EQIO

WJ-G15HD

PRODUCT MANUAL

15.6-inch Dual-Display Ground Control Station

Intel Core i9-13900H



Appearance reference (generated from product photos); shipped units may differ.

Measurement and control, made easy.

Easy · Quick · Input · Output

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01 OVERVIEW

15.6-inch Dual-Display Ground Control Station

Ground control station · Unmanned systems control · Remote measurement and control · Multi-display status monitoring · Intel

WJ-G15HD uses dual 15.6-inch display structure, configured with Intel Core i9-13900H, 32GB DDR4 memory and 2TB SSD, provides RTX GPU option, dual joystick and programmable keys, suited to multi video display and equipment control integrates.

20 programmable keys and touch keyboard together with dual joystick provides centralized operation ingress, 4-ch Gigabit Ethernet, dual RS-232 and multi-channel USB used for field connect. Dual display can respectively present operator UI and equipment data, facilitates multi task monitoring.



Multi-angle reference (generated from product photos); shipped units may differ.

Key features

- Dual 15.6-inch Full HD display
- Core i9-13900H and 32GB memory
- 2TB SSD solid-state storage
- Dual joystick and 20 programmable keys
- 4-ch Gigabit Ethernet and dual RS-232

Applications

Unmanned systems control

Remote measurement and control

Multi-display status monitoring

02 FUNCTIONS

Functions and engineering value

Dual display and physical control combination

2 15.6-inch 1920 × 1080 display can respectively display control UI and task data, dual joystick, 20 programmable keys and touch silicone keyboard provides centralized input. Suited to multi window continuous observe, keys role split and dual display layout can around specific operation procedure design.

Compute storage and GPU option

Core i9-13900H, 32GB DDR4 and 2TB SSD forms basic compute storage configured with, run Windows 11. Independent GPU optional RTX3080 or RTX4090 series etc.solution, GPU model, GPU memory, power consumption and delivery range should selection when single independent confirm.

Multi device connection and expansion display

4-ch Gigabit Ethernet, dual RS-232, multi-channel USB and SATA3.0 equipment and storage connection provides resources, DP supports up to 4K external display. I/O layout required combined with wiring space and target equipment check, not can has connect at the same time full load capability from port quantity directly derive.

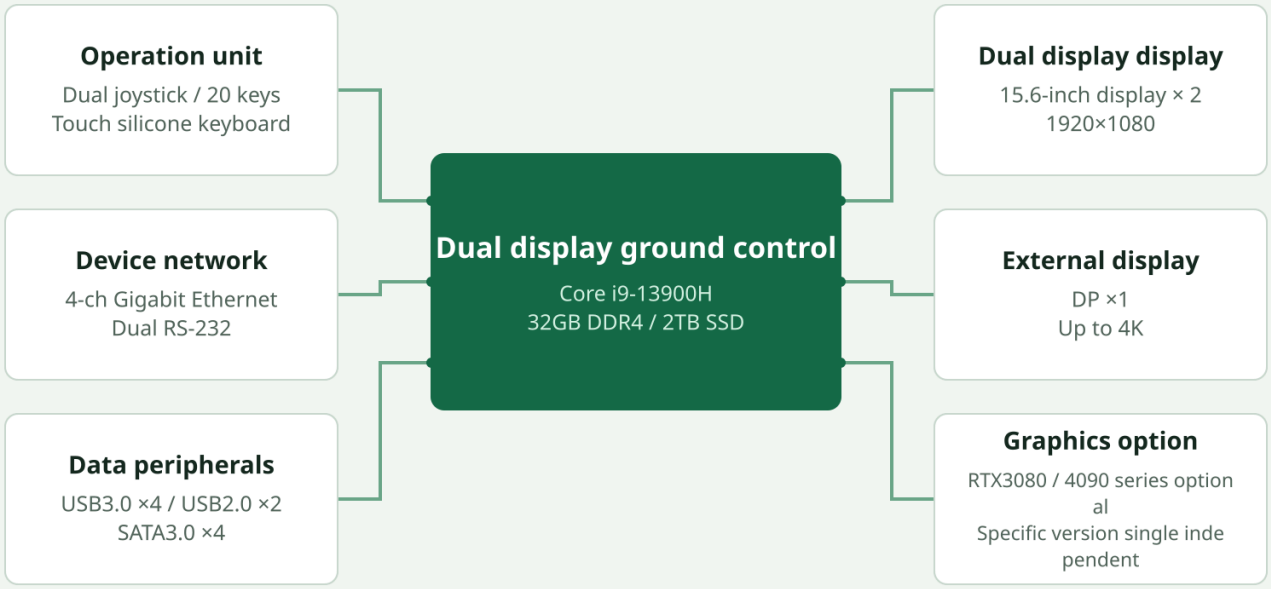
The functional notes explain the product’s role from published configuration. Optional functions, software and peripherals follow the project definition. Chip capability is not the same as implemented I/O.

03 ARCHITECTURE

Product functional architecture

FUNCTIONAL BLOCK DIAGRAM

WJ-G15HD



Functional relationships · lines do not show internal circuits, pins or dedicated bus topology

From published specification illustrative functional grouping, does not show internal circuits, on-board bus or signal routing; I/O direction actual protocol shall prevail. GPU frame indicates option solution, not indicates has version standard.

Platform and I/O

Basic platform Core i9-13900H, 14-core20 threads, up to turbo 5.4GHz, configured with 32GB DDR4 and 2TB SSD. RTX independent GPU belongs to optional solution, not can acceleration capability as all version standard; CPU peak and multi-display, graphics task continuous performance should respectively evaluate.

> **Reading the diagram**
>
> Solid lines show published functional relationships, not on-board buses, bridge chips or connector pins. Optional controllers, radios, storage and software follow the configuration and interface files.

