wienet

INDUSTRIAL NETWORK

Robust industrial networking solutions for flexible,
secure distribution and management of data packets.

HELLO
WIELAND ELECTRIC

―――

**Tradition and innovation - Wieland is representing the synergy of these
two guiding principles for more than 100 years.**

At Wieland Electric, we are proud to be the world market leader in electrical connections,
and have been focusing on safe and innovative technologies since our founding.
The beginnings of our success lie in the legendary Wieland Clamp, the first-ever safe
electrical connector. Since then, innovation has pushed us to develop safer and
more efficient ways to electrify the world.

Expanding from a component-only manufacturer, we are now one of the leading suppliers
of innovative, future-oriented, and complete electrical solutions. We divide our focus into
two main areas, Building and Industry. Our Building Solutions focus on decentralized
power distribution and pluggable connections in all kinds of architectures and
infrastructures. From in-store displays and lighting to hospitals and airports, and any
structure in between – you build it, we power it! Our Industry Solutions center around
functional safety for machines, industrial networking, and power distribution.
At Wieland, we keep your productivity going in mechanical engineering,
wind power, material handling, HVAC, and many other industries.

We are at our customers' side in every step of the project, right from the start.
Our experts offer consulting, on-site services, and technical support. We see ourselves
as service providers, trainers and subject-matter experts.

1910	1700 +	3	70 +
Founded in Bamberg	Employees worldwide	Production sites	Countries worldwide

CONTENTS

INDUSTRIAL **NETWORK TECHNOLOGY** FOR DIVERSE APPLICATIONS.

Modern machines and systems are placing increasingly higher demands on the performance of communication networks. Greater amounts of data from devices within a network are being stored on a server for analysis purposes.

Our wienet product range allows you to organize data traffic within your Ethernet network, and also monitor data leaving the network. Prioritizing data packets and a fail-safe hardware basis play a key role in this process. All devices in the wienet product range are designed to be robust and are best-suited for industrial environments.

SPECIALLY SUITABLE FOR

+ Machine networking
+ Harsh industrial environments
+ Active monitoring

PRODUCTS FOR:

+ INDUSTRIAL COMMUNICATION
+ NETWORK MONITORING
+ SECURE DATA TRANSMISSION
+ WIRELESS DEVICE ACCESS

WIENET POWER OVER ETHERNET

Power over Ethernet (PoE) technology makes it easier to set up networks.
The same Ethernet cabling is used for both the power supply and data transmission.
This technology enables the simplest possible installation or expansion of new or existing networks.

PoE is an intelligent and extensive technology for the power supply. Only suitable consumers are supplied with the required voltage and monitored as well. In case of malfunctions, such as short-circuit or overload, or in case of a physical supply isolation, the components supplied with voltage are shutdown automatically.

This function can also be used for the very simple and, above all, efficient, remote control and monitoring of consumers.

wienet Power over Ethernet switches enable energy and data to be transferred, in accordance with IEEE 802.3, on one Ethernet line.

DC

HIGHER-LEVEL NETWORK

WLAN ACCESS POINT

CAMERA

- - - - - Data

———— Data with power supply
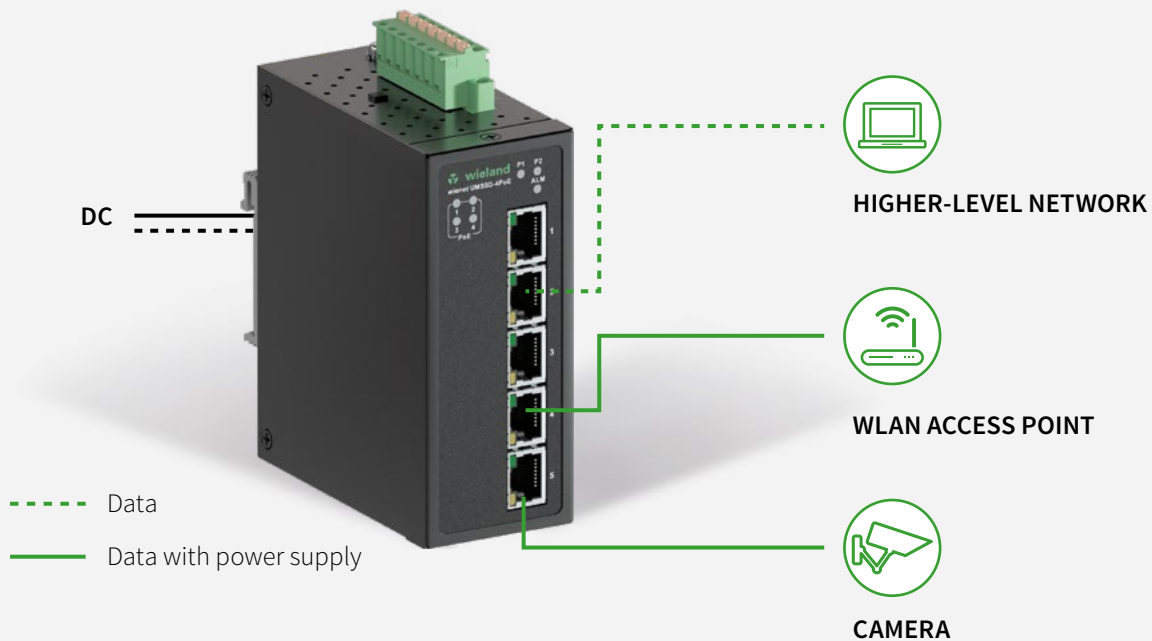
SUITABLE FOR

+ IP network cameras

+ WLAN access points

+ VoIP telephony

+ Scanners and RFID sensors

+ Anywhere where voltage supply for network devices is difficult

WIENET WIRELESS

Radio technology (WLAN) is gaining increasing importance both in electronic devices and throughout the plant and machinery engineering sector as a whole. No matter whether Industrial Internet of Things (IIoT), Machine to Machine (M2M), authentication, tracking, tracing, monitoring or remote control.

With Wireless Local Area Network (WLAN), high-frequency radio waves are used instead of wires as the transmission medium for data and communication. Because wired network devices are connected to the Internet via cables, WLAN is a flexible data communication system that is implemented as an expansion or as an alternative to wired LANs. WLAN normally offers a connection to the wider network via one access point. This gives users the option to move within a local coverage area while remaining connected to the network.

Access Points from the wienet product range allow various devices to make a WLAN connection to the network via one Ethernet interface, or to connect various WLAN/LAN networks to one another.

It is also able to establish a fully encrypted and secure data transfer through a VPN (virtual private network) tunnel that protects transmitted critical machine data.

With IIoT being on the rise, the wienet AP can connect to IIoT applications thanks to MQTT.

This connection is configured by means of a password-protected web interface. The web interface offers detailed statistics on the activities of the Access Point concerned, and also on the signal strength, and delivers a detailed report.

VPN-PORTAL
wie SERVICE24

REMOTE MONITORING AND CONTROL
• Firmware updates

SIMPLE AND SECURE INTEGRATION OF MACHINES AND SYSTEMS INTO THE NETWORK

SUITABLE FOR

+ Expanding an Ethernet cable network with WLAN functionality

+ Integrating wired network devices (e.g. PLC controls) into an existing WLAN

+ Replacement of network connections that are difficult to wire with transparent WLAN bridges

+ Expansion of existing WLAN networks

+ Establishing a secure communication channel via VPN (virtual private network)

WIENET FIBER OPTICS

Modern communication and information technology demands increasingly larger transmission bandwidths and booster-free, bridgeable section lengths. The requirements for interference resistance are increasing alongside rising disturbance levels. These potentially conflicting demands can only be properly fulfilled with message transmission over fiber optic cables (FOC).
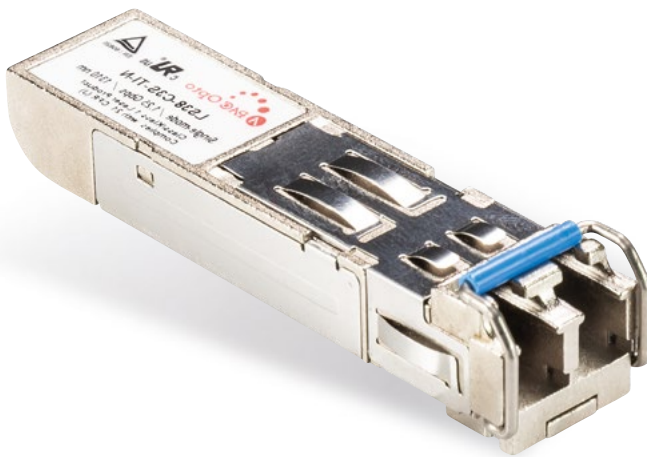
THE BENEFITS TO YOU:

+ Ideal for long transmission sections and high bandwidths

+ EMC problems are avoided

+ Galvanically isolated potentials

+ Lightning and explosion protection, tap-proof

+ No crosstalk between the fibers

+ SFP modules for the correct FOC connection

REALIZABLE LENGTHS WITH FIBER-OPTIC TECHNOLOGY

Fiber	Without connectors	One additional connector	Two additional connectors
Plastic Optical Fiber (POF)	50 m	43.5 m	37 m
Plastic Cladded Fiber (PCF)	100 m	100 m	100 m
Multi mode glass fiber	10 km	10 km	10 km
Single mode glass fiber	80 km	80 km	80 km

