

Hardened 4-port 10/100/1000BaseTX to 1-FX 1000BaseFX Industrial Ethernet PoE Switch

E-LINK LNKGY104GP-20



**User's Manual
(V1.0 Version)**

Overview

LNK-GY104GP Series unmanaged Ethernet PoE switch is designed for hardened industrial environment. It is classified as power resource equipment, which can be used to power IEEE 802.3af/at compliant powered devices, eliminates the need of additional wiring.

Package Checklist

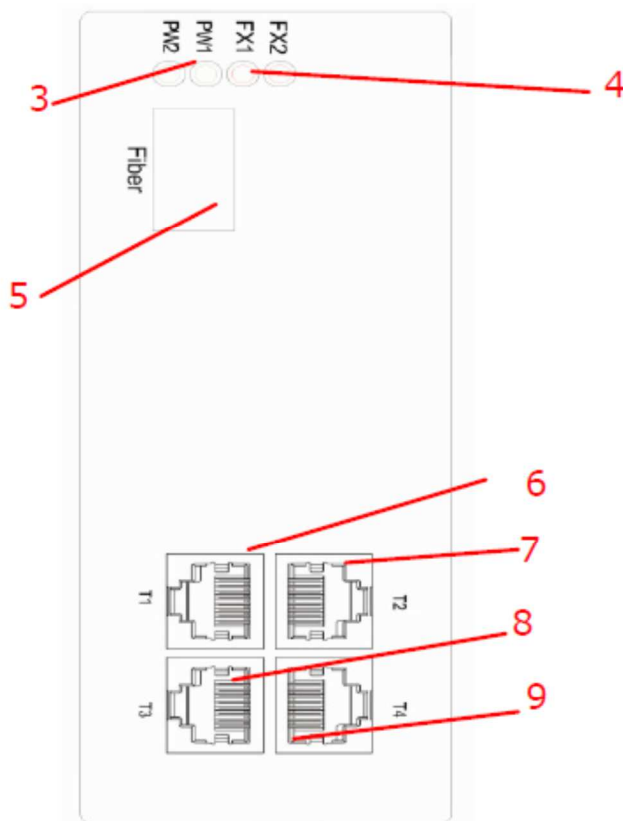
E-link's 4-port 10/100/1000BaseTX to 1-FX 1000BaseFX Industrial PoE Switch is shipped with the following items. If any of these items are missing or damaged, please contact your customer service representative for assistance.

- LNK-GY104GP series x 1
- User's Manual (CD format) x1
- Warranty card x1

Features

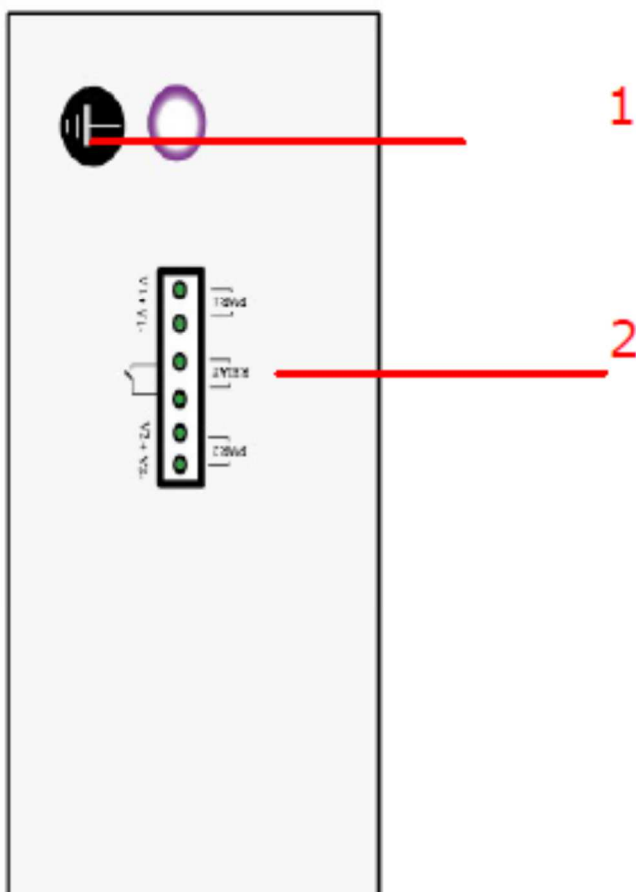
- 4 10/100/1000 TX PoE ports and 1 1000 FX uplink port
- 20KM for Single-Mode / 550m for Multi-Mode Fiber Uplink Port
- Up to 30W at 48V DC power output on each PoE port
- Terminal Block Power Input for Industrial Application.
- Super lightning protection, IP40 protection
- Excellent heat elimination without cooling fan
- Redundant dual DC power inputs
- -40℃-85℃ operating temperature range
- DIN-Rail/ Wall-mounting and Desktop Installation

