DATA SHEET

Mini Industrial AI Smart Managed 10G PoE++ Media Converter

1-Port 10M/100M/1000M/2.5G/5G/10G Base-T IEEE802.3bt PoE++ 90W to 1-Port 1.25G/2.5G/5G/10G BASE-X

Mini Industrial AI Smart Managed 10G 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 → 90W PoE output

• 48V input → 90W PoE output

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

► 1 X 1.25G/2.5G/5G/10G BASE-X SFP+ fiber uplink port

► Support LFP(Link fault pass through) Function

► 6KV lightning surge protection on all ports

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



Overview

The LNK-AIMC10GMP90 is a compact AI smart managed industrial PoE media converter independently developed by E-link. Each unit is equipped with 1×10M/100M/1000M/2.5G/5G/10G Base-T IEEE 802.3af/at/bt PoE++ RJ45 port + 1×1.25G/2.5G/5G/10G BASE-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, LFP 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.

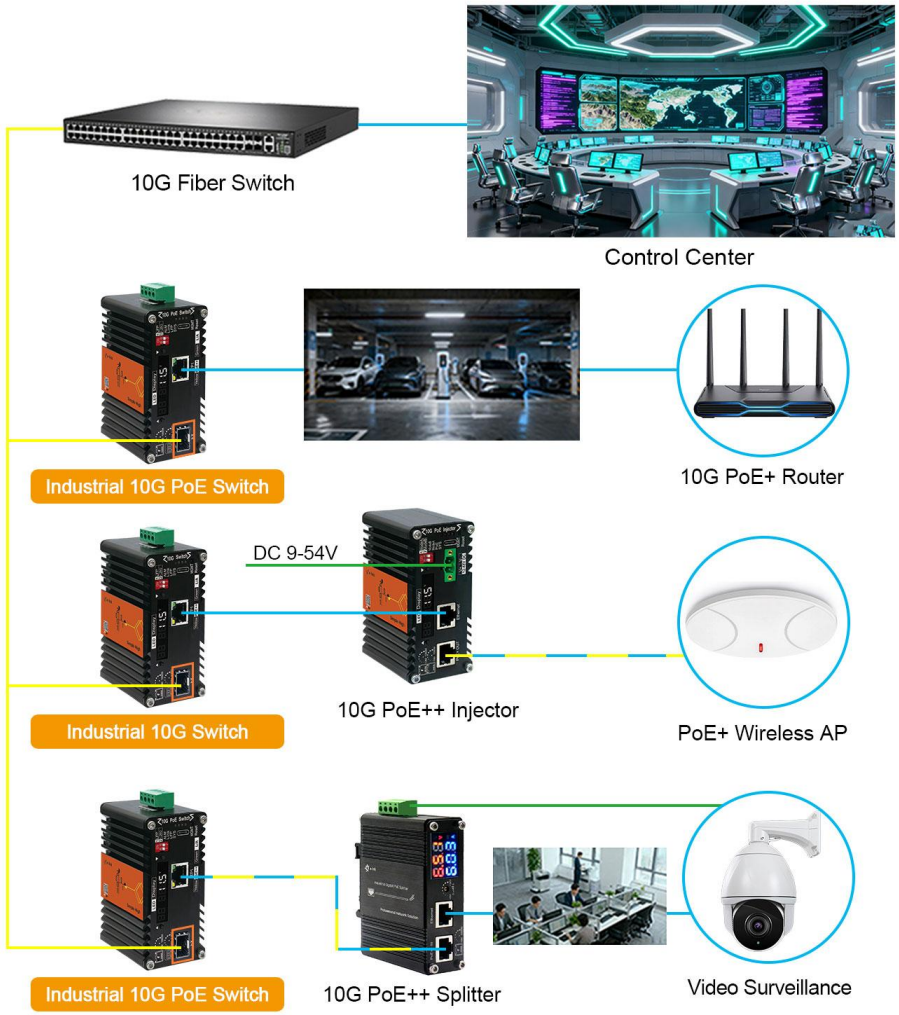
Oil, Gas & Mining Sites: Stable communication

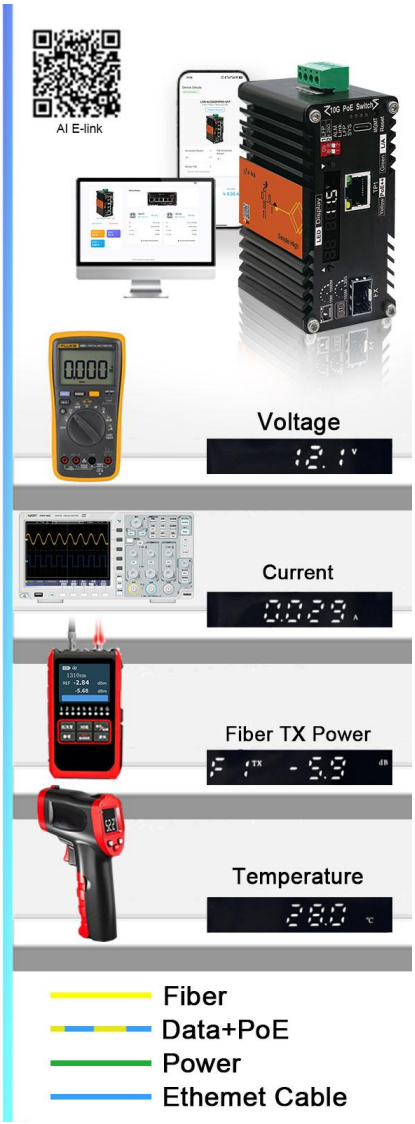
Smart City & New Infrastructure Deployment

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.

