

LinkPower™ LPS3000-T1

Outdoor L2+ Managed Gigabit PoE Network Switch with Gigabit Fiber Uplink



APPLICATIONS

- Smart City
- IP Video Surveillances
- Campus Networks
- Fixed Wireless Networks
- Border Security Surveillance
- Municipal Networks
- Hospitality Networks
- Hotel Resort Networks
- Hotspot Integrations
- VOIP Services
- Traffic Monitoring

The LinkPower™ LPS3000-T1 Layer 2+ Managed Outdoor PoE (Power over Ethernet) IEEE802.3af/at Switch Series offers 4-Port Gigabit PoE with 2 SFP Uplink Port Network Switch and 8-Port Gigabit PoE with 2 SFP Uplink Ports or 2 RJ45 and 4SFP Uplink Port Network Switch with dual power input redundancy with 120V~240AC and/or 48V DC. This is the industry first outdoor L2+ managed weatherproof industrial gigabit Ethernet switch that delivers data and power over one single network cable protected with an IP68 compliant weatherproof enclosure. The outdoor weatherproof rating of the systems is strictly based on how the top cover is closed. For the hinged cover without the four top cover screws, the outdoor weatherproof rating is IP66 and, otherwise, the outdoor rating is IP68 with the four top cover screws securely closed with the enclosure. The LPS3000-T1 Managed Gigabit PoE Series has the following sub-models:

Product Line	Product Model	PoE Output	Model Description
LPS3000-T1 Outdoor Managed Gigabit PoE Network Switch Series	LPS3400AFM-T1	30W per Port / 62W Total	Outdoor Managed 10/100/1000Mbps 4-Port 802.3af/at PoE Switch with 2 SFP Fiber 1.25G Uplink Ports, Up to 30W and an Average of 15.4W per PoE Port, Not to Exceed 62W for a Total of 4 Ports
	LPS3400ATM-T1	30W per Port / 120W Total	Outdoor Managed 10/100/1000Mbps 4-Port 802.3af/at PoE Switch with 2 SFP Fiber 1.25G Uplink Ports, Up to 30W per PoE Port
	LPS3802AFM-T1	30W per Port / 150W Total	Outdoor Managed 10/100/1000Mbps 8-Port 802.3af/at PoE Switch with 2 SFP Fiber 1.25G Uplink Ports, Up to 30W and an Average of 15.4W per PoE Port, Not to Exceed 150W for a Total of 8 Ports
	LPS3802ATM-T1	30W per Port / 240W Total	Outdoor Managed 10/100/1000Mbps 8-Port 802.3af/at PoE Switch with 2 SFP Fiber 1.25G Uplink Ports, Up to 30W per PoE Port
	LPS3800AFM-T1	30W per Port / 150W Total	Outdoor Managed 10/100/1000Mbps 8-Port 802.3af/at PoE Switch with 2 RJ45 and 4 SFP Fiber 1.25G Port Uplink Ports (Port 13/14 2.5Gbps), Up to 30W and an Average of 15.4W per PoE Port, Not to Exceed 150W a Total of 8 Ports Up to 30W per PoE Port, Not to Exceed 150W for a Total of 8 Ports
	LPS3800ATM-T1	30W per Port / 240W Total	Outdoor Managed 10/100/1000Mbps 8-Port 802.3af/at PoE Switch with 2 RJ45 and 4 SFP Fiber 1.25G Port Uplink Ports (Port 13/14 2.5Gbps), up to 30W per PoE Port

The LPS3000-T1 Outdoor Managed Gigabit PoE Series with the two sub-models is designed for industrial and commercial applications, e.g., video surveillance, remote security, wireless mesh, carrier wifi installations, and etc. The terminal equipment, i.e., powered devices, such as weather-proof IP camera, high performance wireless AP and industrial IP telephony. With the two port Gigabit fiber ports, it can transfer data up to a distance of 120Km from SFP fiber port to a remote control center and the systems is also offer with powerful anti-electromagnetic interference feature. Additionally, the LPS3000-T1 Managed Gigabit PoE Series is designed for harsh outdoor environments with features such as a wide working temperature range from -30°C to +70°C and 3KV Ethernet port surge protection that can ensure the reliability of the uninterrupted PoE network operations. The LPS3000-T1 Outdoor Gigabit PoE Series is a Managed network switch with Link Aggregation, VLAN, Trunking, SNMP, and QoS technology to meet the accelerating demand for powering the most demanding outdoor PoE devices. The LPS3000-T1 Gigabit PoE Switch provide LED displays internally that show device status for easy power management and troubleshooting. The PoE technology conveniently eliminates the need to install networked devices with multiple wires, such as Inscape Data's IP cameras and SB300/BR300, and B3000/BR3000 wireless products, thereby reducing equipment and installation costs. The LPS3000-T1 Gigabit PoE Series offers the following key features:

