2-Port 10/100/1000Base-T IEEE802.3bt PoE++ 60W to 1-Port 100/1000BASE-X

Mini Industrial AI Smart Managed PoE++ Fiber Media Converter with Voltage Booster

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 with built-in voltage boost circuit,

• 12V input → 60W PoE output

• 24V input → 120W PoE output

• 48V input → 120W PoE output

► Compliant with IEEE 802.3af/at/bt PoE++ PSE standard, customizable versions for Starlink Gen 2 / Gen 3 compatibility

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

► One-click VLAN isolation and 10M 250m transmission

► 6KV lightning surge protection on all ports

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



Overview

The LNK-AIMC102GMP60-SFP is a compact AI smart managed industrial PoE media converter independently developed by E-link. Each unit is equipped with 2×10/100/1000Base-T RJ45 PoE++ ports + 1×100/1000BASE-X SFP fiber port, integrated with a built-in voltage boost circuit specially optimized for solar power supply applications.

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, PoE 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, PoE Scheduled Restart, 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.

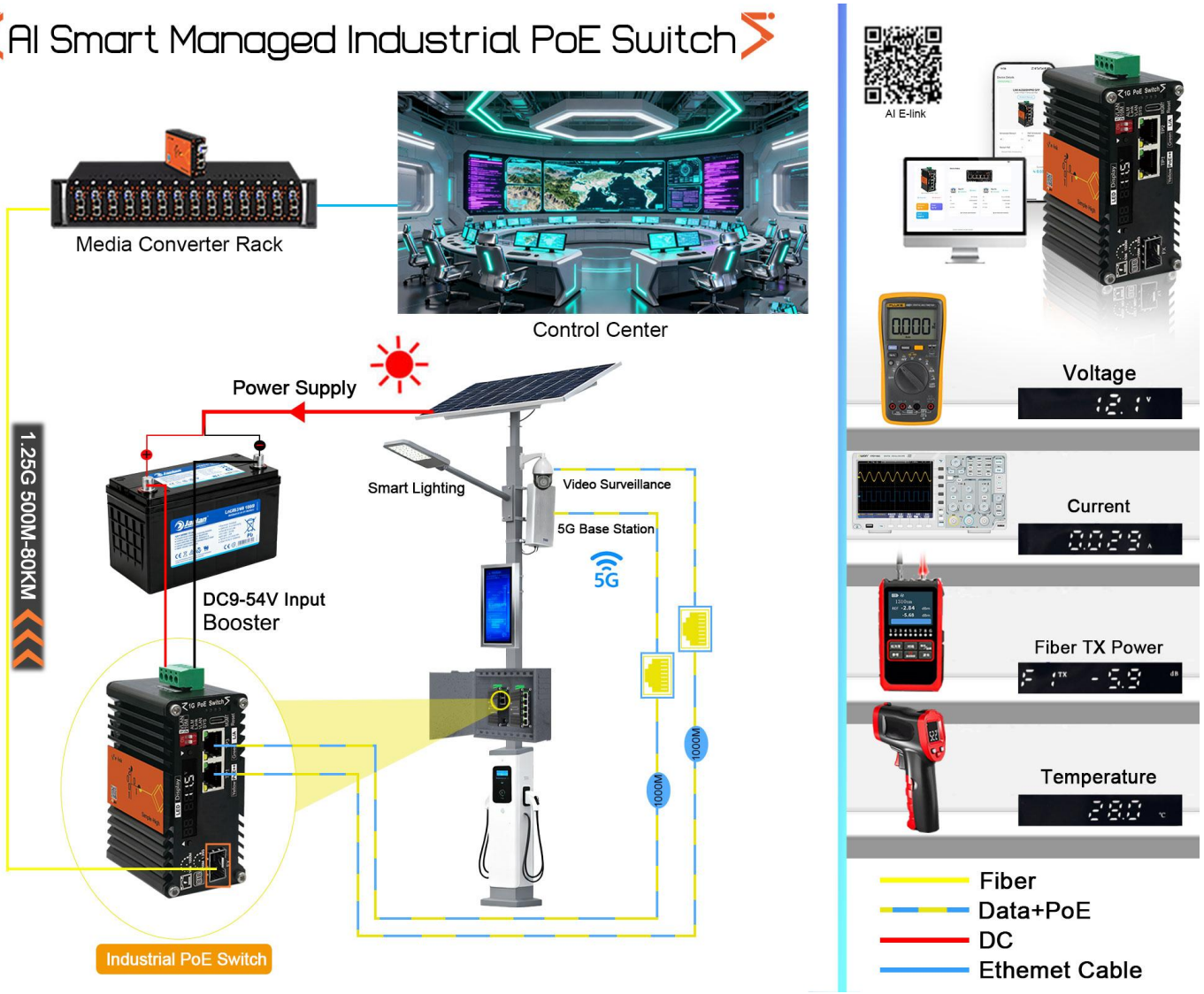
Oil, Gas & Mining Sites: Stable communication

