



Alcatel-Lucent Ruggedized Ethernet Switches

OmniSwitch 6465, OmniSwitch 6465T, OmniSwitch 6575, OmniSwitch 6865 for mission-critical environments.

The Alcatel-Lucent Enterprise family of ruggedized Ethernet switches brings industrial-grade, highly secure, intelligent and superior performance to mission-critical applications running in harsh environments and extreme temperatures.

The latest generation of hardened Ethernet switches from Alcatel-Lucent delivers a comprehensive industrial portfolio designed for harsh and mission-critical environments.

The range includes:

- [the OmniSwitch® 6465 Compact Industrial Ethernet Switch](#) for space-constrained access deployments,
- [the OmniSwitch 6465T Extended-Temperature Rugged Switch](#) for cost-effective operation in extreme climates,
- [the OmniSwitch 6575 Precision Industrial Edge Switch](#), offering 90W IEEE 802.3bt PoE, sub-microsecond timing (IEEE 1588v2, SyncE), and secure automation for real-time industrial networks.
- [the OmniSwitch 6865 Advanced Hardened PoE Switch](#) with full Layer 3 capabilities and high-power PoE for industrial aggregation

This family is designed for **mission-critical industrial deployments** such as:

- Transportation & traffic systems
- Utilities & substations
- Rail networks
- Smart cities
- Video surveillance
- Harsh indoor & outdoor environments

Across the portfolio, the switches deliver advanced industrial networking capabilities including **IEEE 1588v2 Precision Time Protocol (PTP)** support for sub-microsecond synchronization required by time-sensitive industrial applications. **High-power IEEE 802.3bt PoE** is available up to **90W per port**, with **Fast PoE and Perpetual PoE** ensuring uninterrupted power delivery to mission-critical devices such as PTZ cameras, digital signage, IoT sensors, etc. Designed for resilient industrial operation, the portfolio supports **Ethernet Ring Protection (ERP v2)**, Media Redundancy Protocol (MRP), **advanced Layer 3 routing**, VRF, **multicast, SPB, and IPv4/IPv6 services** to guarantee speed, security and high network availability in harsh environments.

The industrial family of switches run on the latest generation of the **Alcatel-Lucent Operating System (AOS)**, delivering enhanced reliability, **high-performance and network resiliency** to support evolving industrial and critical infrastructure requirements. The switches support **plug-and-play deployment, zero-touch provisioning, automated configuration, and disaster recovery mechanisms** to ensure rapid and scalable rollouts.

Unified management is provided through the [Alcatel-Lucent OmniVista® Network Management Platform](#), offering centralized visibility, configuration control, analytics, and policy enforcement. OmniVista is **available both on-premises and cloud-based**. Integration with multi-vendor environments and open programmability further **protects long-term investment and operational agility**.





OmniSwitch 6465 Compact Hardened Ethernet Switches

The OmniSwitch 6465 (OS6465) is a family of ruggedized, fully manageable, fan-less Gigabit Ethernet switches designed for industrial Ethernet applications. They are available in DIN rail and 19" rack mountable versions.

The OS6465 can operate in extreme temperatures of -40°C to +75°C. It offers a range of fully redundant power input options and alarm relay connectors for industrial deployments.

The OS6465 family offers IEEE 802.3bt type 3 compliant PoE. It offers high surge protection of level 4 on the power side, and 6KV on the data side. It also offers line rate encryption on all ports through MACsec, to enable end-to-end encrypted networks. OS6465 switches are certified for Marine (DNV & IEC 60945), Railway (track-side and rolling stock), power substations, and intelligent transportation among other industrial compliances, and are also offered in TAA certified versions. It also supports the industrial protocol PROFINET.



OS6465-P6



OS6465-P12



OS6465-P28



OS6465T-12



OS6465T-P12

OmniSwitch 6465T Extended Temperature Ethernet Switches

The OmniSwitch 6465T (OS6465T) are extended temperature, gigabit Ethernet switches in half-rack (19») form-factor and come in PoE and non-PoE configurations. The versatile OS6465T models can be deployed in a variety of environments including residential and business metro Ethernet access, in smart cities and buildings, and railways.

The OS6465T are plenum-rated, and the PoE version can provide efficient power for smart building subsystems such as lighting, CCTV and HVAC. The OS6465T is designed to operate in extreme temperature conditions ensuring reliable operation in -10°C to +60°C.

The OS6465T is optimized for size and offers low-power consumption and a rich software feature set. These switches can be mounted in 19" rack, wall and plenum mount configurations.

OS6465T supports line rate data encryption on all ports through MACsec ensuring communication safety and integrity.

The OS6465T is certified for plenum and MEF 3.0.