KEY PRODUCT FEATURES

- Dual Power Input Redundancy with 120V~240AC and/or 48V DC
- Compliant to IEEE 802.3, IEEE 802.3u, IEEE 802.3z, IEEE 802.3ab, IEEE 802.3x, IEEE 802.1D, IEEE 802.3af, IEEE 802.1Q, IEEE 802.1p, IEEE 802.1x, IEEE 802.1W, SNMP, IGMP standards
- Up to eight 10/100/1000M self-sensing RJ45 port, support IEEE802.3af/at PoE power supply function
- Four gigabit SFP fiber ports are capable of high bandwidth and long distance transmission
- All ports support auto-flip (Auto MDI/MDIX)
- Each PoE port can provide power up to 15.4W & 30W
- Supply power for powered devices compatible with IEEE802.3af/at PoE+
- Support IEEE802.3x full duplex flow control and duplex backpressure flow control
- Uplink port speed supports 2.5Gbps on Port 13 & 14 of LPS3800-T1
- Two SFP fiber optic ports, No. 13 & 14, support 2.5Gbps uplink network speed
- 1K MAC address table, 8.8G backplane bandwidth
- Its 3KV network port surge protection can adapt to harsh outdoor environment
- Working temperature from -30°C ~ +70°C at full load
- Compatible with Port-based VLAN, IEEE 802.1Q VLAN, GVRP protocols, GVRP, and Dynamic MAC Address Authentication
- Support authentication features including RADIUS, TACACS+, IEEE 802.1x, HTTPS and SSH, and MAC address port locking
- Support SNMP V1/V2c/V3 for different levels network management
- Adopt RMON to effectively improve network surveillance and forecasting capabilities
- Auto accident report through E-mail and the output of electric relay