04 SPECIFICATIONS

Technical specifications

Compiled from published product data. Batch, I/O and environmental ratings follow the order confirmation.

Core system

Processor	Intel Core i9-13900H, 14-core (6 performance core+8 efficiency cores), 20 threads, up to turbo 5.4GHz
Capacity	DDR4 32G+SSD 2T
Display and touch	Ultra-thin HD wide temperature dual display, each 15.6-inch, resolution 1920 × 1080
Operating system	Windows 11 operating system
GPU	Optional GeForce RTX3080 / RTX4090 series independent GPU

I/O and expansion

External I/O	1-ch DP display interfaces, resolution maximum supports 4K 4-ch10/100/1000Mbps Ethernet port, 4-ch SATA3.0 I/O, 2-ch RS-232 serial 4-ch USB3.0 I/O, 2-ch USB2.0
Ergonomic operation unit	Control joystick × 2, multi function programmable keys × 20, multi function touch integrated silicone keyboard

Mechanical specifications and system requirements

Dimensions / weight	420mm (L) × 325mm (W) (including handle height) × 143mm (H), weight≤12.5kg
Environmental ratings	Operating temperature: -20°C~50°C, storage temperature: -40°C~70°C, 5–95% RH, not condensation

05 COMPONENTS

Processor and device specifications

Device figures come from vendor publications and describe the chip or module. The implemented product follows the specification tables. Optional devices are supplied with the selected configuration.

Intel i9-13900H

Micro architecture codename	Raptor Lake
Manufacturing process	Intel 7
CPU core number	14
Performance core count amount	6
Efficiency cores quantity	8
CPU threads number	20
Up to turbo	5.40 GHz
Performance core up to turbo	5.40 GHz
Efficiency cores up to turbo	4.10 GHz
Shared cache	24 MB Intel® Smart Cache
Processor basic power	45 W

Intel i9-13900H (continued)

Maximum turbo power	115 W
CPU memory controller capacity upper limit	96 GB
CPU memory controller supports type	DDR5-5200, DDR4-3200, LPDDR5/x-6400, LPDDR4x-4267 (each up to rate, MT/s)
Memory channel number	2
CPU ECC supports	Not supports
Integrates graphics unit	Intel® Iris® Xe Graphics eligible
IGPU up to dynamic frequency	1.50 GHz
IGPU actuation unit	96

05 COMPONENTS

Processor and device specifications (continued)

Intel i9-13900H (continued)

Chip supports display quantity upper limit	4
Chip display output protocol	eDP 1.4b, DP 1.4a, HDMI 2.1
Processor PCIe version	Gen 5
PCH side PCIe version	Gen 3
CPU PCIe channel upper limit	28
Package	FCBGA1744
Package dimensions	50 mm x 25 mm
VT-x virtualization	Supports
VT-d directional I/O virtualization	Supports

Intel i9-13900H (continued)

Quick Sync video acceleration	Supports
Command width	64-bit

Sources: Intel, Intel i9-13900H Processor Specifications.

06 GALLERY

Appearance and scene

Reference views







Product appearance reference; shipped units may differ.

Scene



Application illustration (not a product photo).

07 APPLICATIONS

From product capability to applications

Unmanned systems dual display operation

Can one display display control and task UI, another display observe video or telemetry information, dual joystick and 20 keys share operator input. 4-ch Gigabit Ethernet facilitates organize different device connection, software required completes data aggregation, status feedback and operation permission management.

Remote measurement and control bring-up

RS-232 and USB can attach field instrument or communications equipment, dual display respectively present parameters settings and real-time status, reduce bring-up when window switch. 2TB SSD used for save project file and log, log rate, retain cycle and backup method should follow application data amount define.

Multi video monitoring operation unit

Dual built-in display and external DP display can supply different role view task information, touch keyboard and can definition keys convenient field operation. Requires graphics processing or acceleration application when can evaluate independent GPU option, application supports and cooling power consumption must per actual GPU version verification.

Integration checks

GPU configured with	RTX3080/4090 option, confirm specific model, GPU memory and shipped with the unit range.
Dual display layout	Per 2 15.6-inch Full HD display planning UI, and confirm DP external resolution.
I/O brought out	Check 4-ch network, RS-232, USB and SATA I/O location and cables method.
Environment cooling	Per -20–50°C and selected GPU load verify against cooling and power conditions.

08 CONFIGURATION

Configuration, options and selection

Configuration

Provides RTX independent GPU option, uses Windows 11 system.

Independent GPU	RTX3080 / RTX4090 etc.; optional, not as all standard

Selection guide

Order confirmation	Batch, I/O and environmental ratings follow the order confirmation
Published data	Compiled from published product data; EQIO provides selection and system integration
Configuration talk	Share the application, I/O count, environment and software so a configuration can be proposed

Request a quotation and selection support

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EQIO

Easy · Quick · Input · Output

BRAND

Measurement and control, made easy.



EQIO product family · concept rendering

Brand story

EQIO builds measurement and control products and systems. The name stands for Easy Quick Input Output: Easy is a clear structure that is quick to learn, Quick is a direct path to efficient delivery, and Input / Output is every link between the device under test and the control system.
The soft single-cycle wave inside the Q links the brand to signals, acquisition and I/O. “Measurement and control, made easy” is our promise for every selection, integration and delivery.

What we do

Products

Data acquisition, test instruments, control and I/O, modular platforms, software, cables

Systems

Configured to the measurand, channels, accuracy and software, from design to commissioning

Support

Selection advice, training, maintenance and calibration

How we deliver

01
Requirements

02
Solution design

03
Build & integration

04
Factory test

05
Delivery & training

06
Ongoing support

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