

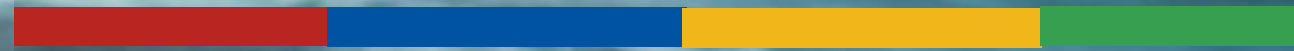


WinMATE

UAV

Ground Control Station

V1.5



Application

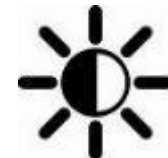
- ✓ Agriculture
- ✓ Public Safety
- ✓ Search and rescue
- ✓ Delivery
- ✓ Construction and inspection
- ✓ Environmental monitoring
- ✓ Military and surveillance



Overview

The Winmate UAV Ground Control Station boasts a range of impressive features, including both 8-inch and 10.1-inch multi-touch displays that are powered by a variety of Intel processors, such as Core i3/i5/i7, Pentium, and ARM. Equipped with dual antennas, the ground control station offers improved wireless connectivity, while supporting various wireless modules that provide flexibility in terms of communication protocols and frequencies.

Additionally, the ground control station includes the SUITCASE model, which is powered by Intel Alder Lake CPUs and is available in Core i3/i5/i7 configurations, featuring a 15.6-inch multi-touch display. With dual antennas, support for various wireless modules, and two removable batteries for extended operation time, the SUITCASE model offers even more versatility and power for UAV operations.

