# 2-Port 10/100/1000Base-T to 1-Port 100/1000BASE-X

## Mini Industrial AI Smart Managed Fiber Media Converter

## Features

► Self-developed intelligent management system by E-link, supporting Android mobile APP and PC web UI

► One-click LED screen display real-time data dashboard: system current, voltage, internal temperature, SFP transmit/receive optical power, Ethernet & fiber port link speeds and more

► Rich APP & web management capabilities: intuitive graphical dashboard for full device status; complete SFP information & DDM diagnostic data; customizable optical power alarm thresholds; user-defined scheduled port/device reboot

► Wide 9–54VDC power input

► 2 X Port 10/100/1000Base-T

► 1 X 100/1000BASE-X SFP fiber uplink port

► Mini Size: 98 x 67 x 46 mm

► One-click VLAN isolation

► 10M 250m transmission

► 6KV lightning surge protection on all ports

► Wide operating temperature: -40°C ~ +75°C (-40°F ~ 167°F)




## Overview

The LNK-AIMC102GM is a compact AI smart managed industrial fiber media converter independently developed by E-link. Each unit is equipped with 2×10/100/1000Base-T RJ45 ports + 1×100/1000BASE-X SFP fiber port.

This world-first innovative device combines the dual advantages of managed and unmanaged switches. Engineers can monitor device status via multiple methods: mobile APP, PC web management interface and LED Display without additional test tools.

Data cover:voltage,current, temperature, Ethernet port status, SFP port working status,as well as detailed SFP DDM parameters such as optical power, wavelength, transmission distance, link rate and module temperature.

**We innovated this product based on standard switches:**

Device function:Fiber Port Alarm, Scheduled System Reset,VLAN Isolation,10M 250m Transmission Support. The redundant-mode supports auto -recover function. If the destination port of a packet is link-down, it forwards the packet to the other port of the backup pair

Meets IP40, aluminum housing, works stably under harsh industrial temperatures from -40℃ to 75℃.

Equipped with dual redundant power supplies, it keeps Ethernet working stably 24X7.

**Application Scenarios:**

Intelligent Manufacturing & Automation: data transmission and multi-device interconnection

Power & New Energy: Surveillance communication and cluster networking.

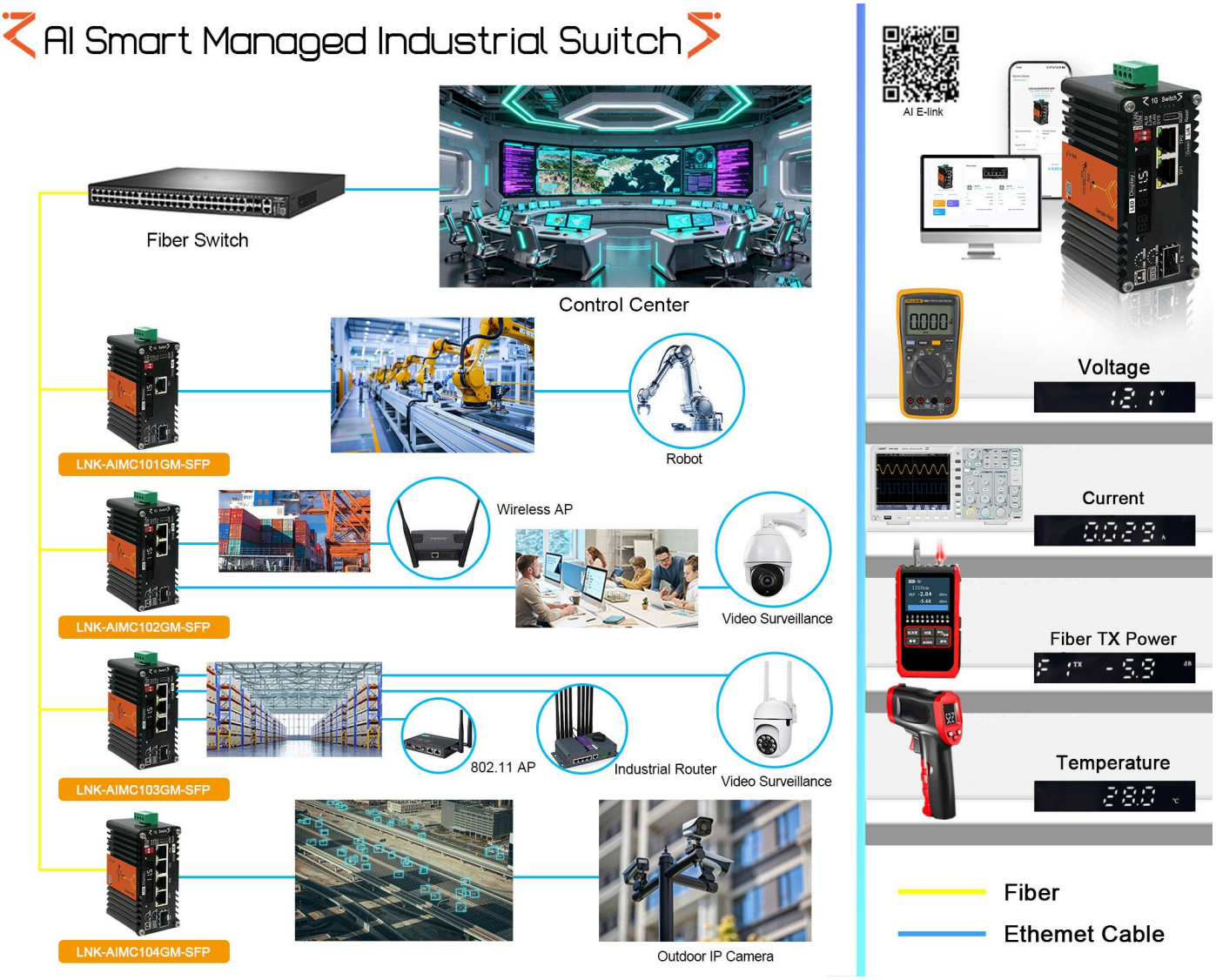
Rail Transit & Tunnel Engineering: Real-time video monitoring and signal transmission.

