

Information

Doovit Industrial PC



Overview

- Industrial-grade IoT gateway with pre-installed Linux OS
- RP2040 + CM4 dual-processor for low power and high-performance applications
- Wide input voltage range (5–30V) and temperature operation (-25°C to 75°C)
- Versatile network and connectivity support
- Open source Doover software platform for remote access and control

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Key Features

Processing

- Dual-processor: RP2040 (low-power, real-time) + Quad Core ARM Cortex-A72 (high-performance, Linux)
- ARM processor power controlled from low-power processor; firmware updatable from ARM

Power & Environment

- 5–30 V DC input voltage range
- Operating temperature: -25°C to 75°C
- CE (EU) and ACMA RCM (Australia) compliant

I/O

- 4 NPN sinking digital inputs (3.3–36 V, software-selectable NPN/PNP)
- 2 analog voltage inputs (0–30 V)
- 4 analog current inputs (4–20 mA)
- 6 sourcing digital outputs (up to 5 A each, 15 A total)
- 2 analog outputs (0–10 V)
- Software-configurable RS485 terminating resistor

Connectivity

- Dual 10/100/1000M LAN ports
- 2 × USB 2.0 Type A
- HDMI display output
- SIM card slot + mPCIe slot (4G/GPS)
- External WiFi antenna (SMA female)
- 2 service USB connectors for firmware updates and data transfer

Software

- Pre-installed Debian Linux
- Optimised for open-source Doover software platform
- Remote access via network or local display/keyboard/mouse

I/O Labels

Pin No.	Signal Name	Capabilities (I/O Type)
10	DI0 ¹	NPN/PNP Pulse Reading
9	DI1 ¹	NPN/PNP Pulse Reading
8	DI2 ¹	NPN/PNP Pulse Reading
7	DI3 ¹	NPN/PNP Pulse Reading
6	V AI0	0-30 V input
5	V AI1	0-30 V input
4	4-20 AI2 ²	4-20 mA signal inputs
3	4-20 AI3 ²	4-20 mA signal inputs
2	4-20 AI4 ²	4-20 mA signal inputs
1	4-20 AI5 ²	4-20 mA signal inputs

Table 1: Input Capabilities

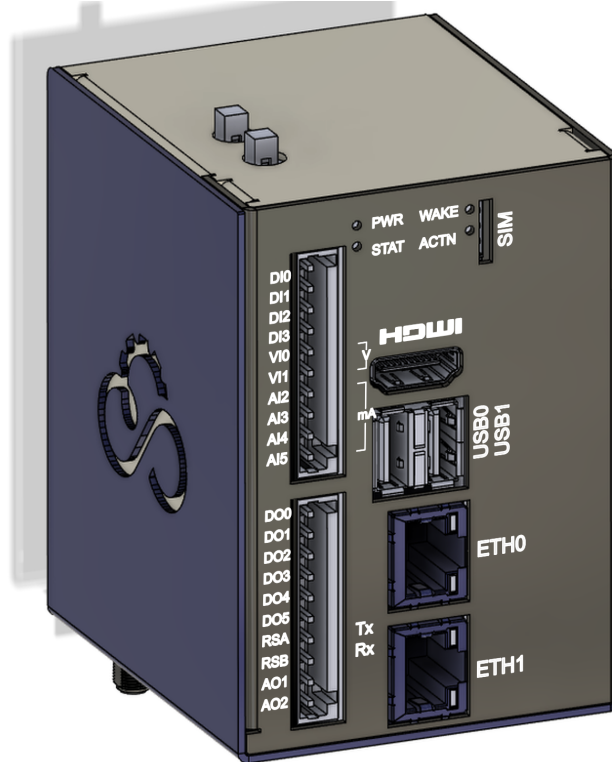


Figure 1: I/O Pinout Label Diagram

Pin No.	Signal Name	Capabilities (I/O Type)
10	DO0 ³	Sourcing Output
9	DO1 ³	Sourcing Output
8	DO2 ³	Sourcing Output
7	DO3 ³	Sourcing Output
6	DO4 ³	Sourcing Output
5	DO5 ³	Sourcing Output
4	SER A	Software Configurable RS485 and RS232
3	SER B	Software Configurable RS485 and RS232
2	AO1 ⁴	0-10 V Output
1	AO2 ⁴	0-10 V Output

Table 2: Output Capabilities

Notes

- ¹ Software selectable NPN/PNP pulse reading (between 3.3-36V Input)
- ² Sinking Current Input (4-20mA)
- ³ Digital outputs source up to 5A per channel; max combined draw 15A
- * Max per-pin sourcing current: 5A
- * Rated total sourcing limit (all pins): 15A
- ⁴ Analog Voltage Signal Output.