Panel Layout

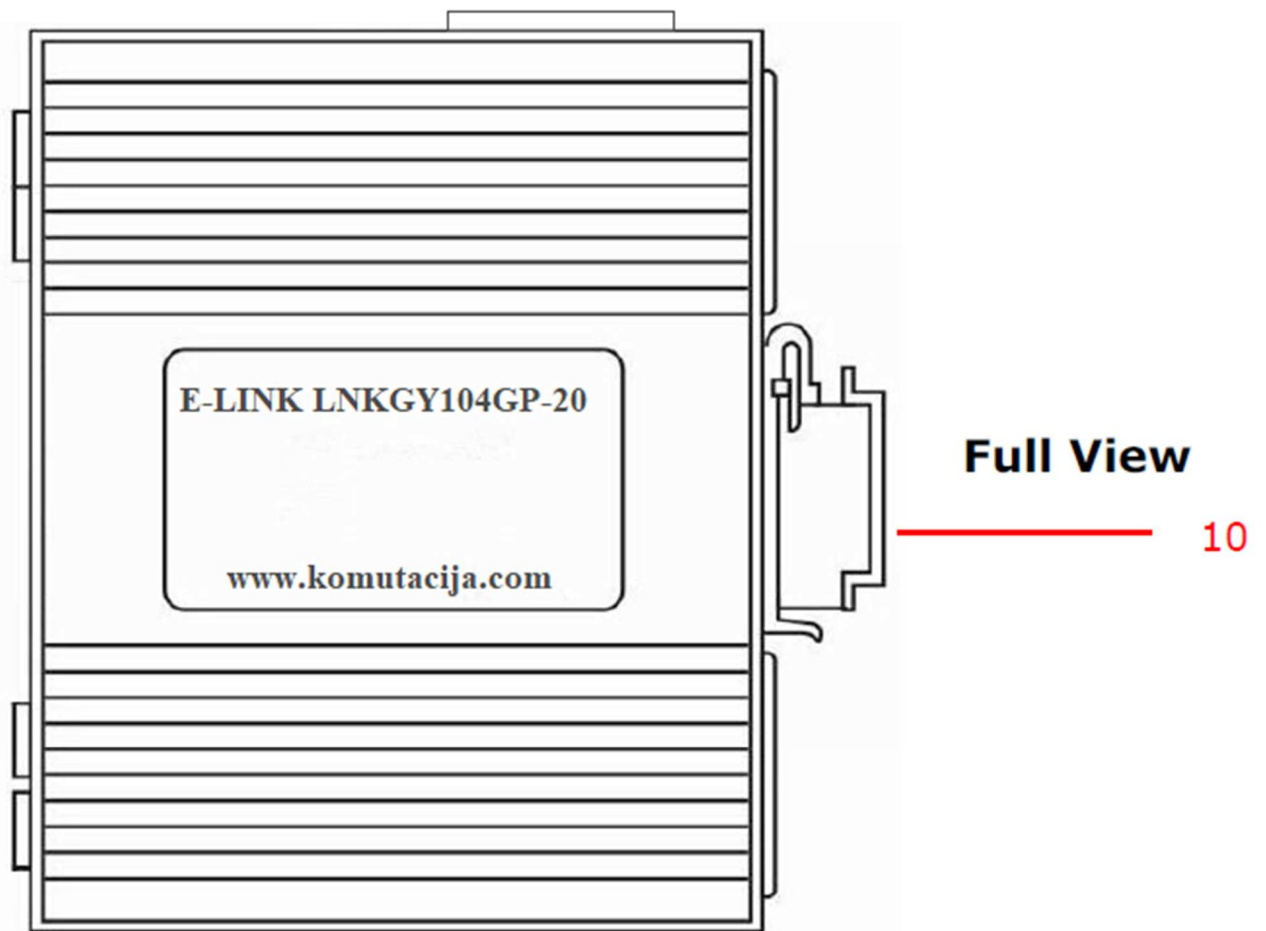


Front View

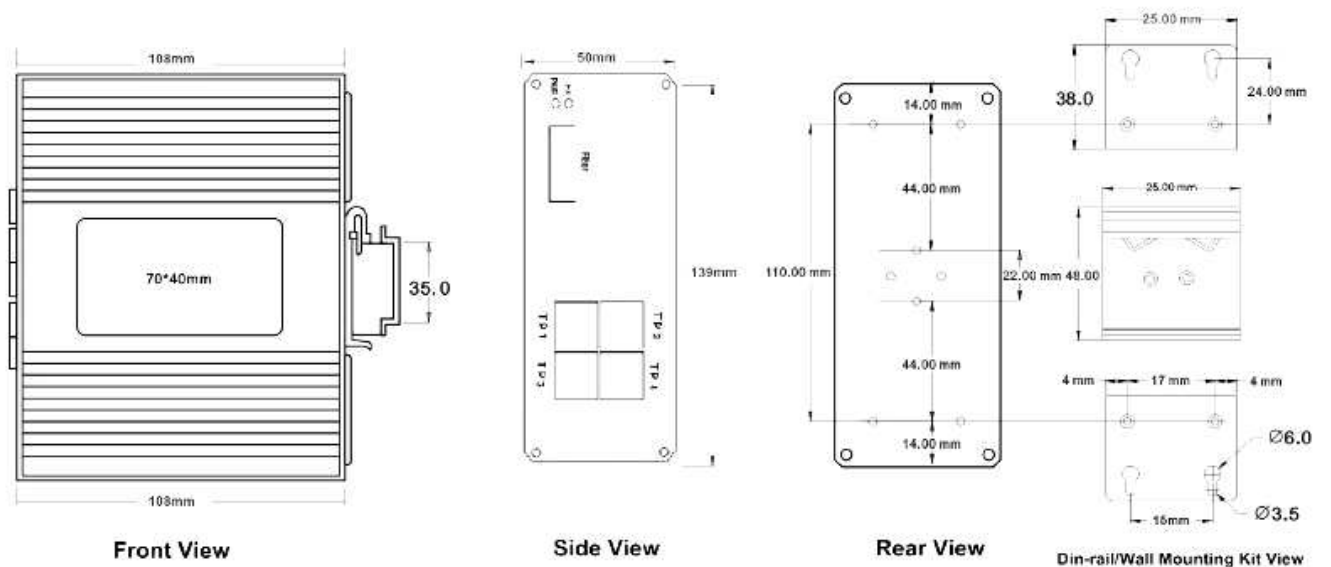
1. Shielding Ground
2. Terminal block for power input
3. Power LED
4. FX LED
5. Fiber Port: SC/ST
6. TP1 Port 10/100/1000M
7. TP2 Port 10/100/1000M
8. TP3 Port 10/100/1000M
9. TP4 Port 10/100/1000M
10. DIN rail kit



Top View

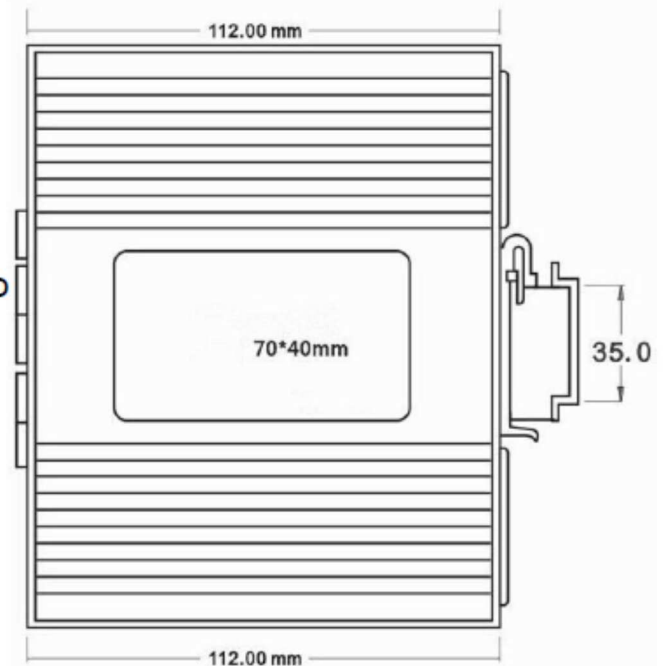


Mounting Dimensions



DIN Rail Mounting

The aluminum DIN rail attachment plate should be fixed to the back panel of the Converter when you take it out of the box. If you need to reattach the DIN rail attachment plate to the Converter, make sure the stiff metal spring is situated towards the top.



Wiring Requirements



ATTENTION

Safety First!

Be sure to disconnect the power cord before installing and/or wiring E-link LNK-GY104GP Series.

Calculate the maximum possible current in each power wire and common wire. Observe all electrical codes dictating the maximum current allowable for each wire size.

If the current goes above the maximum rating, the wiring could overheat, causing serious damage to your equipment.

