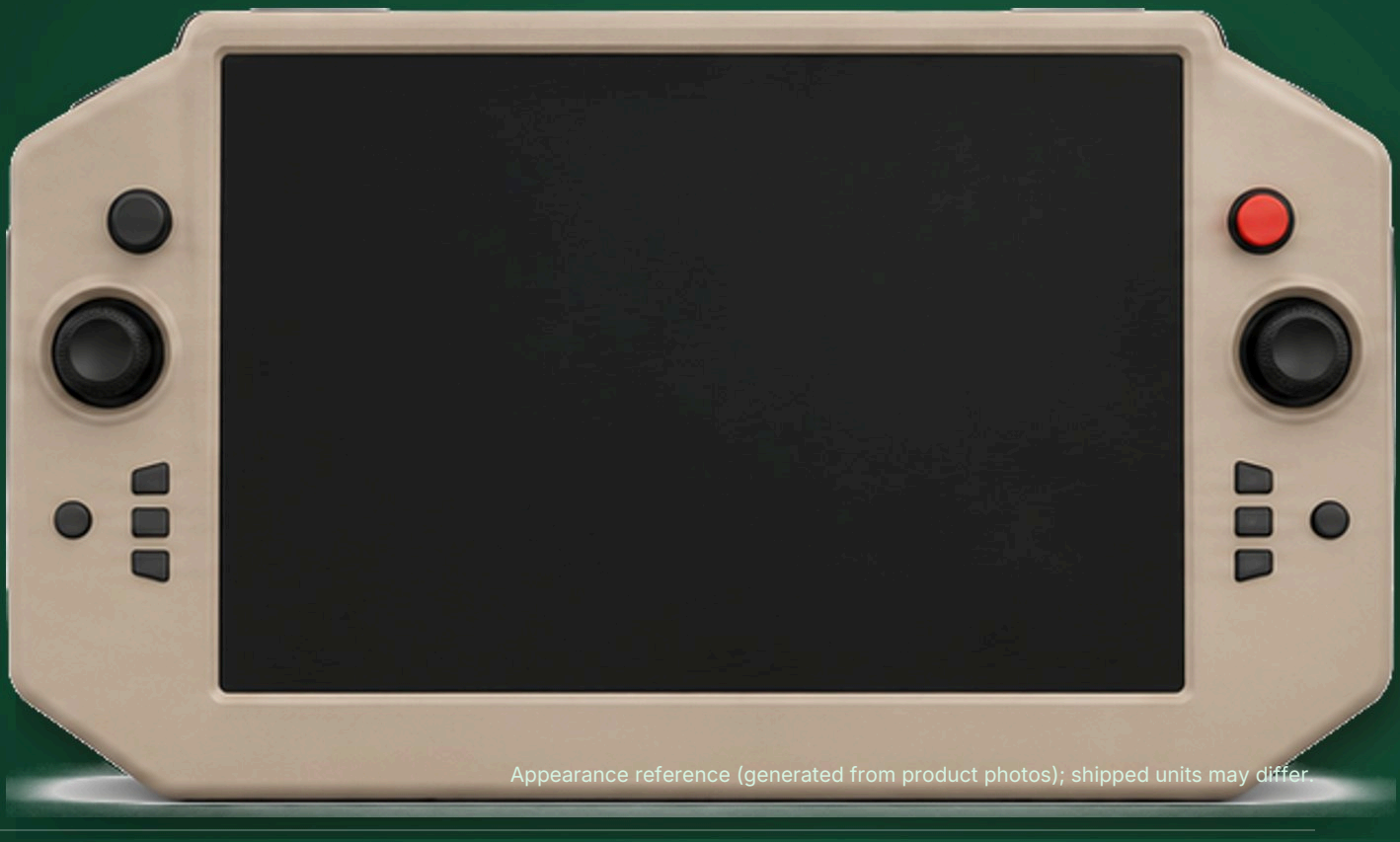
EQIO

WJ-T10S

PRODUCT MANUAL

10.1-inch Unmanned Systems Control Terminal

Rockchip RK3588 8-core processor



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

10.1-inch Unmanned Systems Control Terminal

Control terminal · Unmanned systems control · Industrial inspection · Mobile display-control · Rockchip

WJ-T10S uses Rockchip RK3588 8-core platform, equipped with 10.1-inch touch display, dual Hall joysticks and programmable keys, supports serial, USB, network and communications module expansion, suited to field mobile control and information display.
High-brightness panel screen resolution 1920 × 1200, shoulder keys, three-position switch and rotary encoder facilitates assign operation function. Housing still provides Type-C, Micro HDMI and audio connect, suited to mobile operation in view video and operation equipment.



