OSDP PERIPHERAL DEVICE

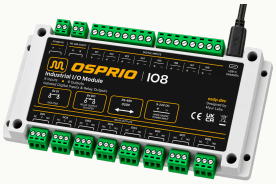
Osprio IO4 / IO8

Four or eight channels, in and out, pure OSDP

An OSDP peripheral device with opto-isolated voltage inputs and changeover relays rated for AC or DC loads — four of each on IO4, eight on IO8. The ACU drives the relays with standard output commands, and each output's idle state is configurable, so one module handles fail-safe and fail-secure circuits side by side. Commissioned from a page the module serves over its own WiFi access point, then run as a node on your existing RS-485 bus with secure channel.



IO4 · 4 in / 4 out



IO8 · 8 in / 8 out

SPECIFICATIONS

PROTOCOL

Role	Peripheral Device (PD) only, on LibOSDP
PD address	`0x00`–`0x7E`, set in portal or by COMSET
Baud rates	`9600` / `19200` / `38400` / `57600` / `115200` / `230400`
Secure channel	16-byte SCBK; portal entry or install-mode `osdp_KEYSET`
Capabilities	Contact status `01` · Output control `04`

INPUTS / OUTPUTS

Inputs	4 (IO4) or 8 (IO8) opto-isolated voltage, + / – pairs
Sampling	Every 10 ms, 30 ms debounce; no EOL supervision
Outputs	4 (IO4) or 8 (IO8) changeover relays, NC / C / NO
Contact rating	`10 A @ 250 VAC` · `10 A @ 30 VDC`
Inactive state	Per output, persisted — fail-safe or fail-secure

POWER, WIRING & MECHANICAL

Power	USB-C, or external 9–24 V DC, no jumper
Bus	RS-485 half duplex, A / B screw terminal, multi-drop
Configuration	Onboard WPA2 WiFi portal at `192.168.4.1`
Firmware update	WiFi portal, or OSDP file transfer from the ACU
Enclosure	Industrial ABS, DIN mountable, pluggable terminals
Markings	CE · UKCA · WEEE

KEY FEATURES

100% OSDP, no side channel. One protocol, no vendor app and no second channel doing the real work. The module reports its capabilities honestly, so everything it does is visible on the bus.

Opto-isolated voltage inputs. The field device applies a voltage across an input's + and – pins through an optocoupler; the logic side never shares a return with your wiring.

Relay outputs for AC and DC. Changeover relays bring out NC, C and NO on screw terminals. A mains-powered maglock and a 12 V strike wire up the same way, with no interposing relay.

Fail-safe or fail-secure, per output. Each output carries its own idle level, applied as the outputs initialise — so a fail-safe output never pulses through its active state on the way to being ready.

Unsolicited input reporting. A debounced change is submitted as an OSDP event, and every report carries the complete picture of the board — the ACU never sees a stale partial view.

Standalone WiFi commissioning. The module raises its own WPA2 access point and serves the configuration page itself. A phone is all you carry: no site network, nothing to install.

COMMISSIONING

01 Power the module and join its `osprio-…` WPA2 access point from a phone.

02 Claim phase: replace the shipped passphrase. Nothing else is reachable until you do.

03 Set PD address, baud rate, SCBK or install mode, and each output's inactive state.

04 Land A and B on the segment, then enable lockdown so the portal only comes up on a button press.

The access point shuts down after 5 minutes idle; a short press on the config button brings it back. A 10-second hold, released, factory-resets and clears the SCBK.