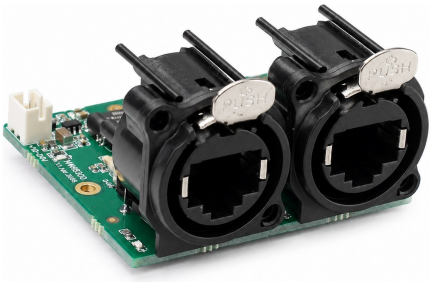
NWB300

3-Port 100M Network Switch Board with Locking Panel Connectors

NWB300 puts the fixture network on two locking, panel-mount RJ45 connectors instead of bare PCB sockets, so the network chain survives the handling a touring or rental fixture gets. A third port is wired straight to the laser controller through the on-board FB4 ribbon header. The connectors are through-panel bodies and carry most of the load; two M2 holes secure the far end of the board.

Both network connectors accept standard locking stage network cables.



KEY FEATURES

- Three 100M ports — 2 x locking panel-mount RJ45 plus 1 x FB4 ribbon header
- Latching connectors survive repeated make/break far better than bare RJ45
- Two M2 mounting holes (Ø2.10 mm, 42.00 mm apart) plus the panel connectors themselves
- 43.0 x 49.0 mm board, 1.6 mm thick
- Four status LEDs
- OEM / ODM: mechanical layout, harness and connector position customisable

SPECIFICATIONS

Model	NWB300
Function	3-port Ethernet switch board for FB4-based fixtures
Network ports	2 x locking panel-mount RJ45, through-panel bodies
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	43.0 x 49.0 mm, R1.5 corners
PCB thickness	1.6 mm nominal, 6-layer (finished 1.54 mm ±10%)
Mounting	2 x M2 holes, Ø2.10 mm, 42.00 mm apart — plus the two panel connectors, which carry most of the load
Ingress protection	none on the bare board — sealing comes from the enclosure and panel connectors

TYPICAL APPLICATIONS

- Touring and rental fixtures where the network connector takes repeated handling
- Laser projectors using an FB4 controller, with the network brought out to the panel
- Control panels and OEM show-control boxes needing a latching network inlet

