MICROSENS
SBR
Savunma

Microsens

The Company

- German manufacturer founded in 1993
- Competence in manufacturer of Ethernet switches, converters and xWDM platforms based on fibre optic
- I+D and production in the headquarter in Hamm and Neu-Isenburg(Frankfurt). Offices in France, Poland and Dubai
- Technology partner of well known Manufacturer like Siemens, Alcatel-Lucent, Dräger Medical, Mobotix...
- More than 1 Mio. installed active ports all over the world
- Since 2020 Microsens belongs to the Zech Group

Our End-users

SBR Savunma

RWE

DB

euromicron systems GmbH
euromicron Gruppe

POLISH ENERGY PARTNERS

T··Systems·

Energa

Liège
Une ville, un esprit.

Die Continentale

Prime Telecom
natural communication

e·on

SIEMENS

WDR

AREVA

EnBW

BEIJING SUBWAY

BT

الشركة السعودية للكهرباء
Saudi Electricity Company

RAG
Deutsche Steinkohle

Dubai Airports
Connecting the World

BARTEC

Tocumen
AEROPUERTO INTERNACIONAL
PANAMA

amprion

Bundeswehr

ITM
Institución Universitaria

Universitätsklinikum Leipzig
Anstalt öffentlichen Rechts

Mercedes-Benz

CENTRE HOSPITALIER DE CANNES

tu technische universität dortmund

TELE2

MICROSENS
euromicron group

Product groups

ENTERPRISE NETWORKS

- FTTO – Alternative concept to SCN
- BFOPs – Basic Fibre Optic Products

INDUSTRIAL SOLUTIONS

- Components for harsh enviroments
- Profi Line for professional installations
- Entry Line for basic installations

OPTICAL TRANSPORT

- Enterprise Interconection
- Solutions for telecomunication companies
- Transmition from 40 to 100G
- RAMAN Amplifier

SMART Building Solutions

- Building automation based on Ethernet Network

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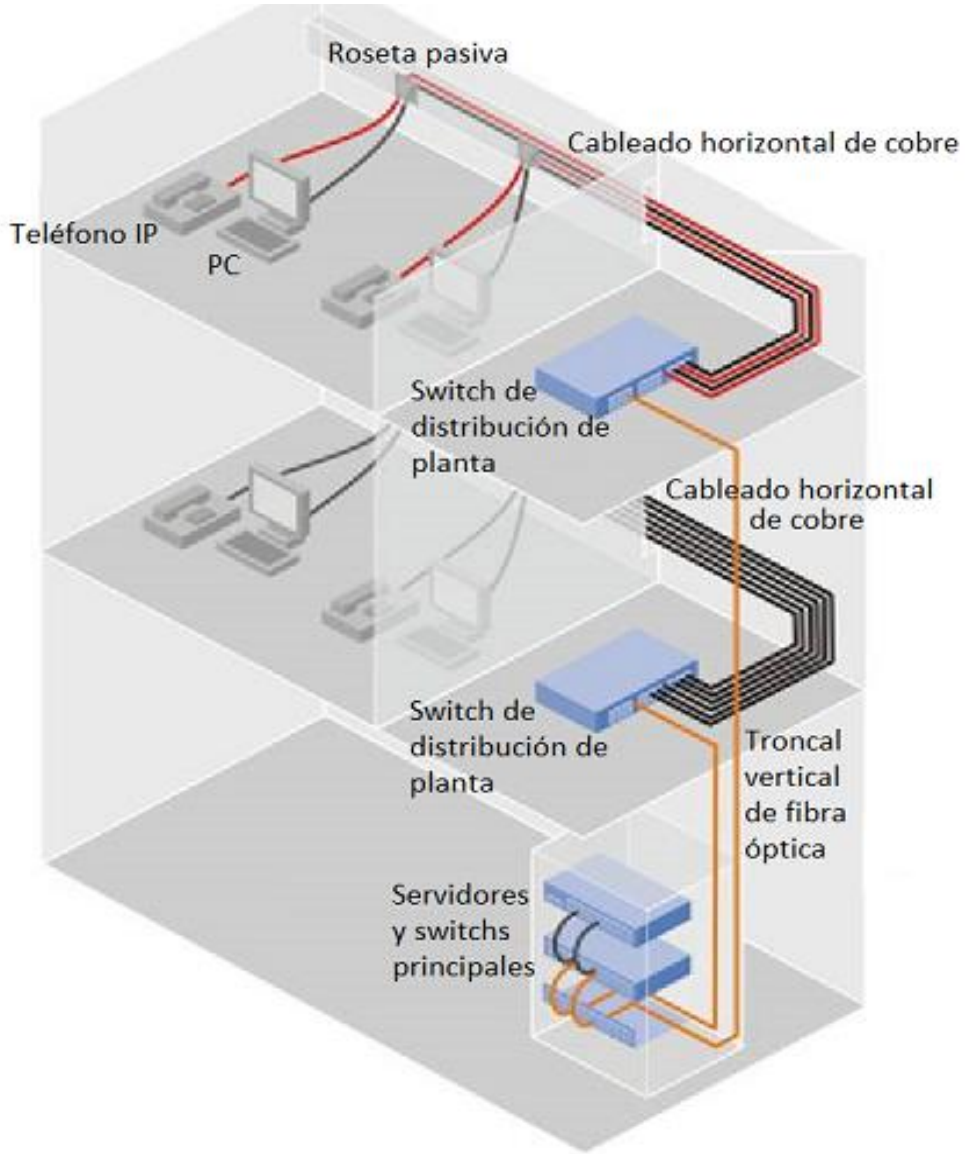
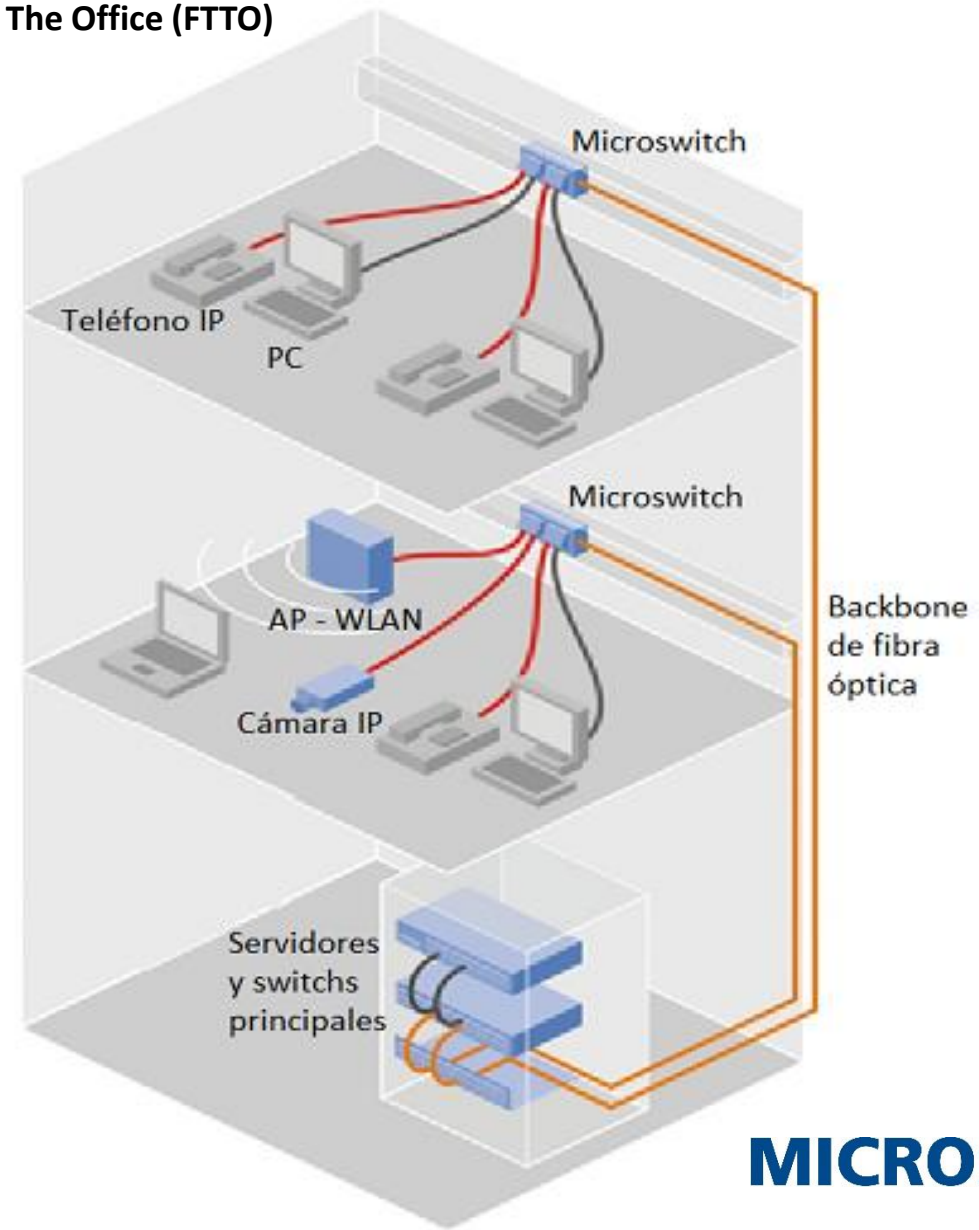
Fiber To The Office(FTTO)

Structured Cabling Network



Fiber To The Office (FTTO)