*** LinkPower LPS Outdoor PoE Series Products are protected under several of Inscape Data's U.S. Patents. ***

Product Model	LPS3400AFM-T1	LPS3400ATM-T1	LPS3802AFM-T1	LPS3802ATM-T1	LPS3800AFM-T1	LPS3800ATM-T1
Product Name	Outdoor Gigabit Managed 4 Port 802.3af/at PoE Switch with 2 Gigabit SFP Fiber Uplink Ports		Outdoor Gigabit Managed 8-Port 802.3af/at PoE Switch with 2 Gigabit SFP Fiber Uplink Ports		Outdoor Gigabit Managed 8-Port 802.3af/at PoE Switch with 2 Gigabit RJ45 and 4 SFP Fiber Uplink Ports	
Connector	RJ45 Port: 4x10/100/1000BaseT(X) self-detect		RJ45 Port: 8x10/100/1000BaseT(X) self-detect ports		RJ45 Port: 8x10/100/1000BaseT(X) self-detect ports	
	Fiber Port: 2x100/1000Base SFP port		Fiber Port: 2x100/1000Base SFP ports		RJ45 Port: 2x10/100/1000BaseT (Tx) self-detect ports Fiber Port: 2x100/1000Base (#11 & 12) & 2 2.5Gbps (#13 & 14) SFP ports	
Switching Performance	Priority Queue: 4					
	MAC Address Table Size: 8 K					
	Packet Buffer Memory: 1Mbit					
Network Medium	10BASE-T: Cat3/ 4/ 5 UTP (≤100m)					
	100BASE-TX: Cat5 or more UTP (≤100m)					
	1000BASE-TX: Cat5 or more UTP (≤150m)					
	2.5Gbps Uplink Speed on LPS3800AFM-T1 & LPS3800ATM-T1, SFP Port 13 & 14 Single mode (9/125um) fiber transmission, the transmission distance can be up to 25km (Default dual fiber, can be customized single fiber)					
Performance Specifications	MTBF: 190,000 hours (about 21 years)					
	Database: Telcordia (Bellcore), GB					
Protocols and Standards	IEEE 802.3: CSMA/CD					
	IEEE 802.3i: 10Base-T					
	IEEE 802.3u: 100Base-T					
	IEEE 802.3ab: 1000Base-T					
	IEEE 802.3x: Flow Control					
	IEEE 802.1af: DTE Power via MDI					
	IEEE 802.3af: Power-over-Ethernet standard					
	IEEE 802.3at: Power-over-Ethernet standard					
LEDs Status	PWR, 10/100/1000, PoE , SFP Network					
Power Supply (AC to DC Internal Power Supply) PoE Port Output	AC Input voltage: 120V ~ 240V AC					
	DC Input voltage: 48V					
	Output voltage: 48V DC					
	IEEE802.3af standard, each port power is 15.4W, total power is 62W for 4 ports					
	IEEE802.3at standard, each port power is 30W, total power is 120W for 4 ports					
	IEEE802.3af standard, each port power is 15.4W, total power is 150W for 8 ports					
	IEEE802.3at standard, each port power is 30W, total power is 240W for 8 ports					
	Support OCP (Over-Current Protection) and electronic protection					
Connection: 3-pin AC pluggable connecting terminal , 4-pin DC pluggable connecting terminal						
Dimensions/Weight	Enclosure: IP68 protection grade, shell Dimension (LxWxH): (12 x 10 x 4 inch, 304.8 x 250.4 x 101.6 mm)					
	Weight: 9LB, 4KG					
	Installation Method: Wall Mount / Mast Mount					
Working Environment	Operating Temperature: -30℃ ~ +70℃					
Industrial Standard	EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A					
	EMS: EN 61000-4-2 (ESD) Level 3, EN 61000-4-3 (RS) Level 3, EN 61000-4-4 (EFT) Level 3, EN 61000-4-5 (Surge) Level 3, EN 61000-4-6 (CS) Level 3, EN 61000-4-8					
	Traffic Control: NEMATS-2					
	Rail Traffic: EN50155,EN50121-4					
Mechanical Project: IEC60068-2-6, IEC60068-2-27, IEC60068-2-32 Industrial: IEC 61000-6-2						
Safety	CE Mark ,commercial CE/LVD EN60950, RoHS, UL60591-1					
Warranty	3 year warranty					

PACKAGE CONTENTS

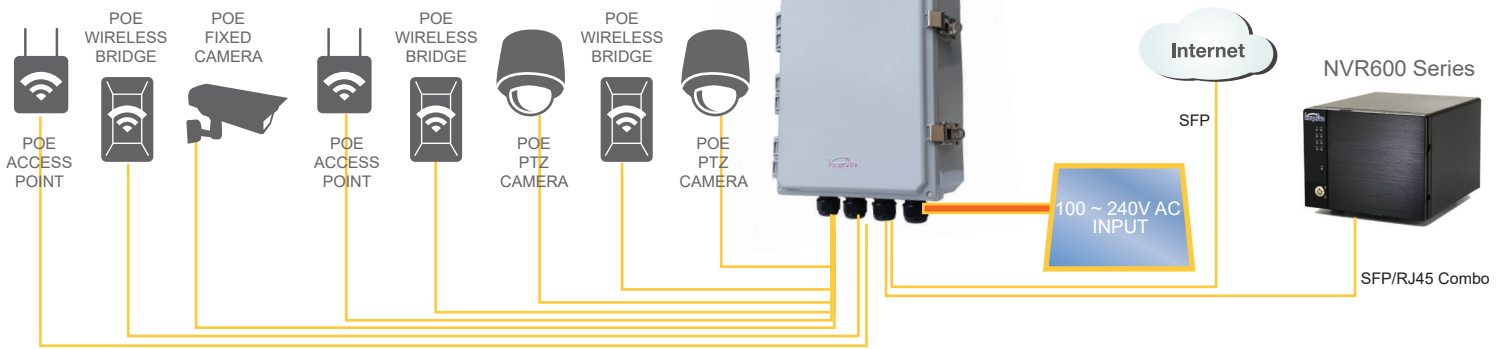
1. LinkPower LPS3000-T1 Gigabit PoE Switch:
 - LPS3400AFM-T1 or LPS3400ATM-T1
 - or LPS3802AFM-T1 or LPS3802ATM-T1
 - or LPS3800AFM-T1 or LPS3800ATM-T1
2. User's Manual
3. Quick Install Guide
4. Warranty Information
5. APCK0001 AC Power Cable Kit
6. PFCK0001-3 Power & Fiber Connector Kit
7. ECK0001-4 Ethernet Connector Kit
8. WMK0001 Wall Mount Kit with 4 Flanges (Standard)
9. MMK0001-L Pole Mount Kit (Optional)