Smart City & New Infrastructure Deployment

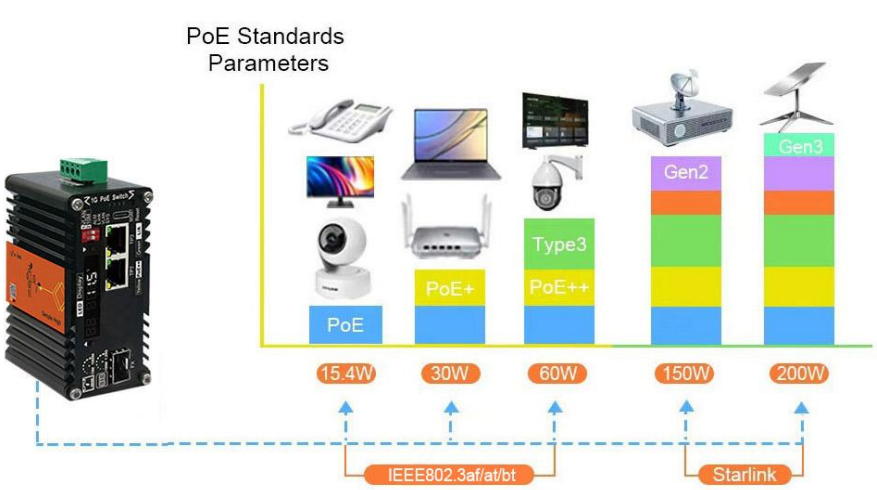
In addition, this product can be used in fields such as autonomous driving, humanoid robots, AI computing, metallurgy, chemical engineering, outdoor research base stations and field weather monitoring.

Application

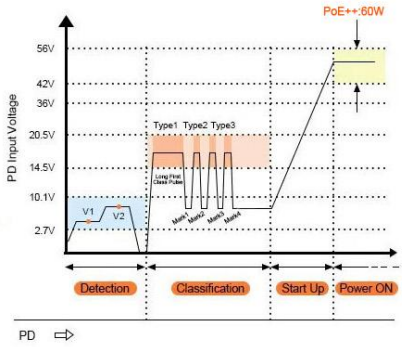
AI Smart Managed Industrial PoE Switch



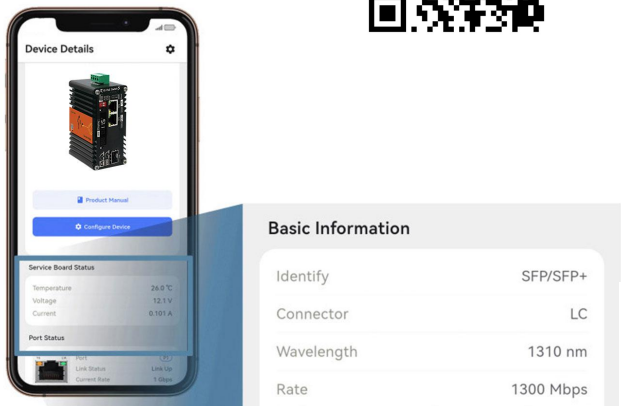
PoE Standards Parameters							
PoE Standards		**Input(V)**	**Current(A)**	**Output(V)**	**Power(W)**	**PoE Pin**	**Mode**
IEEE802.3af/at/bt	af/at/bt	9-12	5	48V	60	1/2(+),3/6(-); 4/5(+),7/8(-)	ModeA&B
	af/at/bt	19-24	5	48V	120	1/2(+),3/6(-); 4/5(+),7/8(-)	ModeA&B
	af/at/bt	48-54	5	48V	120	1/2(+),3/6(-); 4/5(+),7/8(-)	ModeA&B
Starlink PoE	Gen2	48-56	2.67	56	150	1/2(+),3/6(-); 4/5(+),7/8(-)	
	Gen3	48-56	3.57	56	200	1/2(+),3/6(-); 4/5(+),7/8(-)	