FTTO: Microswitch 6th Generation

Full Gigabit Ethernet →

Energy Efficient Ethernet →

Power Over Ethernet+(30 W) →

Compact design 45x90 mm →

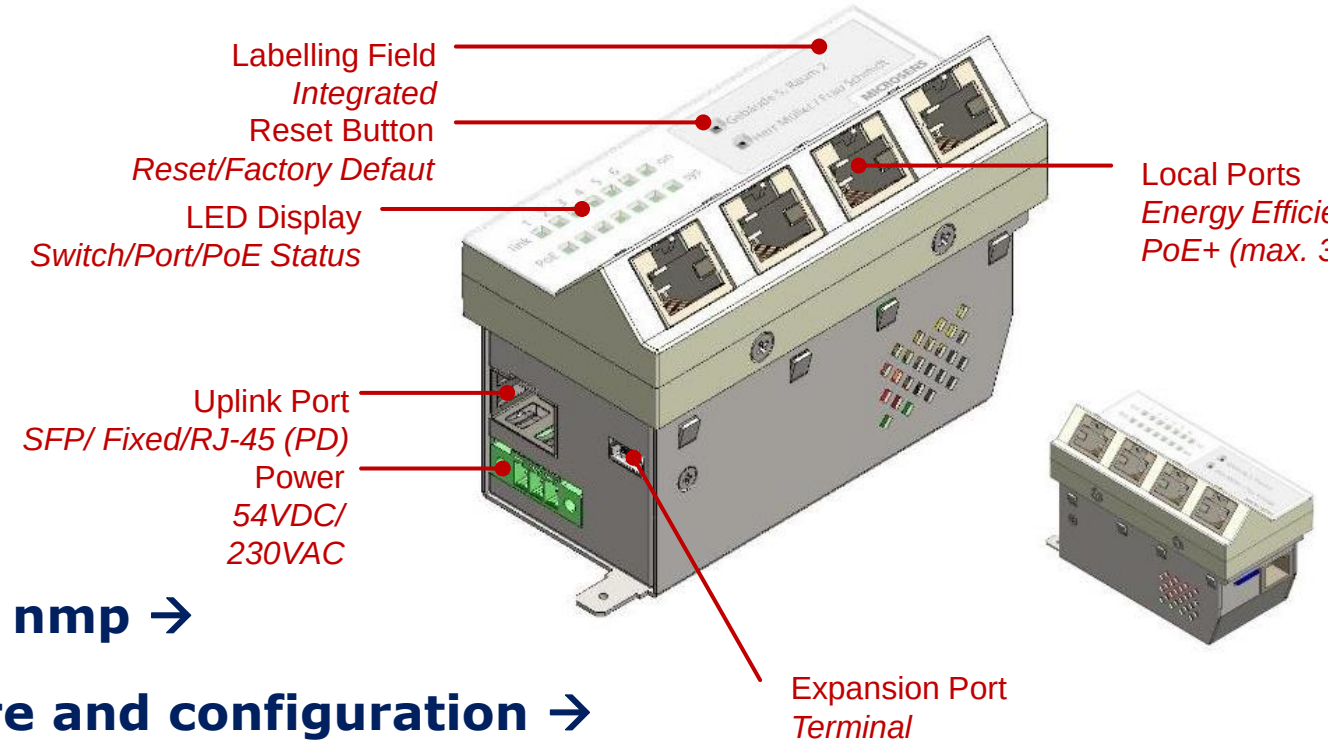
Fanless Design →

Professional Mangement System nmp →

MicroSD card for storing firmware and configuration →

For individual use in star, ring and mixed topologies →

Also with extended temperature and DIN Rail Mounting →

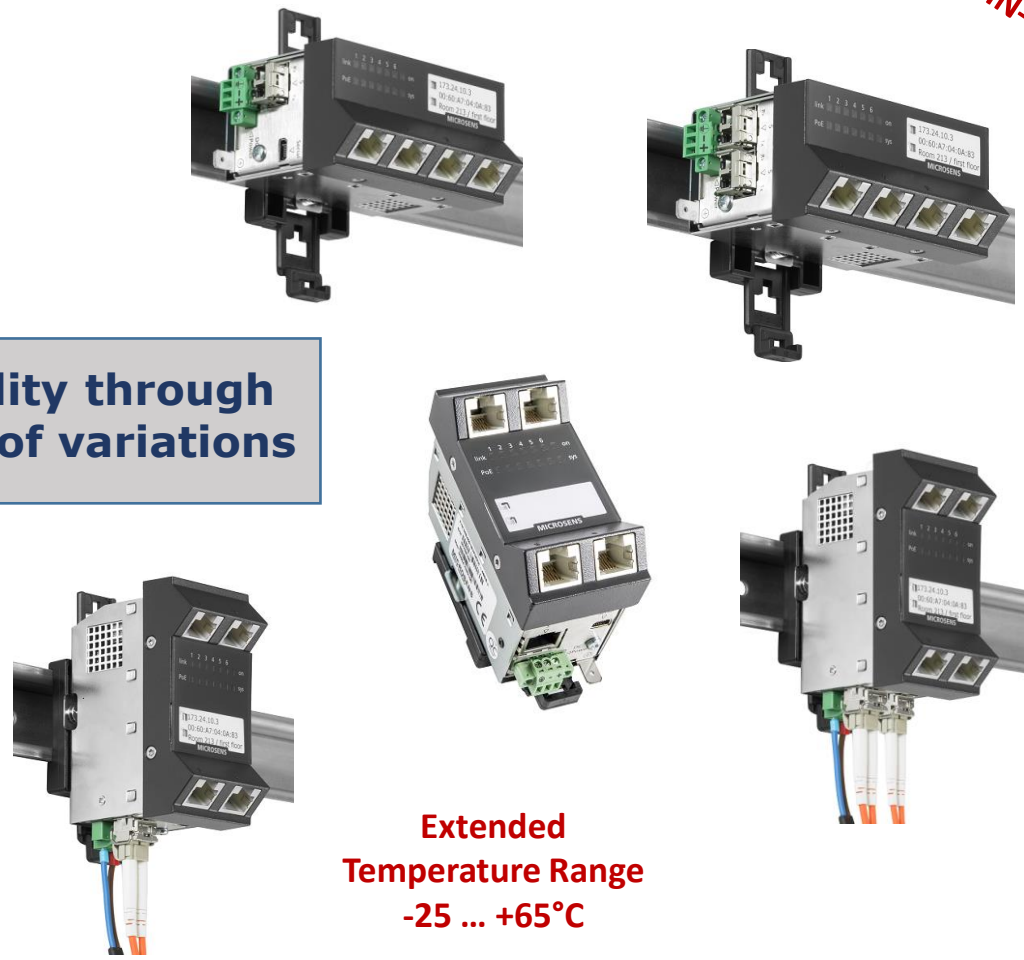


Microsens Generation 6

FTTO switches for temperature controlled environments

Higher flexibility through a wide range of variations

DIN-Rail mounting



Extended Temperature Range -25 … +65°C

Ruggedized FTTO switches with DIN-Rail mounting option and extended temperature

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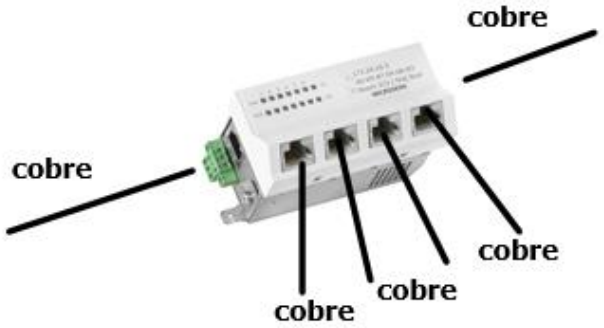
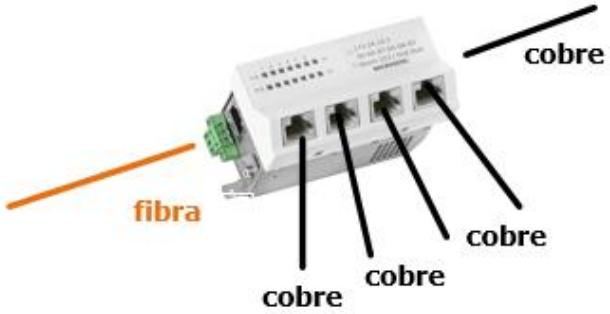
FTTO: Microswitch Variation

Microswitch for indoor use



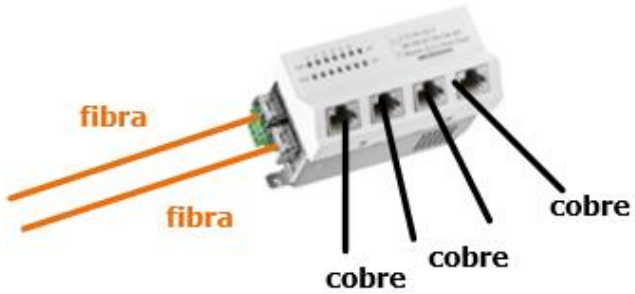
MS450186PM-48G6+

Gigabit Ethernet Micro-Switch 45x45, 4x10/100/1000T with 2x 10/100/1000 Base-T Up-& Downlink ports



MS440209PM-48G6+

Gigabit Ethernet Micro-Switch 45x45, 4x10/100/1000T with 1x1000Base-X SFP Uplink and 10/100/1000T downlink



