologies for real-time monitoring and video capture. However, conventional drones face challenges such as flight stability, real-time tracking, and high-resolution video transmission in security scenarios. By leveraging wireless remote control and programmatic control capabilities, along with the integration of AI deep learning for rapid video analysis, the client achieved multi-modal target locking and real-time tracking for enhanced security surveillance.

Core Products

- G101TG - 10.1” Intel® Tiger Lake Rugged Ground Control Station

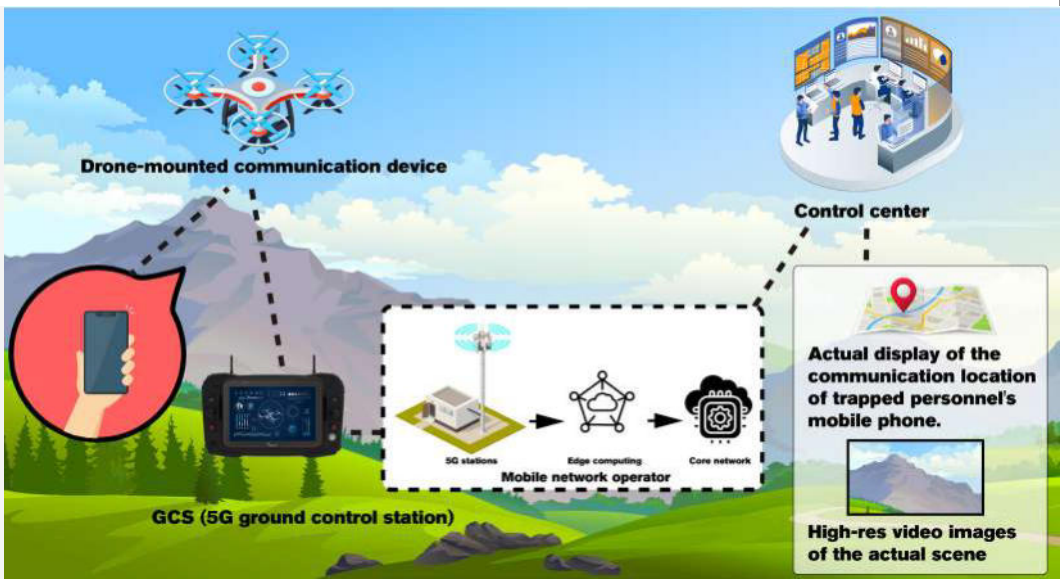
Main Challenges

One of the primary challenges faced by the client was ensuring stable flight of the drone in challenging environments. Narrow spaces, strong winds, and obstacles posed difficulties for maintaining stable flight and maneuverability. The drone needed to be equipped with advanced flight stabilization systems and adaptive control algorithms to overcome these challenges and ensure safe and effective operations. Real-time tracking and target locking were critical aspects of the client’s security surveillance requirements. However, achieving accurate and reliable tracking in dynamic environments proved to be a challenge.

Why Winmate

The Winmate UAV GCS industrial inspection drone is suitable for various inspection scenarios, including but not limited to storage tanks, sewers, bridges, tunnels, boilers, factories, and pipelines. It can efficiently perform inspections and monitoring in narrow and hazardous environments, ensuring operator safety.

G101TG



Revolutionizing Public Domain Inspections

Nordic Customer Leveraging Winmate UAV GCS for Smart Aerial Patrol

Background

In recent years, unmanned aerial vehicles (UAVs) have found widespread applications in public domains across various industries, including disaster response, site inspections, and facility maintenance. These UAVs, commonly known as drones, have the capability to replace human personnel by utilizing visible light imaging and infrared thermography devices to provide real-time on-site video feeds. This success case highlights how a Nordic customer successfully implemented Winmate UAV GCS (Ground Control Station) to manage their intelligent aerial patrol, leveraging AI analysis, and 5G technology to optimize decision-making, reduce risk to personnel, and enhance overall operational efficiency.

Core Products

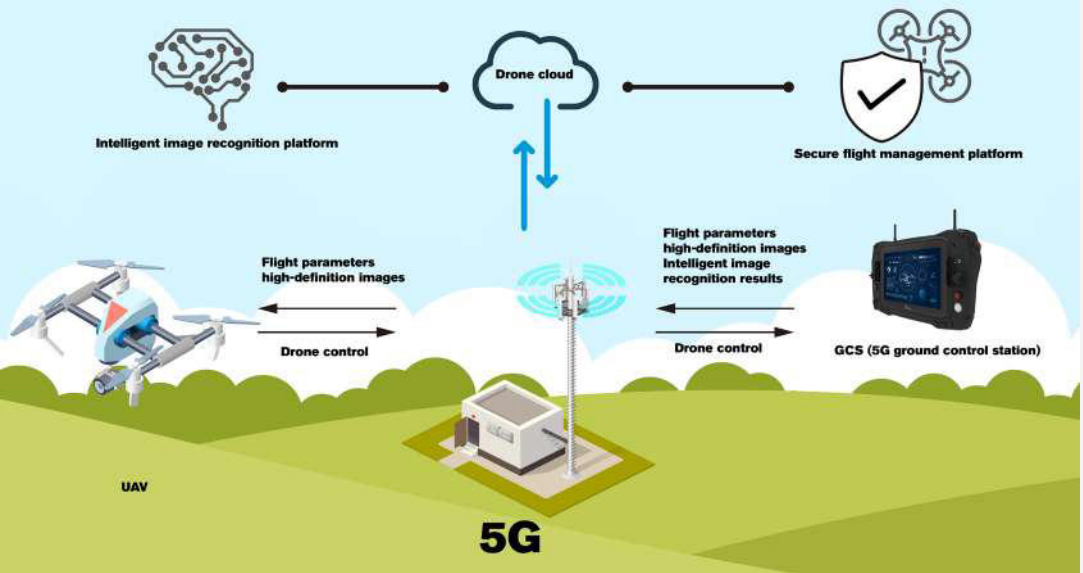
- G101TG - 10.1” Intel® Tiger Lake Rugged Ground Control Station