Appearance

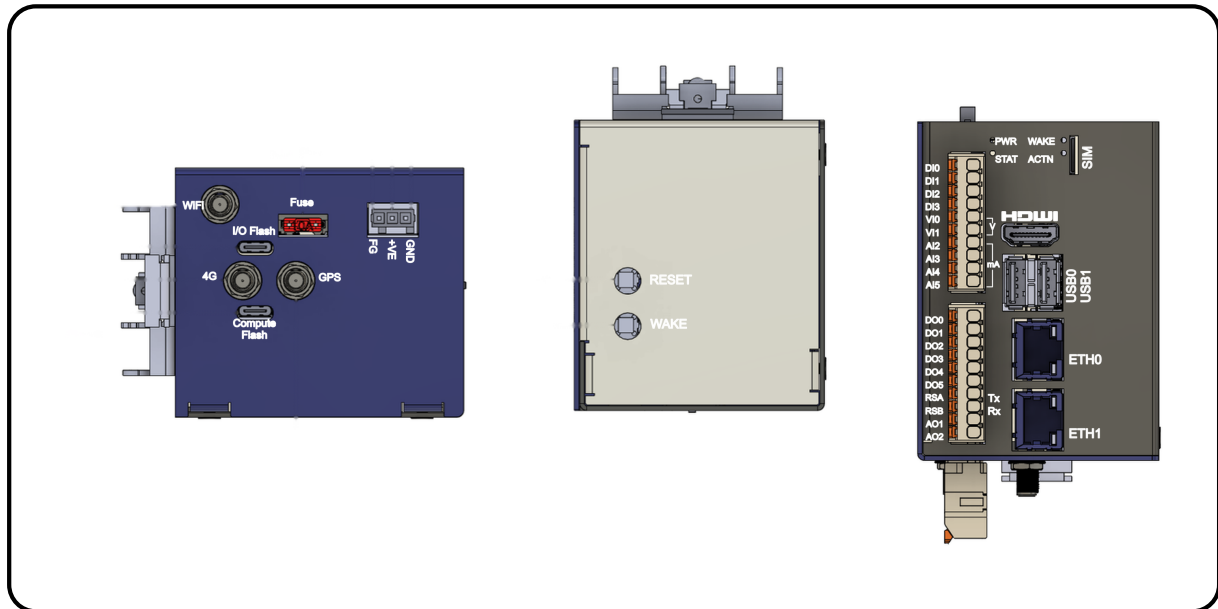


Figure 2: Connections and Buttons

Dimensions

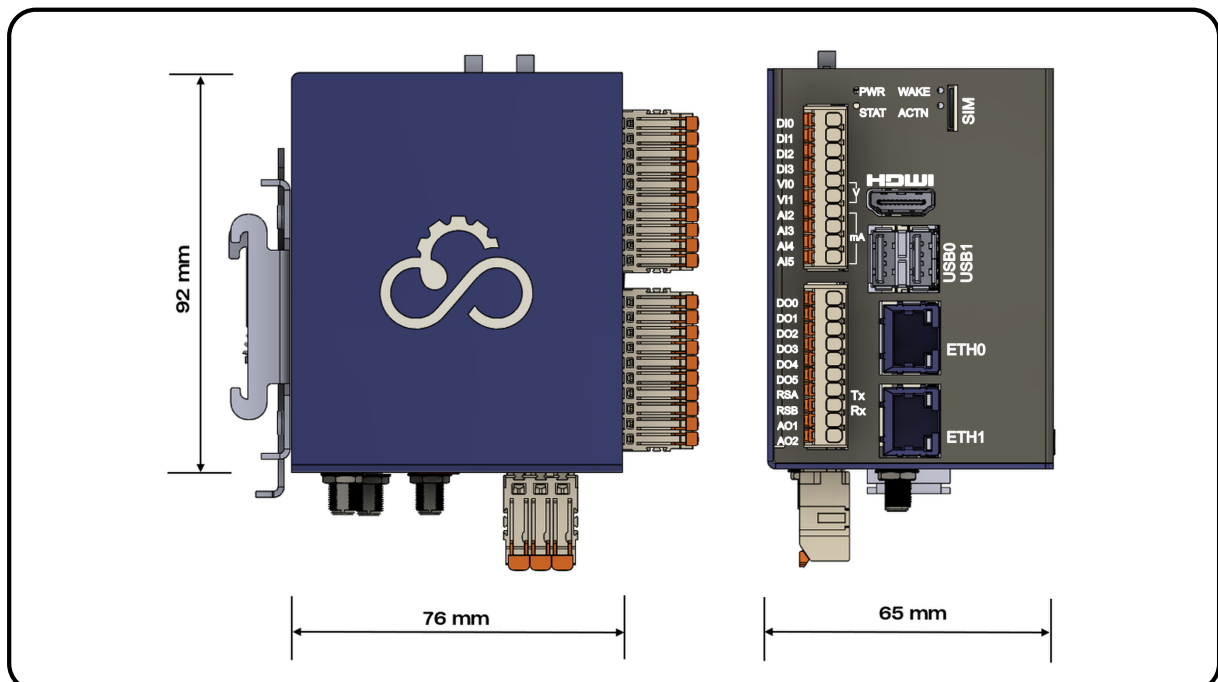


Figure 3: Dimensions

Feature	Specification
Chassis Properties	
Dimensions (W x D x H)	76 x 65 x 92 mm
Weight	0.570 kg
Material	Mild Steel
Paint Finish	Double Pack Matte Finish
Hardware Specifications	
Power Input	5-30V DC
High Power Mode Power Consumption	≈ 2.5 - 3.5 W
Low Power Mode Power Consumption	≈ 0.25 W
Processor 1	Broadcom BCM2711
Processor 2	RP2040
Memory	2 GB
Storage	32 GB
Graphics	Broadcom VideoCore VI GPU
Internal I/O	
Sim Card	Single slot
mPCIe	Supports 4G and GPS Cards
Software	
Operating System	Debian 12.9 Bookworm

Feature	Specification
Front I/O	
Ethernet	dual 10/100/1000M (Twisted pair) LAN ports
USB 2.0	2 type A USB slots
User LEDs	4 status LEDs
Digital Input	4 Isolated Digital Inputs (NPN/PNP software-configurable)
Digital Output	6 Digital Sourcing Outputs 5A Max
Analog Input	2 x 0-30 V input and 4 x 4-20 mA signal input
Analog Output	0-10V Sourcing Analog Output
Serial	RS485 serial communication port (software-configurable RS485/RS232)
Bottom I/O	