MS440207PM-48G6+

Gigabit Ethernet Micro-Switch 45x45 horizontal design, 4x10/100/1000T with 2x SFP-Uplink 100/1000X

Fiber to The Office: Ruggedized Switch

Microswitch for outdoor use

MS440219PMXH-48G6+ Gigabit Ethernet ruggedized Micro-Switch, 4x10/100/1000T PoE+, with 1x SFP-Uplink 100/1000X (dual speed), horizontal design, DIN-Rail holder, extended temperatura(-20 to +65°C)

MS440217PMXH-48G6 Gigabit Ethernet ruggedized Micro-Switch, 4x10/100/1000T PoE+ with 2x SFP-Uplink 100/1000X (dual speed), horizontal design, DIN-Rail holder, extended temperatura(-20 to +65°C)

MS450187PMXH-48G6 Gigabit Ethernet ruggedized Micro-Switch, 6x10/100/1000T 5x PoE+/PD, horizontal design, DIN-Rail holder, extended temperatura(-20 to +65°C)

Fiber to The Office: Ruggedized Switch

Outdoor boxes IP66/67 for Microswitch ruggedized

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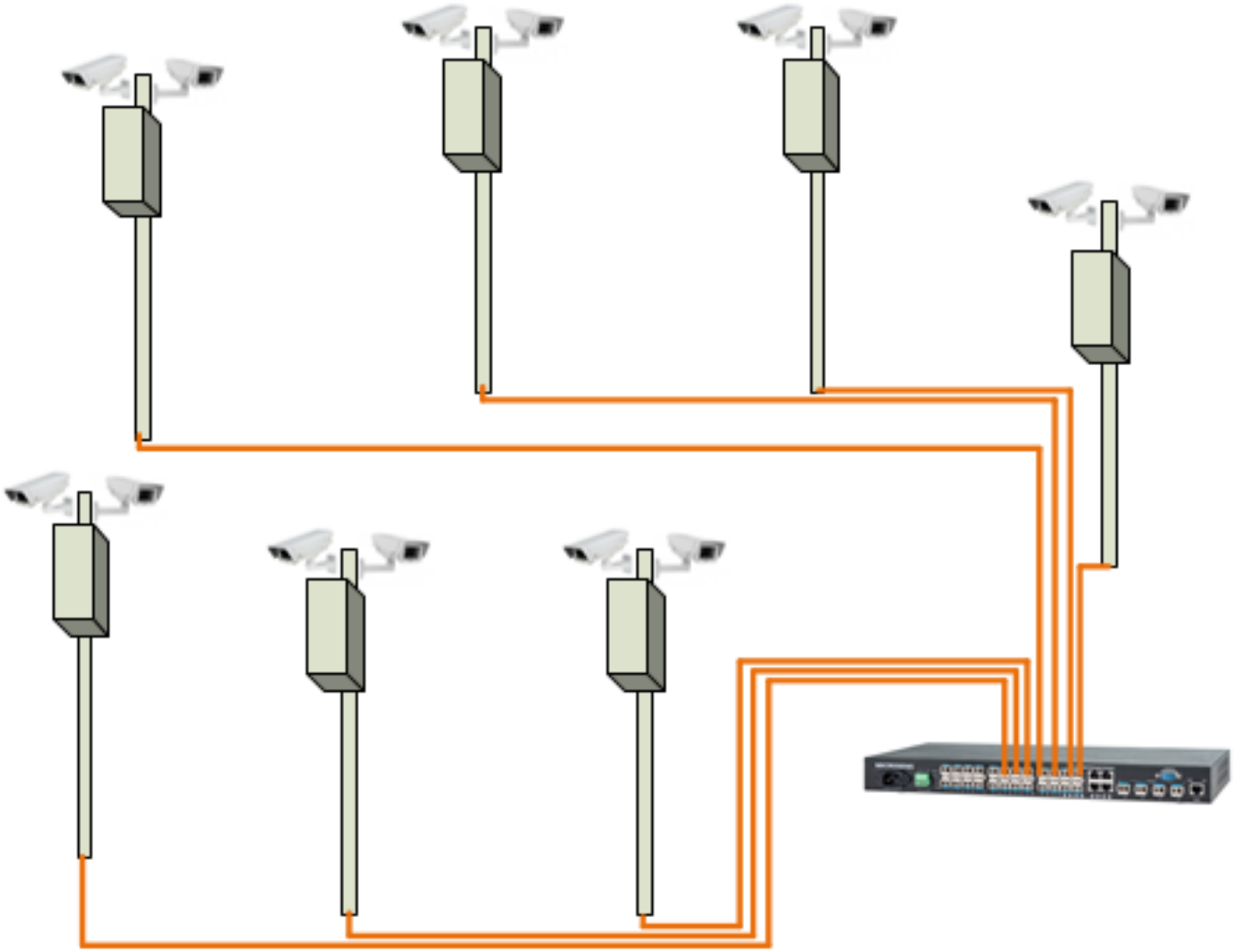
Ruggedized Switch: Configuraciones