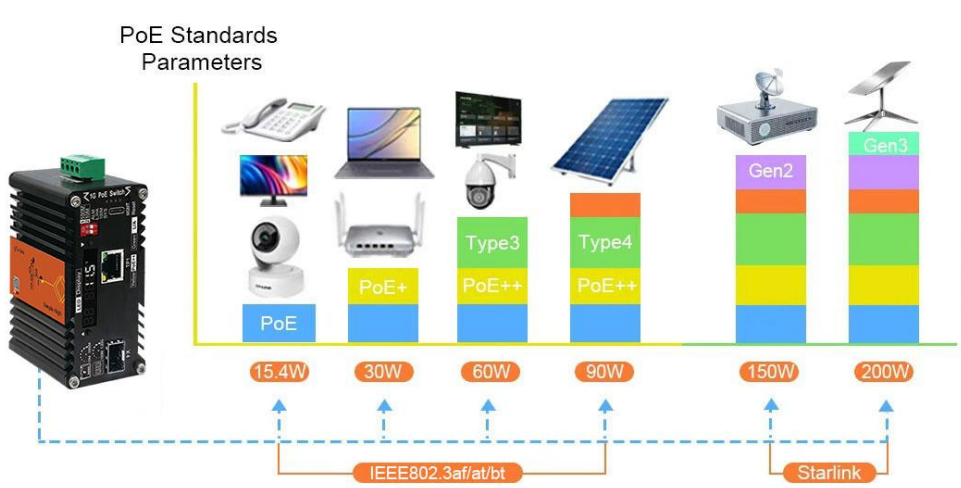
Application

AI Smart Managed Industrial PoE Switch

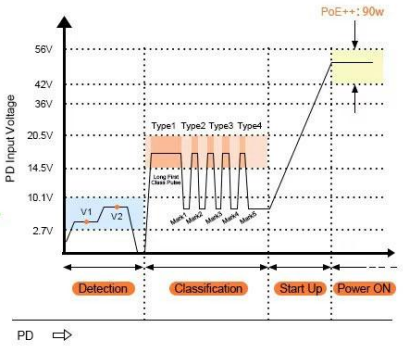




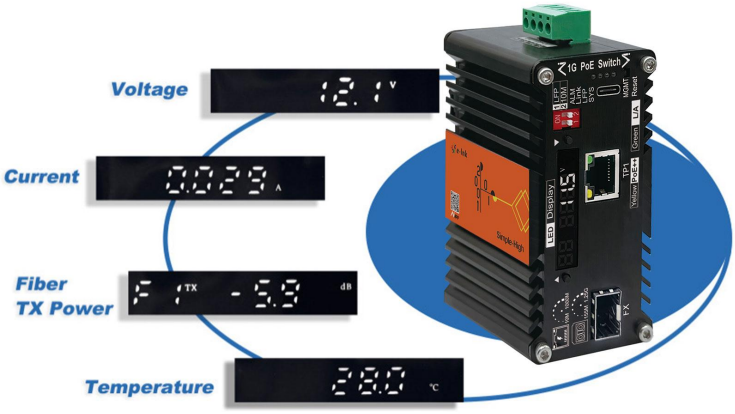
PoE Standards Parameters							
PoE Standards		**Input(V)**	**Current(A)**	**Output(V)**	**Power(W)**	**PoE Pin**	**Mode**
IEEE802.3af/at/bt	af/at/bt	9-12	5	48V	60	1/2(+),3/6(-); 4/5(+),7/8(-)	ModeA&B
	af/at/bt	19-24	5	48V	90	1/2(+),3/6(-); 4/5(+),7/8(-)	ModeA&B
	af/at/bt	48-54	5	48V	90	1/2(+),3/6(-); 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(-)	

