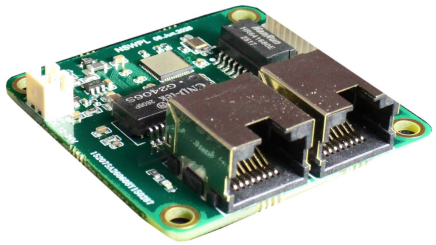
NSWPL

3-Port 100M Network Switch Module with Direct FB4 Header

NSWPL is a compact internal network switch module for laser projectors, stage lighting fixtures and OEM show-control hardware, where a desktop network switch is too large or mechanically unsuitable. Two RJ45 ports give the fixture network in and through; a third port is wired straight to the laser controller through the on-board FB4 ribbon header, so no patch lead is needed inside the housing.

Board and mounting pattern are interchangeable with the NSW WP board.



KEY FEATURES

- Three 100M ports — 2 x RJ45 plus 1 x FB4 ribbon header
- Two separate surface-mount RJ45 jacks for flexible panel routing
- DC 12–24 V input on a 2-pin header
- 48.0 x 48.0 mm board, four Ø3.5 mm mounting holes on a 41.0 x 41.0 mm pitch
- Four status LEDs
- OEM / ODM: mechanical layout, harness and connector position customisable

SPECIFICATIONS

Model	NSWPL
Function	3-port Ethernet switch module for FB4-based fixtures
Network ports	2 x RJ45, surface-mount, two separate jacks
Controller port	1 x FB4 header, 10-pin 1.50 mm pitch, wired directly to the controller
Port speed	100 Mbit/s on all three ports
Switch controller	5-port 10/100M switch controller, three ports used
Status LEDs	4
Power input	DC 12–24 V, 2-pin header, 2.00 mm pitch
PCB size	48.0 x 48.0 mm, R3.0 corners
PCB thickness	1.6 mm nominal, 6-layer (finished 1.54 mm ±10%)
Mounting	4 x Ø3.5 mm non-plated holes, 41.0 x 41.0 mm pitch, 3.5 mm from each edge
Ingress protection	none on the bare board — sealing comes from the enclosure and panel connectors

TYPICAL APPLICATIONS

- Laser projectors using an FB4 controller, where the network must reach a panel connector
- Outdoor laser fixtures, behind sealed panel-mount network connectors
- Touring and rental fixtures needing network in / through daisy-chaining
- OEM show-control boxes and embedded control panels