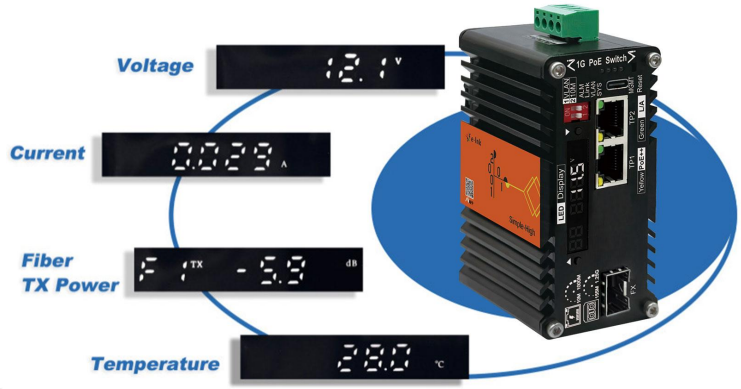


Utilizing hardware IEEE802.3af/at/bt PoE chipset, it automatically powers up PD device with 4 steps (PD Detection -> PoE Classification -> Start Up -> Power ON). Itallocates appropriate power to IEEE802.af/at/bt PoE devices, and no power for non-PoE devices.It ensures high safety for PoE and Non-PoE devices.



E-link App and PC Web



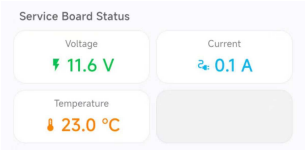


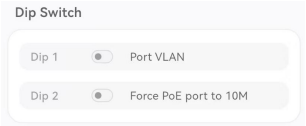
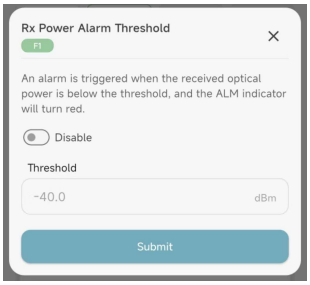
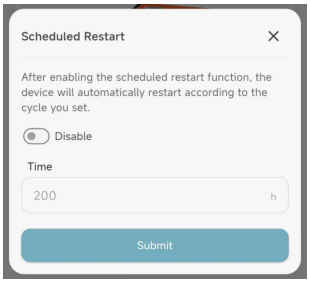
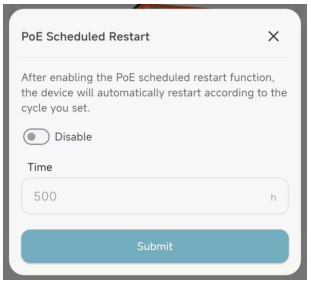
Basic Information	
Identify	SFP/SFP+
Connector	LC
Wavelength	1310 nm
Rate	1300 Mbps
Distance	SM 20 km

DDM Information	
Temperature	33.9 ℃
VCC	3.3 V
Tx Bias	18.2 mA
Tx Power	-5.9 mW
Rx Power	-40.0 mW



Technical Indexes

Industrial AI Smart Managed PoE++ Fiber Media Converter with Voltage Booster		
Access Mode	1x100/1000BASE-X SFP to 2x10/100/1000BASE-T RJ45 PSE IEEE802.3af/at/bt	
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) Google Chrome 89+ (Release date: 2021-03-02 or later version) Opera 75+ (Release date: 2021-03-24 or later version)	
Windows Browser:	Microsoft Edge 89+ (Release date: 2021-03-04 or later version) Google Chrome 89+ (Release date: 2021-03-02 or later version) 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	
	PSE Supply Voltage	
	PSE Power Consumption	
	Power Pin Assignment	

