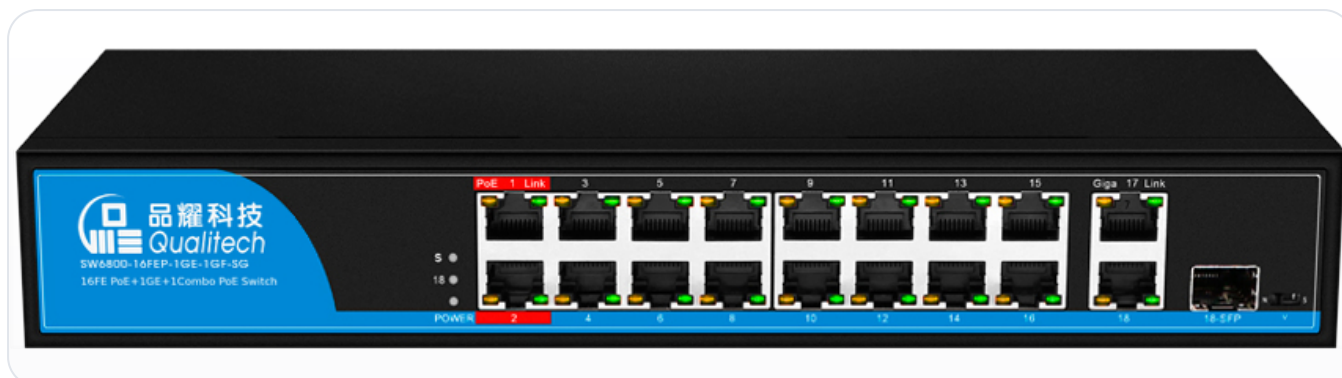




SW6800-16FEP-1GE-1GF-SG

16-Port PoE Switch with Gigabit + Combo Uplink

16 PoE Ports + Gigabit and Combo Uplinks / 150 W PoE Budget / 90 W Single-Port Output

A rackmount unmanaged PoE switch for medium-density surveillance and access-point deployments. Sixteen 10/100M PoE ports connect and power the edge, while a gigabit RJ45 uplink and a gigabit combo port carry aggregated traffic back to the core over copper or fibre. A 150 W power budget, a 90 W IEEE 802.3bt port, PoE Dog auto-recovery and a 250 m extra-remote mode round out the feature set — with no configuration required.

Model	-1GE	SW6800-16FEP-1GE-1GF-SG
Product Name		16-Port PoE Switch with Gigabit + Combo Uplink
Fixed Ports		16 × 10/100M PoE + 1 × 10/100/1000M uplink + 1 × 1000M combo
Total PoE Power		Max 150 W
Form Factor		1U rackmount (mounting ears supplied)
Manufacturer		Qualitech Technology Pte. Ltd.
Quality System		ISO 9001 Certified
Document No.		QLT-SW6800-16FEP-1GE-1GF-V1.0.0
Revision		V1.0.0
Issue Date		August 2026

Product Overview

The SW6800-16FEP-1GE-1GF-SG is a 1U rackmount unmanaged PoE switch that powers and connects up to sixteen PoE terminals from a single unit. Sixteen 10/100M downlink ports feed the edge, while a 10/100/1000M RJ45 uplink and a 1000M combo port — copper or SFP fibre — carry the aggregated traffic back to the core. Store-and-forward switching runs on 20 Gbps of backplane bandwidth at a 6.55 Mpps forwarding rate, with an 8K MAC address table and a 4 M packet buffer.

Power delivery is built for mixed device estates. Port 1 supports IEEE 802.3af/at/PoE++/bt with up to 90 W for high-draw devices such as PTZ domes, heated housings or multi-radio access points, while the remaining ports deliver up to 30 W each under IEEE 802.3af/at — 150 W in total across the unit. PD devices are detected automatically before power is applied, so non-PoE equipment connected to a PoE port is not damaged, and port priority protects the most important links when the remaining budget runs short.