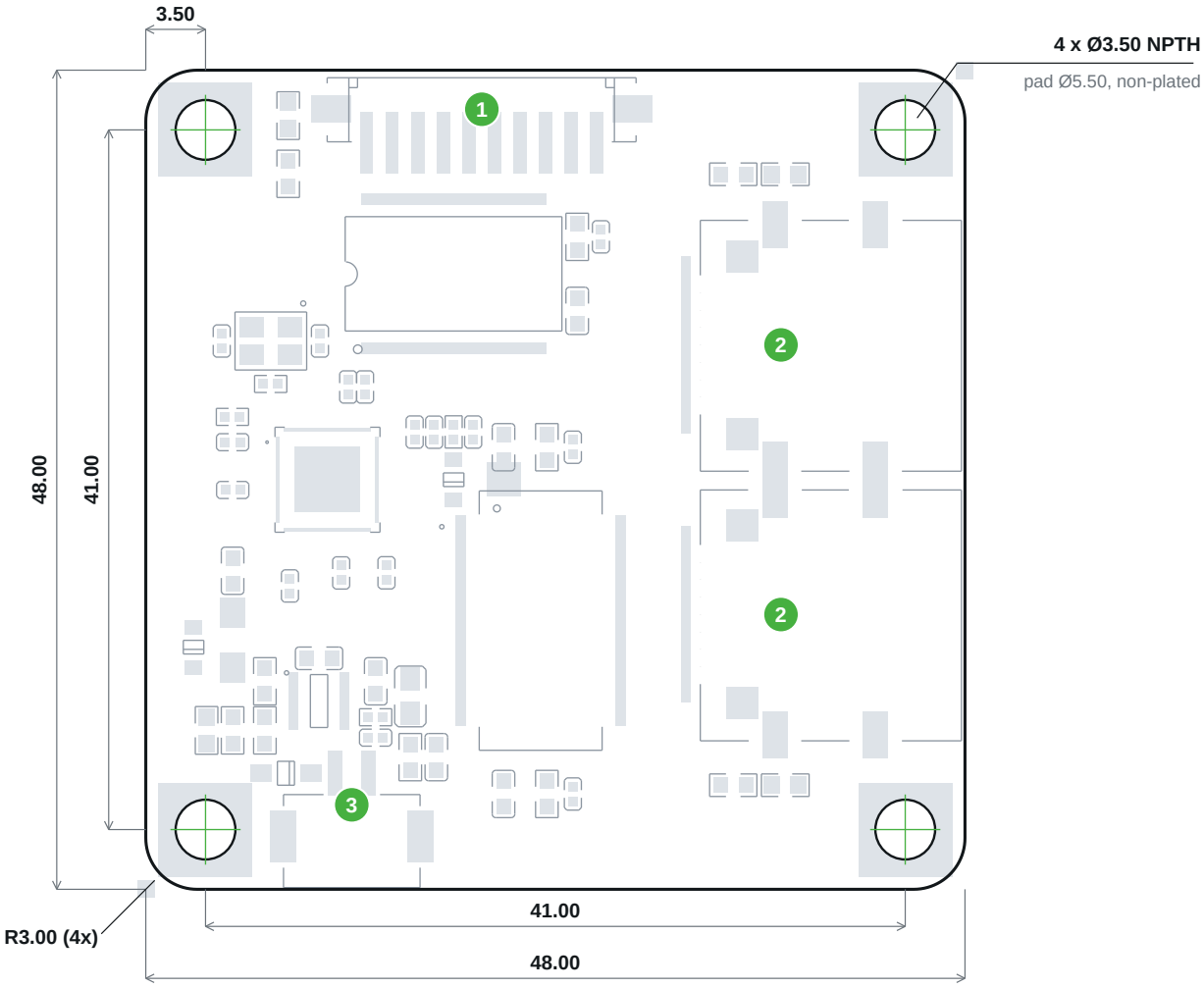
INTEGRATION NOTES

For an outdoor fixture the RJ45 ports are patched to sealed panel-mount network connectors on the housing. The board itself is a bare PCBA and carries no ingress rating of its own; the seal is made by the enclosure and the panel connectors fitted to it.

The FB4 header removes the internal patch lead between switch and controller, which is the usual failure point in a vibrating fixture.

DIMENSIONS

Geometry read from the production CAD file NSWPL_260626.PcbDoc. Boards currently shipping carry the silkscreen marking NSWPL 08.Jun.2026; the outline, mounting pattern and hole sizes shown here are identical on both revisions.



All dimensions in millimetres. Component side (top) view. Tolerance ±0.15 mm unless stated.

CONNECTOR LOCATIONS

Numbers refer to the callouts on the drawing above.

1. FB4 header	10-pin, 1.50 mm pitch
2. Network	2 x RJ45, surface-mount
3. Power	2-pin, 2.00 mm pitch, DC 12-24 V

ORDERING INFORMATION

Order code	NSWPL-16
Pack quantity	16 boards per carton, in a die-cut foam tray
Carton size	367 x 233 x 80 mm (outer)
Shop	www.supercanlight.com/product/nswpl-fb4-network-switch-module/

NOTES

Operating temperature range, ingress rating, net weight and regulatory approvals are not characterised for the bare board and are therefore not stated in this document. Contact info@supercanlight.com for OEM qualification data. Specifications are subject to change; confirm critical dimensions against the current CAD file before committing tooling.