- Use separate paths to route wiring for power and devices. If power wiring and device wiring paths must cross, make sure the wires are perpendicular at the intersection point.
- Do not run signal or communications wiring and power wiring in the same wire conduit. To avoid interference, wires with different signal characteristics should be routed separately.
- You can use the type of signal transmitted through a wire to determine which wires should be kept separate. The rule of thumb is that wiring that shares similar electrical characteristics can be bundled together.
- Keep input wiring and output wiring separated.
- We strongly advise that you label wiring to all devices in the system.

Grounding the E-link LNK-GY104GP Series



Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface prior to connecting devices.



ATTENTION

This product is intended to be mounted to a well-grounded mounting surface such as a metal panel.

Wiring the Power Inputs

The 6-contact terminal block connector on the Industrial Media Converter's top panel is used for the Industrial Media Converter's two DC inputs. Top and front views of one of the terminal block connectors are shown here.



STEP 1: Insert the negative/positive DC wires into the V-/V+ terminals.

STEP 2: To keep the DC wires from pulling loose, use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.

STEP 3: Insert the plastic terminal block connector prongs into the terminal block receptor located on E-link LNK-GY104GP Series's top panel.

Redundant Power Inputs

Both power inputs can be connected simultaneously to live DC power sources. If one power source fails, the other live source acts as a backup, and automatically supplies all of the Industrial Media Converter's power needs.

Communication Connections

RJ45 Ethernet Port Connection

The E-link LNK-GY104GP Series has 4 Ethernet port located on the front panel for connecting to Ethernet-enabled devices.

When connected to a 10/100/1000Mbps Ethernet port, the pinouts and cable wiring diagrams for both MDI (NIC-type) and MDI-X (HUB/switch type) ports for both straight-through and cross-over Ethernet cables are:

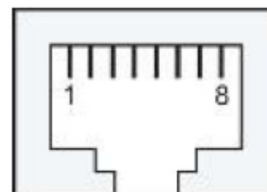
MDI Port Pinouts

Pin	Signal
1	Tx+
2	Tx-
3	Rx+
6	Rx-

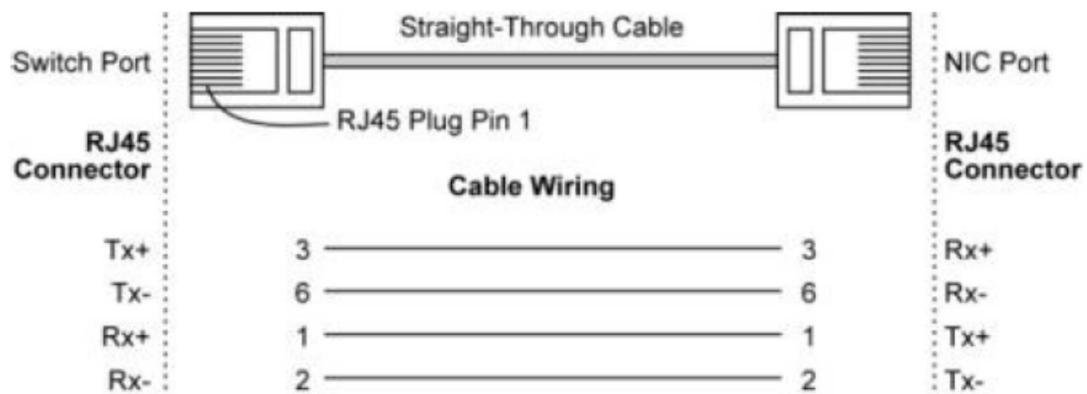
MDI-X Port Pinouts

Pin	Signal
1	Rx+
2	Rx-
3	Tx+
6	Tx-

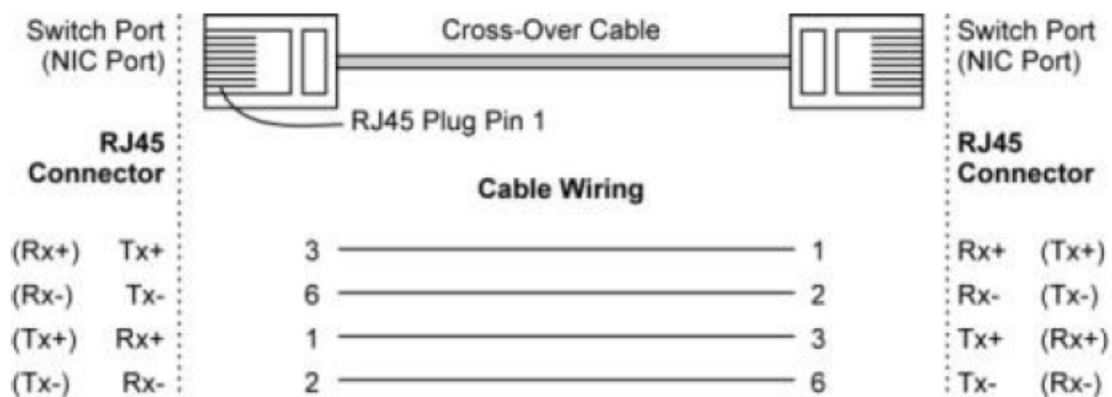
8-pin RJ45



Straight-Through Cable Wiring



Cross-Over Cable Wiring

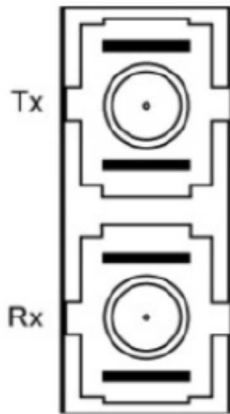


SC/ST Fiber Optic Port Connection

The concept behind the SC/ST port and cable is straightforward. Suppose you are connecting devices I and II. Contrary to electrical signals, optical signals do not require a circuit in order to transmit data. Consequently, one of the optical lines is used to transmit data from device I to device II, and the other optical line is used to transmit data from device II to device I, for full-duplex transmission.

All you need to remember is to connect the Tx (transmit) port of device I to the Rx (receive) port of device II, and the Rx (receive) port of device I to the Tx (transmit) port of device II. If you make your own cables, we suggest labeling the two sides of the same line with the same letter (A-to-A and B-to-B, as shown below, or A1-to-A2 and B1-to-B2).

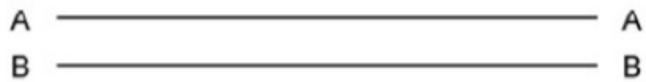
SC-Port Pinouts



SC-Port to SC-Port Cable Wiring



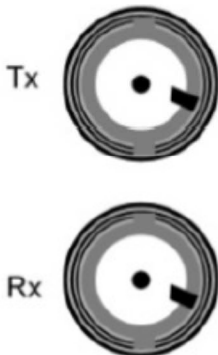
Cable Wiring



ATTENTION

This is a Class 1 Laser/LED product. To avoid causing serious damage to your eyes, do not stare directly into the laser beam.

ST-Port Pinouts



ST-Port to ST-Port Cable Wiring



Cable Wiring



Technical Specifications

Parameter	Specifications
Switch Properties	MAC Table Size: 2K Packet Buffer Size: 6KX64bit Processing Type: Store and Forward Exchange Properties: 1488000pps (1000M)
Physical Characteristics	Housing: Aluminum Alloy material with IP40 Protection Dimension: 139mm(L) X 108mm(W) X 50mm(H) Weight: 640g Installation: Din-Rail mounting, Wall mounting
Interfaces	4 RJ45 Ports Comply with IEEE802.3, IEEE802.3u, 10/100/1000Base-T(X), IEEE802.3af/at PoE, 10/100/1000Base-T(X) auto negotiation speed Full/Half duplex mode Auto MDI-MDI-X connection Up to 100m Cat-5 transmission distance 1 Fiber Port Comply with IEEE802.3u, 100Base-FX Rate: 1000Mbps Wavelength: 1310nm/1550nm Up to 550m transmission distance with multi-mode Up to 20km,40km,60km,80km transmission distance with single-mode SC/ST/FC interfaces optional
Power	Input Voltage: 48V DC(46-56VDC), Redundant dual inputs Input Current: <0.5A @24VDC Overload Current Protection: Present Reverse Polarity Protection: Present Redundant Protection: Present Connection: 1 removable 6-pin terminal blocks
Environmental Limits	Operating Temperature: -40°C-85°C Storage Temperature: -40°C-85°C Ambient Relative Humidity: 5%-95% (non-condensing)
Approvals	Safety: UL 60950-1

	<p>EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A</p> <p>EMS:</p> <ul style="list-style-type: none">• EN61000-4-2 (ESD) , Level 3• EN61000-4-3 (RS) , Level 3• EN61000-4-4 (EFT) , Level 3• EN61000-4-5 (Surge), Level 3• EN61000-4-6 (CS) , Level 3• EN61000-4-8, Level 3 <p>Shock: IEC 60068-2-27 Free Fall: IEC 60068-2-32 Vibration: IEC 60068-2-6 EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A Industry: IEC61000-6-2 Rail: EN50155, EN50121-4 Traffic: NEMA TS-2</p>
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