Input pulse — Output pulse

Multi mode glass fiber with step index profile

Input pulse — Output pulse

Multi mode glass fiber with gradient index profile

Input pulse — Output pulse

Single mode glass fiber
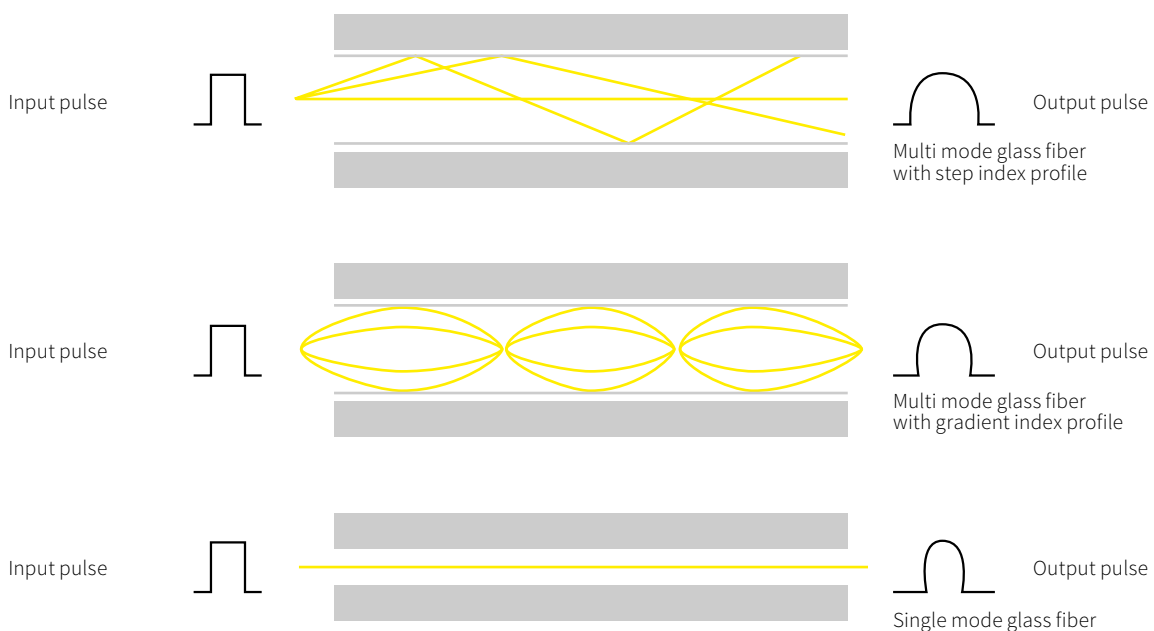
INCREASED REQUIREMENTS

Applications in harsh industrial environments require correspondingly robust and reliable network infrastructure. wienet switches therefore boast features that go above and beyond the standard.

Industrial Ethernet differs from the conventional network infrastructure in that it has to meet higher requirements for the communication devices used.

These requirements include:

- Installation conditions
- Ambient conditions
- Protocols
- Certificates / Approvals

The Industrial Ethernet Switches fulfill such requirements, including:

- Use in the expanded temperature range
- Reliable, redundant power supply for interruption-free communication
- High resistance to electromagnetic disruptions
- Immunity to vibrations and impacts
- Compliance with various certification standards

REDUNDANT POWER SUPPLY INPUTS FOR INDUSTRIAL APPLICATIONS

Two independent power supply inputs ensure the reliable function of the industrial network. All wienet switches have a broad input voltage range.
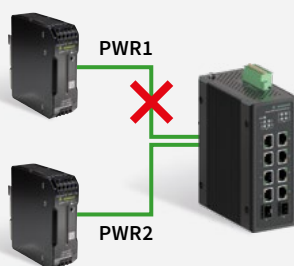
USE UNDER EXTREME TEMPERATURE CONDITIONS

Extreme operating conditions often prevail in industrial environments. This calls for devices that work cleanly even under severe temperature fluctuations. Most wienet switches have a broad temperature operating range from -40 °C to +75 °C, allowing highly diverse network applications to be realized.

CERTIFIED TO INDUSTRIAL STANDARDS

The robust designs of Wieland Switches are able to achieve a very high standard with respect to electromagnetic compatibility. Many switches are certified to Level 3.

The majority of wienet switches are certified to higher levels and suitable for use with Profinet, Ethernet IP and Modbus TCP protocols.

12 - 48 V DC
power supply

PWR1

PWR2

Backup
Power supply

-40 °C   +75 °C

Industrial **EMC**

PROFI NET ®

EtherNet/IP™

Modbus

WIENET MANAGED SWITCHES

wienet Managed Switches achieve the best possible control and diagnosis of industrial Ethernet networks. Configurable ring structures allow redundant topologies and increase the availability of the network.

Integrated Ethernet technologies such as VLAN Tagging, Quality of Service or Port Trunking offer various ways of optimizing the network. With Power over Ethernet (PoE), the ports of the Ethernet switches also supply connected devices with energy at the same time. All switches are certified for use in Profinet networks (Conformance Class A and B) by the PNO (Profinet User Organization). Diverse port variants from 10/100 Base-T(X) RJ45 ports to variable SFP ports through to Gigabit-combi ports allow the selected switches to be optimally adapted to the application environment.

+ More data flow control in the network

+ Data flow optimization through segmentation via VLANs

+ Ethernet packet prioritization for data with real-time requirement

+ PoE+ support, i.e. full 30 W on every PoE port

+ Suitable for Profinet up to CC-B and Ethernet IP

+ EMC Level 3 for highest industry requirements

+ Various possible ways of creating redundant ring topologies

MAXIMUM **AVAILABILITY** + FAIL **SAFE**

RING REDUNDANCY

Enables the network to recover autonomously in the event of a connection failure. This ensures maximum availability in industrial network applications. There are various protocols with advantages and disadvantages.

wienet Managed Switches support: ERPS, MRP (for ProfiNet networks), RSTP, STP

ERPS ring
recovery time
< 20 ms
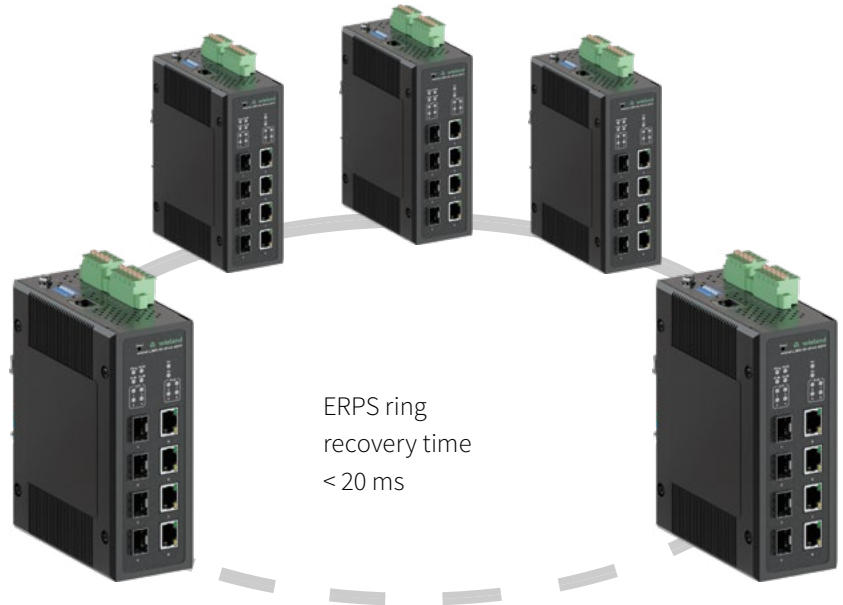
PORT TRUNKING
TO INCREASE BANDWIDTH

The Link Aggregation Control Protocol (LACP) standardized in IEEE 802.3ad allows multiple several physical LAN interfaces to be bundled into one logical channel. This increases the data throughput and the fail safe rates compared to a simple network inter-face. With wienet Managed Switches, up to eight ports can be amalgamated into one logical channel.

2–8 ports
form a
trunk group
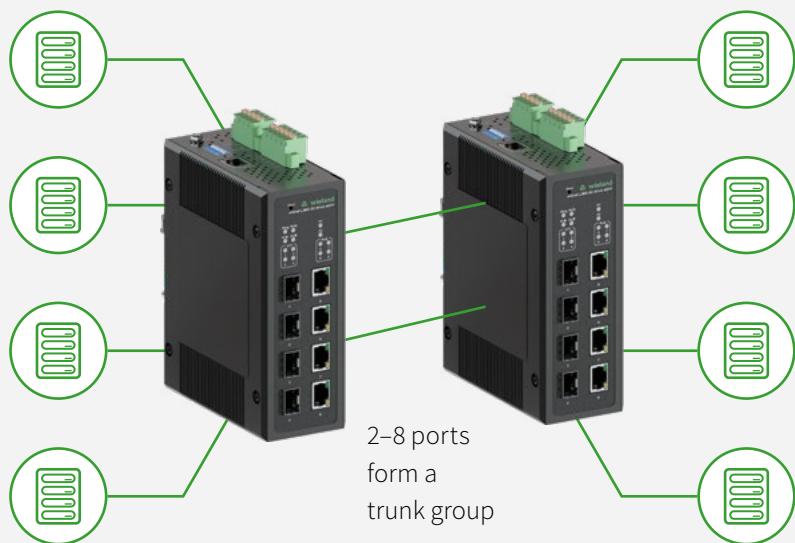
WIENET INDUSTRIAL ETHERNET SWITCHES

Ethernet connections are part of many areas of life. The communication between components in automation technology is being increasingly realized using industrial Ethernet, a technology that is becoming more and more prevalent. Ethernet switches are now widely used for the secure networking and coupling between machines or within the system. The common goal of manufacturer and user is to design the networking and configuration of the components more simply and more effectively, and to systematically manage the data flow.

Industrial switches differ from normal switches in various features, all of which are extremely relevant to the industry. With this type of installation, they are usually mounted on a DIN top-hat rail, extended temperature ranges and sometimes redundant power inputs. They are also usually smaller, so they can be accommodated in applications with limited installation space.