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

Key features

- 10.1-inch 1920 × 1200 high-brightness panel
- Dual Hall joysticks, shoulder keys and encoder
- 10 programmable keys
- Gigabit Ethernet and industrial serial
- 7.4V battery quick swap

Applications

Unmanned systems control	Industrial inspection	Mobile display-control

02 FUNCTIONS

Functions and engineering value

Large display handheld HMI

10.1-inch 1920 × 1200 high-brightness panel expand status and operator UI display area, dual Hall joysticks together with 10 keys, shoulder keys and encoder provides different operation ingress. Touch and physical control can combined with application UI design, facilitates field at the same time view video and adjust equipment parameters.

Has line and wireless solution attach

Terminal via circular connector provides Gigabit Ethernet, RS-232/RS-422 and USB connect, standard Type-C, audio and Micro HDMI used for common peripherals. Source data supports 4G/5G, BeiDou and ad-hoc radio communications solution, deployment when can around covers range and equipment protocol selection combination.

Compute storage and portable use

RK3588 8-core platform standard 8GB LPDDR4X and 128GB eMMC, terminal application, status display and local logging provides resources. Housing 332 × 188 × 45mm, weight less than 2kg, 7.4V battery can quick swap, facilitates mobile operation in shift rotation.

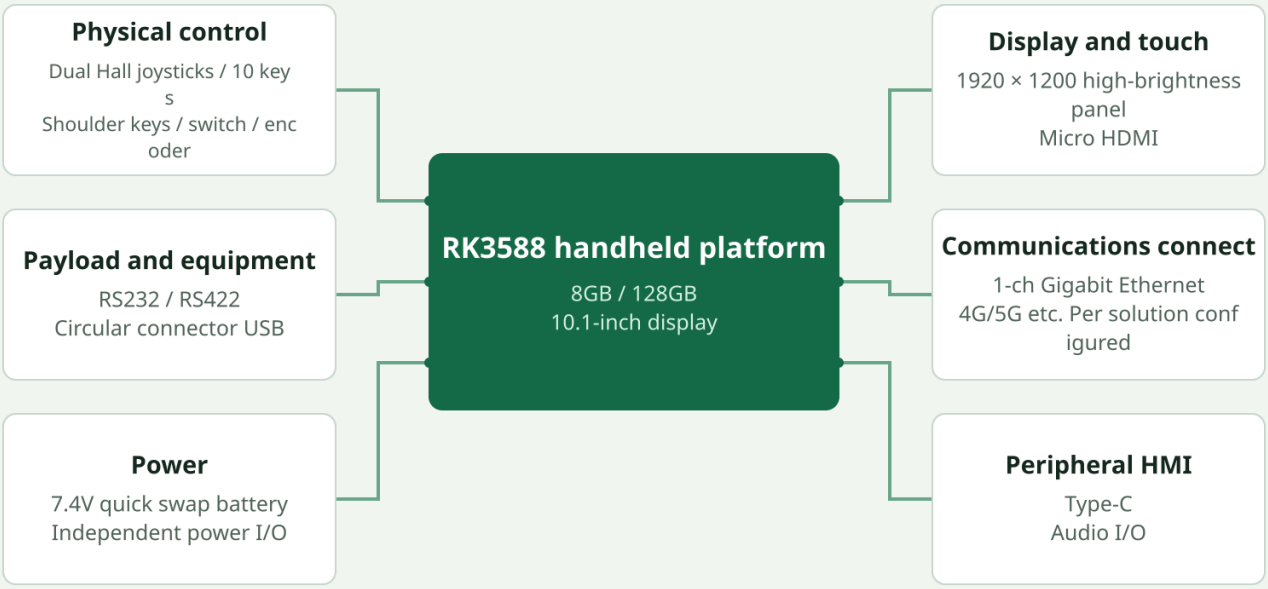
The functional notes explain the product’s role from published configuration. Optional functions, software and peripherals follow the project definition. Chip capability is not the same as implemented I/O.

03 ARCHITECTURE

Product functional architecture

FUNCTIONAL BLOCK DIAGRAM

WJ-T10S



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.