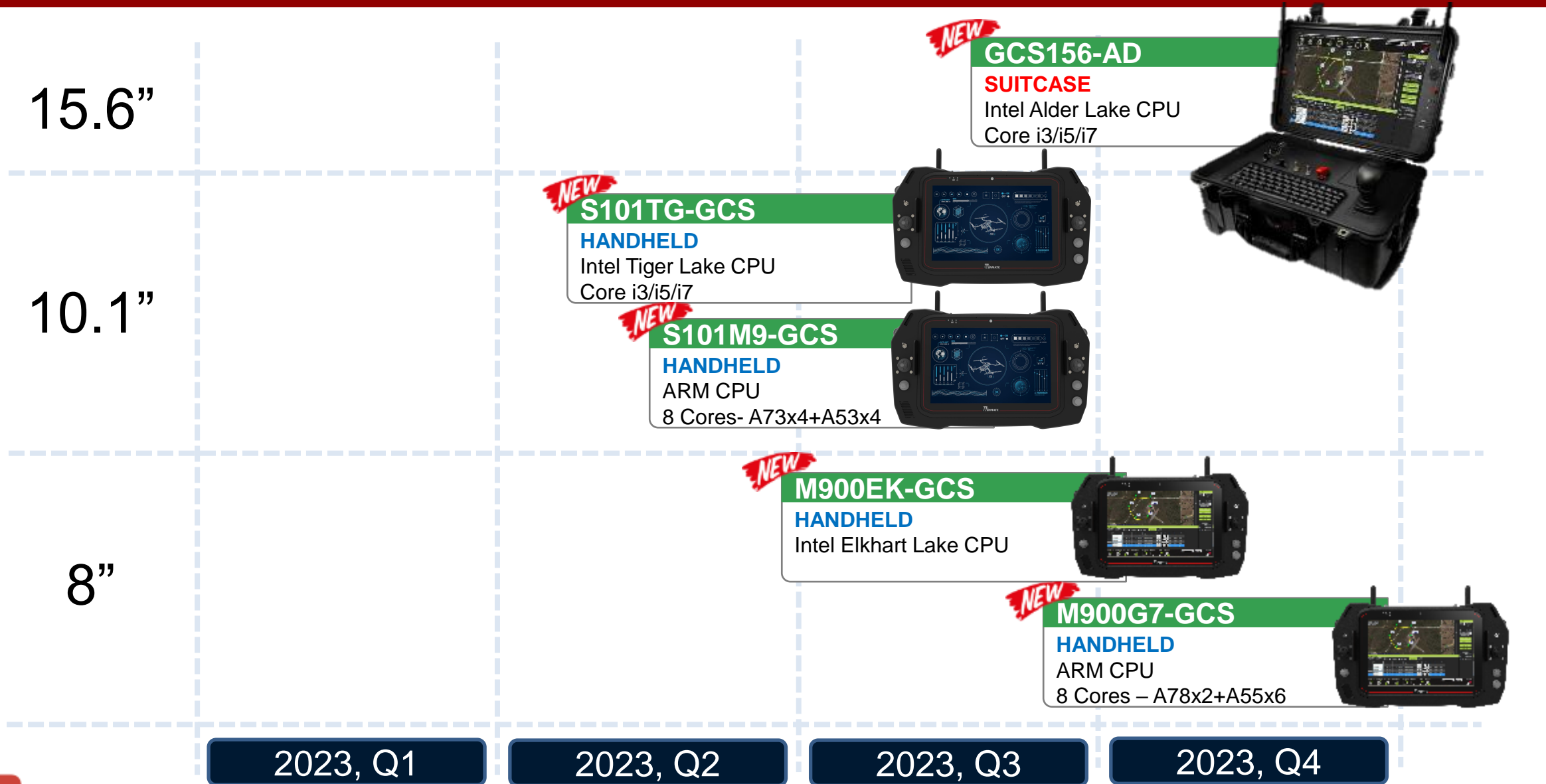


Data Link



Digital Video Link

Ground Control Station Product Line



UAV Ground Control Station Key Features



LOW LATENCY VIDEO SW DECODER

For real-time high-resolution video viewing

Winmate UAV Ground Control Station with real-time high-resolution video viewing capabilities is an essential tool for any pilot. It provides a seamless and immersive experience, allowing pilots to fly their UAVs with precision and confidence, while also enabling them to capture stunning aerial footage.

UAV Ground Control Station Key Features

EXTENDED RUGGEDIZED

All-weather, dust, and water-resistant design (IP65). MIL-grade drop, Shock and vibration.

The combination of all-weather, dust, and water-resistant design (IP65) and MIL-grade drop, shock, and vibration resistance make this UAV Ground Control Station a reliable and durable option for any UAV enthusiast. With these features, you can confidently take your UAV Ground Control Station out into the field, no matter what the weather or terrain conditions may be.



UAV Ground Control Station Key Features

WIRELESS COMMUNICATION

Supports optional WIFI,
Bluetooth and 4G/5G

UAV Ground Control Station that supports optional WIFI, Bluetooth, and 4G/5G connectivity is a powerful and convenient tool for UAV enthusiasts. With its versatility and connectivity options, users can enjoy the benefits of live video feeds, remote control, and internet access while flying their UAV.