THE BENEFITS TO YOU:

+ Redundant power supply

+ Full compatibility in accordance with IEEE 802.3, incl. Autocrossing, Autonegotiation, Autosensing, Autopolarity

+ Complete diagnosis display via various LEDs

+ Compact, robust design

+ Top-hat rail mounting or screw fastening

+ High protection class (IP30)

+ PoE variants

+ Advanced variants (QoS, Jumbo Frame)

FUNCTIONS MATRIX

COMPLEXITY

MANAGED | UNMANAGED

	MODEL	OPTIONAL
	WIENET UMS SERIES **UNMANAGED SWITCHES**	**POE PORTS**
	WIENET UMS-G SERIES **UNMANAGED SWITCHES GIGABIT**	**POE PORTS**
	WIENET UMS-A SERIES **UNMANAGED SWITCHES ADVANCED**	**POE & SFP PORTS**
	WIENET FS SERIES **FIELDBUS SWITCHES**	
	WIENET L2MS-G SERIES **LAYER 2 MANAGED SWITCHES GIGABIT**	**POE & SFP PORTS**

UNMANAGED SWITCHES ARE IDEAL FOR:

+ Quick, simple commissioning

+ Small networks (manageable data volumes)

+ Use in restricted areas

+ Simple interface conversion

+ Applications without the need for remote diagnosis

+ Cost-effective applications

MANAGED SWITCHES ARE REQUIRED WHEN:

+ Remote diagnosis is required

+ Switches are integrated in a monitoring system

+ A detailed assessment of internal statistics is required

+ In constantly expanding networks, monitoring is desirable
  and early fault detection is required in case of malfunction

+ LAN traffic has to be prioritized to safeguard the most
  important information

WIENET UNMANAGED SWITCHES

FAST ETHERNET
SWITCHES UMS SERIES

Model	Art. No.	10/100 Mbps
wienet UMS 5	83.040.1001.0	5x RJ45
wienet UMS 5-L	83.040.0129.1	5x RJ45
wienet UMS 6	83.040.0000.0	6x RJ45
wienet UMS 6-L	83.040.0000.1	6x RJ45
wienet UMS 8	83.040.0001.0	8x RJ45
wienet UMS 8-C	83.040.1281.0	8x RJ45
wienet UMS 8-W-M12	83.040.1600.0	8x M12
wienet UMS 4-1FM	83.040.0002.0	4x RJ45
wienet UMS 4-1FS	83.040.0003.0	4x RJ45
wienet UMS 4-C-2SC-FM	83.040.1252.0	4x RJ45
wienet UMS 16	83.040.1334.0	16x RJ45

GIGABIT
SWITCHES UMS-G SERIES

Model	Art. No.	10/100 Mbps
wienet UMS 5G	83.040.0130.0	-
wienet UMS 5G-L	83.040.0130.1	-
wienet UMS 5G-4PoE	83.040.0131.0	-
wienet UMS 5-C-4G-1SFP-W	83.040.1256.0	-
wienet UMS 6-C-1G-4PoE-1SFP-W	83.040.1268.0	4x RJ45
wienet UMS 8G	83.040.0106.0	-
wienet UMS 8G-C	83.040.1283.0	-
wienet UMS 16-2G	83.040.0160.0	14x RJ45
wienet UMS 20-16G-4SFP-W	83.040.1223.0	-

ADVANCED GIGABIT
SWITCHES UMS-A SERIES

Model	Art. No.	10/100 RJ45 ports
wienet UMSA 8G-8PoE-24V	83.040.0114.0	-
wienet UMSA 10G-2SFP	83.040.0115.0	-
wienet UMSA 10G-8PoE-2SFP-24V	83.040.0119.0	-

10/100/1000 RJ45 ports	FOC/SFP ports	PoE ports	Dimensions W x H x D (mm)	
-	-	-	30 x 120 x 95	
-	-	-	25 x 94 x 72	
-	-	-	45,3 x 90 x 90,5	
-	-	-	45 x 90 x 80	
-	-	-	45.3 x 90 x 90.5	Page **20**
-	-	-	30 x 140 x 95	
-	-	-	62 x 194 x 25	
-	1 x ST (multi mode)	-	45.3 x 90 x 90.5	
-	1 x SC (single mode)	-	45.3 x 90 x 90.5	
-	2 x SC (single mode)	-	37 x 140 x 95	
-	-	-	74 x 120 x 84	

10/100/1000 RJ45 ports	FOC/SFP ports	PoE ports	Dimensions W x H x D (mm)	
5	-	-	32 x 90 x 110	
5	-	-	23 x 94 x 72	
5	-	4	45.3 x 90 x 110	
4	1	-	30 x 140 x 95	
1	1	4	30 x 140 x 95	Page **24**
8	-	-	45.3 x 90 x 90.5	
8	-	-	30 x 140 x 95	
2	-	-	54 x 113 x 135	
16	-	-	74 x 152 x 105	

10/100/1000 RJ45 ports	SFP ports	PoE ports	Dimensions W x H x D (mm)	
8	-	8	54 x 145 x 113	
8	2	-	54 x 145 x 113	Page **28**
8	2	8	54 x 145 x 113	

WIENET MANAGED SWITCHES

INDUSTRIAL PROTOCOL
SWITCHES FS SERIES

Model	Art. No.	10/100 RJ45 ports
wienet FS 8-EI	83.040.1500.0	8
wienet FS 8-PN	83.040.1510.0	8
wienet FS 16-PN	83.040.1511.0	16

GIGABIT
SWITCHES L2MS-G SERIES

Model	Art. No.
wienet L2MS 4G	83.040.0300.0
wienet L2MS 4G-4PoE	83.040.0301.0
wienet L2MS 4G-2SFP	83.040.0302.0
wienet L2MS 4G-2PoE-2SFP	83.040.0303.0
wienet L2MS 8G	83.040.0310.0
wienet L2MS 8G-4SFP	83.040.0312.0
wienet L2MS 8G-4PoE-4SFP	83.040.0313.0
wienet L2MS 8G-8PoE	83.040.0314.0

10/100/1000 RJ45 ports	SFP ports	PoE ports	Additional info	Dimensions W x H x D (mm)
-	-	-	Ethernet IP	43 x 120 x 84
-	-	-	ProfiNET	43 x 120 x 84
-	-	-	ProfiNET	74 x 120 x 84

10/100/1000 RJ45 ports	SFP ports	PoE ports	Dimensions W x H x D (mm)
4	-	-	54 x 113 x 145
4	-	4	54 x 113 x 145
2	2	-	54 x 113 x 145
2	2	2	54 x 113 x 145
8	-	-	54 x 113 x 145
4	4	-	54 x 113 x 145
4	4	4	54 x 113 x 145
8	-	8	54 x 113 x 145

WIENET ACCESSORIES

SFP TRANSCEIVER

Model	Art. No.
wienet SFP G MM VCSEL	83.040.0710.0
wienet SFP G MM FP	83.040.0711.0
wienet SFP G SM FP	83.040.0712.0
wienet SFP F/E (auto-neg) RJ45	83.040.0715.0

WIENET WLAN ACCESS POINT

WLAN ACCESS POINT

Model	Art. No.
wienet AP-ETH-A	83.040.0050.0
wienet AP-ETH-A-A	83.040.0051.0
wienet AP 3P ETH -A	83.040.0052.0
wienet AP 3P ETH-A-A	83.040.0053.0

WLAN ACCESS POINT ACCESSORIES

Model	Art. No.
wienet Antenne 15854v2 WIFI	F0.000.0037.4
wienet Antenne 15874v2 WIFI	F0.000.0037.5

ACCESSORIES

Model	Art. No.
wienet PATCH-CABLES MOD ZBH RJ45	78.999.4x00.0

Media type	Data rate
Glass fiber multi mode (850 nm)	1250 Mbps
Glass fiber multi mode (1310 nm)	1250 Mbps
Glass fiber single mode (1310 nm)	1250 Mbps
Copper	10/100/1000 Mbps

Number of RJ45 ports	Antenna	Dimensions W x H x D (mm)
1	Integrated	48.5 x 109 x 76.5
1	External via SMA socket	48.5 x 109 x 76.5
3	Integrated	48.5 x 109 x 76.5
3	External via SMA socket	48.5 x 109 x 76.5

Connection	Mounting method	Dimensions W x H x D (mm)
SMA / M-RP	Magnetic holder	29 x 223 x 29
SMA / R	Mast and wall	48 x 82 x 48

Description
Patch-cables RJ45, different lengths (x = m see chart)

UNMANAGED FAST ETHERNET SWITCHES **WIENET** UMS SERIES

wienet Unmanaged Fast Ethernet Switches cover standard functions, and are therefore a simple Plug & Play solution.
They are best suited for entry into industrial ethernet networks and an ideal and cost-effective solution for applications with manageable device subscribers having a low data flow.

+ Allow communication between Ethernet-capable devices

+ Relay information to the correct destination

+ Are supplied with fixed configuration

+ Connect peripheral devices in network extensions

+ Small, autonomous networks with just a few components

+ Star-topology network installation within the control panel

PERFORMANCE FEATURES

+ Switch method: Store and forward switching mode

+ Switch functions: Autocrossing, Autonegotiation

+ Power supply: Redundant power supply

+ Bandwidth: Fast Ethernet

+ Connection: Pluggable terminals

+ Number of ports: 5 to 16 ports

+ Installation: Top hat rail mounting

RoHS conform   CE   c UL US LISTED   FCC

UNMANAGED FAST ETHERNET SWITCHES · WIENET UMS
TECHNICAL DATA

Description wienet	UMS 5-W	UMS 5-L	UMS 6-L	UMS 6	UMS 8	UMS 8-C	UMS 8-W-M12
Art. No.	83.040.1001.0	83.040.0129.1	83.040.0000.1	83.040.0000.0	83.040.0001.0	83.040.1281.0	83.040.1600.0

Technical data Ethernet

	UMS 5-W	UMS 5-L	UMS 6-L	UMS 6	UMS 8	UMS 8-C	UMS 8-W-M12
Number of ports	5	5	6	6	8	8	8
10/100 RJ45	5	5	6	6	8	8	-
10/100 M12	-	-	-	-	-	-	8
SFP	-	-	-	-	-	-	-
PoE	-	-	-	-	-	-	-

Switch properties

	UMS 5-W	UMS 5-L	UMS 6-L	UMS 6	UMS 8	UMS 8-C	UMS 8-W-M12
Transmission type	Store and Forward	Store and Forward	Store and Forward	Store and Forward	Store and Forward	Store and Forward	Store and Forward
Autonegotiation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Autosensing	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Autopolarity	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Communication	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex
Ethernet Standards IEEE	802.3/802.3u/ 802.3x	802.3/802.3u/ 802.3x/802.1q/p	802.3/802.3u/ 802.3x	802.3/802.3u/ 802.3x	802.3/802.3u/ 802.3x	802.3/802.3u/ 802.3x	802.3/802.3u/ 802.3x
Broadcast storm protection	-	yes	-	-	-	-	yes
Transmission length	100 m	100 m	100 m	100 m	100 m	100 m	100 m
Topology	Line, star, mesh	Line, star, mesh	Line, star, mesh	Line, star, mesh	Line, star, mesh	Line, star, mesh	Line, star, mesh