Two operational features address the failures that actually consume field-service time. **PoE Dog** continuously monitors each powered device and, when a PD stops responding, automatically resets that port's PoE supply to recover the device — no site visit for a camera that has simply locked up. The **extra-remote mode**, selected on the front-panel switch, drops downlink ports to 10 Mbps and extends the usable cable run to 250 m, covering the long runs typical of car parks, perimeters and warehouse installations. A third position isolates the downlink ports from one another to suppress broadcast storms. No software, no configuration — the mode is set by a physical switch.

16 PoE Ports, Two Uplinks

16 × 10/100M PoE downlinks with a gigabit RJ45 uplink plus a gigabit combo port for copper or fibre aggregation.

90 W on Port 1

IEEE 802.3af/at/PoE++/bt on port 1 for high-power PDs; 30 W per port elsewhere, 150 W total budget.

PoE Dog Auto-Recovery

Detects an unresponsive powered device and power-cycles its port automatically, restoring service without a site visit.

250 m Extra-Remote Mode

A front-panel switch extends downlink reach to 250 m at 10 Mbps — enough for perimeter and car-park camera runs.

Why Unmanaged Suits Edge Surveillance

A switch feeding a floor or a car park rarely needs VLANs or a management plane; what it needs is to come up on power, supply the right wattage to each device, and keep running unattended. This unit is configured entirely by a three-position front-panel switch and its own PD detection logic, so commissioning is a matter of connecting cables. Fault handling is equally direct — the power LED doubles as an overload indicator, and PoE Dog resolves the most common failure mode, a hung camera, without human intervention.

Key Specifications

Model	SW6800-16FEP-1GE-1GF-SG
Manufacturer	Qualitech Technology Pte. Ltd.
Fixed Ports	16 × 10/100M RJ45 PoE ports; 1 × 10/100/1000M RJ45 uplink port; 1 × 1000M combo port (RJ45 / SFP)
PoE Standards	Port 1: IEEE 802.3af/at/PoE++/bt, max 90 W. Ports 2–16: IEEE 802.3af/at, max 30 W per port
Total PoE Power	Max 150 W
Power Input	Built-in AC power supply, 100–240 VAC, 50/60 Hz, 1.9 A, 158 W max
Form Factor	1U rackmount; mounting ears supplied
Quality System	ISO 9001 Certified

Operating Modes

A single three-position function switch on the front panel selects the operating mode. No management software or configuration is required.

Position	Mode	Behaviour
N	Standard switching mode	All ports communicate freely — the default mode for general data transmission.
V	Port isolation mode	Downlink ports are isolated from each other and exchange traffic only through the uplink ports, suppressing broadcast storms and limiting the spread of virus traffic between edge devices.
S	Extra-remote mode	Downlink ports are limited to 10 Mbps, extending the usable transmission distance to 250 m for long cable runs.

Choosing a Mode

Standard mode suits most installations. Port isolation is the right choice where edge devices should not see one another — shared-tenant access points, public-area cameras, or any segment where a compromised endpoint should not reach its neighbours. Extra-remote mode trades bandwidth for reach and is intended for a camera at the end of a run beyond 100 m; at 10 Mbps a single H.265 stream still passes comfortably.

LED Indicators

Indicator	State	Meaning
POWER	On / Off / Flashing	On: normal operation. Off: no power applied. Flashing: port short circuit or excessive load current (power-overload indication)
18 — SFP link	On	Signal present on the combo fibre port
S — Extra-remote	On	Extra-remote mode active
PoE port (orange)	On / Off	On: a powered device is connected and being supplied. Off: no PD connected, or no power supplied
PoE port (green)	On / Off	On: network link established on that port. Off: no link
Uplink port	Green / Orange	Green: 100M link. Orange: 1000M link