4G | 5G



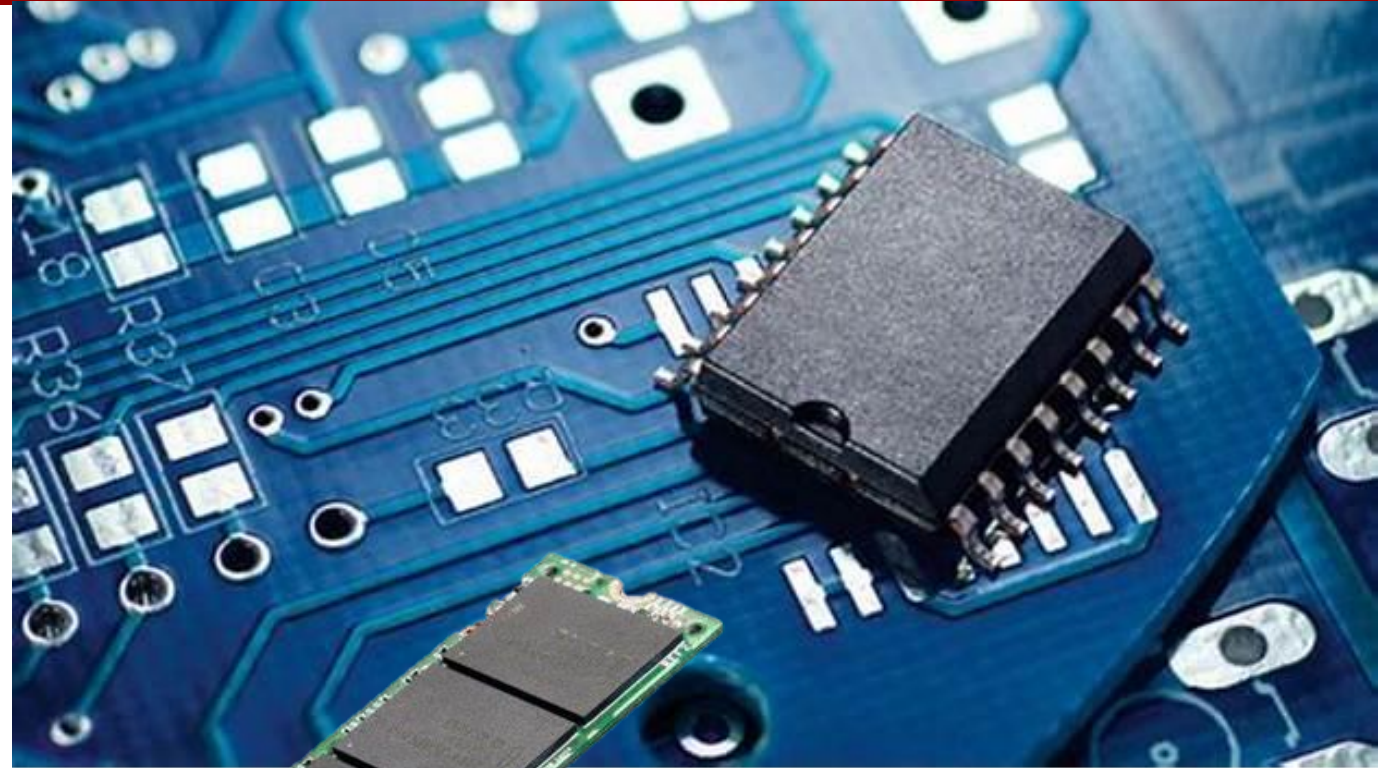
UAV Ground Control Station Key Features

SECURE AND ENCRYPTED

Embedded TPM IC and Optional OPAL SSD

Optional OPAL SSD can be added to further enhance the security of a computer system. OPAL stands for "Opalite" and is a standard for self-encrypting hard drives. An OPAL SSD ensures that all data on the drive is encrypted and can only be accessed with the correct authentication credentials. This ensures that even if the drive is stolen or lost, the data stored on it remains secure and cannot be accessed by unauthorized users.

Embedded TPM IC and an OPAL SSD can provide a high level of security for a computer system, protecting against data breaches and other security threats. This is especially important for businesses that handle sensitive data, as any security breach can result in significant financial losses and damage to reputation.