Main Challenges

Traditionally, public domain inspections required human personnel to physically travel to the sites, often exposing them to hazardous environments and delaying response times. The Nordic customer recognized the need for a safer and more efficient solution that could remotely gather real-time video and data feeds from drones. Additionally, they sought to leverage AI analysis and 5G technology to enable instant decision-making and enhance situational awareness.

Why Winmate

To address these challenges, the customer implemented Winmate UAV GCS, a comprehensive ground control station software, in conjunction with the Drone Fleet Management System (DFMS) provided by the Nordic telecommunications company. This integrated solution allowed for the remote control, monitoring, and analysis of the drone fleet in real time.



G101TG

Overview

Winmate Inc., a leading developer of rugged tablet and handheld computers, releases the brand new mobile control station for robotic, drone, and remote-control vehicles. Based on Winmate best selling rugged tablets S101TG, the portable ground controller is durable and suitable for field applications in various applications, such as agriculture, public safety, search and rescue, environmental monitoring, defence surveillance, and many more.

Based on the best lightweight rugged tablets

The new G101TG is built based on Winmate best selling rugged tablets S101TG and powered by Intel® processors for extraordinary performance. The system also provides communications flexibility with WLAN, BT, GNSS, and optional 4G/5G. Top up with the tablet docking controller.

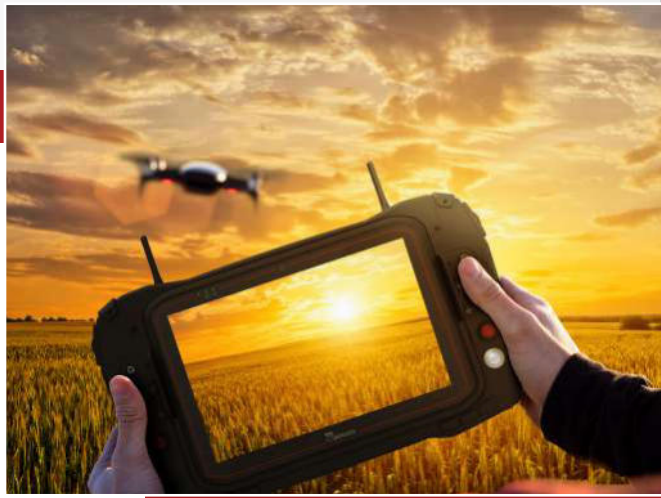
Protect your device from unauthorized access

The TPM chip helps to prevent unauthorized access to data and ensures that data remains confidential. It provides a secure platform for storing and managing cryptographic keys, which can be used to encrypt sensitive data stored on the tablet.

Built to meet your needs

With a long history of serving in various industrial and mission-critical applications, Winmate understands customers' computing demands and provides various rugged mobile computer products. The new UAV ground control station is built with a high brightness and multi-touch panel for daylight readability, ease to use, and touch sensitivity even while wearing gloves.

Winmate also offers a variety of customization options and can be precisely fine-tuned to exact requirements suited to unique robotic and unmanned platforms. We design and build a complete ground control station solution that supports various wireless modules, including configurable joysticks, switches, and buttons in a modular design.



Features:

- Low latency video SW decoder for real-time high-resolution video viewing
- All-weather, dust, and water-resistant design (IP65), MIL-grade Drop, Shock and Vibration
- Supports optional WIFI, BT and 4G
- With dual antennas, providing improved wireless connectivity and stability
- With a removable second battery and a battery life of over 10 hours is a must-have tool for serious UAV pilots

Application

Winmate GCS (Ground Control Station) can be utilized in various unmanned aerial vehicle (UAV) applications, providing essential ground control and monitoring capabilities. Here are some areas of UAV applications where Winmate GCS can be of assistance:

Military Applications: In military UAV systems, Winmate GCS can be used for remote operation, mission planning, surveillance, and intelligence gathering. It aids armed forces in achieving intelligence, monitoring, and counter-terrorism operations.

Civil Inspection and Monitoring: Winmate GCS can be applied in UAVs used for civil inspection and monitoring, such as pipeline inspections, agricultural monitoring, forest fire monitoring, natural disaster management, providing efficient ground control and data collection.