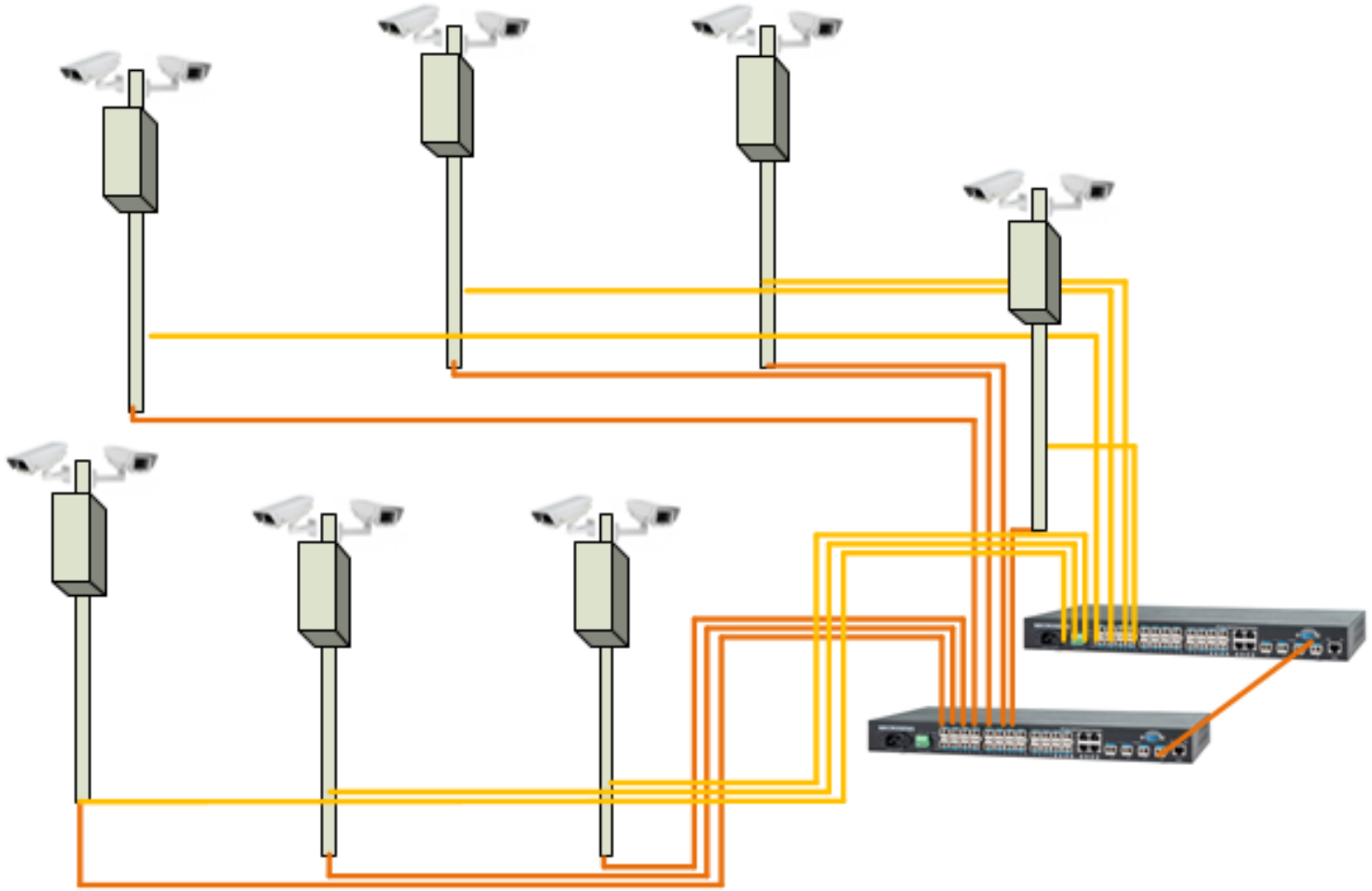
Exampel: Star Topology

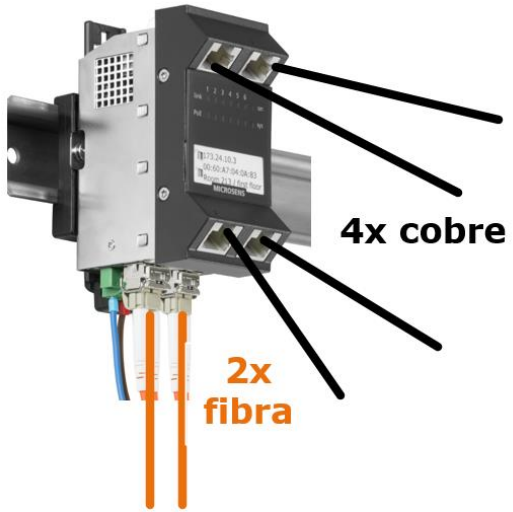


MS440219PMXH-48G6+

Ruggedized Switch: Configuraciones

Example: Redundant Star Topology

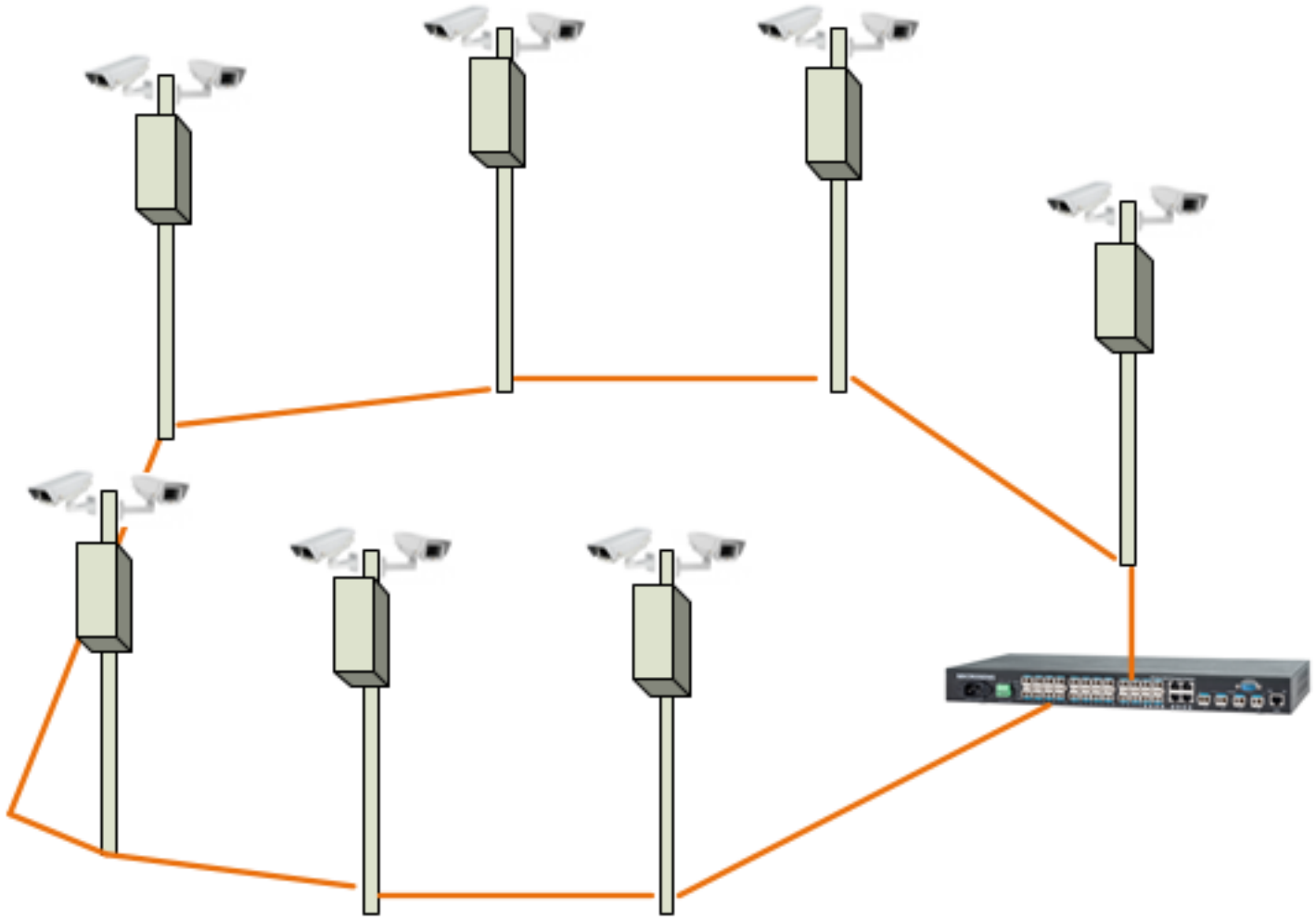


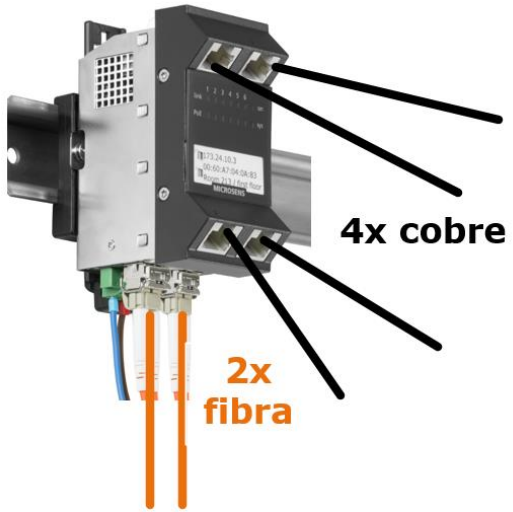


MS440217PMXH-48G6

Ruggedized Switch: Configuraciones

Example: Redundant Fibre Ring Topology

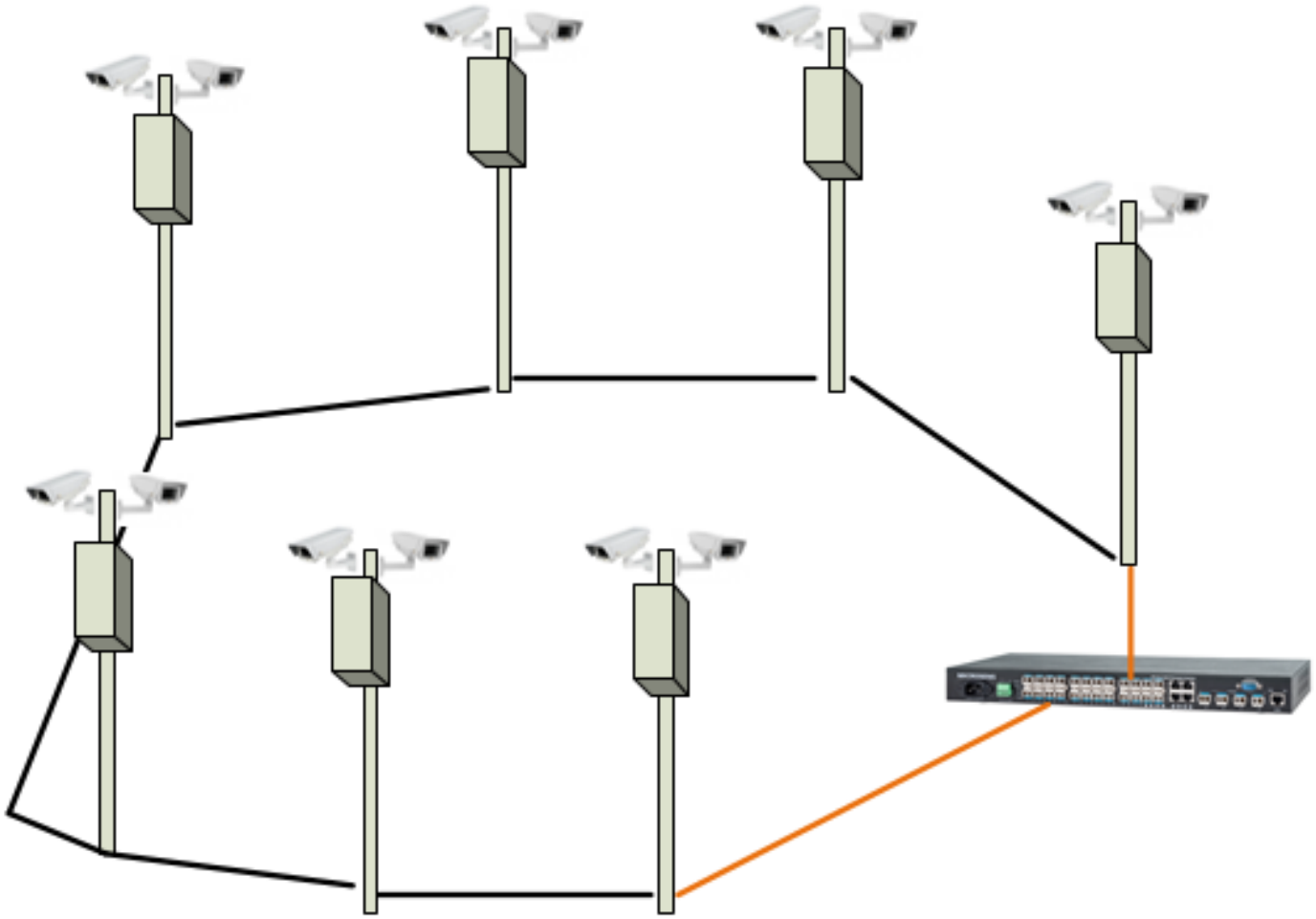




MS440217PMXH-48G6

Ruggedized Switch: Configuraciones

Example: Redundant Fibre/Copper Ring Topology



MS440219PMXH-48G6+

MS450187PMXH-48G6

Fiber to The Office: Powering

Power Supplies

MS700701/MS700710
Power Supply for Microswitches with PoE/PoE+ functionality, 60W, 54 VDC