Technical Specifications

Ports & PoE

Fixed Ports	16 × 10/100M RJ45 PoE ports; 1 × 10/100/1000M RJ45 uplink port; 1 × 1000M combo port (RJ45 / SFP)
PoE Ports	Port 1: IEEE 802.3af/at/PoE++/bt, max 90 W. Ports 2–16: IEEE 802.3af/at, max 30 W per port
Total PoE Power	Max 150 W
PoE Power Polarity	af/at: 12+ 36–. af/at/PoE++/bt: 12+ 45+ 36– 78–
PoE Dog	Supported — with PoE enabled, the switch detects an unresponsive powered device and resets its port automatically to restore supply
PD Detection	Automatic identification of PoE devices before power is applied; non-PoE devices are not damaged
Port Priority	Supported — when the remaining PoE budget is insufficient, high-priority ports are supplied first, preventing overload

Switching Performance

Forwarding Mode	Store-and-forward (wire speed)
Switching Bandwidth	20 Gbps
Packet Forwarding Rate	6.55 Mpps
MAC Address Table	8K
Packet Buffer	4 M

Technical Specifications (continued)

Transmission & Power

Port Features	Auto MDI/MDI-X, duplex and speed auto-negotiation; IEEE 802.3x full-duplex flow control and back-pressure half-duplex flow control
Transmission Distance	10BASE-T: Cat3/4/5 UTP (≤250 m). 100BASE-TX: Cat5 or later UTP (≤150 m). 1000BASE-TX: Cat6 or later UTP (≤150 m). SFP: 1000M single-mode or multi-mode modules, up to 120 km depending on the module
LED Indicators	POWER: power (also power-overload indication). 18: SFP link. S: extra-remote active. PoE ports: orange PoE status, green link status. Uplink ports: green 100M, orange 1000M
Power Input	Built-in AC power supply, 100–240 VAC, 50/60 Hz, 1.9 A, 158 W max

Mechanical & Environmental

Dimensions	Product: 295 × 195 × 45 mm. Packaging: 410 × 278 × 95 mm
Weight	Net 1.8 kg / Gross 2.6 kg
Mounting	1U rackmount; mounting ears supplied as standard
Operating Environment	Operating temperature –10 °C to +55 °C; humidity 5%–90% RH, non-condensing
Storage Environment	Storage temperature –40 °C to +75 °C; humidity 5%–95% RH, non-condensing
Surge Protection	Port surge protection 6 kV (8/20 μs); ingress protection IP30

Certifications & Warranty

Certifications	CCC; CE-EMC EN55032; CE-LVD EN62368; FCC Part 15 Class B; RoHS
Warranty	1 year for the complete unit (accessories not included)

Packing list: switch × 1, AC power cord × 1, quick guide and warranty card × 1, rack-mount ears × 1 pair. SFP modules are ordered separately; single-fibre modules must be paired 1310 nm / 1550 nm.

Application Scenarios

IP Video Surveillance

Sixteen cameras powered and aggregated in 1U, with the gigabit uplink carrying the combined stream to the recorder or core.

Wireless Access Points

Powers multi-radio APs over a single cable, with port isolation available to keep edge traffic separated.

Fibre Aggregation

The combo port takes an SFP module for uplinks over fibre — up to 120 km depending on the module — or a second gigabit copper link.

Access Control & Intercom

Door stations, readers and intercom terminals powered and networked from one unit, with PoE Dog recovering hung devices.



Support & Partnership

Qualitech Technology provides technical guidance and engineering support services for partners.

Ordering Information

Model	Description	Warranty
SW6800-16FEP-1GE-1GF	16-Port PoE Switch with Gigabit + Combo Uplink — 16 × 10/100M PoE + 1 × gigabit uplink + 1 × gigabit combo, 150 W PoE budget, rackmount	1 year
SW6800-8GEP-2GE	Full Gigabit 8-Port PoE Switch — 8 × gigabit PoE + 2 × gigabit uplink, 120 W PoE budget, desktop	1 year
SW6800-24FEP-2GE	Gigabit Uplink 24-Port PoE Switch — 24 × 10/100M PoE + 2 × gigabit uplink, 240 W PoE budget, rackmount	1 year

Contact

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MODEL

SW6800-16FEP-1GE-1GF-SG

PRODUCT NAME

16-Port PoE Switch with Gigabit + Combo Uplink

QUALITY SYSTEM

ISO 9001 Certified

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