UAV Ground Control Station Key Features

MIMO DATA LINK

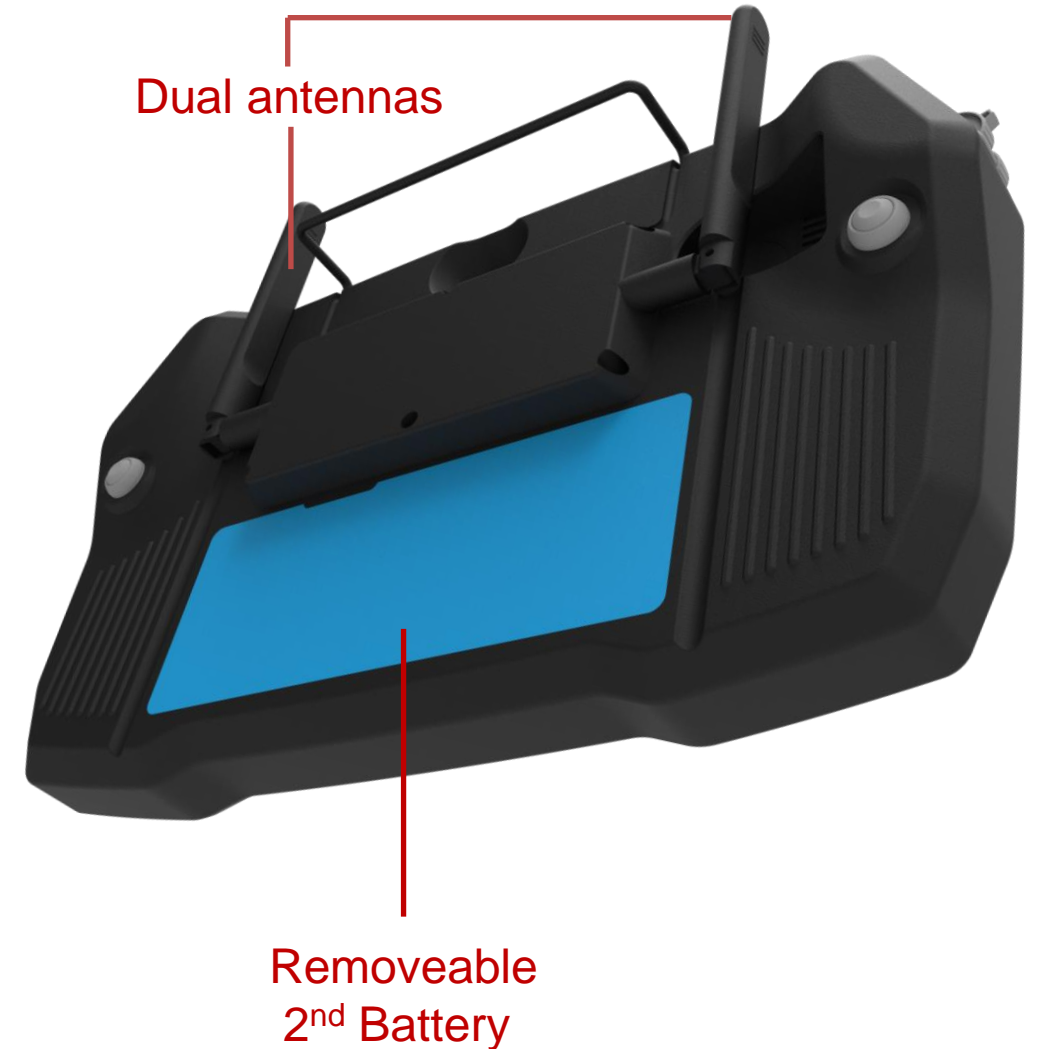
Dual antennas

Equipped with dual antennas, providing improved wireless connectivity and stability.

LONG BATTERY LIFE

2 Batteries, Battery Life >10 hours

Winmate UAV Ground Control Station with a removable second battery and a battery life of over 10 hours is a must-have tool for serious UAV pilots. With its exceptional reliability and convenience, this type of controller provides an outstanding flying experience, allowing pilots to focus on capturing stunning aerial footage without having to worry about power limitations.



UAV Ground Control Station Key Features

CONFIGURABLE CONTROLLING OPTIONS

Configurable joysticks, switches and buttons.

Modularize design

In addition to providing greater control and flexibility, a modularized design also makes it easier to repair or replace components if necessary. This means that pilots can easily swap out faulty or damaged modules, rather than having to replace the entire controller.



UAV Ground Control Station Key Features

SUPPORTED VARIOUS WIRELESS MODULES

Many different data links are available. Ranges up to 50 km are possible (depending on module, regulations and configuration).



Module	GCSRF-100	GCSRF-200	GCSRF-300	GCSRF-500
Frequency	2.402 - 2.478 GHz	900 MHz & 2.4 GHz	2.4GHz or 5GHz	2.304 - 2.39GHz
Output Power	1W	1W	1W	4W

