

G500G7

5.5" ARM A78 + A55 Rugged Robotic Controller



KEY FEATURES

- 1920 x 1080 TFT LCD Panel with direct bonding
- Genio 510 2 x A78 2.0GHz + 4 x A55 2.0GHz
- All-weather, dust, and water-resistant design (IP65). MIL-grade drop, Shock and vibration
- Compact and ergonomic design
- Supports WIFI/BT

INTRODUCTION

Winmate's Rugged Handheld Robotic Controller Series is a versatile and durable solution tailored for robotics, defense, public safety, and industrial automation. Available in sizes from 5.5" to 10.1", these controllers support Windows, Android, and Linux, providing flexibility for various applications. Featuring IP65-rated water and dust resistance, along with MIL-grade shock and vibration protection, they are built for all-weather reliability. With PCAP touchscreens, Intel or ARM processors, Wi-Fi, Bluetooth, and optional 4G connectivity, these robotic controllers deliver robust performance in demanding environments.

OVERVIEW



Efficient and Reliable Performance

Powered by an ARM-based processor, the Winmate G500G7 Handheld Robotic Controller offers efficient and reliable performance for industrial and robotic tasks. Running on Linux and Android operating systems, it ensures smooth multitasking and compatibility with diverse applications, providing flexibility for various operational needs.

Compact and Durable Design for Any Environment

The Winmate G500G7 Handheld Robotic Controller combines portability and durability in a compact 5.5" form factor. Featuring a 1080(RGB) x 1920 TFT LCD panel with direct bonding, it ensures sharp visuals and high responsiveness in a lightweight, ergonomic design. Built to withstand harsh environments, the G500G7 meets IP65 standards for dust and water resistance and adheres to military-grade certifications for drop, shock, and vibration, delivering reliable performance in demanding industrial applications.





Seamless Wireless Connectivity

The Winmate G500G7 Handheld Robotic Controller supports WiFi and Bluetooth connectivity, enabling reliable communication and data transfer across industrial networks. These wireless options ensure smooth integration with robotic systems and real-time access to critical information, making it an essential tool for dynamic environments requiring uninterrupted connectivity.

Tailored Configurations for Versatile Applications

Winmate offers a fully customizable robotic controller solution tailored to user-specific needs. The Winmate G500G7 Handheld Robotic Controller supports various wireless modules and features a modular design with configurable joysticks, switches, and buttons. This flexibility allows users to adapt the device to different robotic systems and operational requirements, making it a versatile tool for modern industrial automation.



SPECIFICATIONS

Display

Bonding	Optical Bonding for Sunlight Viewability	Resolution	1920x1080
Size	5.5 inches	Contrast Ratio	1000:1
Panel Brightness	1000.0 nits	View Angles	80,80,80,80
Type	Projected Capacitive Multi Touch	Viewability	Anti-Glare touch treatment
Touch Mode	Support Hand / Gloves and Rain Mode		

System Specification

Processor	Genio 510 2 x A78 2.2GHz + 4 x A55 2.0GHz	Memory	4GB
Storage	64GB eMMC	Operating System	Android 13.0
WLAN	Support	BT	Support

Mechanical

Dimension	205.34 x 135.1 x 46 mm	Cooling System	Fan Design
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IO Ports

USB Port	1 x USB 3.0 (Type C)	SD Card Slot	1 x Micro SD Card Slot (Max to 2TB)
Video	1 x micro HDMI output	Audio	2x Speaker
LAN	1 x M8 LAN Connector (10/100 Mbps , Max to 250 Mbps)		

Environment

Operating Humidity	10% to 90% RH, non-condensing	Operating Temperature	-20°C to 60°C (AC mode), -10°C to 50°C (Battery mode)
Storage Temperature	-30°C to 70°C (-22°F to 158°F)	Shock	MIL-STD-810H Method 516.8 Procedure I
Vibration	MIL-STD-810H Method 514.8 Procedure I	IP rating	IP65

Certification

Certification	CE, FCC
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Control

Button	2 x joystick 2 x Roller switch 6 x buttons
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Power

Battery	7.4V, typ. 2950mAh LiIon Rechargeable Internal Battery (2S1P)	Power Rating	19V DC
Adapter	100-240V, 50-60Hz / 19V DC		

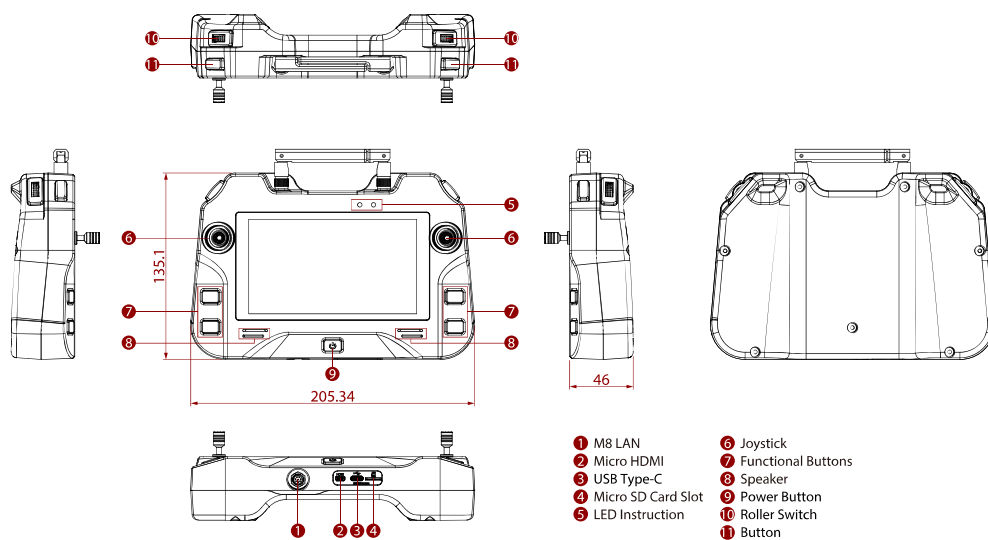
Accessory

Accessory	1 x Adapter 19V/65W 1 x M8 LAN external cable(2M) 1 x Power Cord	Optional Accessory	shoulder strap(Optional)
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DIMENSIONS UNIT:MM

NOTE

1.This is a simplified drawing and some



- 1 M8 LAN
- 2 Micro HDMI
- 3 USB Type-C
- 4 Micro SD Card Slot
- 5 LED Instruction
- 6 Joystick
- 7 Functional Buttons
- 8 Speaker
- 9 Power Button
- 10 Roller Switch
- 11 Button

components are not marked in detail.
 2. Please contact our sales representative if you need further product information.
 3. All specifications are subject to change without prior notice.
 4. The product shown in this datasheet is a standard model. For diagrams that contain customized or optional I/O, please contact the Winmate Sales Team for more information.