Oil, Gas & Mining Sites: Stable communication

Smart City & New Infrastructure Deployment

In addition, this product can be used in fields such as autonomous driving, humanoid robots, AI computing, metallurgy, chemical engineering, outdoor research base stations and field weather monitoring.

# Application

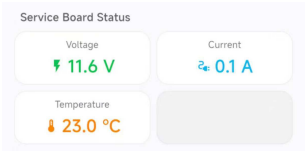
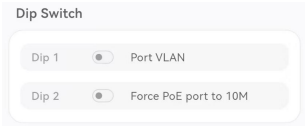


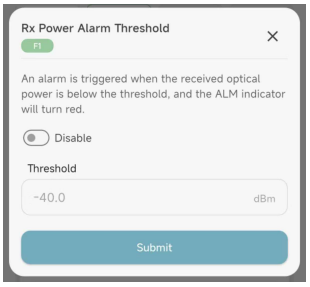
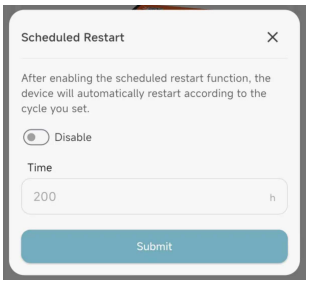
## E-link App and PC Web




## Technical Indexes

| Industrial AI Smart Managed Fiber Media Converter | |
|---|---|
| Access Mode | 1x100/1000BASE-X SFP to 2x10/100/1000BASE-T RJ45 |
| **Ethernet** | |
| Standards | Standards Compliance IEEE 802.3 Ethernet |
| | IEEE 802.3u Fast Ethernet |
| | IEEE 802.3ab Gigabit Ethernet |
| | IEEE 802.3x Full-Duplex Flow Control |
| | IEEE 802.3az Energy Efficient Ethernet (EEE) |
| Processing Type | Store-and-Forward |
| Forward Filter Rate | 14,880pps (10Mbps) |
| | 148,800pps (100Mbps) |
| | 1,488,000pps (1000Mbps) |
| Packet Buffer Memory | 1 Mbit |
| Max Packet Length | 9K Bytes |