Search and Rescue: UAVs play a crucial role in search and rescue missions. Winmate GCS can be used to coordinate search and rescue operations, providing real-time visual and data support to enhance success rates.

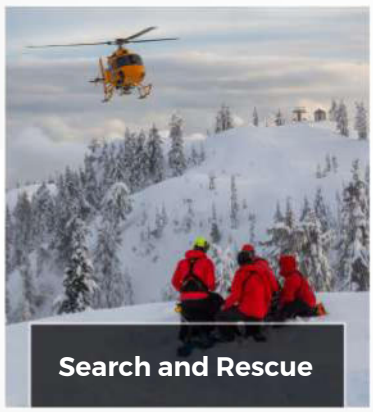
Scientific Research: Scientists and researchers use UAVs for various environmental and meteorological research purposes. Winmate GCS can be used for remote operation and data collection to support research projects.

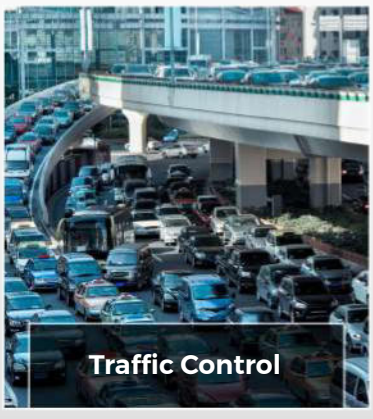
Traffic Control: In traffic control and monitoring, UAVs are used to monitor road conditions and traffic. Winmate GCS can assist operators in real-time traffic monitoring and traffic management.

Power and Infrastructure Inspection: UAVs are used to inspect power lines, infrastructure, and facility conditions. Winmate GCS provides ground control for executing these missions.

Security and Border Surveillance: UAVs are used for border and security surveillance to enhance border security and monitoring. Winmate GCS can be used for remote operation and data analysis.

In summary, Winmate GCS can provide ground control, data reception, and mission support in various UAV applications, whether in military, civilian, scientific research, or commercial domains.





UAV GCS
Product Family

	Windows
Rugged Handheld Controller	**G101TG**  Intel Core i5-1135G7 Tiger Lake

Specifications: G101TG

Model Name		G101TG
Display	Resolution	1920x1200
	Contrast Ratio	800:1
	View Angles	85,85,85,85
	Type	Projected Capacitive Multi Touch
	Touch Mode	Support Hand / Gloves and Rain Mode
	Size	10.1 inches
	Panel Brightness	800 nits
	Bonding	Optical Bonding for Sunlight Viewability
	Viewability	Anti-Glare touch treatment
System Specification	Processor	Intel Core i51135G7 2.4GHz (up to 4.2GHz) Intel Core i3/i7 Processor (Optional)
	Storage	128GB SSD, up to 2TB SSD (Optional)
	Operating System	Windows 10 IoT Enterprise LTSC (64 bit) Windows 11 IoT Enterprise SAC (64 bit) (Optional) Linux Ubuntu 22.04 (Optional)
	BT	Support
	GNSS	GPS, GLONASS
	Memory	4GB SDRAM, up to 32GB SDRAM (Optional)
	Security	Trusted Platform Module (TPM) 2.0
	WLAN	Support
	WWAN	4G LTE (Optional)
	Sensors	Light sensor/ Gsensor/ Gyro
Camera	Front Camera	2MP Front Camera
	Rear Camera	8MP Rear Camera with autofocus and LED light
Mechanical	Dimension	366 x 219 x 49.5 mm
	Cooling System	Fan Design
IO Ports	USB Port	1 x USB 2.0
	Audio	1x Speaker
	Video	1 x HDMI output
Environment	Operating Humidity	10% to 90% RH, non-condensing
	Storage Temperature	-30° C to 70°C (-22°F to 158°F)
	Vibration	MIL-STD-810H Method 514.8 Procedure I
	Operating Temperature	-20°C to 60°C (AC mode), -10°C to 50°C (Battery mode)
	Shock	MIL-STD-810H Method 516.8 Procedure I
	IP rating	IP65
Certification	Certification	CE, FCC
Security Function	SOTI MobiControl	SOTI MobiControl Compliance
	Kensington Lock	Kensington Lock Support
Control	Button	Left Side: 1x joystick 2x roller switch 1x 2 band toggle switch 4x button (front side) 1x control button (rear side) Right Side: 1x joystick 1x roller switch 1x power button 1x 2 band toggle switch 5x button (front side) 1x control button (rear side)
Power	Battery	11.4V, typ. 3500 mAh Li Ion Re chargeable Internal Battery (3S1P) 11.4V, typ. 3500 mAh Li Ion Re chargeable Secondary Battery (3S1P)
	Power Rating	19V DC
	Battery Operating Time	Standard. Battery: 10 hours
	Adapter	100-240V, 50-60Hz/ 19V DC
Accessory	Accessory	Adapter and Power Cord
	Optional Accessory	Battery Charger (Optional) Stylus (Optional)
Communication Link	Antenna	2x 3dBi Antennas
	Output Power	1W, Adjustable
	Frequency	2.4GHz