Standard

Option

Handheld Ground Control Station Front-side Form Factor



Handheld Ground Control Station the Side Form Factor

LS-Roller
Switch 1

LS-Roller
Switch 2



RS-Button

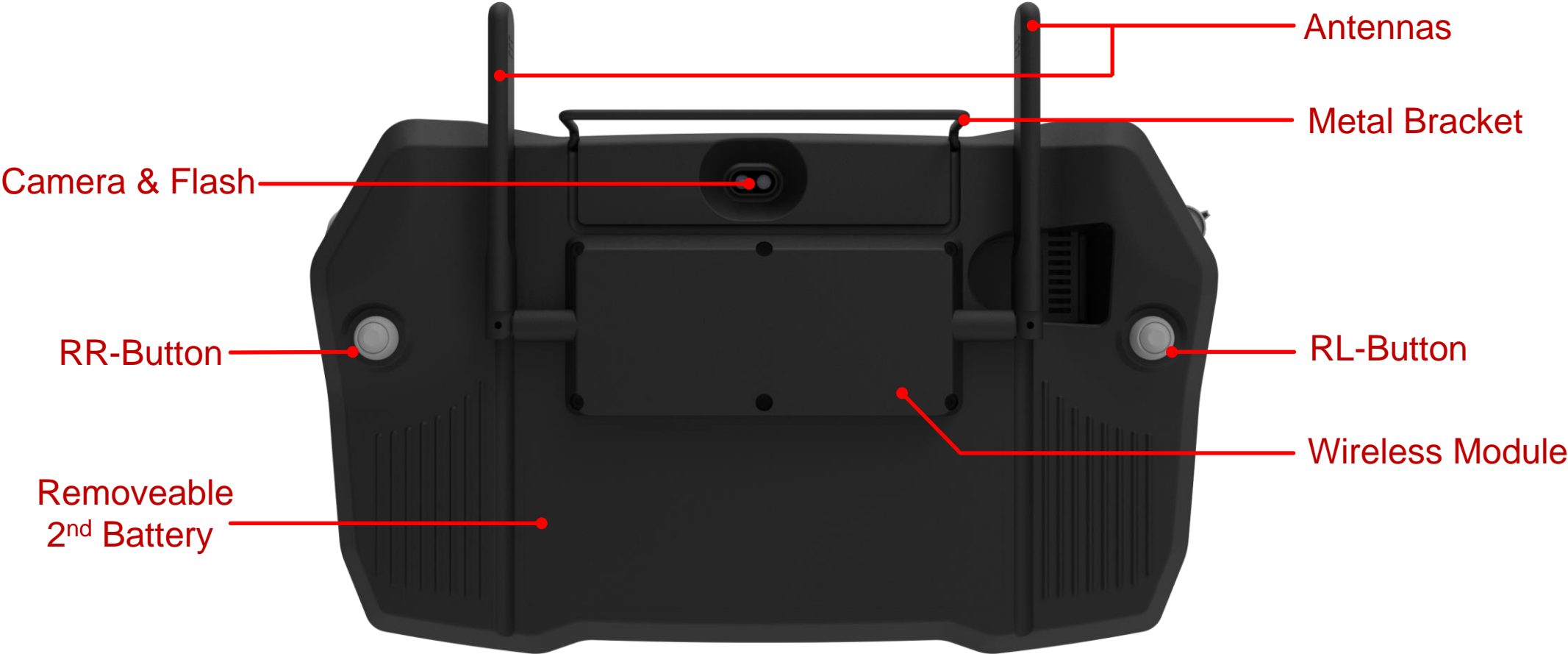
RS-Roller Switch

HDMI & USB2.0

DC input



Handheld Ground Control Station Rear-side Form Factor



Handheld Ground Control Station Accessories

Battery



AC-DC Adapter



Vehicle Charger



Rugged Carrying Case



Battery Charger



Shoulder Strip



Standard Accessories

Optional Accessories

S101TG-GCS Product Specification



Specification	S101TG-GCS
Display Specification	
Size	10.1"
Brightness	800 nits
Resolution	1920 x 1200
Contrast Ratio	800:1 (typ)
Viewing Angle	85/85/85/85
Touch	P-Cap Touch (10-point) with Anti-glare technology
System Specification	
Processor	Intel Core i5-1135G7 Processor Optional Intel Core i3/i7 Processor
Operating System	Windows 10 IoT LTSC, Windows 11 IoT SAC, Linux
System Memory	4GB DDR4 (up to 32GB)
Storage	128GB SSD (up to 2TB)
I/O Connectors	
Data Communication	1 x USB2.0
VIDEO Output	1 x HDMI
Power Input	1 x 19V DC input
Optional Wireless Communication	
WLAN	802.11 a/b/g/n/ac/ax
Bluetooth	Bluetooth 5.3
GNSS	GPS / GLONASS
WWAN	5G/LTE module
Others	
Internal Battery	11.4V, 3500mAh, 3S1P
External Battery	11.4V 3500mAh, 3S1p
Operating Temperature	-20~ 60C (AC); -10~ 50C (Battery)
Dimension (W x H x D)	TBD
Gross Weight	<2 Kg

Control	
Physical Channel	2x joystick 3x Roller switch 1x Power button 2x 2 band toggle switch 5x buttons
Communication Link	
Antenna	2x 3dBi Antennas
Frequency	2.4GHz
Output Power	1W, Adjustable
Data Capture Solutions	
Front Camera	2MP webcam
Rear Camera	8MP Auto-focus Camera w/ LED Flash
Barcode Reader	2D/1D Barcode Scanner (Optional)
Mechanical and Environment	
IP Rating	IP65
Drop	MIL-STD-810H Method 516.8, Produce IV, 4 feet
Shock	MIL-STD-810H Method 516.8, Procedure I
Vibration	MIL-STD-810H Method 514.8, Procedure I

S101M9-GCS Product Specification



Specification	S101M9-GCS
Display Specification	
Size	10.1"
Brightness	800 nits
Resolution	1920 x 1200
Contrast Ratio	800:1 (typ)
Viewing Angle	85/85/85/85
Touch	P-Cap Touch (10-point) with Anti-glare technology
System Specification	
Processor	ARM A73 x 4 (2.0 GHz) + A53 x 4 (2.0 GHz)
Operating System	Android 11
System Memory	4GB DDR4
Storage	32GB
I/O Connectors	
Data Communication	1 x USB2.0
VIDEO Output	1 x HDMI
Power Input	1 x 19V DC input
Optional Wireless Communication	
WLAN	802.11 a/b/g/n/ac/ax
Bluetooth	Bluetooth 5.3
GNSS	GPS / GLONASS
WWAN	5G/LTE module
Others	
Internal Battery	11.4V, 3500mAh, 3S1P
External Battery	11.4V 3500mAh, 3S1p
Operating Temperature	-20~ 60C (AC); -10~ 50C (Battery)
Dimension (W x H x D)	TBD
Gross Weight	<2 Kg