| | | | |
|---|---|---|---|
| Switching Capacity | 10Gbps/non-blocking | | |
| **PC (Support MacOS, Windows)** | | | |
| MacOS Browser: | Microsoft Edge 89+ (Release date: 2021-03-04 or later version)<br>Google Chrome 89+ (Release date: 2021-03-02 or later version)<br>Opera 75+ (Release date: 2021-03-24 or later version) | | |
| Windows Browser: | Microsoft Edge 89+ (Release date: 2021-03-04 or later version)<br>Google Chrome 89+ (Release date: 2021-03-02 or later version)<br>Opera 75+ (Release date: 2021-03-24 or later version) | | |
| **Mobile App (Support Android, Not Support iOS)** | | | |
| Mobile Phone APP(Android) | Support all Android Mobile Phone and Android Tablet | | |
| Mobile iPhone APP(iOS) | Not Support iPhone or iPad | | |
| **AI Smart Managed Functions** | | | |
| Service Board Status | Temperature | |  |
| | Voltage | | |
| | Current | | |
| RJ45 Port Status | Link Status | | |
| | Rate | | |
| | VLAN | | |
| SFP Port Status | Link Status | | |
| | PN/SN | | |
| | TX Power | | |
| | RX Power | | |
| | All DDM Information | | |
| DIP Switch | DIP1 | VLAN |  |
| | DIP2 | 10M | |

| | | |
|---|---|---|
| Fiber Port Alarm | Support |  |
| Scheduled Reset | Support |  |
| **Interface Port** | | |
| Ethernet Port | 2-Port 10/100/1000BASE-T Ethernet RJ45 interface Auto-negotiation, auto MDI/MDI-X | |
| | 2-Port 10/100/1000BASE-T | |
| | Cable: Cat 5e or above;<br>Distance: ≤100 meters at 1000M data rate, ≤250 meters at 10M data rate | |
| SFP Port | 1-Port 100/1000BASE-X SFP (Backward compatible with 100BASE-X and 1000BASE-X and transceivers) (auto detection) | |
| | Cable:<br>Multi-Mode: 50/125um or 62.5/125um fiber optic cable, distance: 550m/2km;<br>Single Mode: 9/125um fiber optic cable, distance: 20/40/80/100/120/160/200km | |
| **Electrical and Mechanical** | | |
| Input Power | 9~54V DC, 4-pin terminal block | |
| Power Consumption | 5W Max | |
| Dimensions (W x D x H) | 98 x 67 x 46 mm | |
| Weight | 300g | |
| Casing | Aluminum Case | |
| Mounting Options | DIN-Rail | |
| **LED Indicators** | | |
| SYS | Green LED Blinking: Operating normally | |
| VLAN | Green Solid On: VLAN On | |
| | Green Solid Off: VLAN Off | |
| Link | Green LED Solid On: SFP port link established | |
| | Green LED Blinking: Data transmission | |
| | Green LED Off: SFP port no link | |
| ALM | Red LED Solid On: Received optical power below threshold | |
| | Red LED Off: Received optical power normal | |
| TP1-2 L/A | Green LED Solid On: Ethernet port link | |
| | Green LED Slow Blink: Ethernet port link rate is 10M/100M/1000M | |
| | Green LED Off: Ethernet port no link | |
| **Environmental** | | |
| Operating Temperature | -40°C to 75°C (-40°F to 167°F) | |

| | |
|---|---|
| Storage Temperature | -40°C to 85°C (-40°F to 185°F) |
| Relative Humidity | 5% to 95% non-condensing |
| MTBF | > 200,000 hrs |
| **Regulatory Approvals** | |
| ISO9001, CE, FCC Part 15 Class A, RoHS | |
| EMI:<br>EN55022:2010+AC: 2011, Class A<br>EN 61000-3-2: 2006+A1: 2009+A2: 2009<br>EN 61000-3-3: 2013<br>EN55024: 2010 | |
| EMS:<br>IEC 61000-4-2: 2008 (ESD)<br>IEC 61000-4-3: 2010 (RS)<br>IEC 61000-4-4: 2012 (EFT)<br>IEC 61000-4-5: 2014 (Surge)<br>IEC 61000-4-6: 2013 (CS)<br>IEC 61000-4-8: 2009 (PFMF) | |

## Ordering Information

| **Model** | **Description** |
|---|---|
| LNK-AIMC102GM-SFP | Industrial AI Smart Managed 1-Port 100/1000Base-X SFP to 2-Port 10/100/1000BASE-T Fiber Media Converter, 9V to 54V DC power input |
| SFP Options | ► SFP option. Please select your SFP on our SFP Options Page. |
| | ► SFP module is to be purchased separately. |
| Mounting Options | ► Default DIN-Rail bracket included. |
| Power Options | ► 24W/1A 24VDC Power Supply. Open Wire for Terminal Block |
| | ► Power Supply is to be purchased separately. |