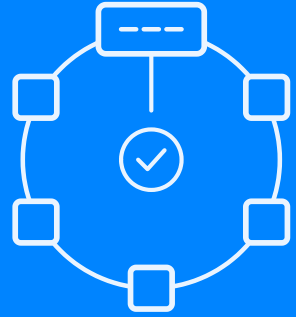


NETWORK INFRASTRUCTURE

Secure Industrial Networks

A dedicated, redundant fibre backbone that keeps every field device online.



BUILT ON

Maisvch

ERPS ring

Star topology

Arpyan ComBox

10 GbE SFP+

Cameras, speakers and controllers are only as available as the network behind them. Arpyan designs dedicated security networks with Maisvch industrial switches in star and ERPS ring configurations, and delivers them with the ComBox, a pre-engineered field cabinet that brings fibre, PoE and protected power to each mast or building.

< 50 ms

Ring recovery with ERPS (ITU-T G.8032) after a fibre or node failure

10 GbE

SFP+ backbone with capacity for high-resolution video

-40 ... +75 °C

Fanless industrial switches for outdoor cabinets

WHAT IT DELIVERS

No single point of failure

In a ring every node has two paths to the core. A cut fibre or a failed cabinet does not disconnect the rest.

Recovery nobody notices

ERPS reroutes traffic in under 50 milliseconds, so live video and recording continue without operator action.

Built for the field

Fanless switches in aluminium housings with wide temperature range and redundant power inputs, made for unconditioned cabinets.

Economical with fibre

Bidirectional SFP+ modules run each 10 GbE link on a single fibre, halving the cores needed on long routes.

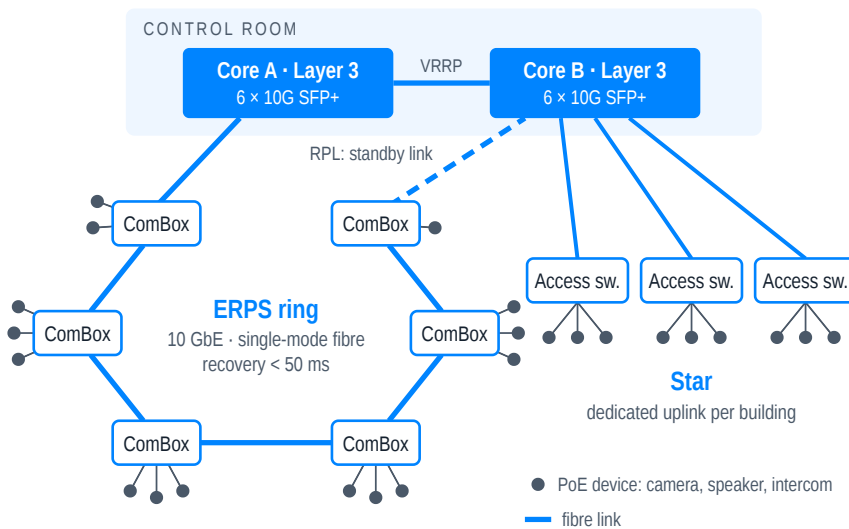
Hardened and separated

A dedicated network with VLAN segmentation, 802.1X, access lists and encrypted management keeps it apart from IT and from intruders.

Monitored end to end

SNMP and optical diagnostics report switch, link and transceiver health before users see a fault.

TOPOLOGY: RING, STAR OR BOTH



ERPS ring

For chains of masts and cabinets along a perimeter or route. Each ComBox connects to its two neighbours and the ring closes on the core. Best resilience per metre of fibre.

Star

For buildings and clusters near the control room. Each access switch has its own uplink to the core, single or dual. Simple, with full bandwidth per branch.

Combined

Large sites use both: rings for the outdoor field, stars inside buildings, joined at a redundant Layer 3 core.

BUILDING BLOCKS

Maisvch MISCOM8030GX Layer 3 core switch

6 × 10G SFP+, 16 × Gigabit SFP and 8 × Gigabit combo ports in a fanless 1U unit. ERPS, OSPF, VRRP, 802.1X and ACL; redundant power; -40 to +75 °C.

Maisvch managed switches Ring and access nodes

DIN-rail Layer 2 / Layer 3 switches with 10G or Gigabit fibre uplinks and PoE ports for cameras, speakers and intercoms.

Arpyan ComBox Field cabinet

Outdoor enclosure delivered assembled and tested: industrial PoE switch, fibre termination, power supply and surge protection for the devices of one mast.

SFP+ optics Fibre links

Single-mode 10G transceivers, including bidirectional (BiDi) pairs for single-fibre links, with digital diagnostics.

Reference design: developed for a large heritage estate with open terrain: two 10 GbE ERPS rings on single-mode fibre, a ComBox at every camera mast and a redundant pair of MISCOM8030GX core switches.

TYPICAL APPLICATIONS

- Perimeter and estate surveillance
- Parks and heritage sites
- Stadiums and campuses
- Ports, roads and transport
- Energy and utilities
- Industrial plants

COMBINES WITH

Surveillance · Public Address ·
Management Platform

HOW ARPYAN DELIVERS

1 Design

Requirements, coverage and architecture studies, specifications and bills of quantities.

2 Supply

Equipment, software and licences from the manufacturers, with their full warranty.

3 Commission

Platform configuration, guidance of the installer on site, testing and hand-over.

4 Support

Operator and administrator training, documentation and ongoing technical support.