Layer 2+ Switching	
Spanning Tree Protocol (STP)	Standard Spanning Tree 802.1d Rapid Spanning Tree (RSTP) 802.1w
G.8032 ERPS	<50ms ring protection for industrial high reliable application
Aggregation	Link Aggregation Control Protocol (LACP) IEEE 802.3ad; Up to 7 groups ; Up to 14 ports per group
VLAN	Support up to 4K VLANs simultaneously (out of 4096 VLAN IDs) ; Port-based VLAN; 802.1Q tag-based VLAN
IGMP v1/v2 snooping	IGMP limits bandwidth-intensive multicast traffic to only the requesters; supports 1024 multicast groups (source-specific multicasting is not supported)
Security	
Secure Shell (SSH) Protocol	SSH secures Telnet traffic in and out the switch, SSH v1 and v2 are supported
Secure Sockets Layer (SSL), HTTPS	SSL encrypts the http traffic, allowing advance secure access to the browser-based management GUI in the switch
Port Security	Locks MAC Addresses to ports, and limits the number of learned MAC addresses
DHCP Snooping	prevent unauthorized configuration and use of IP addresses, while providing support for IP Source Guard and ARP detection
IP Source Guard	Prevents datagram with spoofed addresses from being in the network
ARP Inspection	Prevent ARP spoofing attacks and ARP
Storm control	Prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm on a port
ACLs	Support for up to 256 entries; Drop or rate limitation based on source and destination MAC, VLAN ID or IP address, protocol, port, differentiated services code point (DSCP) / IP precedence, TCP/ UDP source and destination ports, 802.1p priority, Ethernet type, Internet Control Message Protocol (ICMP) packets, IGMP packets, TCP flag
Quality of Service	
Hardware	Support 8 hardware queues
Scheduling	8 COS (Class of Service) queues per port support strict priority and weighted round-robin (WRR)
Classification	Port based; 802.1p (PCP) VLAN priority based;
Rate Limiting	Ingress policer; egress shaping and rate control; per VLAN, per port and flow based
Management (Web/ SSL, Telnet/ SSH, ping, Trivial File Transfer Protocol (TFTP), SNMP, Syslog)	
Web GUI interface	Built-in switch configuration utility for browser-based device configuration (HTTP/HTTPS). Supports configuration, system dashboard, maintenance, and monitoring
Dual Image	Dual image provides independent primary and secondary OS files for backup while upgrading
Firmware upgrade	Web browser upgrade (HTTP/ HTTPS) and TFTP; Upgrade through console port as well
Port mirroring	Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe. Up to N-1 (N is Switch's Ports) ports can be mirrored to single destination port. A single session is supported.
Other management	Single IP management; HTTP/HTTPS; SSH; RADIUS; DHCP Client; SNTP; cable diagnostics; ping; syslog; Telnet client (SSH secure support)

SYSTEM CONFIGURATION

**LinkPower™ LPS3800-T1
Managed Gigabit PoE Switch**

Connect Up to 8 PoE Devices



STANDARD ACCESSORIES

ECK0001
Ethernet Connector Kit



WMK0001
Wall Mounting Kit



APCK0001
AC Power Cord Kit



OPTIONAL ACCESSORIES

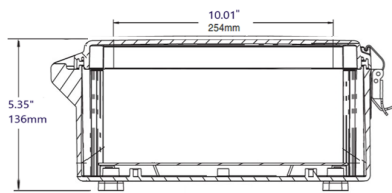
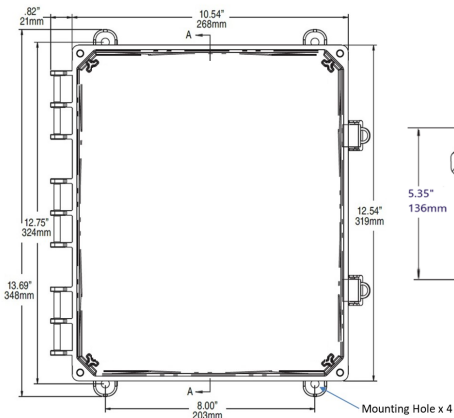
MMK0001-L Mast Mounting Kit
(For Pole Diameter from 2" to 4.5")