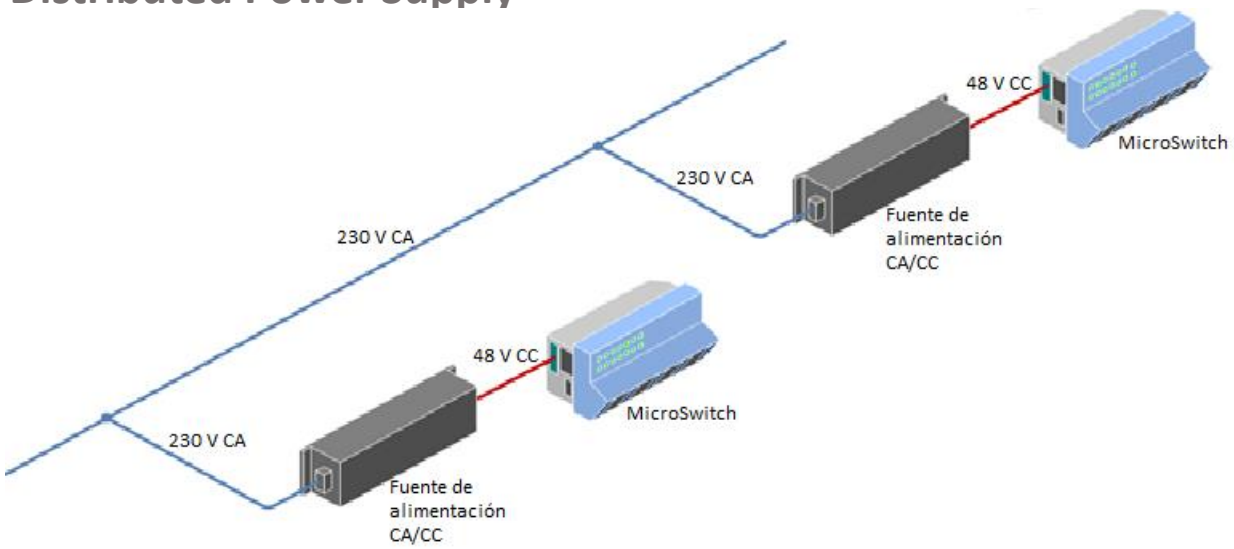
MS700750
Power Supply 45x45 for Microswitches for installation in cabletrunk funcionalidad for PoE/PoE+ functionality, 70 W, 54 VDC

MS700458
DIN Rail mounting power supply 480 Watt 48 VDC/10 A, input voltage 93-264 VAC, screw terminals, temperature range -40°C..71°C

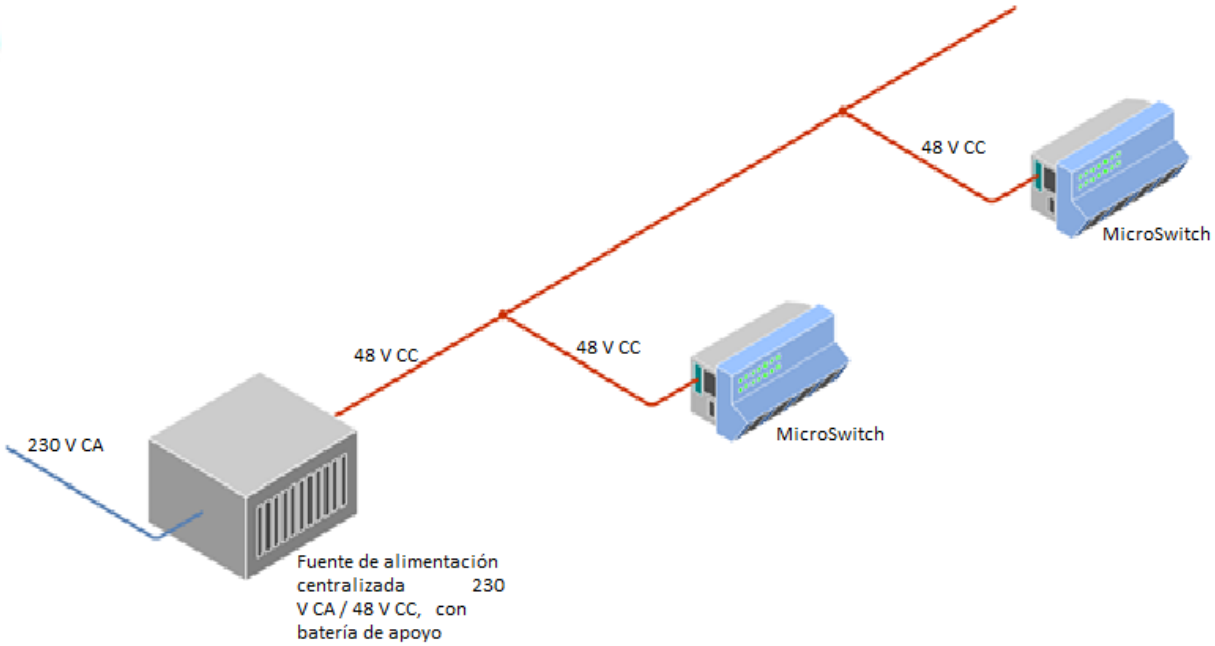
MS70087x
19" 1U Power Supply, 3 module 850W/54VDC for max 2.550W with management (SNMP included)