Technical features

	UMS 5-W	UMS 5-L	UMS 6-L	UMS 6	UMS 8	UMS 8-C	UMS 8-W-M12
Operating voltage min.-max.	12 - 48 V DC	12 - 48 V DC	9 - 30 V DC	9 - 30 V DC	9 - 48 V DC	12 - 48 V DC	12 - 48 V DC
Redundant power supply	2 power inputs	2 power inputs	2 power inputs	2 power inputs	2 power inputs	2 power inputs	2 power inputs
Power consumption max.	4.5 W	4.5 W	4.5 W	4,5 W	5 W	5 W	2,5 W
Output with PoE ports max.	-	-	-	-	-	-	-
Operating temperature min.-max.	-40 °C…+75 °C	0 °C…+60 °C	0 °C…+60 °C	-10 °C…+60 °C	-10 °C…+70 °C	-10 °C…+60 °C	-40 °C…+75 °C
Storage temperature min.-max.	-40 °C…+85 °C	-20 °C…+70 °C	-20 °C…+70 °C	-40 °C…+85 °C	-40 °C…+85 °C	-40 °C…+85 °C	-40 °C…+85 °C
Rel. humidity during operation min.-max. (non-condensing)	10 - 95 %	5 - 95 %	5 - 95 %	5 - 95 %	5 - 95 %	5 - 95 %	5 - 95 %
Terminal type	Plug-in screw terminal	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable	M12 D-coded
Norms and approvals	FCC Part 15 Class A, CE, UL, cULus	FCC Part 15 Class A, CE, UL, cULus	FCC Part 15 Class A, CE, UL, cULus	FCC Part 15 Class A, CE, UL, cULus	FCC Part 15 Class A, CE, UL, cULus	FCC Part 15 Class A, CE, UL, cULus, UL 62368	FCC Part 15 Class A, CE, UL, cULus, EN50155, IEC 61131-2
Mounting method	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail	Wall
Protection class	IP30	IP30	IP40	IP30	IP30	IP30	IP67
Housing material	Metal	Metal	Plastic	Metal	Metal	Metal	Metal

Dimensions

	UMS 5-W	UMS 5-L	UMS 6-L	UMS 6	UMS 8	UMS 8-C	UMS 8-W-M12
Width (mm)	30	25	45	45.3	45.3	30	62
Height (mm)	120	94	90	90	90	140	194
Depth (mm)	95	72	80	80	80	95	25
Weight approx.	255 g	110 g	160 g	260 g	270 g	460 g	700 g

GENERAL TECHNICAL DATA FOR THE SERIES	
Diagnosis display	LEDs
RoHs	Yes

Subject to technical modifications

UNMANAGED FAST ETHERNET SWITCHES · WIENET UMS
TECHNICAL DATA

Description wienet	UMS 4-1FM	UMS 4-1FS	UMS 4-C-2SC-FM	LMS 16-W
Art. No.	83.040.0002.0	83.040.0003.0	83.040.1252.0	83.040.1334.0

Technical data Ethernet

Number of ports	4	4	6	16
10/100 RJ45	4	4	4	16
10/100 M12	-	-	-	-
FOC ports	1x ST (multi mode)	1x SC (single mode)	2x SC (multi mode)	-
PoE	-	-	-	-

Switch properties

Transmission type	Store and Forward	Store and Forward	Store and Forward	Store and Forward
Autonegotiation	Yes	Yes	Yes	Yes
Autosensing	Yes	Yes	Yes	Yes
Autopolarity	Yes	Yes	Yes	Yes
Communication	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex
Ethernet Standards IEEE	802.3/802.3u/ 802.3x	802.3/802.3u/ 802.3x	802.3/802.3u/ 802.3x	802.3/802.3u/ 802.3x
Broadcast storm protection	-	-	yes	-
Transmission length	2 km	20 km	Ethernet: 100 m Optical: 2 km	100 m
Topology	Line, star, mesh	Line, star, mesh	Line, star, mesh	Line, star, mesh

Technical features

Operating voltage min.-max.	9 - 30 V DC	9 - 30 V DC	12 - 48 V DC	8.4 - 52.8 V DC
Redundant power supply	2 power inputs	2 power inputs	2 power inputs	2 power inputs
Power consumption max.	4.5 W	4.5 W	6.5 W	3.84 W
Output with PoE ports max.	-	-	-	-
Operating temperature min.-max.	-10 °C…+70 °C	-10 °C…+70 °C	-10 °C…+60 °C	-40 °C…+75 °C
Storage temperature min.-max.	-40 °C…+85 °C	-40 °C…+85 °C	-40 °C…+85 °C	-40 °C…+85 °C
Rel. humidity during operation min.-max. (non-condensing)	5 - 95 %	5 - 95 %	5 - 95 %	10 - 95 %
Terminal type	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable	Plug-in screw terminal
Norms and approvals	FCC Part 15 Class A, CE, UL, cULus	FCC Part 15 Class A, CE, UL, cULus	FCC Part 15 Class A, CE, UL, cULus UL 60950-1	FCC Part 15 Class A, CE, UL, cULus
Mounting method	DIN Rail	DIN Rail	DIN Rail	DIN Rail
Protection class	IP30	IP30	IP30	IP30
Housing material	Metal	Metal	Metal	Metal

Dimensions

Width (mm)	45.3	45.3	37	74
Height (mm)	90	90	140	120
Depth (mm)	80	80	95	84
Weight approx.	260 g	260 g	700 g	700 g

GENERAL TECHNICAL DATA FOR THE SERIES

Diagnosis display	LEDs
RoHs	Yes

UNMANAGED GIGABIT SWITCHES
WIENET UMS-G SERIES

The wienet Gigabit Ethernet Switches series was designed primarily to satisfy the requirements of high-performance IP devices. Through the option of Power over Ethernet ports, end devices such as cameras can be supplied via the same transmission medium.

+ Allow communication between Ethernet-capable devices

+ Relay information to the correct destination

+ Are supplied with fixed configuration

+ Full gigabit power on all ports

+ Connect peripheral devices in network extensions

+ PoE+ support, i.e. full 30 Watt on every PoE port

+ Star-topology network installation within the control panel

PERFORMANCE FEATURES

+ Switch method: Store and forward switching mode
+ Switch functions: Autocrossing, Autonegotiation
+ Power supply: Redundant power supply
+ Bandwidth: Fast Ethernet & Gigabit Ethernet
+ Connection: Pluggable terminals
+ Number of ports: 5 to 20 ports
+ Installation: Top hat rail mounting

RoHS conform   CE   c UL us LISTED   FCC

UNMANAGED GIGABIT SWITCHES · WIENET UMS-G
TECHNICAL DATA
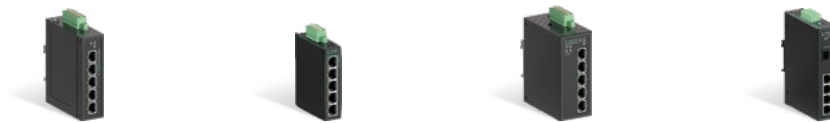
Description wienet	UMS 5G	UMS 5G-L	UMS 5G-4PoE	UMS 5-C-4G-1SFP-W
Art. No.	83.040.0130.0	83.040.0130.1	83.040.0131.0	83.040.1256.0

Technical data Ethernet

Number of ports	5	5	8	5
10/100 RJ45	-	-	-	-
10/100/1000 RJ45 RJ45	5	5	8	4
SFP	-	-	-	1
PoE	-	4	-	-

Switch properties

Transmission type	Store and Forward	Store and Forward	Store and Forward	Store and Forward
Autonegotiation	Yes	Yes	Yes	Yes
Autosensing	Yes	Yes	Yes	Yes
Autopolarity	Yes	Yes	Yes	Yes
Communication	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex
Ethernet Standards IEEE	802.3/802.3u/x/ab/z/az 802.1 q/p	802.3/802.3u/x/ab/z/az 802.1 q/p	802.3/802.3u/x/ab	802.3/802.3u/x/ab/z
Broadcast storm protection	-	-	-	Yes
Transmission length	100 m	100 m	100 m	Ethernet: 100 m Optical: 10 km
Topology	Line, star, mesh	Line, star, mesh	Line, star, mesh	Line, star, mesh
Packet Buffer Size	1 Mb	1 Mb	-	1 Mb
Flow Control	Back pressure and pause frame-based flow control schemes	Back pressure and pause frame-based flow control schemes	Back pressure and pause frame-based flow control schemes	-
MAC Address Table	8 K	8 K	-	2 K
Jumbo Frame	10 K Bytes	10 K Bytes	9 K Bytes	10 K Bytes
LLDP (Link Layer Discovery Protocol)	Forwarding	Forwarding	-	-

Technical features

Operating voltage min.-max.	12 to 52 V DC	12 - 52 V DC	9 - 30 V DC	12 - 48 V DC
Redundant power supply	2 power inputs	2 power inputs	2 power inputs	2 power inputs
Power consumption max.	4.5 W	6 W	4.5 W	2.5 W
Output with PoE ports max.	-	120 W	-	-
Relay output max.	0.5 A / 24 V DC	0.5 A / 24 V DC	-	1 A / 24 V DC
Operating temperature min.-max.	-40 °C…+70 °C	-40 °C…+70 °C	-10 °C…+70 °C	-40…+75°C
Storage temperature min.-max.	-40 °C…+85 °C	-40 °C…+85 °C	-40 °C…+85 °C	-40°C…+85°C
Rel. humidity during operation min.-max. (non-condensing)	5 - 95 %	5 - 95 %	5 - 95 %	10 - 95 %
Terminal type	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable
Norms and approvals	FCC Part 15 Class A, CE, UL, cULus, EN50155, UL61010-2-201, ULC1D2/ ATEX Zone 2	FCC Part 15 Class A, CE, UL, cULus, UL/IEC 62368-1	FCC Part 15 Class A, CE, UL, cULus, EN50155, UL61010-2-201, ULC1D2/ ATEX Zone 2	FCC Part 15 Class A, CE, UL, cULus, UL 62368
Montageart	DIN Rail	DIN Rail	DIN Rail	DIN Rail
Protection class	IP30	IP30	IP30	IP30
Werkstoff des Gehäuses	Metal	Plastic	Metal	Metal