Platform and I/O

Uses RK3588 8-core compute platform, configured with 8 GB LPDDR4X and 128GB eMMC. Device level uses 4 × Cortex-A76 and 4 × Cortex-A55, integrates Mali-G610 MC4 and rated 6 TOPS NPU; terminal implemented I/O should this product parameters shall prevail.

> **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

CPU	Rockchip 3588 8-core processor
Memory / storage	Standard 8GB LPDDR4X RAM; 128GB EMMC5.1
Display	10.1-inch high-brightness display, resolution 1920*1200, sunlight readable

Mechanical specifications and system requirements

Dimensions / weight	332mm long × 188mm wide × 45mm high ±2mm, weight＜2kg
Environmental ratings	Operating temperature: -40°C~60°C; ingress protection: IP65 meets road-transport vibration and shock
Battery voltage and swap	7.4V, supports quick-swap

I/O and expansion

Control peripherals	2*Hall joystick, 10*programmable keys, 4*shoulder keys, 1*three-position switch, 2*rotary encoder
I/O specification	Circular connector 1: RS-232/422/2*USB, circular connector 2: 1-ch Gigabit Ethernet port, power I/O*1, SMA antenna I/O*1 standard interfaces: 1*type-c/3.5mm audio/micro HDMI
Data and video radio	Supports 4g/5g/BeiDou/ad-hoc radio communications

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.

Rockchip RK3588

Manufacturing process	8 nm
CPU architecture	4 × Arm Cortex-A76 + 4 × Arm Cortex-A55, 64-bit 8-core
Clock reference	Up to 2.4GHz
Graphics processor	Arm Mali-G610 MC4, integrates 2D graphics acceleration
Graphics and compute API	OpenGL ES 3.2；Vulkan 1.1；OpenCL 2.0
NPU rated peak	6 TOPS
NPU structure and accuracy	3-core NPU; supports INT4/INT8/INT16/FP16/BF16/TF32
Memory controller	LPDDR4/LPDDR4X/LPDDR5, 4-channel × 16bit
L3 cache	3 MB
Native storage interfaces	eMMC 5.1、SD3.0/MMC4.5

Rockchip RK3588 (continued)

PCIe3.0-channel combination	1×4 / 2×2 / 4×1
Native Gigabit Ethernet MAC	2-ch
Native low-speed controller	10×UART、6×SPI、9×I2C
Video decode upper limit note	H.265/H.264/AV1/AVS2 etc.format, up to 8K@60fps, per en code format and code stream configured with
Video encode upper limit	H.264/H.265 up to 8K@30fps
Chip display interfaces	EDP, DP, HDMI2.1, MIPI, multi-display display engine
Video input	MIPI CSI-2/DVP; HDMI2.0 RX up to 4K@60fps

Sources: Rockchip, Rockchip RK3588 official product specification; Rockchip, RK3588 Brief Datasheet V1.0 2025-08-28; Rockchip, Rockchip Toybrick TB-RK3588X development board released.

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

Mobile control operation position

10.1-inch display can at the same time arrangement main operation zone and equipment status zone, dual joystick handles continuous input, switch and keys call common function. Network or serial and field equipment HMI, application software required definition operation feedback, confirm step and fault status prompt.

Inspection and graphics view

Inspection process in can uses high-brightness panel view field graphics, equipment reading and task information, using serial or USB connect peripheral terminal. Less than 2kg housing suited to multiple equipment point position between carry with, battery rotation arrangement should combined with actual application load and shift duration define.

Field display-control expansion

Requires multi people observe when can via Micro HDMI connect external display equipment, this unit retain touch and physical control ingress. Gigabit Ethernet can interface with local device network, 8GB memory and 128GB storage used for run display-control application, suited to temporary operation unit and mobile bring-up scenario.

Integration checks

HMI	Per 10.1-inch 1920 × 1200 resolution planning touch zone, status zone and physical key mapping.
Communications module	Respectively confirm 4G/5G, BeiDou and ad-hoc radio configured with, do not all solution view standard.
Portable use power	Confirm 7.4V battery capacity, charging equipment and battery swap when application recovery procedure.
I/O protection	Check circular connector pinout, IP65 used conditions and -40–60°Cdeployment requirements.

08 CONFIGURATION

Configuration, options and selection

Configuration

Provides 4G/5G, BeiDou and ad-hoc radio communications supports, configured with 8 GB memory and 128GB storage.

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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