Powering Options

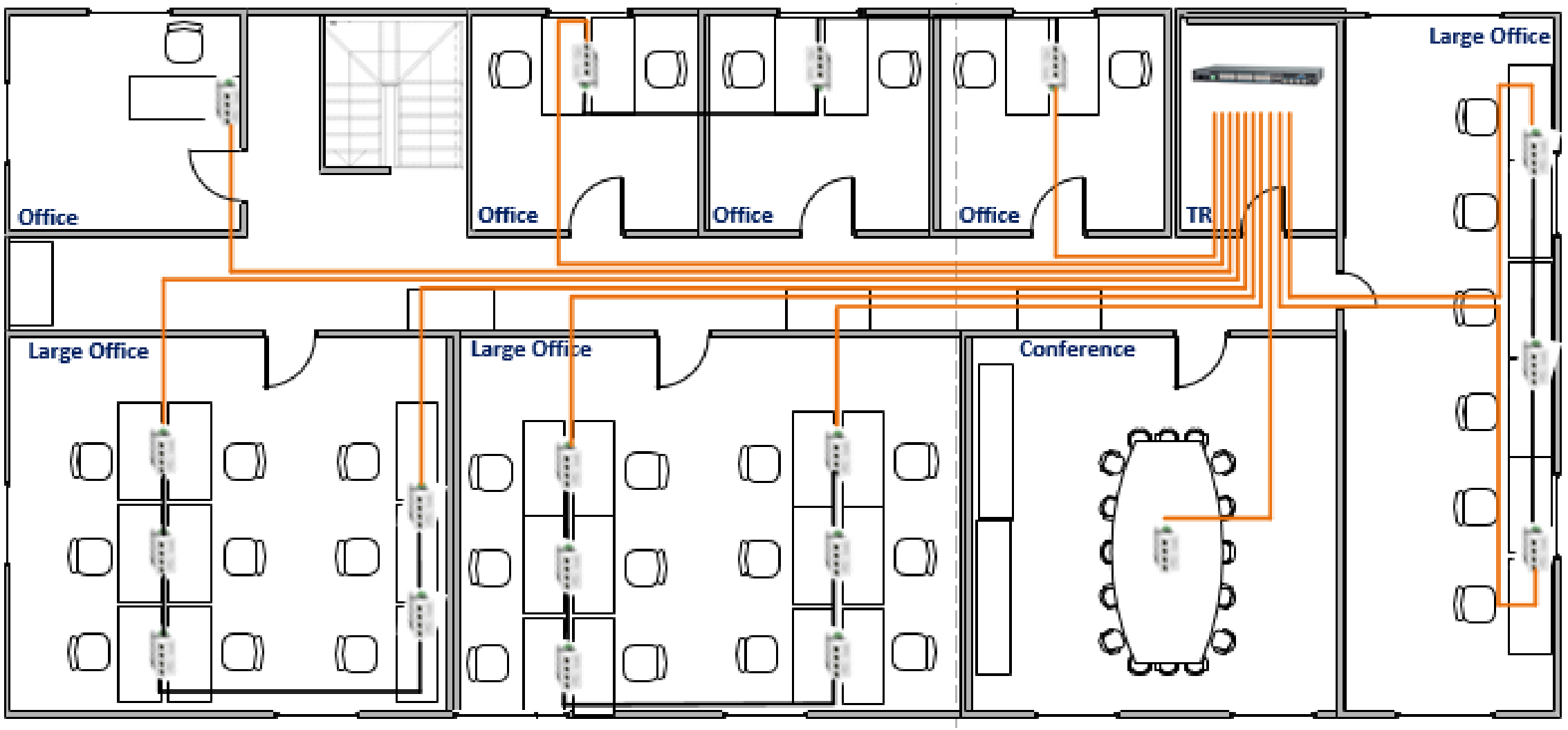
Distributed Power Supply



Centralized Power Supply



Fiber To The Office – Network Example



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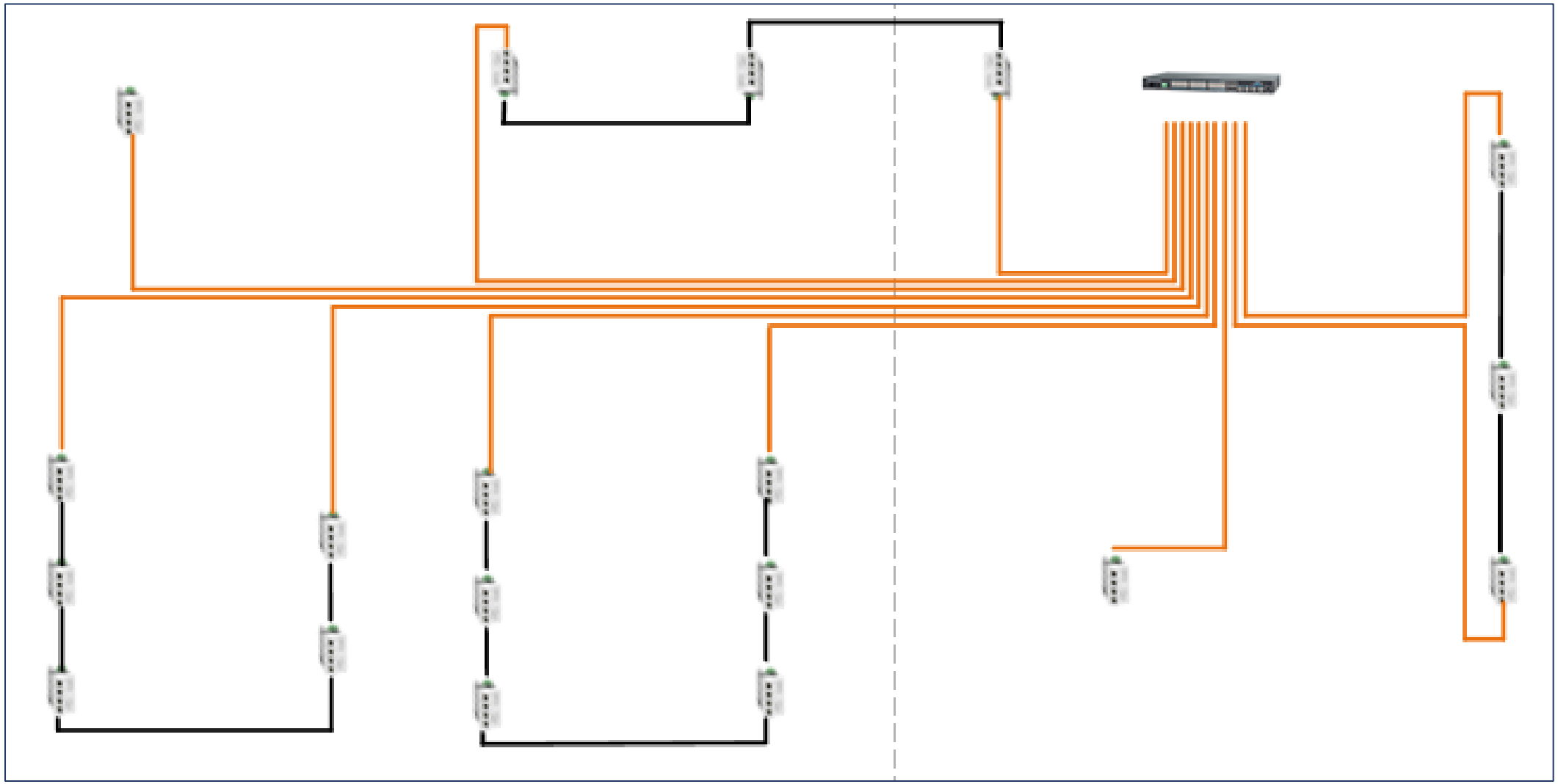
Fiber To The Office – Network Example



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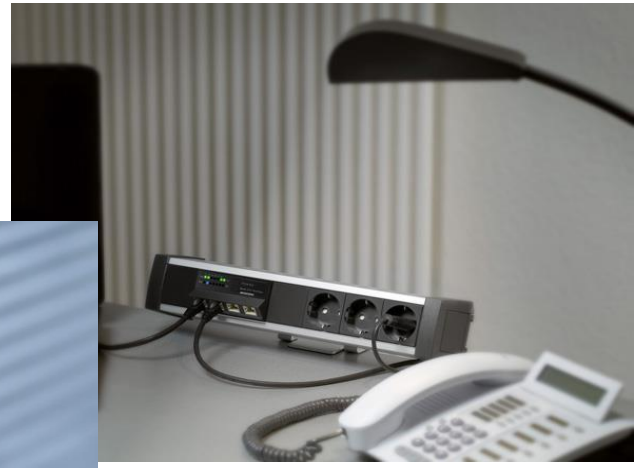
Fiber To The Office



Company - Industrial Series

Profi Line Modular

- Highest Performance, (25 GBE ports, PoE+)
- Expansion tailored to needs
- Fault tolerant through Ring Technology
- Network Security

Profi Line

- Robust and reliable
- For fail sensitive applications
- Certifications for Rail and Power Substations
- Ring Topology
- Network Management

Entry Line

- Basic Solutions
- Bridges, Switches, Device Server
- without Management
- Cost-effective, fast delivery

MICROSENS Industrial Switches

MICROSENS

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Entry Line

- Basic Solution without Management
- Bridges, Converter, Switches
- Injectores for PoE up to 90 W
- Plug and Play
- On Stock

Profi Line G6

- For critical Infrastructures
- Extended temperatur up to + 85°C
- Management system profesional nmp
- Star- Ring- Topologies
- Security functions
- Certification for „Railway“ and „Power Substations“

Profi Line Modular Series

Hardware-Platform

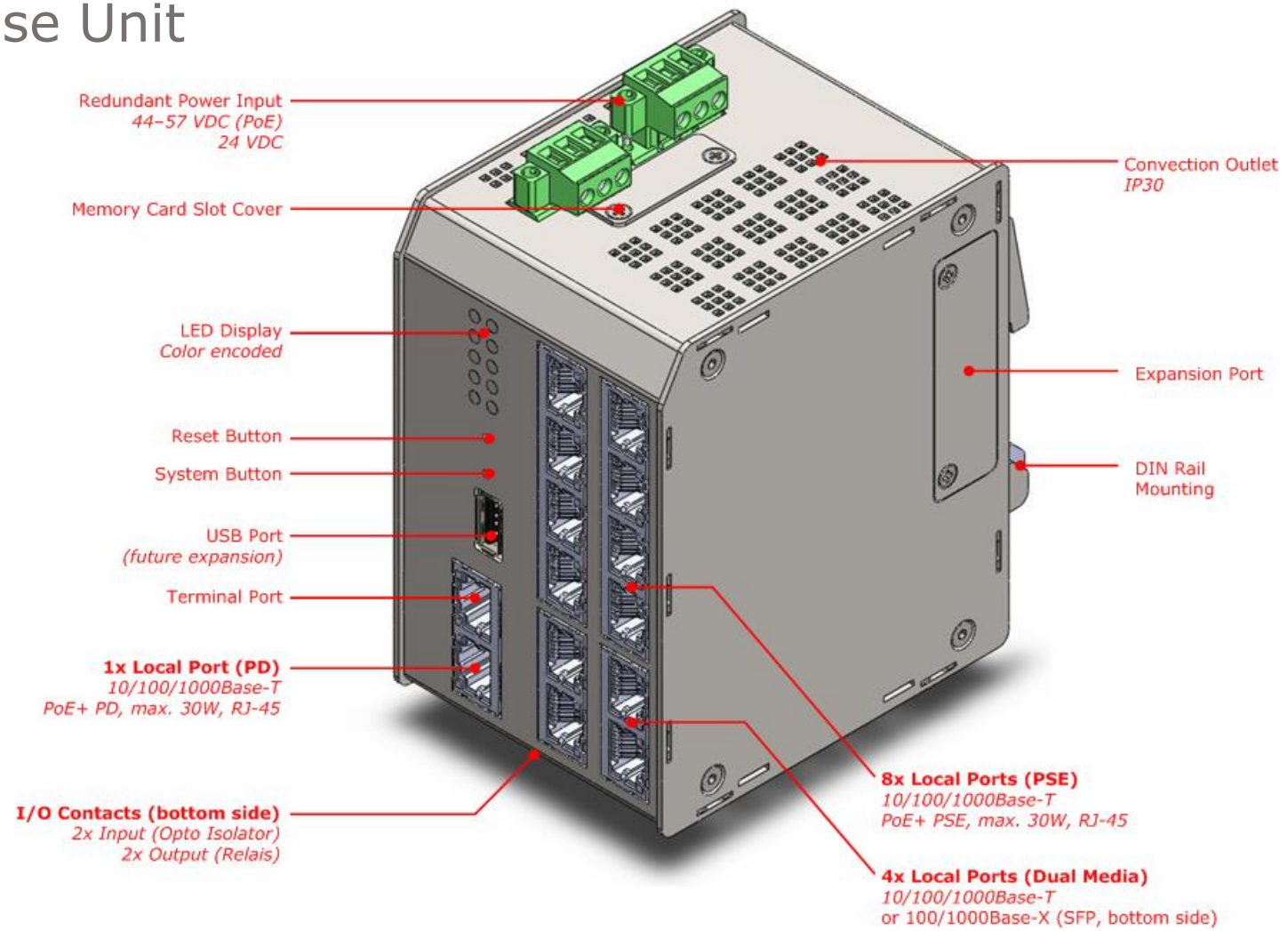
- Latest switch technology with Energy-Efficient Ethernet
- Modular design up to 25 GBE ports, up to 8 GBE Fiber Ports
- Power-over-Ethernet+ (802.3at) on all copper ports (max. 200W)
- SD card for firmware & configuration
- Solid metal chassis, clear port layout
- Temperature range -40..+75°C
- Redundant power supply input
- I/O Ports: 2x in, 2x out
- Modular Expansion Slot (port numbers, I/O, Services etc.)