Dimensions

Width (mm)	32	25	45	30
Height (mm)	90	94	90	140
Depth (mm)	110	72	90.5	95
Weight approx.	420 g	420 g	255 g	450 g

GENERAL TECHNICAL DATA FOR THE SERIES				
Diagnosis display	LEDs			
RoHs	Yes			

Subject to technical modifications

UNMANAGED GIGABIT SWITCHES · WIENET UMS-G
TECHNICAL DATA

Description wienet	UMS 6-C-1G-4PoE-1SFP-W	UMS 8G	UMS 8G-C	UMS 16-2G	UMS 20-16G-4SFP-W
Art. No.	83.040.1268.0	83.040.0106.0	83.040.1283.0	83.040.0160.0	83.040.1223.0

Technical data Ethernet

Number of ports	6	8	8	16	20
10/100 RJ45	4	-	-	14	-
10/100/1000 RJ45 RJ45	1	8	8	2	16
SFP	1	-	-	-	4
PoE	4	-	-	-	-

Switch properties

Transmission type	Store and Forward	Store and Forward	Store and Forward	Store and Forward	Store and Forward
Autonegotiation	yes	yes	yes	yes	yes
Autosensing	yes	yes	yes	yes	yes
Autopolarity	yes	yes	yes	yes	yes
Communication	Full Duplex/ Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex
Ethernet Standards IEEE	802.3/802.3u/x 802.1ab/z	802.3/802.3u/x/ab	802.3/802.3u/x/ab	802.3/802.3u/x/ab 802.1 p	802.3/802.3u/x
Broadcast storm protection	yes	-	-	-	-
Transmission length	Ethernet: 100 m Optical: 10 km	100 m	100 m	100 m	100 m
Topology	Line, star, mesh	Line, star, mesh	Line, star, mesh	Line, star, mesh	Line, star, mesh
Packet Buffer Size	1 Mb	-	-	2,75 Mb	4,1 Mb
Flow Control	-	Back pressure and pause frame-based flow control schemes	-	Back pressure and pause frame-based flow control schemes	-
MAC Address Table	2 K	-	-	4 K	8 K
Jumbo Frame	9 K Bytes	9 K Bytes	10 K Bytes	-	10 K Bytes
LLDP (Link Layer Discovery Protocol)	-	-	-	-	-

Technical features

Operating voltage min.-max.	12 - 48 V DC	9 - 30 V DC	12 - 48 V DC	12 - 48 V DC	12 - 48 V DC
Redundant power supply	2 power inputs	2 power inputs	2 power inputs	2 power inputs	2 power inputs
Power consumption max.	2 W	4.5 W	5.8 W	7.4 W	15 W
Output with PoE ports max.	90 W	-	-	-	-
Relay output max.	1 A / 24 V DC	-	1 A / 24 V DC	-	1 A / 24 V DC
Operating temperature min.-max.	-40 °C…+75 °C	-10 °C…+70 °C	-10 °C…+60 °C	-10 °C…+60 °C	-40 °C…+75 °C
Storage temperature min.-max.	-40 °C…+85° C	-40 °C…+85 °C	-40 °C…+85 °C	-20 °C…+70 °C	-40 °C…+85 °C
Rel. humidity during operation min.-max. (non-condensing)	10 - 95 %	5 - 95 %	10 - 95 %	5 - 95 %	10 - 95 %
Terminal type	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable
Norms and approvals	FCC Part 15 Class A, CE, UL, cULus, UL 62368	FCC Part 15 Class A, CE, UL, cULus, UL60950-1, IEC62368-1	FCC Part 15 Class A, CE, UL, cULus, UL 62368	FCC Part 15 Class A, CE, UL, cULus, EN60950-1:2006, UL/ IEC(CB) 60950/62368	FCC Part 15 Class A, CE, UL, cULus, NEMA TS2, IEC60950, UL61010-2-201
Montageart	DIN Rail	DIN Rail	DIN Rail	DIN Rail	DIN Rail
Protection class	IP30	IP50	IP30	IP30	IP30
Werkstoff des Gehäuses	Metal	Metal	Metal	Metal	Metal

Dimensions

Width (mm)	30	45	30	54	74
Height (mm)	140	90	140	113	152
Depth (mm)	95	90.5	95	135	105
Weight approx.	450 g	255 g	450 g	700 g	700 g

GENERAL TECHNICAL DATA FOR THE SERIES

Diagnosis display	LEDs
RoHs	Yes

UNMANAGED ADVANCED GIGABIT
SWITCHES **WIENET** UMS-A SERIES

The wienet Unmanaged Advanced Gigabit Switches series is set apart especially by the broader function range compared to standard unmanaged switches. This switch series is ideally suited for challenging industrial applications, supporting a broad temperature range of -40 °C to +75 °C. As part of its compact design, this switch series is available with a voltage booster for PoE end devices. The PoE Voltage Boost increases the input voltage to the PoE+ level to supply end devices with Power over Ethernet. This eliminates the need for additional, separate power supplies, which can often be expensive and bulky.

+ Allow communication between Ethernet-capable devices

+ Relay information to the correct destination

+ Are supplied with fixed configuration

+ Power over Ethernet Voltage Boost for PoE+ applications

+ Supports data flow control

+ Small, autonomous networks with just a few components

+ Star-topology network installation within the control panel

+ Multi-functional SFP ports for flexible FOC applications (primarily for fast Uplink function)

PERFORMANCE FEATURES

+ Switch method: Store and forward switching mode
+ Switch functions: Autocrossing, Autonegotiation
+ Power supply: Redundant power supply
+ Bandwidth: Gigabit Ethernet
+ Connection: Pluggable terminals
+ Number of ports: 8 (10) ports
+ Ambient temperature: -40 °C to +75 °C
+ Installation: Top hat rail mounting

RoHS conform   CE   c UL us LISTED   FCC

UNMANAGED ADVANCED GIGABIT SWITCHES
WIENET UMS-A · TECHNICAL DATA

Description	**wienet** UMSA 8G-8PoE-24V	**wienet** UMSA 10G-2SFP	**wienet** UMSA 10G-8PoE-2SFP-24V
Art. No.	83.040.0114.0	83.040.0115.0	83.040.0119.0

Technical data Ethernet

Number of ports	8	10	10
10/100 RJ45	-	-	-
10/100/1000 RJ45	8	8	8
SFP	-	2	2
PoE	8	-	8

Switch properties

Transmission type	Store and Forward	Store and Forward	Store and Forward
Autocrossing (MDI/MDI-X)	Yes	Yes	Yes
Communication	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex
Ethernet Standards IEEE	802.3/802.3u/802.3x/802.3ab/ 802.3af/802.1Q/802.1p/802.3az	802.3/802.3u/802.3x/802.3ab/ 802.3af/802.1Q/802.1p/802.3az	802.3/802.3u/802.3x/802.3ab/ 802.3af/802.1Q/802.1p/802.3az
Transmission length	100 m	2 km (FOC single mode) / 30 km (FOC multi mode)	2 km (FOC single mode) / 30 km (FOC multi mode)
Topology	Lines, star, mains, ring, meshes	Lines, star, mains, ring, meshes	Lines, star, mains, ring, meshes
Packet Buffer Size	2 Mbits	2 Mbits	2 Mbits
Data flow control	Back pressure and pause frame-based flow control schemes	Back pressure and pause frame-based flow control schemes	Back pressure and pause frame-based flow control schemes
MAC Address Table	16 K	16 K	16 K
Jumbo frame	10K Bytes	10K Bytes	10K Bytes

Technical features

Operating voltage min.-max.	12 - 57 V DC	12 to 57 V DC	12 - 57 V DC
Redundant power supply	2 power inputs	2 power inputs	2 power inputs
Output with PoE ports max.	120 W	120 W	120 W
Relay output max.	0.5 A / 24 V DC	0.5 A / 24 V DC	0.5 A / 24 V DC
Operating temperature min.-max.	-40 °C…+75 °C	-40 °C…+75 °C	-40 °C…+75 °C
Storage temperature min.-max.	-40 °C…+85 °C	-40 °C…+85 °C	-40 °C…+85 °C
Rel. humidity during operation min.-max. (non-condensing)	5 - 95 %	5 - 95 %	5 - 95 %
Terminal type	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable
Mounting method	DIN Rail	DIN Rail	DIN Rail
Protection class	IP30	IP30	IP30
Housing material	Metal	Metal	Metal

Dimensions

Width (mm)	54	54	54
Height (mm)	145	145	145
Depth (mm)	113	113	113
Weight approx.	700 g	700 g	700 g

GENERAL TECHNICAL DATA FOR THE SERIES	
Diagnosis display	LEDs
RoHs	Yes
Norms and approvals	FCC Part 15 Class A, CE, UL, cULus

INDUSTRIAL PROTOCOL SWITCHES
WIENET FS SERIES

wienet Industrial Protocol Switches make your machinery network part of the entire automation solution within the system environment. The switches are integrated into the hardware planning directly (with Profinet via GSDML file). Using these switches increases the performance level in your industrial Ethernet networks. The comprehensive diagnosis information means you have quality and capacity utilization in your network fully under control at all times.