Control	
Physical Channel	2x joystick 3x Roller switch 1x Power button 2x 2 band toggle switch 5x buttons
Communication Link	
Antenna	2x 3dBi Antennas
Frequency	2.4GHz
Output Power	1W, Adjustable
Data Capture Solutions	
Front Camera	8MP webcam
Rear Camera	13MP Auto-focus Camera w/ LED Flash
Barcode Reader	2D/1D Barcode Scanner (Optional)
Mechanical and Environment	
IP Rating	IP65
Drop	MIL-STD-810H Method 516.8, Produce IV, 4 feet
Shock	MIL-STD-810H Method 516.8, Procedure I
Vibration	MIL-STD-810H Method 514.8, Procedure I

M900EK-GCS Product Specification



Specification	M900EK-GCS
Display Specification	
Size	8"
Brightness	800 nits
Resolution	1280 x 800
Contrast Ratio	1500:1 (typ)
Viewing Angle	80/80/80/80
Touch	P-Cap Touch (10-point) with Anti-glare technology
System Specification	
Processor	Intel Pentium N6415
Operating System	Windows 10 IoT LTSC, Windows 11 IoT SAC, Linux
System Memory	4GB DDR4 (up to 32GB)
Storage	128GB SSD (up to 2TB)
I/O Connectors	
Data Communication	1 x USB2.0
VIDEO Output	1 x HDMI
Power Input	1 x 19V DC input
Optional Wireless Communication	
WLAN	802.11 a/b/g/n/ac/ax
Bluetooth	Bluetooth 5.3
GNSS	GPS / GLONASS
WWAN	5G/LTE module
Others	
Internal Battery	7.6V, 4200mAh, 2S2P
External Battery	7.6V 4200mAh, 2S2p
Operating Temperature	-20~ 60C (AC); -10~ 50C (Battery)
Dimension (W x H x D)	TBD
Gross Weight	<2 Kg

Control	
Physical Channel	2x joystick 3x Roller switch 1x Power button 2x 2 band toggle switch 5x buttons
Communication Link	
Antenna	2x 3dBi Antennas
Frequency	2.4GHz
Output Power	1W, Adjustable
Data Capture Solutions	
Front Camera	2MP webcam
Rear Camera	8MP Auto-focus Camera w/ LED Flash
Barcode Reader	2D/1D Barcode Scanner (Optional)
Mechanical and Environment	
IP Rating	IP65
Drop	MIL-STD-810H Method 516.8, Produce IV, 4 feet
Shock	MIL-STD-810H Method 516.8, Procedure I
Vibration	MIL-STD-810H Method 514.8, Procedure I