Key Features

- Full Gigabit Ethernet
- Modular Design (Expandable)
- 13x RJ-45 Ports
  - PoE+ (30W) per port
  - Energy Efficient Ethernet
- 4x Dual Media SFP (SC optional)
- 1x PD port to power device
- High performance CPU
  - Open source plattform (Linux OS)
- Ruggedized Housing

Energy Efficient Ethernet

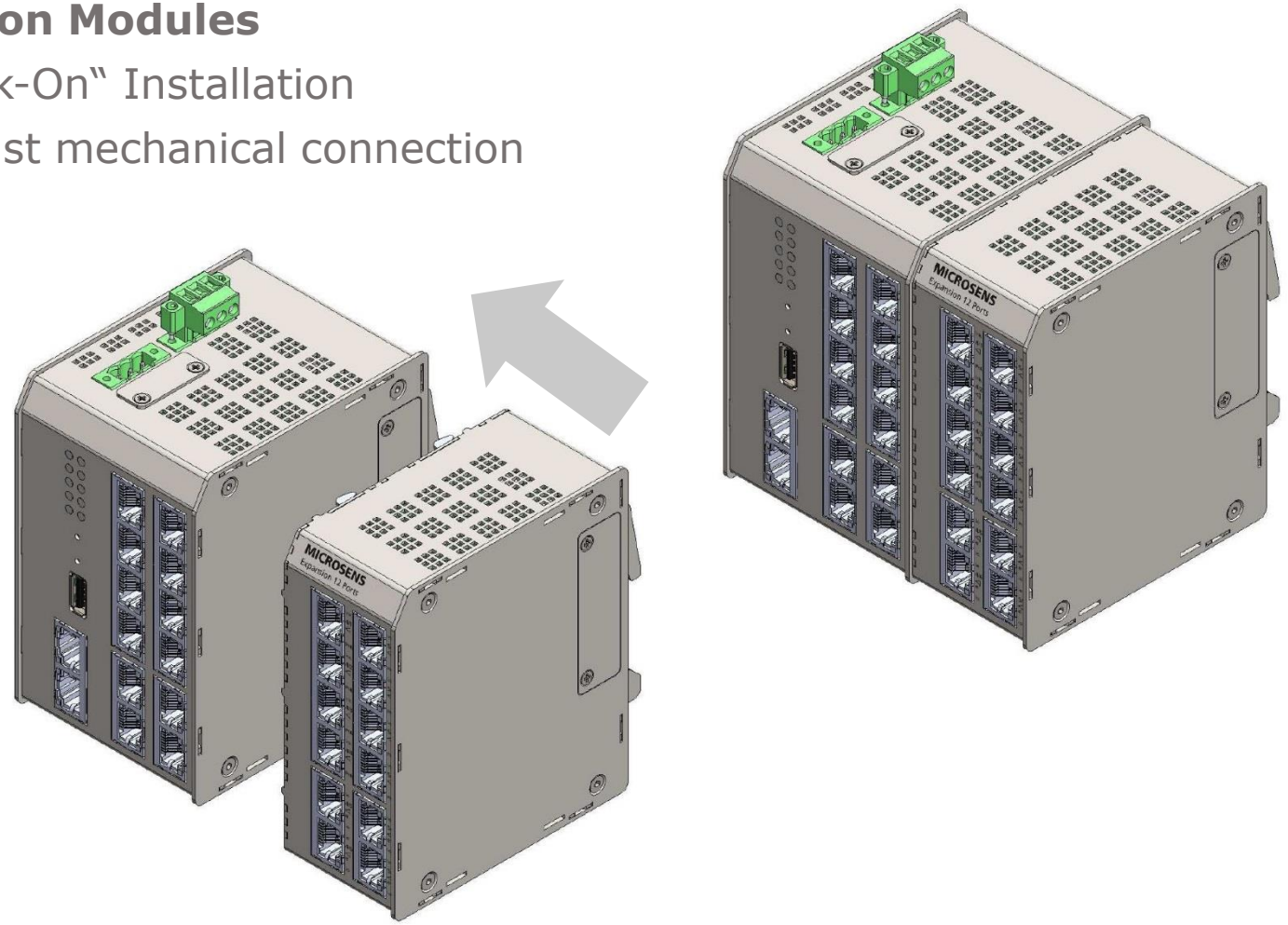
Base Unit


Redundant Power Input
44–57 VDC (PoE)
24 VDC
Memory Card Slot Cover
LED Display
Color encoded
Reset Button
System Button
USB Port
(future expansion)
Terminal Port
1x Local Port (PD)
10/100/1000Base-T
PoE+ PD, max. 30W, RJ-45
I/O Contacts (bottom side)
2x Input (Opto Isolator)
2x Output (Relais)
Convection Outlet
IP30
Expansion Port
DIN Rail
Mounting
8x Local Ports (PSE)
10/100/1000Base-T
PoE+ PSE, max. 30W, RJ-45
4x Local Ports (Dual Media)
10/100/1000Base-T
or 100/1000Base-X (SFP, bottom side)

Profi Line Modular – Switch Generation 6

Expansion Modules

- „Click-On“ Installation
- Robust mechanical connection



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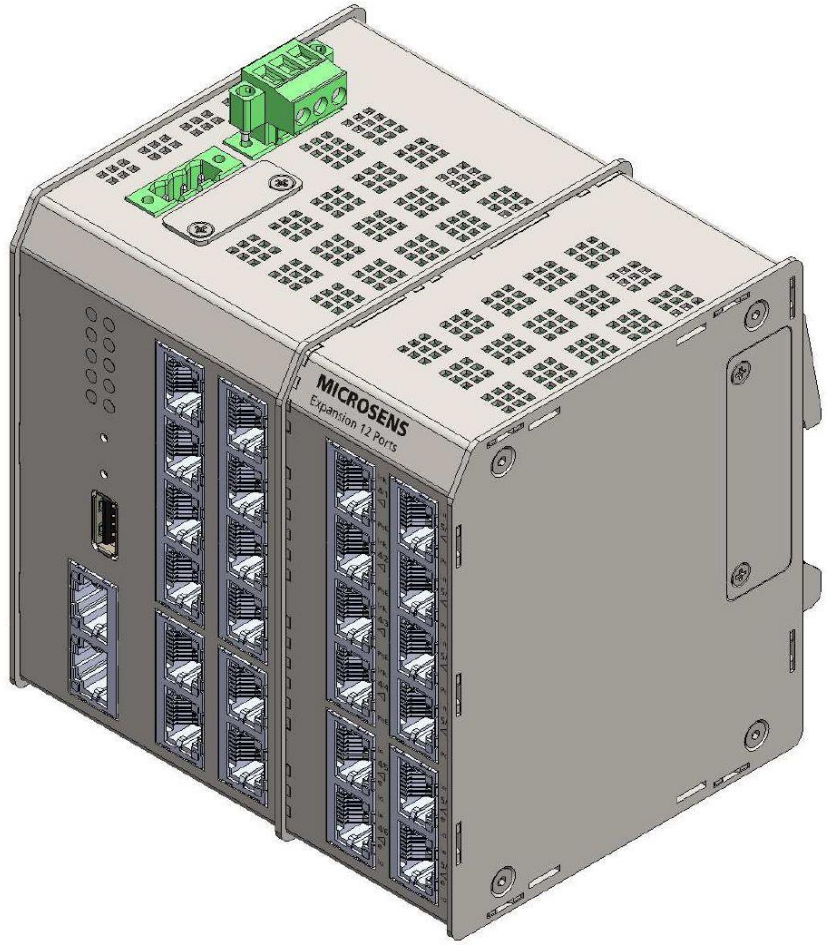
Profi Line Modular – Switch Generation 6

Industrial Switch

Product Family

- Modularity for flexible expansion
- Basic Unit:
  - 9x 10/100/1000T RJ-45
  - 4x Dual Media (TP & SFP/SC)
- Expansion Modules:
  - 4x 10/100/100T RJ-45
  - + 2x Dual Media (TP & SFP/SC)
  - 8x 10/100/1000T RJ-45
  - + 4x Dual Media (TP & SFP/SC)
- Power Options:
  - 54 VDC with PoE+
  - 24 VDC without PoE



Profi Line + Switch Generation 6

Profi Line +

- All features of Generation 6
- Compact design
- 7 Gigabit ports
- Not modular
- Cost and size optimized

MICROSENS CONFIDENTIAL

Profi Line +

- All features of Generation 6
- Compact design
- 7 Gigabit ports
- Not modular
- Cost and size optimized

Profi Line Rack Switch

- All features of Generation 6
- 25 Gigabit Ports
- 1U 19“ rack mounting
- Ruggedized -40 to 75 degrees
- Fanless

Profi Line Modular/Rack

Características claves

- Full Gigabit Ethernet
- Diseño modular/Diseño Rack(19“)
- base: 13 puertos
  - 13x puertos RJ-45/16x RJ45 con PoE+
  - 4x SFP/8x SFP
  - PoE+(30W) opcional High Power PoE(60Watios)
- 1x PD para recibir alimentación de switches --con PoE
- Temperatura extendida(sin ventiladores)
- Tarjeta de memoria (servicio)