Connectivity	SMA Support for WiFi and signal boosting
USB C	USB C Port for configuring open source device firmware
Electrical Protection	15 A Fuse (swappable)
Power Input	5-30 V input with 2 grounding pins for versatility
Mechanical Properties	
Operating Temperature	-25°C to 75°C
EMC	CE and RCM Compliant

Table 3: System Specifications

Compliance & Certifications

Certification	Standards / Directives
CE (Europe)	
EMC Directive	2014/30/EU
Low Voltage Directive	2014/35/EU
RoHS	2011/65/EU
RED	2014/53/EU*
RCM (Australia / New Zealand)	
ACMA	Supplier's Declaration of Conformity held
Emissions	
EN 55032	AS/NZS CISPR 32:2015 + A1:2020, Class A; CISPR 32:2015/A1:2019, Class A
Immunity	
EN 61000-6-1:2019	IEC 61000-4-2 (ESD) IEC 61000-4-3 (RF) IEC 61000-4-4 (EFT) IEC 61000-4-5 (Surge) IEC 61000-4-6 (Conducted) IEC 61000-4-11 (Dips)

Table 4: Compliance and Certifications

Tested by EMC Test Lab – Reports EMCTEST.1550 (Feb 2025) and EMCTEST.1559 (Mar 2025). Declarations signed 7 April 2025.
Span Engineering Pty Ltd, ABN 86 642 152 378.

*RED applies where the optional 4G / Wi-Fi modules are fitted; those modules are separately pre-certified.