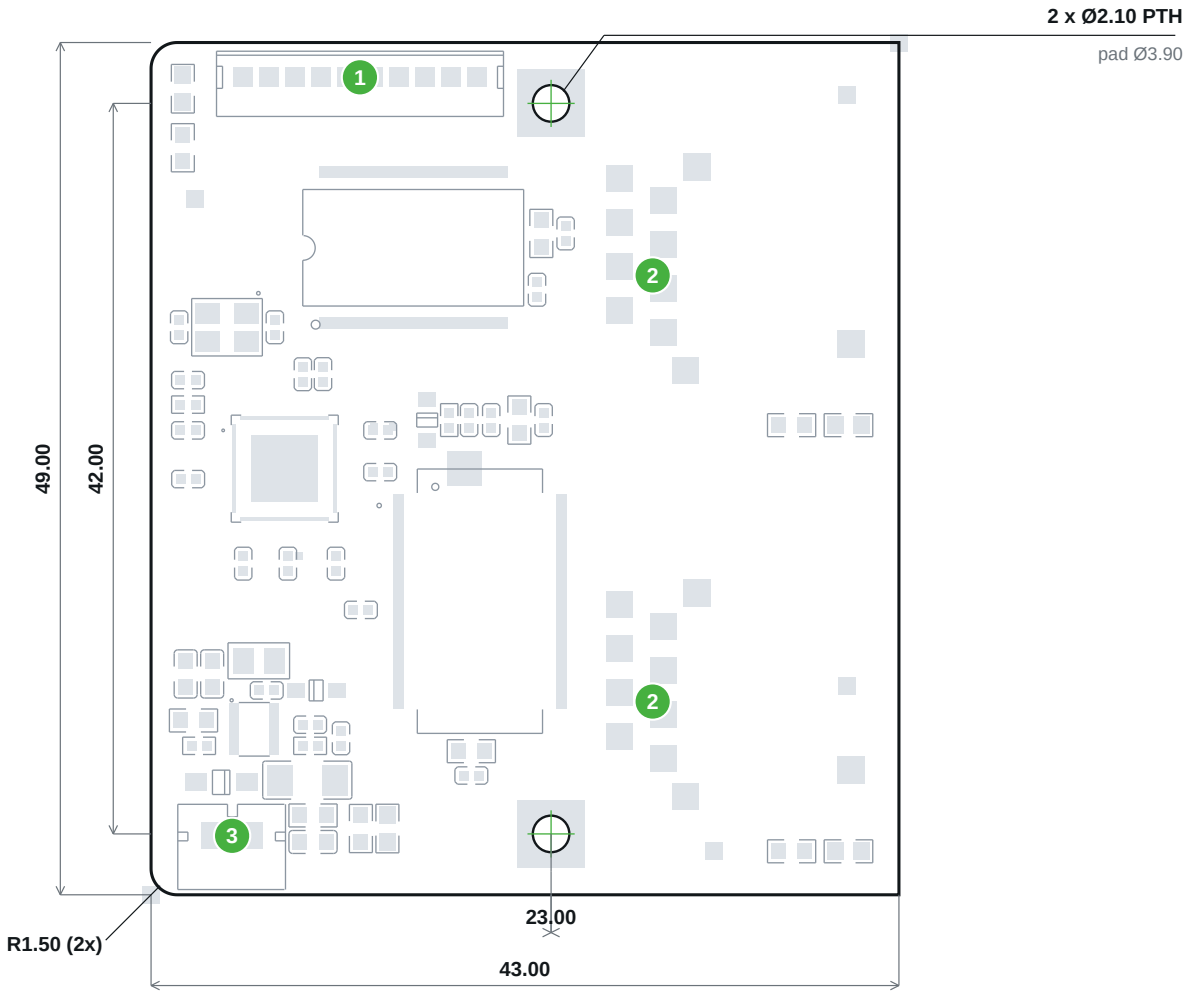
INTEGRATION NOTES

The two network connectors are through-panel bodies: they pass through the fixture panel and carry most of the load, with two M2 holes securing the far end of the board. Panel cut-outs and connector fixing centres are set by the connector, not by this PCB — take them from the connector manufacturer drawing.

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

DIMENSIONS

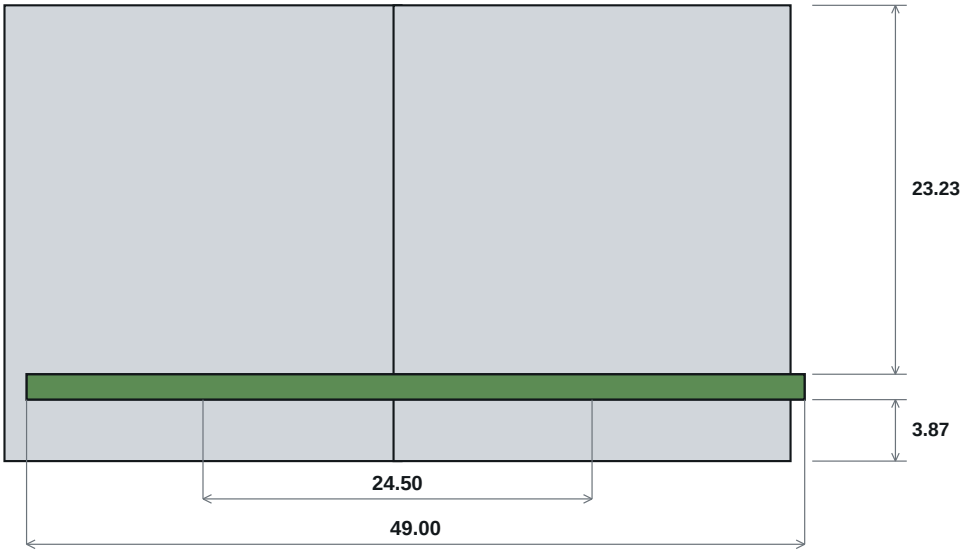
Geometry read from the production CAD file NWB300_260417_1946_3.PcbDoc. Boards currently shipping carry the silkscreen marking NWB300.



