EQIO

WJ-G15H

PRODUCT MANUAL

15.6-inch Portable 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 Portable Ground Control Station

Ground control station · Equipment ground control · Field scheduling · Multi source information display · Intel

WJ-G15H integrates 15.6-inch display, dual joystick and function keys, uses Intel Core i9-13900H compute platform, equipped with 32GB DDR5 memory and SSD and mechanical HDD combination. Provides multi-channel network and USB I/O, used for equipment control, data processing and status monitoring.

3-ch Gigabit Ethernet, 3-ch USB3.0 and external display interfaces facilitates organize field device connection. Dual independent joystick, 10 function keys and three-position switch centralized layout, can used for inspection, measurement and control and mobile data processing.



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

Key features

- 15.6-inch 1920 × 1080 display
- Core i9-13900H and 32GB DDR5
- 512GB SSD plus 1TB mechanical HDD
- 3-ch Gigabit Ethernet and 3-ch USB3.0
- Dual joystick, 10 keys and three-position switch

Applications

Equipment ground control

Field scheduling

Multi source information display

02 FUNCTIONS

Functions and engineering value

Single display centralized control

15.6-inch 1920 × 1080 display and dual independent joystick, 10 function keys and three-position switch centralized portable workstation in. 520nit brightness field view provides conditions, switch position and keys en number can from application mapping equipment operation, facilitates unified arrangement control ingress.

Compute and layered storage

Core i9-13900H together with 32GB DDR5 memory run Windows 11, 512GB SSD and 1TB mechanical HDD can per application requires assign system, task data and log file. Processing, display and storage centralized to one unit, suited to field bring-up and multi source information processing.

Multi network and display expansion

3-ch Gigabit Ethernet and 3-ch USB3.0 used for connect field equipment, communications terminal and data peripherals, DP can external display unit and supports copy or expansion display. Built-in at least 12000mAh lithium battery, together with dedicated circular connector adapter forms portable power solution.

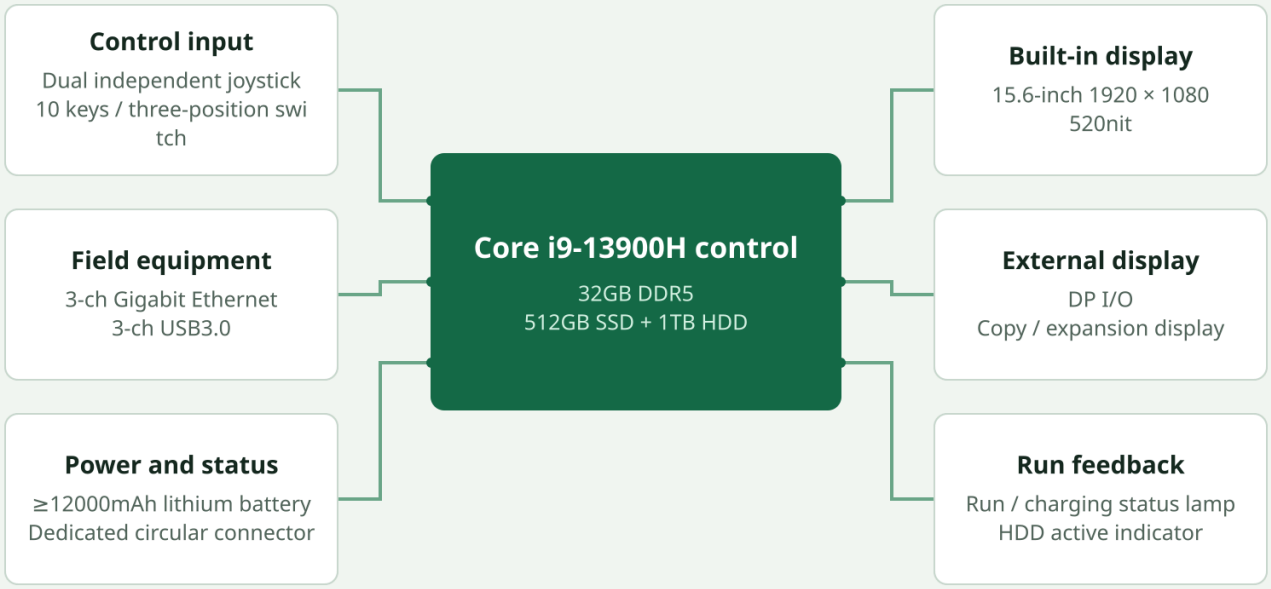
The functional notes explain the product’s role from published configuration. Optional functions, software and peripherals follow the project definition. Chip capability is not the same as implemented I/O.

03 ARCHITECTURE

Product functional architecture

FUNCTIONAL BLOCK DIAGRAM

WJ-G15H



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. Display expansion form per HDMI/DP selected solution confirm.

Platform and I/O

Uses Core i9-13900H, has 14-core (6 performance core+8 efficiency cores) and 20 threads, processor up to turbo 5.4GHz; product configured with 32GB DDR5, 512GB SSD and 1TB mechanical HDD, run Windows 11. Up to turbo not represent continuous all cores frequency or product throughput rate.

> **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	DDR5 32G, 512GB solid-state HDD+1TB mechanical HDD
Display and touch	15.6-inch, resolution 1920*1080, brightness 520nit (sunlight readable), supports HDMI/DP either-or display expansion
Operating system	Windows 11 operating system

I/O and expansion

External I/O	DP I/O 1, supports external DP display unit, supports copy / expansion dual display mode Gigabit has line Ethernet port 3-ch (eth0/eth1/eth2), USB3.0 I/O*3
Built-in control I/O	Dual independent square joystick (left, right joystick), three-position physical toggle switch (position en code: on = 0, in = 1, under = 2) matrix function keys L0~L9 common 10, 3-ch status LED (run green LED, charging green LED, HDD blink LED)

Mechanical specifications and system requirements

Dimensions / weight	Long 420mm × wide 325mm × high 143mm (including handle height), weight≤12.5kg
Environmental ratings	Operating temperature: -20°C~50°C, storage temperature: -40°C~65°C
Battery	Built-in lithium battery, capacity≥12000mAh, dedicated circular connector power adapter

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

Equipment ground control workstation

Dual joystick and three-position switch can continuous control and mode selection provides physical input, display display operator UI and equipment status. 3-ch Gigabit Ethernet facilitates connect different equipment or network segment, application software still requires definition permission, feedback and communications interrupt when.

Field scheduling and multi people view

This unit 15.6-inch display handles operation, DP external display can key status or video provides to other personnel view. 3-ch network attach field data source, Windows 11 platform used for deployment scheduling application, display copy or expansion method can with operation stream selection.

Mobile data log and bring-up

USB3.0 and multi-channel network facilitates attach data equipment, SSD and mechanical HDD can respectively hosts system and field log. 420 × 325 × 143mm portable structure suited to move to equipment adjacent bring-up, weight and battery runtime should combined with complete cables and peripherals solution evaluate.

Integration checks

Operation definition	Stated approximately joystick, L0–L9 keys and three-position switch 0/1/2 en code software mapping.
External display	Confirm DP wiring and HDMI/DP either-or actual delivery method.
Network and storage	Planning eth0/eth1/eth2 network role and 512GB SSD, 1TB HDD data policy.
Power portable use	Check≥12000mAh battery, circular connector adapter and ≤12.5kg product portable use requirements.

08 CONFIGURATION

Configuration, options and selection

Configuration

Run Windows 11, built-in capacity at least 12000mAh lithium battery, and provides external display expansion.

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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