+ In machinery networks in which PROFINET or Ethernet/IP is used

+ In machinery networks where simple handling of a managed switch is important

+ Managed switches especially for industrial communication protocols

+ Integrate directly into the automation environment

+ Integrated diagnosis functions up to Ethernet device level and port level

PERFORMANCE FEATURES

+ Switch method: Store and forward switching mode

+ Configuration: Web interface

+ Diagnosis: LEDs, web interface, SNMP, bus protocol relay alarm outputs

+ Power supply: Redundant power supply
Broad voltage input 8.4 - 52.8 V DC

+ Ambient temperature: -40 °C to +75 °C

+ Number of ports: 8 or 16 ports

RoHS conform   CE   c UL us LISTED   FCC

INDUSTRIAL PROTOCOL SWITCHES · WIENET FS
TECHNICAL DATA

Description	**wienet** FS8-PN	**wienet** FS16-PN	**wienet** FS-EI
Art. No.	83.040.1510.0	83.040.1511.0	83.040.1500.0

Technical data Ethernet

Number of ports	8	16	8
10/100 RJ45	8	16	8

Switch properties

Industrial Ethernet protocol	ProfiNET	ProfiNET	EtherNet/IP
Transmission type	Store and Forward	Store and Forward	Store and Forward
Autonegotiation	Yes	Yes	Yes
Autocrossing (MDI/MDI-X)	Yes	Yes	Yes
Autosensing	Yes	Yes	Yes
Communication	Full Duplex / Half Duplex	Full Duplex / Half Duplex	Full Duplex / Half Duplex
Ethernet Standards IEEE	802.3/802.3u/802.3x/802.1D/ 802.1w/802.1p/802.1Q/ 802.3ad/802.3az	802.3/802.3u/802.3x/802.1D/ 802.1w/802.1p/802.1Q/ 802.3ad/802.3az	802.3/802.3u/802.3x/802.1D/ 802.1w/802.1p/802.1Q/ 802.3ad/802.3az
Topology	Lines, star, mains, ring, meshes	Lines, star, mains, ring, meshes	Lines, star, mains, ring, meshes
Packet Buffer Size	4.1 Mbits	4.1 Mbits	4.1 Mbits
Switch Fabric Speed	3.2 Gbps	3.2 Gbps	3.2 Gbps
Jumbo frame	9216 Bytes	9216 Bytes	9216 Bytes
VLAN	VLAN ID 1-4094	VLAN ID 1-4094	VLAN ID 1-4094
Port Mirroring	Per port, Multi source port	Per port, Multi source port	Per port, Multi source port
IP Multicast	IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave	IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave	IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
Storm Control	Broadcast, Multicast, Unknown unicast	Broadcast, Multicast, Unknown unicast	Broadcast, Multicast, Unknown unicast

Technical features

Operating voltage min.-max.	8.4 - 52.8 V DC	8.4 - 52.8 V DC	8.4 - 52.8 V DC
Redundant power supply	2 power inputs	2 power inputs	2 power inputs
Power consumption max.	5.2 W	8 W	5.2 W
Relay output max.	0.5 A / 24 V DC	0.5 A / 24 V DC	0.5 A / 24 V DC
Operating temperature min.-max.	-40 °C…+75 °C	-40 °C…+75 °C	-40 °C…+75 °C
Storage temperature min.-max.	-40 °C…+85 °C	-40 °C…+85 °C	-40 °C…+85 °C
Rel. humidity during operation min.-max. (non-condensing)	10 - 95 %	10 - 95 %	10 - 95 %
Terminal type	Plug-in screw terminal	Plug-in screw terminal	Plug-in screw terminal
Mounting method	DIN rail	DIN rail	DIN rail
Protection class	IP30	IP30	IP30
Housing material	Metal	Metal	Metal

Dimensions

Width (mm)	43	74	43
Height (mm)	120	120	120
Depth (mm)	84	84	84
Weight approx.	550 g	670 g	550 g

GENERAL TECHNICAL DATA FOR THE SERIES

Diagnosis display	LEDs
RoHs	Yes
Norms and approvals	FCC Part 15 Class A, CE, UL, cULus

Subject to technical modifications

WIENET LAYER 2 MANAGED SWITCHES

QUALITY OF SERVICE (QOS)

IEEE 802.1p describes how data traffic can be prioritized. wienet Managed Switches support QoS, thereby allowing the highest priority data in industrial Ethernet networks to be relayed first at all times. This enhances network performance and ensures that time-critical applications can be communicated as the highest priority.

HIGHEST · PRIORITY

LOWEST · PRIORITY

MEDIUM · PRIORITY

VLAN 1

VLAN 2

VLAN 3
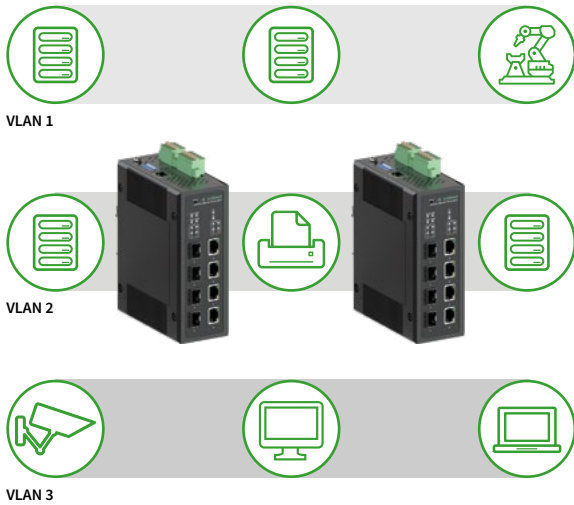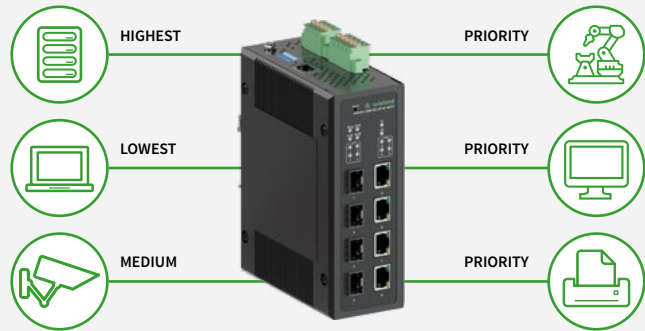
VLAN

Virtual LAN networks (VLAN) allow the segmenting of the network. A VLAN is a logical subnetwork within a switch or an entire physical network. It can extend over multiple switches. wienet Managed Switches relay data packets (Ethernet frames) only to those nodes located in a VLAN. The facility to isolate Ethernet networks with VLANs from one another increases security during the data transmission, thereby offering additional protection from unauthorized access or data traffic.

PRECISION TIME PROTOCOL

IEEE 1588 PTO describes the Precision Time Protocol (PTP). Real-time clocks located at certain nodes are synchronized within a distributed network. wienet Managed Switches support time synchronization according to IEEE 1588 PTP. Consequently, distributed clocks are synchronized to within nanoseconds. This makes wienet Managed Switches the ideal solution for motion control applications as well.
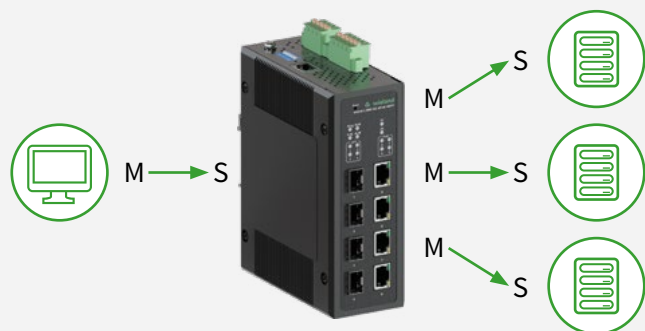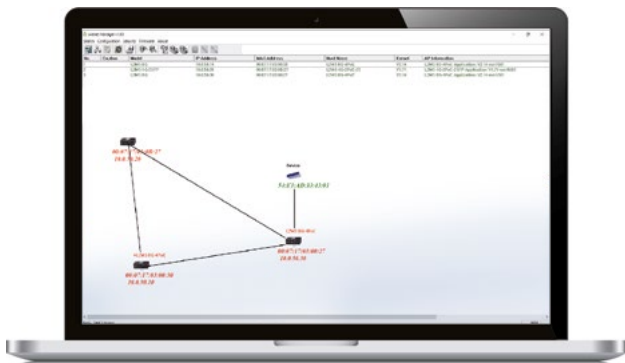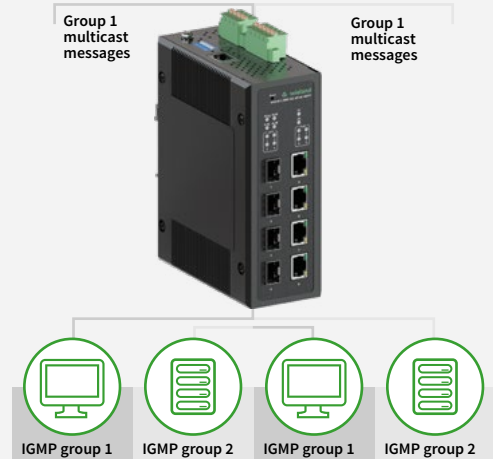
Grand Master Clock:
Sets the reference time for the network

Boundary Clock:
Slave to the grand master and master to its slaves

Ordinary Clock:
Obtains the time as a slave from the boundary clock master

MULTICAST FILTER

IGMP (Internet Group Management Protocol) and GMRP (Generic Multicast Registration Protocol) are protocols which restrict multicast data traffic. Data packets are only forwarded to the end-user devices that actually need them. This reduces unnecessary data traffic on the network.

Group 1 multicast messages   Group 1 multicast messages

IGMP group 1   IGMP group 2   IGMP group 1   IGMP group 2

TOPOLOGY RECOGNITION WITH LLDP

The LLD protocol (Link Layer Discovery Protocol) described in IEEE 802.1 is a Data Link Layer Protocol, which discloses a device's information, such as its IP address, description and functionalities to adjacent devices via the network. wienet Managed Switches fully support LLDP. The network management software "wienet Manager" identifies and manages LLDP-capable devices. "wienet Manager" uses this information to automatically create accurate network topologies and manage information about connected devices.

SEVERAL PATHS LEAD TO THE RIGHT CONFIGURATION

This allows wienet Managed Switches to be simply configured via a web browser, Telnet console, MIB or Hyper Terminal. Various access options can be selected, depending on personal preferences. In addition, the switch configuration can be saved and firmware updates run using these tool.

MANAGED GIGABIT SWITCHES
WIENET L2MS-G SERIES

wienet Managed Gigabit series offers full industrial functionality. The series was developed for an extremely reliable, error-tolerant and extremely fast network connection in harsh environments. The wienet Managed Gigabit series in the compact top-hat rail housing design allows the user to choose between various connection combinations. The Profinet CC-B and Ethernet/IP-compatible switches are designed specifically for the automation sector.

