AETEK
A Delta Group Company

PoE Engineered for
Surveillance and Security

D69-022-91-U

Industrial Uninterruptible L2 PRO 2-Port Managed PoE++ Switch with Battery Backup



TAA & NDAA COMPLIANT
DESIGNED AND MADE IN TAIWAN

12/24 V battery
Power backup

48-56 V DC & bt PoE
Power input options

90 W PoE++
Per port, af/at/bt PSE

2 × 12/24 V DC
Outputs, 3 A each

Perpetual power
PoE and DC outputs

2 × SFP
100M / 1G

Power & Battery Backup

- 48–56 V DC and IEEE 802.3bt PoE input
- 12 or 24 V lead-acid or LiFePO4 battery backup
- Seamless switchover when input power fails

Perpetual PoE & DC Outputs

- 2 × PoE++ up to 90 W per port (af/at/bt PoE)
- 2 × 12 or 24 V DC outputs, up to 3 A each
- Power stays on during reboot and firmware upgrade

Remote Monitoring & NTS

- Battery voltage, capacity and runtime in NTS
- Alerts on power source change and low battery

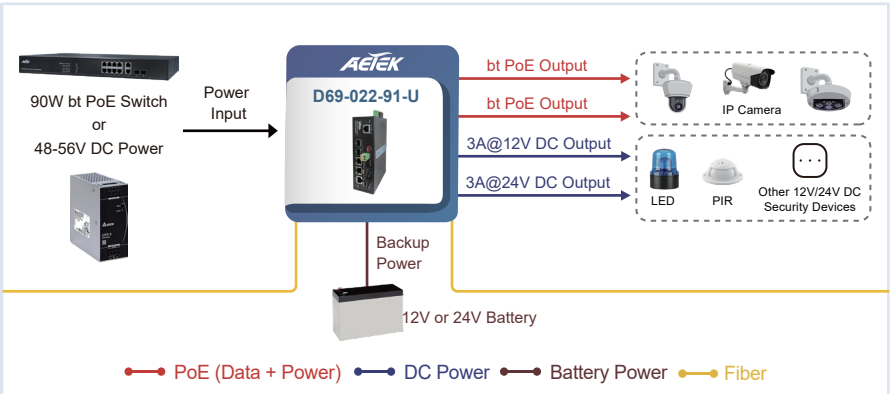
Connectivity & Industrial Design

- 2 × 100M/1G SFP slots for fiber uplinks
- −30 to 75 °C, fanless, DIN-rail or wall mount

Typical Applications

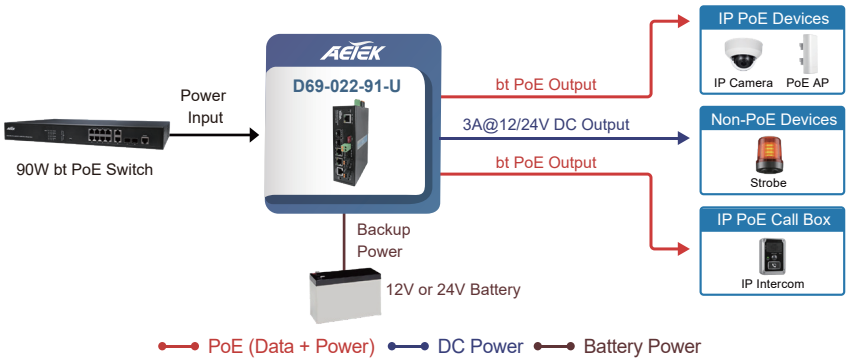
01 Battery backup connection diagram

D69-022-91-U powers network cameras over PoE and other security devices from its DC outputs, and switches to the 12 or 24 V battery if input power fails.



02 Intercom communication with backup power

If the PoE input fails, the battery backed D69-022-91-U keeps video intercoms and emergency stations powered over PoE and DC.

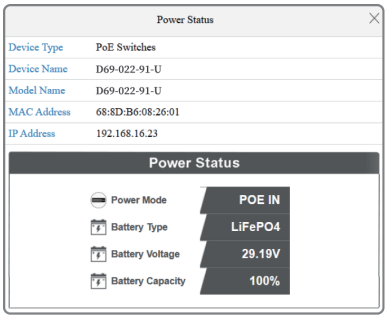


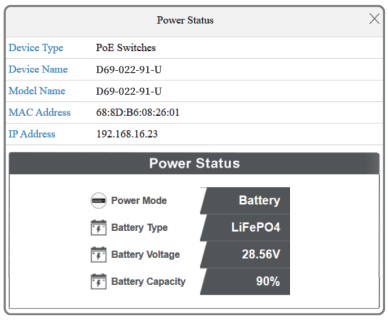
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Network Topology System (NTS)

Embedded network visibility, diagnostics and PoE control, with no license fee.