WPCK0001-3-4 DC Power Cord Kit



ENCLOSURE DRAWINGS & INTERFACES

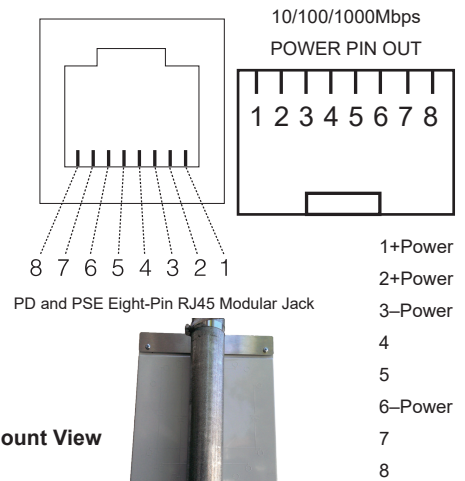


To Use Conduit Connectors, the Diameter of Hole Size is 1.0 Inch

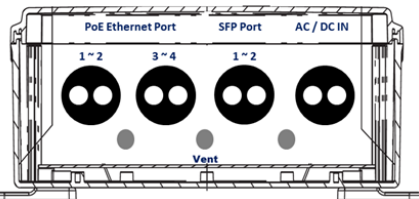
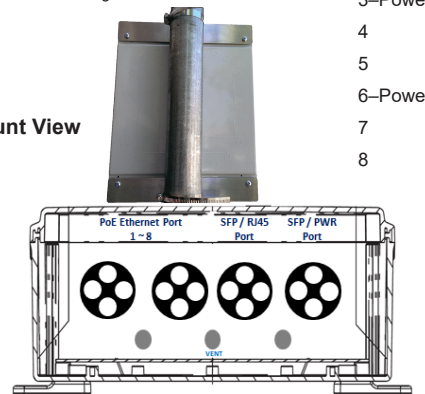


10"x5" (100mm x 127mm) Internal (Hotel) Space for Wiring Storage

ELECTRICAL PIN OUT DIAGRAM

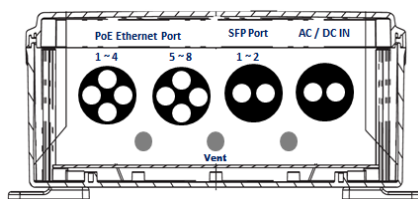


Pole Mount View



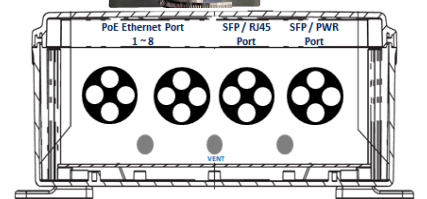
LPS3400 Series Interfaces

1. Weatherproof PoE Connector
2. Weatherproof SFP Cable Connector
3. Weatherproof AC / DC Power Cable Connector
4. Vent Plug



LPS3802-T1 Interfaces

1. Weatherproof AC/ DC Power & Fiber Optics Cable Connector
2. Weatherproof PoE / SFP Cable Connector
3. Vent Plug



LPS3800-T1 Interfaces

1. Weatherproof AC/ DC Power & Fiber Optics Cable Connector
2. Weatherproof PoE / RJ45 / SFP Cable Connector
3. Vent Plug



THE LEADING
OUTDOOR NETWORK
APPLIANCE COMPANY

Product Information Online: <http://www.inscapedata.com/lps3000-t1-mgt.htm>

Corporate Headquarters
2012 Hartog Dr, San Jose, CA 95131, U.S.A.
PHONE +1.408.392.9800 FAX +1.408.392.9812
EMAIL sales@inscapedata.com

Total Turnkey Solutions for Outdoor PoE, Wired/Wireless, and IP Video Applications

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