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

CONNECTOR-FACE ELEVATION

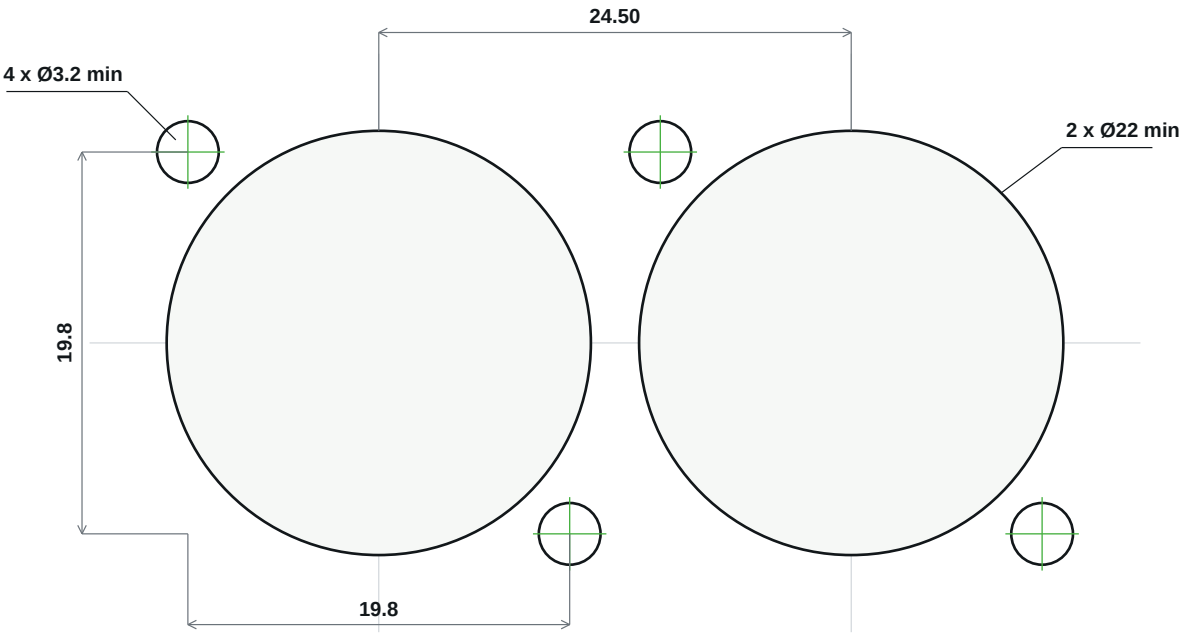
Viewed square on to the network connectors — the face a panel designer works to.



Board 1.6 mm thick. Connector envelope 25.00 mm wide, 23.23 mm above and 3.87 mm below the board.
Envelope from the connector manufacturer 3D model. Panel cut-out and connector fixing centres come from its datasheet, not from this PCB.

PANEL CUT-OUT

Drilling for the fixture panel. Both connectors share one orientation.



Aperture and fixing pattern per connector: Neutrik NE8FAH drawing 20005999 rev C.
The 24.50 mm between connector centres is set by this PCB. Fixing holes are diagonal, 19.8 ±0.1 mm apart on both axes.
Viewed from the rear (inside) face of the panel.

CONNECTOR LOCATIONS

Numbers refer to the callouts on the drawing above.

1. FB4 header	10-pin, 1.50 mm pitch
2. Network	2 x locking panel-mount RJ45
3. Power	2-pin, 2.00 mm pitch

ORDERING INFORMATION

Order code	NWB300-16
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/nwb300-locking-panel-network-switch/

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.