Power visibility and remote control

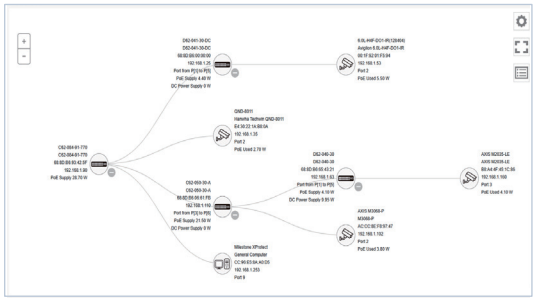




Monitor power and battery status, diagnose connections and manage devices from their own dashboard.

- View power and battery status in PoE, DC power and battery input mode
- Receive notifications when the power source changes or battery voltage is low
- Control each PoE and DC output port
- Run diagnostics to pinpoint the problem
- Reboot remotely and reduce site visits

See your whole site in 3 views

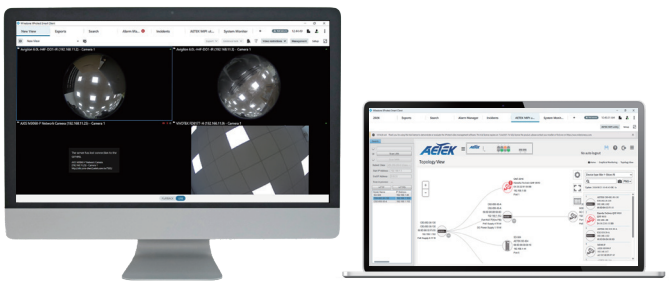


- **Topology View:** Maps how every switch and device connects. Export drawing for documentation.
- **Floor View:** Place device icons on your own floor plan. Export drawing for documentation.
- **Map View:** Locate devices on Google Maps.*

*Map View requires a Google Maps API key.

Works inside your VMS

Access NTS from your VMS through AETEK integrations.



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Genetec Security Center.