+ Full gigabit power on all ports

+ More data flow control on the network

+ Data flow optimization through segmentation via VLANs

+ Ethernet packet prioritization for data with real-time requirement

+ PoE+ support, i.e. full 30 W on every PoE port

+ Suitable for Profinet up to CC-B and Ethernet IP

+ Ring topologies ERPS, RSTP, STP, MRP (Client)

+ IEEE 1588v2 Precision Time Protocol HW-Based Transparent Clock

PERFORMANCE FEATURES

+ Switch method:	Store and forward switching mode
+ Prioritization:	Ethernet packet prioritization for data with real-time requirement
+ Configuration:	Web interface
+ Diagnosis:	LEDs, web interface, SNMP, bus protocol, relay alarm outputs
+ Power supply:	Redundant power supply Broad voltage input 9 - 57 V DC
+ Ambient temperature:	-40 °C to +75 °C
+ Number of ports:	4 to 12 ports

MANAGED GIGABIT SWITCHES · WIENET L2MS-G
TECHNICAL DATA

Description	wienet L2MS 4G	wienet L2MS 4G-4PoE	wienet L2MS-4G-2SFP	wienet L2MS 4G-2PoE-2SFP
Art. No.	83.040.0300.0	83.040.0301.0	83.040.0302.0	83.040.0303.0

Technical data Ethernet

Number of ports	4	4	4	4
10/100 RJ45	4	4	2	2
SFP	-	-	2	2
PoE	-	4	-	2

Switch properties

Transmission type	Store and Forward	Store and Forward	Store and Forward	Store and Forward
Ethernet Standards IEEE	802.3/802.3u/802.3z/802.3ab/802.3Q/ 802.3p/802.3x/ 802.3af/802.3at/802.3az/ 802.1D-2004/802.1s/802.1w/ 802.1X/802.3ad	802.3/802.3u/802.3z/802.3ab/802.3Q/ 802.3p/802.3x/ 802.3af/802.3at/802.3az/ 802.1D-2004/802.1s/802.1w/ 802.1X/802.3ad	802.3/802.3u/802.3z/802.3ab/802.3Q/ 802.3p/802.3x/ 802.3af/802.3at/802.3az/ 802.1D-2004/802.1s/802.1w/ 802.1X/802.3ad	802.3/802.3u/802.3z/802.3ab/802.3Q/ 802.3p/802.3x/ 802.3af/802.3at/802.3az/ 802.1D-2004/802.1s/802.1w/ 802.1X/802.3ad
Transmission length	100 m	100 m	100 m	100 m
Topology	Lines, star, mains, ring, meshes	Lines, star, mains, ring, meshes	Lines, star, mains, ring, meshes	Lines, star, mains, ring, meshes
Supported protocols	ProfiNet (CC A, CC B), Ethernet-IP, Modbus-TCP	ProfiNet (CC A, CC B), Ethernet-IP, Modbus-TCP	ProfiNet (CC A, CC B), Ethernet-IP, Modbus-TCP	ProfiNet (CC A, CC B), Ethernet-IP, Modbus-TCP
Packet Buffer Size	12 Mbits	12 Mbits	12 Mbits	12 Mbits
Data flow control	Back pressure and pause frame-based flow control schemes	Back pressure and pause frame-based flow control schemes	Back pressure and pause frame-based flow control schemes	Back pressure and pause frame-based flow control schemes
MAC address table	16K	16K	16K	16K
Priority levels	8	8	8	8
VLAN	VLAN ID 1-4094	VLAN ID 1-4094	VLAN ID 1-4094	VLAN ID 1-4094

Technical features

Operating voltage min.-max.	9 - 57 V DC	9 - 57 V DC	9 - 57 V DC	9 - 57 V DC
Redundant power supply	2 power inputs	2 power inputs	2 power inputs	2 power inputs
Power consumption max.	12.6 W	12.6 W	12.6 W	12.6 W
Output with PoE ports max.	-	120 W	-	60 W
Relay output max.	2x 1 A / 24 V DC	2x 1 A / 24 V DC	2x 1 A / 24 V DC	2x 1 A / 24 V DC
Operating temperature min.-max.	-20 °C…+70 °C	-20 °C…+70 °C	-20 °C…+70 °C	-20 °C…+70 °C
Storage temperature min.-max.	-40 °C…+85 °C	-40 °C…+85 °C	-40 °C…+85 °C	-40 °C…+85 °C
Rel. humidity during operation min.-max. (non-condensing)	5 - 95 %	5 - 95 %	5 - 95 %	5 - 95 %
Terminal type	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable
Reset switch	Yes	Yes	Yes	Yes
DIP switch	Yes	Yes	Yes	Yes
Mounting method	DIN Rail	DIN Rail	DIN Rail	DIN Rail
Protection class	IP30	IP30	IP30	IP30
Housing material	Metal	Metal	Metal	Metal

Dimensions

Width (mm)	54	54	54	54
Height (mm)	145	145	145	145
Depth (mm)	113	113	113	113
Weight approx.	800 g	800 g	800 g	800 g

GENERAL TECHNICAL DATA FOR THE SERIES	
Diagnosis display	LEDs
MTBF	20 years
RoHs	Yes
Norms and approvals	FCC Part 15 Class A, CE, UL, cULus, CSA

Subject to technical modifications

MANAGED GIGABIT SWITCHES · WIENET L2MS-G
TECHNICAL DATA

Description	wienet L2MS 8G	wienet L2MS 8G-4SFP	wienet L2MS 8G-4PoE-4SFP	wienet L2MS 8G-8PoE
Art. No.	83.040.0310.0	83.040.0312.0	83.040.0313.0	83.040.0314.0

Technical data Ethernet

Number of ports	8	8	8	8
10/100 RJ45	8	4	4	8
SFP	-	4	4	-
PoE	-	-	4	8

Switch properties

Transmission type	Store and Forward	Store and Forward	Store and Forward	Store and Forward
Ethernet Standards IEEE	802.3/802.3u/802.3z/802.3ab/802.3Q/802.3p/802.3x/ 802.3af/802.3at/802.3az/ 802.1D-2004/802.1s/802.1w/ 802.1X/802.3ad	802.3/802.3u/802.3z/802.3ab/802.3Q/ 802.3p/802.3x/ 802.3af/802.3at/802.3az/ 802.1D-2004/802.1s/802.1w/ 802.1X/802.3ad	802.3/802.3u/802.3z/802.3ab/802.3Q/ 802.3p/802.3x/ 802.3af/802.3at/802.3az/ 802.1D-2004/802.1s/802.1w/ 802.1X/802.3ad	802.3/802.3u/802.3z/802.3ab/802.3Q/ 802.3p/802.3x/ 802.3af/802.3at/802.3az/ 802.1D-2004/802.1s/802.1w/ 802.1X/802.3ad
Transmission length	100 m	100 m	100 m	100 m
Topology	Lines, star, mains, ring, meshes	Lines, star, mains, ring, meshes	Lines, star, mains, ring, meshes	Lines, star, mains, ring, meshes
Supported protocols	ProfiNet (CC A, CC B), Ethernet-IP, Modbus-TCP	ProfiNet (CC A, CC B), Ethernet-IP, Modbus-TCP	ProfiNet (CC A, CC B), Ethernet-IP, Modbus-TCP	ProfiNet (CC A, CC B), Ethernet-IP, Modbus-TCP
Packet Buffer Size	12 Mbits	12 Mbits	12 Mbits	12 Mbits
Data flow control	Back pressure and pause frame-based flow control schemes	Back pressure and pause frame-based flow control schemes	Back pressure and pause frame-based flow control schemes	Back pressure and pause frame-based flow control schemes
MAC address table	16K	16K	16K	16K
Priority levels	8	8	8	8
VLAN	VLAN ID 1-4094	VLAN ID 1-4094	VLAN ID 1-4094	VLAN ID 1-4094

Technical features

Operating voltage min.-max.	9 - 57 V DC	9 - 57 V DC	9 - 57 V DC	9 - 57 V DC
Redundant power supply	2 power inputs	2 power inputs	2 power inputs	2 power inputs
Power consumption max.	12.6 W	12.6 W	12.6 W	12.6 W
Output with PoE ports max.	-	-	120 W	240 W
Relay output max.	2x 1 A / 24 V DC	2x 1 A / 24 V DC	2x 1 A / 24 V DC	2x 1 A / 24 V DC
Operating temperature min.-max.	-20 °C…+70 °C	-20 °C…+70 °C	-20 °C…+70 °C	-20 °C…+70 °C
Storage temperature min.-max.	-40 °C…+85 °C	-40 °C…+85 °C	-40 °C…+85 °C	-40 °C…+85 °C
Rel. humidity during operation min.-max. (non-condensing)	5 - 95 %	5 - 95 %	5 - 95 %	5 - 95 %
Terminal type	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable	Push-in terminal, pluggable
Reset switch	Yes	Yes	Yes	Yes
DIP switch	Yes	Yes	Yes	Yes
Mounting method	DIN Rail	DIN Rail	DIN Rail	DIN Rail
Protection class	IP30	IP30	IP30	IP30
Housing material	Metal	Metal	Metal	Metal

Dimensions

Width (mm)	54	54	54	54
Height (mm)	145	145	145	145
Depth (mm)	113	113	113	113
Weight approx.	800 g	800 g	800 g	800 g

GENERAL TECHNICAL DATA FOR THE SERIES

Diagnosis display	LEDs
MTBF	20 years
RoHs	Yes
Norms and approvals	FCC Part 15 Class A, CE, UL, cULus, CSA

Description	**wienet** SFP G MM VCSEL	**wienet** SFP G MM FP	**wienet** SFP G SM FP
Art. No.	83.040.0710.0	83.040.0711.0	83.040.0712.0

Technical data Ethernet

Data rate	1250 Mbps	1250 Mbps	1250 Mbps
Wavelength	850 nm	1310 nm	1310 nm
Light source	VSCEL	FP	FP
Media type	Glass fiber multi mode	Glass fiber multi mode	Glass fiber single mode
Tx power	-9,5…-4 dbm with 50/125µm or 62.5/125µm fiber	-9,5…-1 dbm with 50/125µm or 62.5/125µm fiber	-9.5…-3 dbm with 9/125µm fiber
Rx sensitivity	-18 dbm	-19 dbm	-20 dbm
Link budget	8.5 dbm	10 bm	10.5 dbm
Saturation	0 dbm	-1 dbm	-3 dbm
Distance	550 m	2 km	10 km

Ambient conditions

Operating temperature	-40 °C…+85 °C	-40 °C…+85 °C	-40 °C…+85 °C

Certificates / Approvals

	CE / UL	CE / UL	CE / UL

Description	**wienet** SFP F/E (auto-neg) RJ45
Art. No.	83.040.0715.0

Technical data

Data rate	10/100/1000 Mbps
Max. data transfer rate	1.25 Gbps
Auto-negotiation	Yes
Number of RJ45 ports	1
Media type	Copper

Standards

IEEE 802.3ab 1000BASE-T	19 dbm
Distance	100m

Ambient conditions

Operating temperature	0 °C…+70 °C

Certificates / Approvals

	CE / UL

WIENET
WLAN ACCESS POINT

Today, WLAN networks are everywhere and this trend is also taking hold in industrial applications for which the wienet AP-ETH-A Access Point was developed. Wireless Access Points from the wienet product range allow various devices to make a WLAN connection to the network via one Ethernet interface, or to connect various WLAN-LAN networks to each other. The wienet product range comes with the WIE-SERVICE24 VPN portal that allows the set up and management of VPN connections to guarantee an encrypted and secure machine communication.