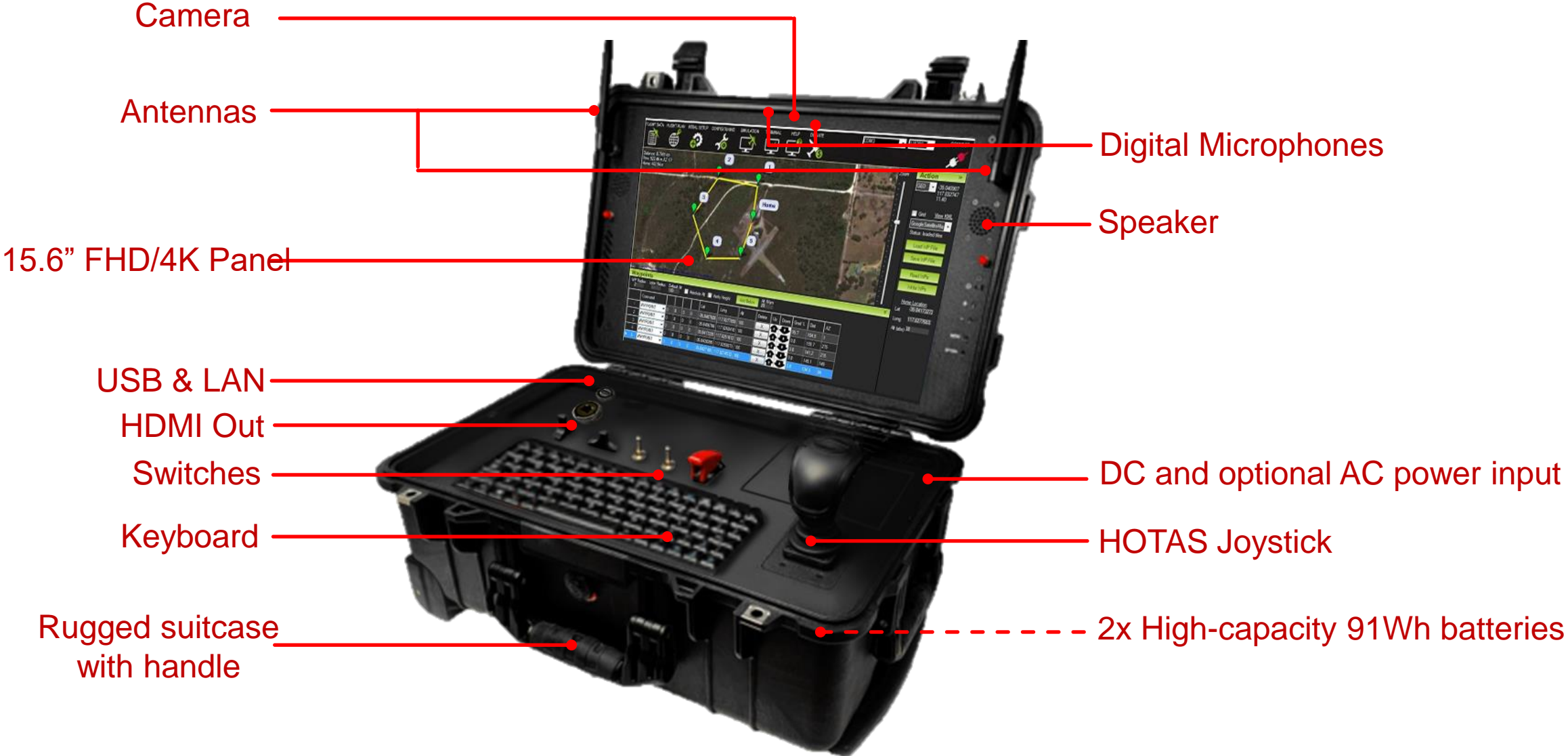
M900G7-GCS Product Specification



Specification	M900G7-GCS
Display Specification	
Size	8"
Brightness	800 nits
Resolution	1280 x 800
Contrast Ratio	1500:1 (typ)
Viewing Angle	80/80/80/80
Touch	P-Cap Touch (10-point) with Anti-glare technology
System Specification	
Processor	ARM 8 Cores, 2x A78 + 6x A55
Operating System	Android 13
System Memory	4GB DDR4
Storage	64GB SSD
I/O Connectors	
Data Communication	1 x USB2.0
VIDEO Output	1 x HDMI
Power Input	1 x 19V DC input
Optional Wireless Communication	
WLAN	802.11 a/b/g/n/ac/ax
Bluetooth	Bluetooth 5.3
GNSS	GPS / GLONASS
WWAN	5G/LTE module
Others	
Internal Battery	7.6V, 4200mAh, 2S2P
External Battery	7.6V 4200mAh, 2S2p
Operating Temperature	-20~ 60C (AC); -10~ 50C (Battery)
Dimension (W x H x D)	TBD
Gross Weight	<2 Kg

Control	
Physical Channel	2x joystick 3x Roller switch 1x Power button 2x 2 band toggle switch 5x buttons
Communication Link	
Antenna	2x 3dBi Antennas
Frequency	2.4GHz
Output Power	1W, Adjustable
Data Capture Solutions	
Front Camera	2MP webcam
Rear Camera	8MP Auto-focus Camera w/ LED Flash
Barcode Reader	2D/1D Barcode Scanner (Optional)
Mechanical and Environment	
IP Rating	IP65
Drop	MIL-STD-810H Method 516.8, Produce IV, 4 feet
Shock	MIL-STD-810H Method 516.8, Procedure I
Vibration	MIL-STD-810H Method 514.8, Procedure I