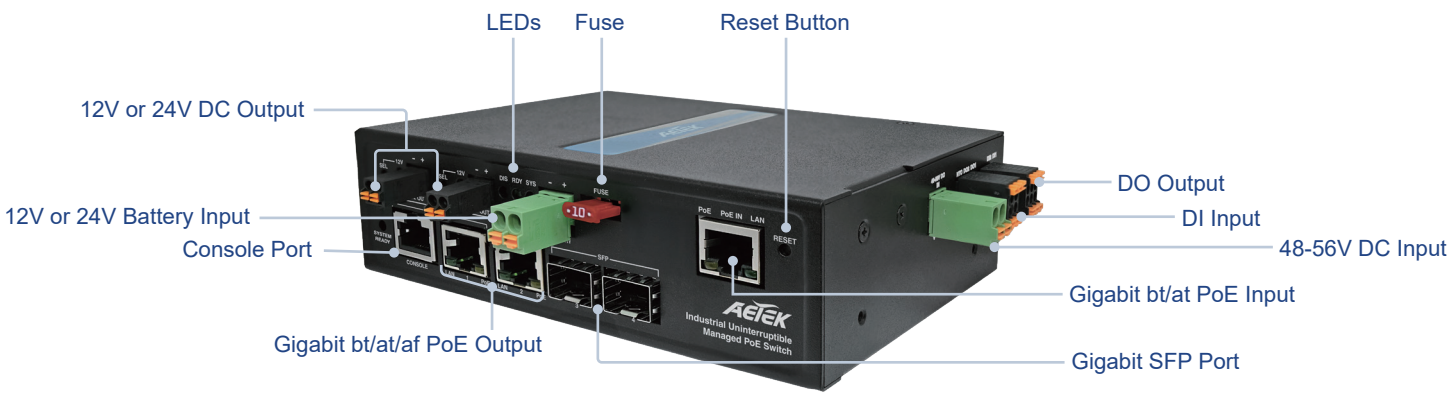
AVIGILON UNITY

BLAZE

wisenet WAVE

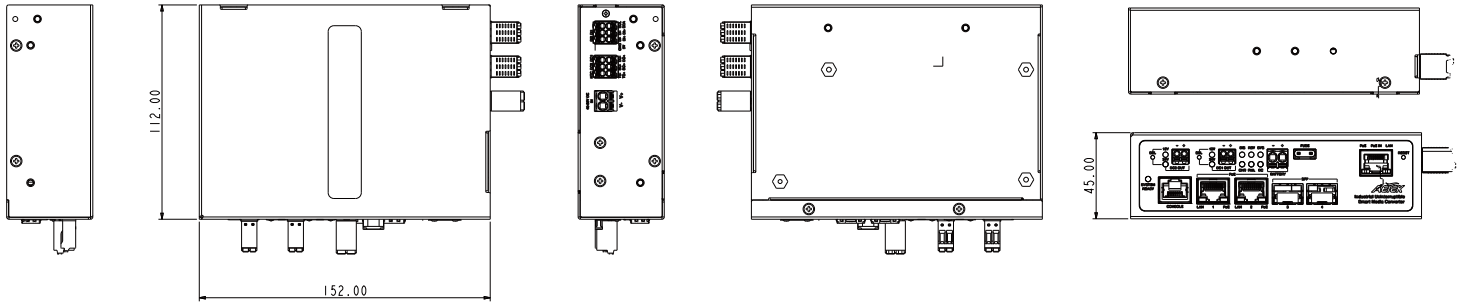
Nx Witness

Interfaces



Dimensions

Unit: mm



Hardware Specifications

Interfaces	
Total Gigabit ports	5
PoE input	1 × 10/100/1000 Mbps RJ45, IEEE 802.3bt PD
PoE output	2 × 10/100/1000 Mbps RJ45, IEEE 802.3af/at/bt
SFP ports	2 × 100M/1G SFP
DC output	2 × 12 or 24 V DC, terminal block
Other ports	RJ45 console; 2 × DI, 2 × DO; NTC input
Performance	
Switching capacity	10 Gbps
Forwarding rate	7.44 Mpps
MAC table	8K entries
Jumbo frames	9,216 bytes
Power	
Power input	48–56 V DC or IEEE 802.3bt PoE input
PoE output per port	IEEE 802.3af: up to 15.4 W IEEE 802.3at: up to 30 W IEEE 802.3bt: up to 90 W
Perpetual PoE	Supported on PoE and DC outputs
PoE pin assignment	Pins 1, 2 (−); 3, 6 (+); 4, 5 (+); 7, 8 (−)
DC output per port	12 or 24 V DC, up to 3 A
Total output budget	See Power budget (page 4)
Standby consumption	< 10 W
Fuse	58 V / 20 A

Protection	
Surge, DC input	±1 kV differential mode
Surge, DC output	±1 kV differential mode
Surge, DO	±6 kV differential mode
I/O	
Digital input (DI)	2 × dry contact
Digital output (DO)	2 × 24 V DC
Mechanical	
Dimensions (W × D × H)	45 × 112 × 152 mm (1.8 × 4.4 × 6.0 in)
Weight	0.65 kg (1.43 lb)
Cooling fan	Fanless
Mounting options	DIN-rail or wall mount
Environment	
IP rating	IP30
Operating temperature	−30 to 75 °C (−22 to 167 °F)
Cold start	−20 °C (−4 °F)
Storage temperature	−40 to 85 °C (−40 to 185 °F)
Operating humidity	5% to 95%, non-condensing
MTBF	Over 50,000 hours
Approvals	
EMC	CE, FCC, VCCI, C-Tick

Battery Variants

Select the model for the intended battery chemistry. External batteries are not included.

	D69-022-91-U-LA	D69-022-91-U-LI
Battery Type	Lead-acid	LiFePO4
Battery Capacity	12 V / 18 Ah 24 V / 9 Ah	12 V / 20 Ah 24 V / 9 Ah
Battery Charge Current	0.4–10 A	0.4–10 A
Float Charge Voltage	12 V battery: 13.6 V 24 V battery: 27.2 V	–
Absorption Charge Voltage	12 V battery: 14.6 V 24 V battery: 29.2 V	12 V battery: 14.6 V 24 V battery: 29.2 V
Low-voltage Disconnection	12 V battery: 10.6 V 24 V battery: 21.2 V	12 V battery: 11.2 V 24 V battery: 22.4 V
Deep Discharge Protection	12 V battery: warning 10.6 V, disconnection 10.0 V (9.8 V min. at load) 24 V battery: warning 21.6 V, disconnection 20.0 V (19.6 V min. at load)	

Power Budget and Backup Runtime

Available output depends on input source, battery voltage and operating temperature. Plan the combined loads within the applicable shared budget.