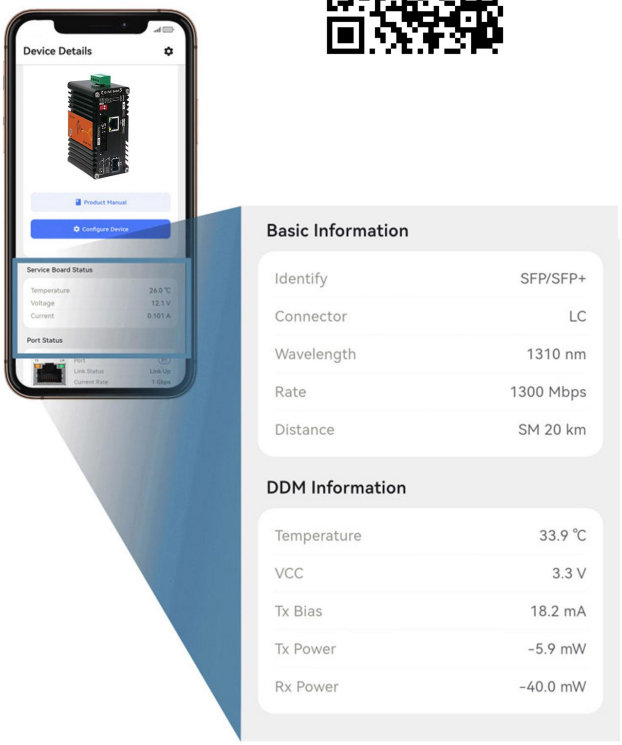


Utilizing hardware IEEE802.3af/at/bt PoE chipset, it automatically powers up PD device with 4 steps (PD Detection -> PoE Classification -> Start Up -> Power ON). Itallocates appropriate power to IEEE802.af/at/bt PoE devices, and no power for non-PoE devices.It ensures high safety for PoE and Non-PoE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



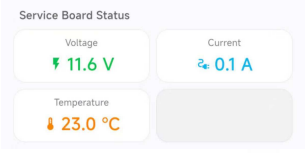
E-link App and PC Web

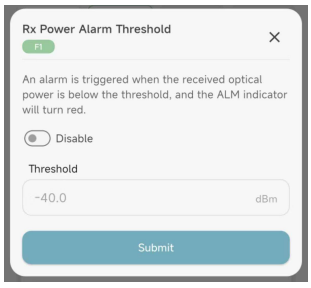
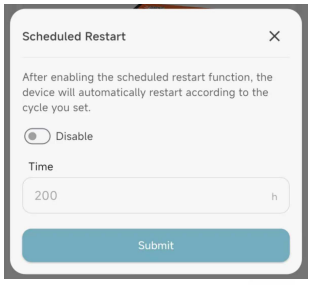
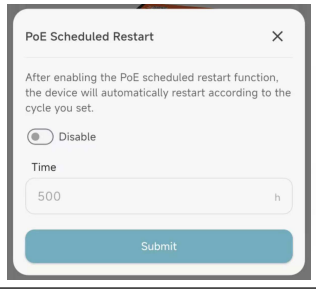






Technical Indexes

Industrial AI Smart Managed 10G PoE++ Media Converter with Voltage Booster		
Access Mode	1.25G/2.5G/5G/10GBASE-X SFP+ to 10/100/1000BASE-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 802.3bz 2.5G/5GBASE-T	
	IEEE 802.3an 10GBASE-T Ethernet	
	IEEE 802.3ae 10Gbps 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)	
	3,720,000pps (2500Mbps)	
	7,440,000pps (5GMbps)	
	14,880,000pps (10GMbps)	
Packet Buffer Memory	1 Mbit	
Max Packet Length	9K Bytes	
Switching Capacity	40Gbps/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		
	LFP Status		
	PSE Supply Voltage		
	PSE Power Consumption		
	Power Pin Assignment		
SFP Port Status	Link Status		
	PN/SN		
	TX Power		
	RX Power		
	All DDM Information		
DIP Switch	DIP1	LFP	
	DIP2	1.25G	
Fiber Port Alarm	Support		
Scheduled Reset	Support		
PoE Power Scheduled	Support		

Interface Port				
Ethernet Port	1-Port 10M/100M/1000M/2.5G/5G/10G Base-T Ethernet RJ45 interface Auto-negotiation, auto MDI/MDI-X			
	1-Port 10M/100M/1000M/2.5G/5G/10G Base-T Support IEEE802.3af/at/bt			
	Cable: 10G-Cat 6A/Cat 7 5G-Cat 6/Cat 6A/Cat 7 1G/2.5G-Cat 5e/Cat 6/Cat 6A/ Cat 7 Distance: ≤100 meters at 1000M data rate			
SFP Port	1-Port 1.25G/2.5G/5G/10G BASE-X (auto detection)			
	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			
PoE (Power over Ethernet)				
Standard	IEEE 802.3af/at/bt PoE++ PSE (af: 15.4W, at: 30W, bt type3: 60W, bt type4: 95W)			
PoE Power Output	90 watts max.			
Power Pin Assignment	End-span + Mid-span: 1/2(+), 3/6(-); 4/5(+),7/8(-)			
PoE Budget	Up to 90-watt PoE budget (9-54VDC)			
PoE Power Supply Type	IEEE 802.3af/at/bt, End-span + Mid-span (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 90W
	DC 24-36V Input	PoE 48V Output, max 90W	DC 48-54V Input	PoE 48V Output, max 90W
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			
LFP	Green Solid On: LFP On			
	Green Solid Off: LFP 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 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 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-AIMC10GMP90-SFP+	Industrial AI Smart Managed 1-Port 10M/100M/1000M/2.5G/5G/10G Base-T IEEE802.3bt 90W PoE++ to 1-Port 1.25G/2.5G/5G/10G BASE-X SFP+ 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.