DIPOWEREDGE • DATASHEET

DPE100

An open EMS that runs on site



> Devices are polled, computed and controlled on the gateway itself. It runs fully without any DiPower-operated cloud, and every uplink is optional and entirely policy-controlled on your side.

VERSION	DATE	STATUS
v1.2	**2026-10-06**	**Specifications subject to change**

Positioning

DiPowerEdge DPE100 is an edge energy gateway built for distributed energy sites, **a zero-code energy manager** on site: device integration, computation and real-time policy execution all happen locally. It can also serve as a data-collection terminal for a cloud platform.

Runs independently on site: the gateway operates in full locally. **Vendor-neutral**: it sits outside every energy equipment vendor, so dispatch recommendations stay neutral. Data stays local by default; connections to third-party clouds, utility operators and power markets are optional.

Hardware specifications

This table compares two configurations of the same hardware platform: the **current hardware baseline** on the left and the **DPE100 target configuration** on the right. The only substantive difference is in the serial ports: 2 × RS485 + 2 × RS232 becoming 4 × RS485. The other interfaces are unchanged. The figures are engineering configuration data, not laboratory measurements, and nothing here is a certified figure. The product is still evolving, so rely on the version confirmed at contract signature.

Item	Current hardware baseline	DPE100 target configuration
SoC	Rockchip RK3506	Not specified
OS	Linux 6.1	Not specified
Power	24 V DC (PE / GND / 24V terminal)	DC 12 / 24V
Serial	2 × RS485 (A1B1 / A2B2) + 2 × RS232 (T1R1 / T2R2)	4 × RS485
Ethernet	2 × RJ45 Ethernet ports (ETH0 / ETH1)	2 ports
Wireless	WiFi (external SMA antenna)	1 port (WiFi + BLE)
USB	1 × USB-A	Not specified
Digital input	4 × DI (IN1–IN4, shared IGND)	4 channels
Digital output	4 × DO (DO1–DO4, each with COM1–COM4)	4 channels
Indication	RUN (green) / PWR (red) / KEY	Not specified
User interface	Not specified	Local web + cloud
Mounting	DIN rail / ear mount	DIN rail + mounting ears
Enclosure	Metal enclosure	Not specified
Operating temp.	Up to 70 °C	−20 °C to +70 °C
Immunity	Comms ports IEC 61000-4-5 level 2	EMC EFT/ESD industrial level 3 + surge industrial level 2

Interfaces and silkscreen

Every interface below was read directly off the physical unit, not inferred:

Front panel

- PE / GND / 24V power terminal
- RUN (green) · PWR (red) · KEY
- ETH1 · ETH0 2 × RJ45
- USB-A
- A1 B1 A2 B2 G T1 R1 G T2 R2 → 2 × RS485 + 2 × RS232

Side panel

- IN1 IN2 IN3 IN4 IGND → 4 × digital input
- DO1 COM1 … DO4 COM4 → 4 × digital output (each with common)
- SMA antenna connector

Functions and strategies

Operating modes are chosen per period, and each period carries its own settings.

Item	Detail
Integration packs	Device Access Package (DAP): one per device model, developed with AI assistance, about an hour per new model, and packs you develop yourself can be submitted for inclusion in the public release. Cloud Access Package (CAP): one per cloud, also developed with AI assistance.
EMS operating modes	AI-EMS · Self Consume · Peak Shaving · Feed-in Priority · Time-of-use.
System functions	Feed-in limiting · Import-power limiting · PV-curtailment avoidance · Closed-loop power-factor control.
Control latency	Millisecond-level real-time control; the loop closes on the gateway, with no cloud round trip.
Data storage	About a month of history kept locally; data survives a network outage.

Protocol support

Outbound protocols are declared per the source checklist. The data models actually available on any given device must be confirmed per model. See the Protocol Support List.

`MODBUS-TCP`	Primary protocol for field device integration
`SUNSPEC`	Standardised information model for distributed energy
`MQTT`	Uplink telemetry and message bus
`IEC104`	Utility telecontrol
`IEC61850`	Substation and microgrid automation

Mounting

Supports 35 mm top-hat DIN rail (EN 50022) mounting and screw-fixed ear mounting.

Notices

Specifications subject to change: The specifications in this document reflect the state at the time of writing. The product is still evolving and specifications and appearance may change without prior notice. For any commitment, rely on the latest version confirmed at contract signature.

Compatibility: This document describes the gateway’ s own protocol capability. It does not mean that any specific field device supports all of the protocols listed. Actual integration is subject to test.

Trademarks: Third-party protocol names are the property of their respective owners and are used here only to describe compatibility. No endorsement or partnership is implied.