<table>
<tr><td rowspan="5">SFP Port Status</td><td colspan="2">Link Status</td><td rowspan="5"></td></tr>
<tr><td colspan="2">PN/SN</td></tr>
<tr><td colspan="2">TX Power</td></tr>
<tr><td colspan="2">RX Power</td></tr>
<tr><td colspan="2">All DDM Information</td></tr>
<tr><td rowspan="2">DIP Switch</td><td>DIP1</td><td>VLAN</td><td rowspan="2">
</td></tr>
<tr><td>DIP2</td><td>10M</td></tr>
<tr><td>Fiber Port Alarm</td><td colspan="2">Support</td><td>
</td></tr>
<tr><td>Scheduled Reset</td><td colspan="2">Support</td><td>
</td></tr>
<tr><td>PoE Power Scheduled</td><td colspan="2">Support</td><td>
</td></tr>
<tr><td colspan="4">Interface Port</td></tr>
<tr><td rowspan="3">Ethernet Port</td><td colspan="3">2-Port 10/100/1000BASE-T Ethernet RJ45 interface Auto-negotiation, auto MDI/MDI-X</td></tr>
<tr><td colspan="3">2-Port 10/100/1000BASE-T Support IEEE802.3af/at/bt</td></tr>
<tr><td colspan="3">Cable: Cat 5e or above;
Distance: ≤100 meters at 1000M data rate, ≤250 meters at 10M data rate</td></tr>
<tr><td rowspan="2">SFP Port</td><td colspan="3">1-Port 100/1000BASE-X SFP (Backward compatible with 100BASE-X and 1000BASE-X and transceivers) (auto detection)</td></tr>
<tr><td colspan="3">Cable:
Multi-Mode: 50/125um or 62.5/125um fiber optic cable, distance: 550m/2km;
Single Mode: 9/125um fiber optic cable, distance: 20/40/80/100/120/160/200km</td></tr>
</table>

PoE (Power over Ethernet)				
Standard	IEEE 802.3af/at/bt PoE++ PSE (af: 15.4W, at: 30W, bt type3: 60W)			
PoE Power Output	60 watts max.			
Power Pin Assignment	End-span + Mid-span: 1/2(+), 3/6(-); 4/5(+),7/8(-)			
PoE Budget	Up to 60-watt PoE budget (9-54VDC)			
PoE Power Supply Type	IEEE 802.3af/at/bt (If need passive PoE please contact customer service)			
PoE Mode	Compatible with Mode A and Mode B.			
Voltage Booster	DC 9-12V Input	PoE 48V Output, max 60W	DC 19-24V Input	PoE 48V Output, max 120W
	DC 24-36V Input	PoE 48V Output, max 120W	DC 48-54V Input	PoE 48V Output, max 120W
Electrical and Mechanical				
Input Power	9~54V DC, 4-pin terminal block			
Power Consumption	5W Max. (When PoE not used)			
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			
TP1-2 PoE	Yellow LED Solid On: Connected PD			
	Yellow LED Off: Not connected PD			
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: EN55022:2010+AC: 2011, Class A EN 61000-3-2: 2006+A1: 2009+A2: 2009 EN 61000-3-3: 2013 EN55024: 2010				

EMS: IEC 61000-4-2: 2008 (ESD) IEC 61000-4-3: 2010 (RS) IEC 61000-4-4: 2012 (EFT) IEC 61000-4-5: 2014 (Surge) IEC 61000-4-6: 2013 (CS) IEC 61000-4-8: 2009 (PFMF)

Ordering Information

Model	Description
LNK-AIMC102GMP60-SFP	Industrial AI Smart Managed 1-Port 100/1000Base-X SFP to 2-Port 10/100/1000BASE-T IEEE802.3bt 60W PoE++ Fiber Media Converter, 9V to 54V DC power input, with Voltage Booster.
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	► 120W/2.5A 48VDC Power Supply. Open Wire for Terminal Block
	► Power Supply is to be purchased separately.