Energy Efficient Ethernet

Industrial Switches G6

Micro Switch G6 - Ruggedized
5(4)x 10/100/1000B-T + PSE (PoE+)
1(2)x SFP (Ring)

Profi Line+
4x 10/100/1000B-T + PSE (PoE+)
1x 10/100/1000B-T + PD (PoE+)
2x SFP Dual Media (Ring)
No Module Expansion Port

Profi Line Modular
+ 6 Ports Expansion
12x 10/100/1000B-T + PSE (PoE+)
1x 10/100/1000B-T + PD (PoE+)
6x SFP Dual Media (Dual Ring)

Profi Line Modular
8x 10/100/1000B-T + PSE (PoE+)
1x 10/100/1000B-T + PD (PoE+)
4x SFP Dual Media (Dual Ring)
Module Expansion Port

Profi Line Modular
+ 12 Ports Expansion
16x 10/100/1000B-T + PSE (PoE+)
1x 10/100/1000B-T + PD (PoE+)
8x SFP Dual Media (Dual Ring)

Microsens Generation 6

2 Solutions on the same platform

In-house and Outdoor installations

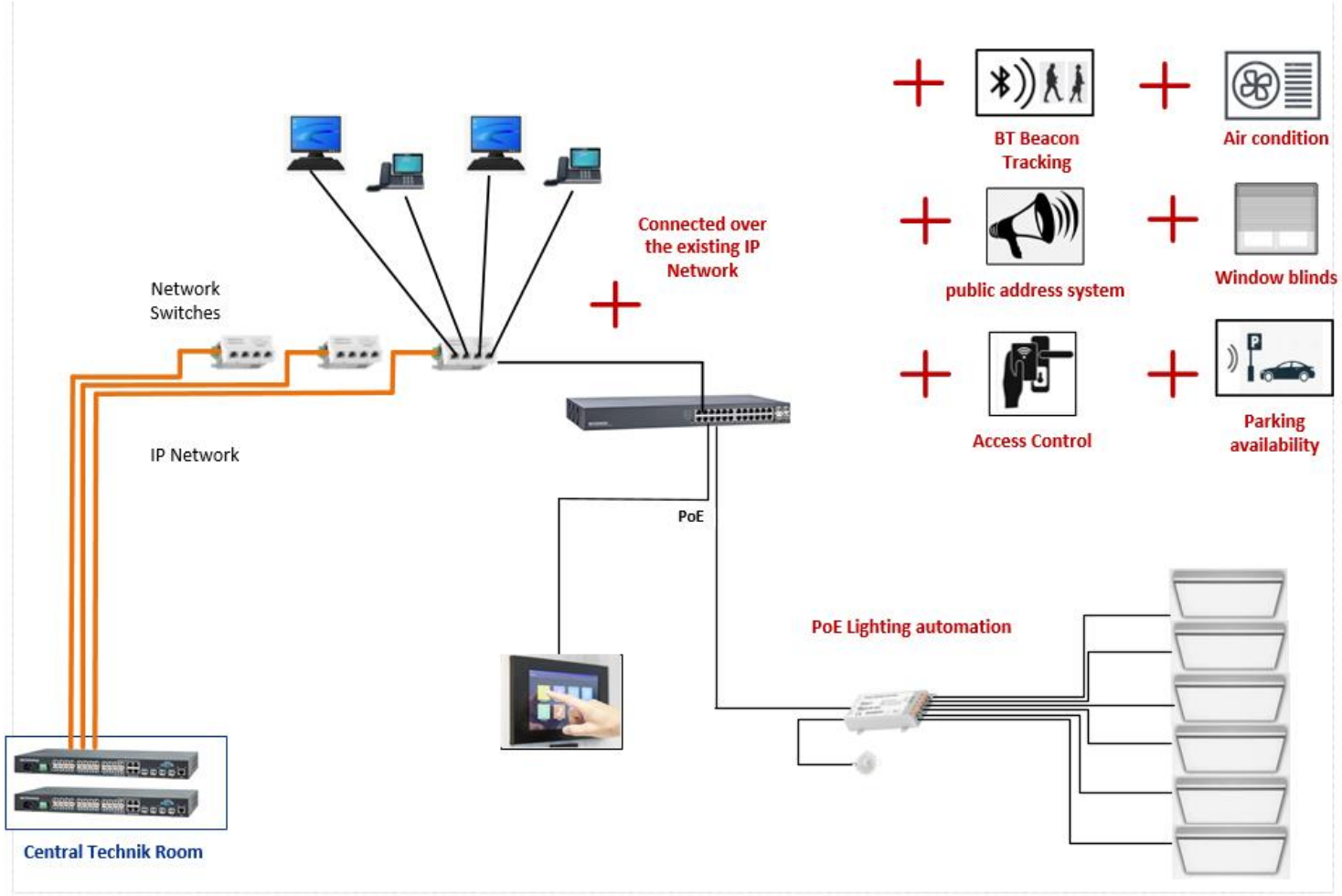
Installations for harsh environments

MICROSENS

Advantages of Microsens Light automation

Latest and future-oriented technology

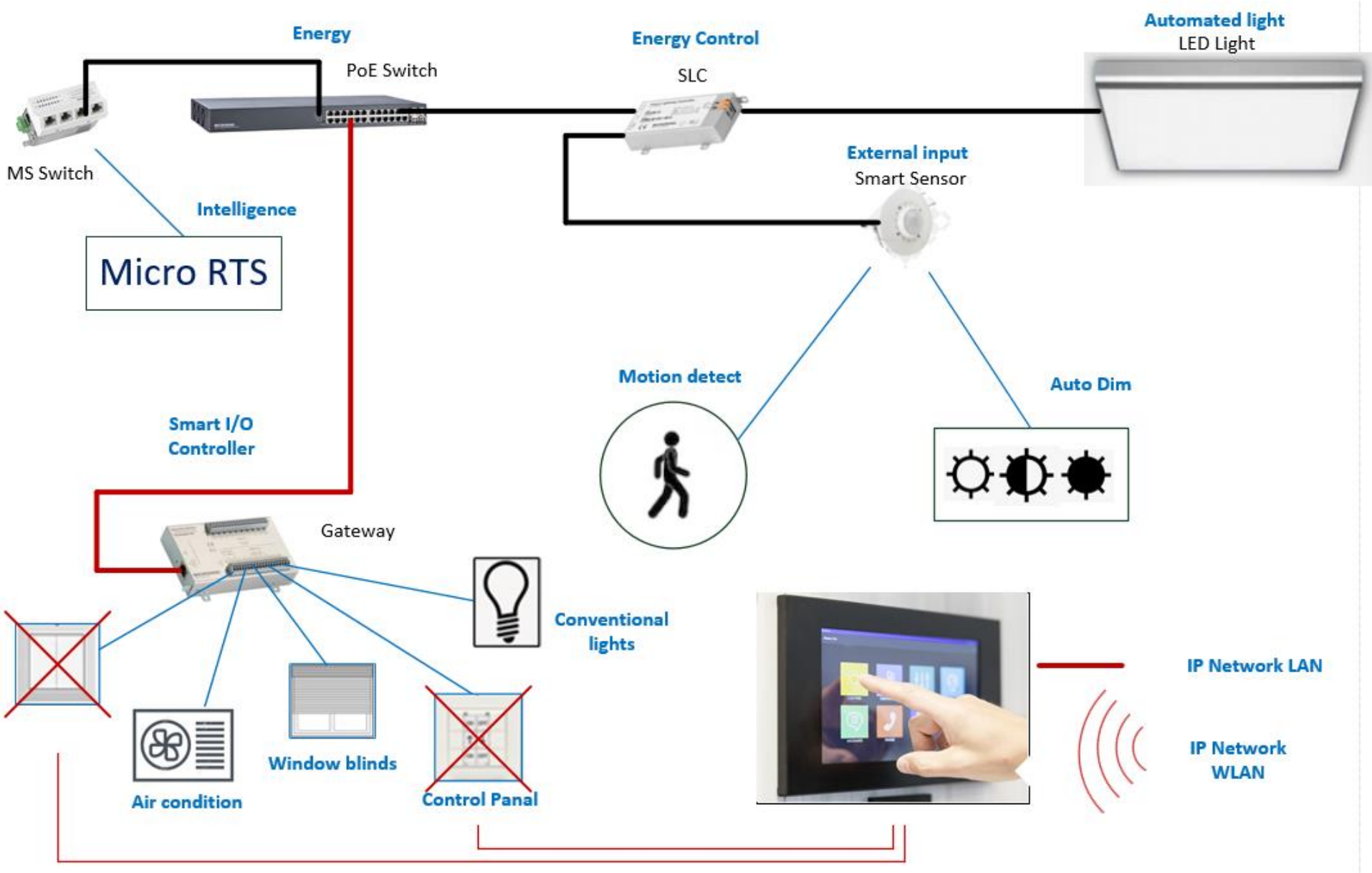
- Network Embedded Software Defined Automation - Alternative IP-Based solution to conventional Building Automation
- All IP based systems can be embedded into the Microsens infrastructure
- Solution grows automatically with IP innovations



Components components of PoE light automation

Energy	Energy Control	External input	Input systems	Automated light	Intelligence
	Gateway				Micro RTS Smart Building Manager

Structure of Microsens PoE lighting automation with I/O controller



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