Suitcase Ground Control Station Form Factor



Suitcase Ground Control Station Accessories

Battery



AC-DC Adapter



Vehicle Charger



Battery Charger



Shoulder Strip



Standard Accessories

Optional Accessories

GCS156-AD Product Specification



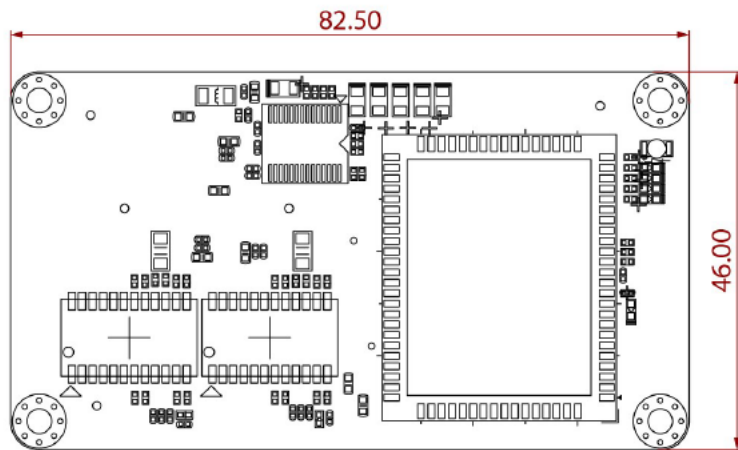
Specification	GCS156-AD
Display Specification	
Size	15.6"
Brightness	1000 nits / 400 nits
Resolution	1920 x 1080 / 3840 x 2160
Contrast Ratio	800:1 (typ) / 1000"1 (typ)
Viewing Angle	85/85/85/85
Touch	P-Cap Touch (10-point) with Anti-glare technology or protection glass
System Specification	
Processor	Intel Core i5-1235u Processor Optional Intel Core i3/i7 Processor
Operating System	Windows 10 IoT LTSC, Windows 11 IoT SAC, Linux
System Memory	4GB DDR4 (up to 32GB)
Storage	128GB SSD (up to 2TB)
I/O Connectors	
Data Communication	1 x USB2.0, 1 x LAN Port
VIDEO Output	1 x HDMI
Power Input	1 x 19V DC input, Optional AC input
Optional Wireless Communication	
WLAN	802.11 a/b/g/n/ac/ax
Bluetooth	Bluetooth 5.3
GNSS	GPS / GLONASS
WWAN	5G/LTE module
Others	
Internal Battery	2x 15.4V, 5900mAh Batteries
Operating Temperature	-20~ 60C (AC); -10~ 50C (Battery)
Dimension (W x H x D)	TBD
Gross Weight	TBD

Control	
Physical Channel	1x joystick 3x Roller switch 1x Power button 2x 2 band toggle switch 5x buttons 1x keyboard
Communication Link	
Antenna	2x 5dBi Antennas
Frequency	2.4GHz
Output Power	1W, Adjustable
Data Capture Solutions	
Front Camera	2MP webcam
Mechanical and Environment	
IP Rating	IP65
Drop	MIL-STD-810H Method 516.8, Produce IV, 4 feet
Shock	MIL-STD-810H Method 516.8, Procedure I
Vibration	MIL-STD-810H Method 514.8, Procedure I

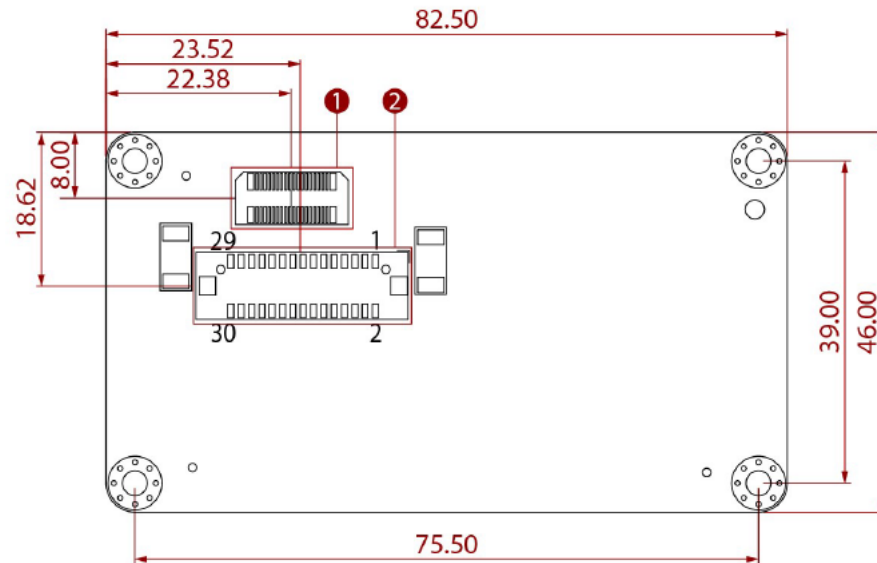
GCSRF-100 Standard RF Module Product Features

- Microhard pMDDL2450
- Robust 2X2 MIMO 2.4 GHz Operation
- Adjustable total transmit power (up to 1W)
- Up to 25 Mbps Iperf Throughput @ 8 MHz channel (-78 dBm)
- Up to 2 Mbps IPerf Throughput @ 4 MHz channel (-102 dBm)
- Serial, USB and 10/100 Ethernet Ports.

Top Side



Bottom Side





THANK YOU