EQIO

WJ-T10P

PRODUCT MANUAL

10.1-inch Intelligent Equipment Control Terminal

Rockchip RK3588M 8-core processor



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

Measurement and control, made easy.

EQIO.COM

Easy · Quick · Input · Output

01 OVERVIEW

10.1-inch Intelligent Equipment Control Terminal

Control terminal · Intelligent equipment control · Inspection · Field display-control · Rockchip

WJ-T10P uses RK3588M 8-core processor, standard 8GB memory and 128GB storage, supports touch display, ambient-light sensing and RTC, provides serial, USB, network and POGOPIN expansion I/O.
Housing provides Gigabit Ethernet, RS-232, RS-422, USB and Micro HDMI, POGOPIN centralized brought out data and power signal. Touch HMI and adaptive display brightness suited to inspection, systems operation and field information view. Function keys facilitates assign and call common operation.



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

Key features

- RK3588M 8-core compute platform
- 8GB memory, 128GB storage
- Touch display and environment optical perception
- Gigabit Ethernet, RS-232 and RS-422
- POGOPIN data and power I/O

Applications

Intelligent equipment control	Inspection	Field display-control

02 FUNCTIONS

Functions and engineering value

Touch and environment optical HMI

10.1-inch terminal supports touch and at least 1920 × 1080 display resolution, environment optical perception can with optical line change adjust display brightness. RTC and function keys together with application UI, can used for organize equipment operation, status view and with time information field log.

Composite peripherals and dock connect

Gigabit Ethernet, RS-232, RS-422 and USB2.0 used for common industrial device connection, Type-C includes 1-ch USB OTG function. POGOPIN centralized provides USB, 100 Mb Ethernet, 15V power, IO and TTL serial signal, facilitates around matching dock design connect method.

Multi system compute platform

RK3588M 8-core processor clock at least 2.0GHz, standard 8GB memory and 128GB storage. Provides Kylin OS V10, Android 12 and Ubuntu 20.04 system solution, application deployment required according to system version check driver, touch HMI and peripherals supports condition.

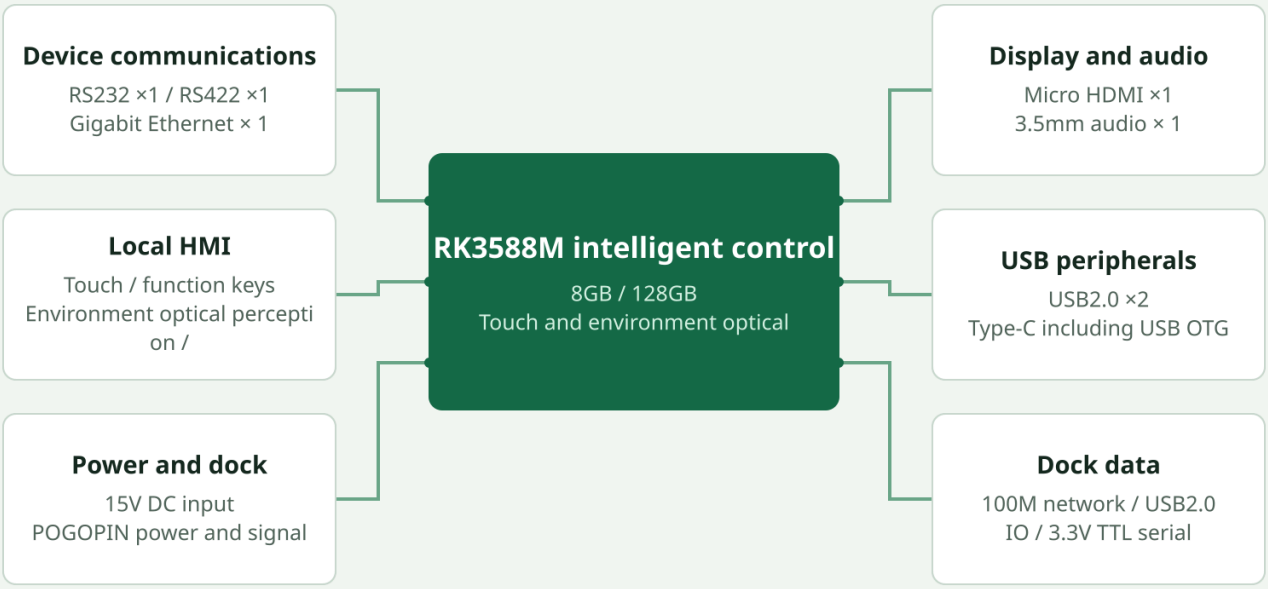
The functional notes explain the product’s role from published configuration. Optional functions, software and peripherals follow the project definition. Chip capability is not the same as implemented I/O.