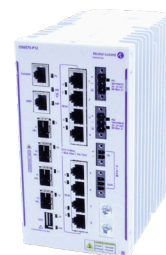


OmniSwitch 6575 — Hardened Ethernet Switches

The OmniSwitch 6575 (OS6575) ruggedized family extends ALE's industrial portfolio with three complementary form factors that fit harsh and space-constrained environments while keeping IT/OT operations simple and secure.

The range includes the compact DIN-rail P12 with high PoE++ for PLCs, sensors and protection devices, the MP16 with vibration-resistant M12 D/X-code and 30/60 W PoE for rolling stock and AGVs, and the U28 fanless, fiber-rich 1RU model with dual PSU for roadside and clean-edge cabinets.

All models are hardened for -40 °C to +75 °C operation, support pervasive MACsec-256 and fabric-based segmentation with SPB/VXLAN, and are easy to deploy with Zero-Touch Provisioning via OmniVista/Cirrus. PTP 1588v2 is supported today with Transparent Clock.



OS6575-P12



OS6575-MP16



OS6575-U28



OS6865-U12X



OS6865-P16X



OS6865-U28X

OmniSwitch 6865 Hardened Ethernet Switches

The OmniSwitch 6865 (OS6865) Hardened Ethernet Switches are a series of advanced Layer 3 switches that offer fast, cost-efficient roll-out of VPN services on the edge using [Shortest Path Bridging](#) (SPB-M). These switches are easy to deploy as they leverage the Alcatel-Lucent intelligent-Fabric technology which offers out-of-the-box plug-and-play, zero-touch provisioning and network automation.

The switches can be mounted on wall/panel, DIN rail or in a 19-inch rack. All the models have built-in 10 Gigabit SFP+ ports and hot-swappable, fully redundant, load sharing power supplies. OS6865 switches offer IEEE 802.3bt type 4 compliant POE. They offer high surge protection of level 4 on the power side and 6KV surge protection on the data side. The OS6865 family is certified for deployments in military (MIL), marine (DNV & IEC 60945), electrical substation, railway (track-side and rolling stock) among other industrial environments and are also offered in TAA certified versions.

Features	Benefits	OmniSwitch 6465	OmniSwitch 6465T	OmniSwitch 6575	OmniSwitch 6865
Ruggedized hardware design for industrial applications	Operates at a temperature range from -40°C to +75°C, withstands greater shock, vibrations, surge and EMI/EMC variance	✓	Operates at -10°C to +60°C		✓
Convection cooled fan-less models	Fan-less operations increases resiliency and maximizes uptime for converged mission-critical networks	✓	Fans stay OFF -10°C to +45°C	✓ (U28 fanless)	✓
Advanced Industrial IEEE 802.3 BT compliant PoE capabilities on all models	Ideal for all types of PoE application requirements from outdoor wireless APs, to PTZ surveillance cameras and video displays	✓		✓ (P12 PoE++; MP16 30/60 W; U28 PoE+ combo)	✓
Non-stop PoE and Instant PoE	Ideal for PoE powered lighting, IP cameras etc. Non-stop PoE continues to provide power to PD even when the switch is rebooted (soft boot). Instant PoE provides power to PDs in a matter of seconds when a switch is powered up even before AOS comes up	✓	✓	✓	✓
Industrial Certifications	Certified to operate in industrial environments including Railway, Road Transportation, Marine, Electric utilities etc.	✓		✓ (model-dependant in progress)	✓
Industrial protocols (PROFINET)	Addresses the evolving needs of industrial and critical infrastructure sectors, including: smart manufacturing, automated railway systems, intelligent energy networks, urban mobility and public service systems	✓		✓ (model-dependant)	
Virtual chassis to connect multiple switches for creating a single chassis-like entity	Increases system redundancy, resiliency and system scalability while simplifying deployment, operations and management of the network	✓	✓	✓	✓
Hot-swappable, fully redundant power supplies	Field upgradable, high redundant network solution maximizes network uptime	✓		✓ *(U28 dual PSU; other model -dep.)	✓
Switch backup and restore	Simplifying switch replacement in field and minimizing network downtime using USB drive. Encryption of USB ensures optimal security	✓	✓	✓	✓
IEEE 1588v2 PTP support	Provides precise nanosecond time synchronization for devices on industrial networks	✓	✓	✓	✓
Simplified installation and service provisioning	Out-of-the-box, zero-touch provisioning and network automation with automatic protocol and topology discovery	✓	✓	✓	✓
MACSec Support	MACSec encryption support provides a secure network access ensuring data confidentiality and integrity	✓	✓	✓	
SPB-M support for scalable network virtualization architecture over standard Ethernet fabric	- Optimizes/simplifies Layer 2 and Layer 3 network designs and reduces administration overhead - SPB Pseudo-wire P2P - ERP-SPB interworking			✓	✓
Auto-fabric technology to simplify installation and service provisioning	- Enables zero-touch provisioning and network automation with automatic and topology discovery - Prevent human mistakes by automating standardized and replicate configurations			✓	✓