Power Budget

Input source	Ambient	12 V battery discharge	24 V battery discharge	12 V battery charge	24 V battery charge
48–56 V DC input	75 °C	60 W	130 W	60 W	130 W
48–56 V DC input	60 °C	72 W	172 W	72 W	172 W
bt PoE input	75 °C	45 W	45 W	45 W	45 W
bt PoE input	60 °C	60 W	60 W	60 W	60 W

Backup Duration by Load and Battery Configuration

			Power Consumption			
Charging Watts	**Battery**	**Charge time LA (10% - 80%, 80% - 100%) LFP(10% - 90%, 90% - 100%)**	**15W**	**30W**	**60W**	**90W**
12 V / 2 A 24 V / 1 A 24 W	12 V / 7 Ah lead-acid	4 hr 16 mn / 6 hr 58 mn	1 hr 33 mn	1 hr 00 mn	34 mn	23 mn
	24 V / 7 Ah lead-acid	8 hr 32 mn / 13 hr 56 mn	3 hr 34 mn	2 hr 19 mn	1 hr 19 mn	54 mn
	12 V / 7 Ah LiFePO4	4 hr 24 mn / 5 hr 46 mn	2 hr 26 mn	1 hr 40 mn	1 hr 02 mn	43 mn
	24 V / 7 Ah LiFePO4	8 hr 48 mn / 11 hr 32 mn	5 hr 02 mn	3 hr 27 mn	2 hr 06 mn	1 hr 30 mn

Software Specifications

NTS and power management	
Device discovery	Automatic discovery of ONVIF, UPnP and more devices
Views	Topology View, Floor View, Map View (Google Maps API key required)
Power status	Power mode, battery voltage, capacity and time left; alerts on power source change and low battery
PoE and DC control	Per-port PoE on/off and configuration; DC output control; PoE scheduling by time
Auto-checking	Ping check of each powered device; reboots the device if it stops responding
Power delay	Staggered PoE start-up after the switch boots
Diagnostics and Traffic	Cable diagnostics; per-port throughput against configured thresholds
Layer 2 switching	
Spanning tree	IEEE 802.1D STP, 802.1w RSTP, 802.1s MSTP; loop protection
Link aggregation	IEEE 802.3ad LACP and static aggregation
VLAN	Up to 4K VLANs (4096 IDs); port-based and IEEE 802.1Q tag-based
Multicast	IGMP v1/v2 snooping
Other	IEEE 802.1AB LLDP with LLDP-MED; port mirroring (one session); IEEE 802.3x flow control
QoS and security	
QoS	Port-based and IEEE 802.1p classification; ingress policing, egress shaping, per-port rate control
Access control	IEEE 802.1X (RADIUS, guest VLAN, dynamic VLAN, single/multi-host); RADIUS and TACACS+ client
Port protection	Port security (MAC lock and limit), storm control
Management	
Interfaces	Web GUI, SSH, Telnet, SNMP v1/v2c/v3, RJ45 console
Services	IPv4/IPv6 management, DHCP server and client, NTP, Syslog
Firmware	Upgrade via HTTP or TFTP

Optional Accessories



SFP-ISX-X5
SFP, multimode, up to 0.5 km



SFP-ISX-02
SFP, multimode, up to 2 km



SFP-ILX-10
SFP, single-mode, up to 10 km



SFP-ILX-40
SFP, single-mode, up to 40 km



SFP-ILX-80
SFP, single-mode, up to 80 km



SFP-ITX-X1
SFP to RJ45, up to 0.1 km



DRL-48V120W1EN
DIN-rail power supply, 48 V / 120 W



DRL-48V240W1EN
DIN-rail power supply, 48 V / 240 W



DRL-48V240W1EN-AC-SOCKET
DIN-rail power supply with AC power socket, 48 V / 240 W



DRL-48V480W1EN
DIN-rail power supply, 48 V / 480 W



DRL-48V480W1EN-AC-SOCKET
DIN-rail power supply with AC power socket, 48 V / 480 W

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