+ Integration of programmable or configurable control units that are impossible or difficult to access

+ Secure machine communication for remote maintenance and control thanks to the WIE-SERVICE24 VPN portal

+ Reliable integration of portable devices (e.g., automated transport systems like AMRs) into the network

+ Provides the service technician a direct and cable-free access to the machine

+ Enables the use of IIoT functionalities thanks to the access to more than 1,000 openWRT packages (e.g., MQTT)

PERFORMANCE FEATURES

- **+** Network connection: LAN or WLAN
- **+** Configuration: Web interface
- **+** Antenna: integrated or external via SMA connection
- **+** Power supply: 9 to 28 V DC
- **+** Power consumption: < 1 W
- **+** Ambient temperature: -5 °C up to +55 °C
- **+** Number of LAN ports: 1 or 3 via RJ45
- **+** Range: up to 150 m (open area)
- **+** Functions: VPN, Mesh (IEEE 802.11s with switching time < 1 sec), NTP, NAT, routing, firewall

RoHS conform CE

WLAN ACCESS POINT
WIENET AP-ETH-A

CUSTOMER PAIN POINTS

+ Minimize equipment downtime by being able to securely monitor and control own devices

+ Increased competition

+ Difficult to integrate mobile equipment (e.g., AMRs) into a network

+ Too complex network structures

+ Highest degree of flexibility to meet varying customer demands

+ No expensive heat dissipation designs required

+ Guaranteed comparability of data

+ Minimize network cost

+ Integration into the most confined spaces

HOW WIELAND HELPS

+ Easy setup of a secure virtual network with OpenVPN encrypted with WPA2-EAP/PSK

+ Maximize customer retention by offering an optimized machine performance and maintenance services

+ Mesh network functionality (IEEE802.11s) with WPA3-SAE encryption

+ Up to three RJ45 ports and integrated switch capabilities eliminate the need for an additional switch device

+ Access to more than 1,000 openWRT packages to easily integrate additional features (e.g., Modbus, MQTT, IPsec)

+ Minimized heat generation due to low power consumption < 1 W

+ NTP (network time protocol) server ensures a synchronized network and validated time stamps

+ Integrated router functions like NAT, routing and firewall saves the cost of an additional router device

+ A slim and compact design saves room in your equipment

REMOTE MONITORING AND CONTROL VIA WLAN

• Programming of barely accessible end devices
• Firmware updates

GANTRY CRANE + INDUSTRIAL CRANE

Simple programming and maintenance from the ground up.
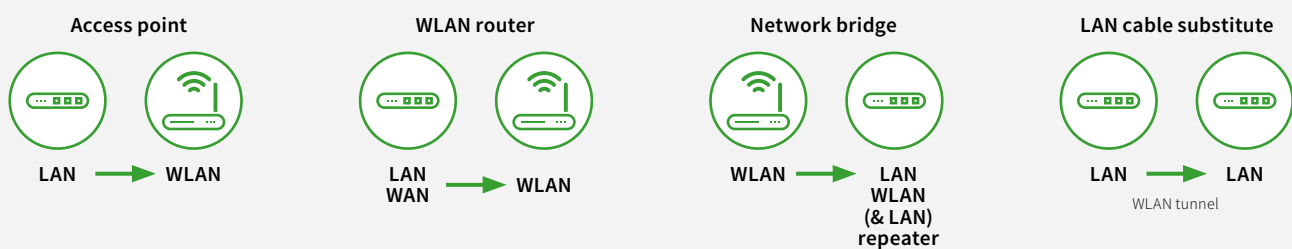
AUTOMATED RACK SYSTEMS

Programming and monitoring from a safe distance.

AUTOMATED TRANSPORT VEHICLES

Programming and status request during operation.

SUITABLE AS:

Access point	WLAN router	Network bridge	LAN cable substitute
LAN → WLAN	LAN WAN → WLAN	WLAN → LAN WLAN (& LAN) repeater	LAN → LAN
			WLAN tunnel

WLAN ACCESS POINT · WIENET AP · TECHNICAL DATA

Description	wienet AP-ETH-A	wienet AP-ETH-A-A	wienet AP 3P ETH -A	wienet AP 3P ETH-A-A
Art. No.	83.040.0050.0	83.040.0051.0	83.040.0052.0	83.040.0053.0
Technical data				
Nominal voltage min.-max.	9 to 28 V DC	9 - 28 V DC	9 - 28 V DC	9 - 28 V DC
Output (24 V DC)	ca. 1 W	ca. 1 W	ca. 1 W	ca. 1 W
WLAN				
Wireless LAN standard	IEEE 802.11n/g/b	IEEE 802.11n/g/b	IEEE 802.11n/g/b	IEEE 802.11n/g/b
Frequency	2.4…2.4835 GHz	2.4…2.4835 GHz	2.4…2.4835 GHz	2.4…2.4835 GHz
Transmission power	<100 mW	<100 mW	<100 mW	<100 mW
Transfer rate	150 Bd	150 Bd	150 Bd	150 Bd
Data rate max.	150 Mbit/s	150 Mbit/s	150 Mbit/s	150 Mbit/s
Reliability	WEP, WPA, WPA2 PSK + EA	WEP, WPA, WPA2 PSK + EA	WEP, WPA, WPA2 PSK + EA	WEP, WPA, WPA2 PSK + EA
Antenna	Integrated	External via RP-SMA socket	Integrated	External via RP-SMA socket
Ethernet (LAN)				
Number of RJ-45 sockets	1	1	3	3
Medium	Twisted pair 10/100BaseT	Twisted pair 10/100BaseT	Twisted pair 10/100BaseT	Twisted pair 10/100BaseT
Ambient conditions				
Operating temperature min.-max.	-5 °C…+55 °C	-5 °C… +55 °C	-5 °C… +55 °C	-5 °C… +55 °C
Storage temperature min.-max.	-20 °C…+60 °C	-20 °C…+60 °C	-20 °C…+60 °C	-20 °C…+60 °C
Rel. humidity during operation min.-max. (non-condensing)	5 - 93 %	5 - 93 %	5 - 93 %	5 - 93 %
Condensation	Not permitted	Not permitted	Not permitted	Not permitted
Dimensions				
Width (mm)	22.5	22.5	22.5	22.5
Height (mm)	96.5	96.5	96.5	96.5
Depth (mm)	91.5	101.5	91.5	101.5
Weight approx.	95 g	97 g	106 g	110 g

GENERAL TECHNICAL DATA FOR THE SERIES	
Mounting method	DIN rail (top hat rail) 35 mm
Protection class	IP20
Housing material	Plastic
Connection type	Plug-in screw terminal
Connection cross-section	2 x 0.14 - 0.75 mm² / 1 x 0.14 - 2.5 mm²
Diagnosis display	LEDs (green/yellow)
RESET button	< 3 s restart / 5-30 s restart with factory settings
RoHs	Yes
Norms and approvals	CE

Subject to technical modifications

WLAN ACCESS POINT · WIENET AP · ACCESSORIES

Description	**wienet** Antenne 15854v2 WIFI	**wienet** Antenne 15874v2 WIFI
Art. No.	F0.000.0037.4	F0.000.0037.5

Technical data		
Frequency	2.4 GHz	2.4 GHz
Connection	SMA/M-RP	SMA/R
Cable length	2.5 m	5 m
Mounting method	Magnetic holder	Mast and wall mounting (incl. bracket)

Dimensions		
Width (mm)	29	48
Height (mm)	223	82
Depth (mm)	29	48

ACCESSORIES

Patch-cables RJ45

Type	Art. No.	PU
wienet Patch-cables MOD ZBH RJ45 0,25 m	78.999.4000.0	1
wienet Patch-cables MOD ZBH RJ45 0,5 m	78.999.4100.0	1
wienet Patch-cables MOD ZBH RJ45 1,0 m	78.999.4200.0	1
wienet Patch-cables MOD ZBH RJ45 2,0 m	78.999.4300.0	1
wienet Patch-cables MOD ZBH RJ45 3,0 m	78.999.4400.0	1
wienet Patch-cables MOD ZBH RJ45 5,0 m	78.999.4500.0	1
wienet Patch-cables MOD ZBH RJ45 7,5 m	78.999.4600.0	1
wienet Patch-cables MOD ZBH RJ45 10 m	78.999.4700.0	1

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OUR **SOLUTIONS** RANGE

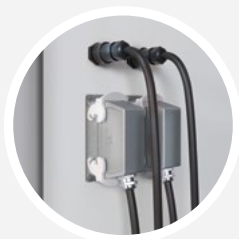Energy distribution in floors and ceilings

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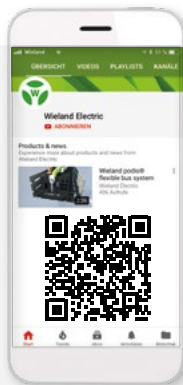Solutions for
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