03 ARCHITECTURE

Product functional architecture

FUNCTIONAL BLOCK DIAGRAM

WJ-T10P



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 RK3588M 8-core processor, product clock specification at least 2.0GHz, configured with 8 GB memory and 128GB storage. Device has Cortex-A76/A55 combination and rated NPU capability; software system and driver determines can used acceleration function, not can chip native display or camera resources view product I/O.

> **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	Rockchip RK3588M, 8 core, clock≥2.0GHz
Capacity	8GB + 128GB (standard)
Display	Supports touch; resolution≥1920 × 1080
Operating system	Kylin OS V10/Android 12/Ubuntu20.04

Mechanical specifications and system requirements

Dimensions / weight	380mm (L) × 240mm (W) × 48mm (H), not includes joystick height, weight≤1.8kg (only bare unit)
Environmental ratings	Operating temperature: -40°C~55°C, storage temperature: -45°C~60°C, relative humidity (RH): 20%–80%
Battery	DC15V power, power adapter standard voltage 230V, standard frequency 50Hz, C type plug

I/O and expansion

I/O specification	Gigabit Ethernet port*1, RS-232*1, RS-422*1, USB2.0*2, Micro HDMI I/O*1, standard 3.5mm audio I/O*1 Type-C I/O*1 (includes 1-ch USB OTG function), Debug I/O*1 (I/O form type C)
POGOPIN I/O	1 (USB2.0*1, 100M network*1, 1 group input 15V power (charging), 2 IO signal and 3.3V TTL serial signal)
Ambient-light sensing	Supports ambient-light sensing function, can enough according to optical line brightness adjust display brightness
Clock	Supports RTC

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 RK3588M

Process	8 nm
CPU structure	4 × Cortex-A76 + 4 × Cortex-A55, 8-core
NPU rated	6 TOPS
SoC display engine capability	8K display/video, native seven display display capability
SoC native Type-C controller	2-ch
SoC imaging processing resources	Dual 16M ISP, at least 12-ch camera supports

Sources: Rockchip, Rockchip release RK3588M intelligent vehicle-mounted surround view solution.

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

Intelligent equipment operation terminal

Can used touch UI present systems status and operation page, via RS-232, RS-422 or Gigabit Ethernet and equipment control system switch data. Programmable keys used for call common function, I/O protocol, control step and fault prompt should combined with target systems software procedure design.

With dock inspection workstation

Mobile inspection stage used terminal display and HMI, to up to workstation rear can via POGOPIN connect matching dock data and power circuit. 100 Mb Ethernet, USB and TTL etc.signal use dock solution has stated I/O based on, but connect life, position structure and hot-swap still requires verification.

Field information display and maintenance

Environment optical adaptive display suited to optical line change field operation, Micro HDMI can connect external display unit, USB OTG used for compatible peripherals or maintenance procedure. Per project selection operating system rear, can deployment equipment view, parameters settings and maintenance log application.

Integration checks

System selection	Kylin OS V10, Android 12 and Ubuntu 20.04 per delivery version selection.
Dock pinout	Check POGOPIN15V power, 100M network, USB, IO and 3.3V TTL definition.
Type-C function	Distinguish including USB OTG Type-C and independent Debug Type-C, avoid mix connections.
Power and dimensions	Per 15V input, 380 × 240 × 48mm and bare unit≤1.8kg arrangement installation.

08 CONFIGURATION

Configuration, options and selection

Configuration

Uses 15V DC power, provides Kylin OS, Android and Ubuntu system solution.

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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