

# Jet series

For a better connected world



# For a better connected world

## Industrial data communication solutions

Secure data communication is essential in basically any automated installation or process – from factory automation to traffic management and everything in between. We develop and manufacture products that'll ensure effective network communication in your application. A comprehensive range of industrial products that enable you to build cost-effective, reliable, secure networks for industrial environments. Whether you require a simple unmanaged switch, a PoE switch, media converters or advanced wireless routers, we have the ideal solution.

### Ethernet switches **JetNet series**

- › IP31 rugged aluminum housing
- › 5ms network failure recovery
- › 0ms seamless restoration
- › Precise traffic isolation made easy



### PoE switches **JetPoE series**

- › Precise video traffic isolation
- › Quality video transmission
- › IP camera keep alive enhancer
- › Power boost for train and vehicle



### Wireless AP and cellular routers **JetWave series**

- › Reliable wireless connection
- › Secure remote access
- › High speed routing engine
- › Wireless/cellular/LAN redundancy

### Media converters **JetCon series**

- › Ethernet extenders
- › Ethernet to fiber converters
- › Serial to serial/fiber converters



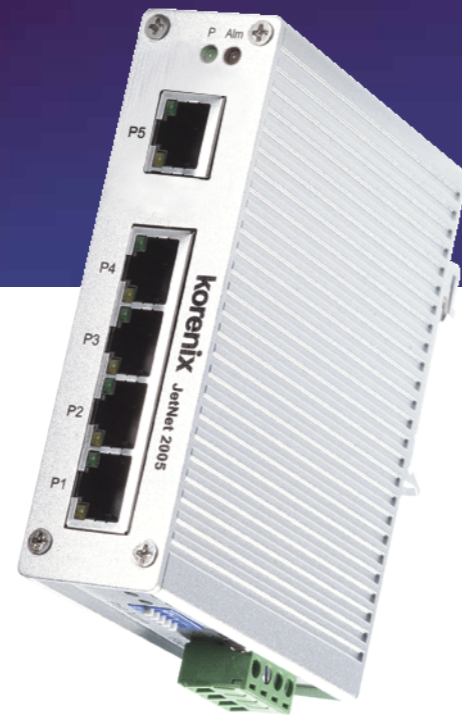
**korenix**  
A Beijer Electronics Group Company

#### Korenix – a Beijer Electronics company

Korenix, a Beijer Electronics group company within the industrial Data Communication business area, is a market leading brand in industrial wireless and networking solutions with an extensive track record in providing innovative, market-oriented, value-focused solutions.

# Unmanaged switches

- › Rugged housing
- › Aluminum body heat sink
- › IP31, fully sealed on top
- › 1.5KV HiPot isolation
- › Failure alarm



### JetNet 2005 5-port switch

- › 10/100 RJ45 × 5
- › Port failure alarm
- › C1D2 certificate
- › -25°C to 70°C / [w]-40°C to 75°C

“ The JetNet unmanaged switches combine cost-effective plug-and-play operation with industrial quality.



- JetNet 2005f**  
5-port switch /w fiber
- › 10/100 RJ45 × 4
  - › 100 SC fiber × 1 [-s] single-mode 30km [-m] multi-mode 2km
  - › Port failure alarm
  - › C1D2 certificate
  - › -10°C to 70°C / [w]-40°C to 75°C



- JetCon 2302**  
4-port switch /w fiber
- › 4-port unmanaged switch or 2-channel media converter
  - › 10/100 RJ45 × 2
  - › 100 SC fiber × 2 [-s] single-mode 30km [-m] multi-mode 2km
  - › Port and power failure alarm
  - › -25°C to 70°C / [w]-40°C to 75°C



- JetNet 3005G**  
5-port full Gigabit Ethernet switch
- › 100/1000 RJ45 × 5
  - › Port and power failure alarm
  - › QoS packet priority
  - › Broadcast filtering
  - › -40°C to 75°C



- JetNet 3008**  
8-port switch
- › 10/100 RJ45 × 8
  - › Port and power failure alarm
  - › QoS packet priority
  - › Broadcast filtering
  - › C1D2, EN50121-4, e Mark
  - › -25°C to 70°C / [w]-40°C to 75°C



- JetNet 3008f**  
8-port switch /w fiber
- › 10/100 RJ45 × 6
  - › 100 SC fiber × 2 [-s] single-mode 30km [-m] multi-mode 2km
  - › Port and power failure alarm
  - › QoS packet priority
  - › Broadcast filtering
  - › C1D2, EN50121-4, e Mark
  - › -10°C to 70°C / [w]-40°C to 75°C



- JetNet 3008G**  
8-port full Gigabit Ethernet switch
- › 100/1000 RJ45 × 8
  - › Port and power failure alarm
  - › QoS packet priority
  - › Broadcast filtering
  - › -10°C to 70°C



- JetNet 3010G**  
10-port Gigabit Ethernet switch /w SFP
- › 10/100 RJ45 × 7
  - › 1000 RJ45/SFP combo × 3
  - › QoS packet priority
  - › -20°C to 70°C / [w]-40°C to 70°C



- JetNet 3018G**  
18-port Gigabit Ethernet switch /w SFP
- › 10/100 RJ45 × 16
  - › 100/1000 RJ45/SFP combo × 2
  - › Port and power failure alarm
  - › QoS packet priority
  - › Broadcast filtering
  - › EN50121-4 compliance
  - › -40°C to 75°C

## Din rail managed switches

- › Rugged housing
- › Aluminum body heat sink
- › IP31, fully sealed on top
- › 1.5KV HiPot isolation
- › Failure alarm
- › Self healing watchdog



### JetNet 4508f

IEC61850-3 8-port Ethernet switch /w fiber

- › 10/100 RJ45 × 6
- › 100 SC fiber × 2  
[-s] single-mode 30km  
[-m] multi-mode 2km
- › Multiple super ring
- › Precise traffic isolation
- › L2 security
- › Modbus/TCP managed
- › -10°C to 70°C / [w] -40°C to 75°C



### JetNet 4508

8-port Ethernet Switch

- › 10/100 RJ45 × 8
- › Multiple super ring
- › Precise traffic isolation
- › L2 security
- › Modbus/TCP managed
- › -25°C to 70°C / [w] -40°C to 75°C

### JetNet 4510

10-port Ethernet switch /w SFP

- › 10/100 RJ45 × 7
- › 100 RJ45/SFP combo × 3
- › Multiple super ring
- › Precise traffic isolation
- › L2 security
- › Modbus/TCP managed
- › -25°C to 70°C / [w] -40°C to 75°C

### JetNet 5010G

10-port Gigabit Ethernet switch /w SFP

- › 10/100 RJ45 × 7
- › 100/1000 RJ45/SFP combo × 3
- › Multiple super ring
- › Precise traffic isolation
- › L2 security
- › Modbus/TCP managed
- › -25°C to 70°C / [w] -40°C to 75°C

### JetNet 5020G

20-port Gigabit Ethernet switch /w SFP

- › 10/100 RJ45 × 16
- › 100/1000 RJ45/SFP combo × 4
- › Multiple super ring
- › Precise traffic isolation
- › L2+ advanced security
- › Modbus/TCP managed
- › -40°C to 75°C

## Rackmount managed switches

- › IEC61850-3 certificate for power electricity
- › EN50121-4 rated for railway
- › NEMA TS2 rated for traffic control



### JetNet 5628G-EU

IEC61850-3 Gigabit modular rackmount switch

- › 3 module slots
- › Up to 24 × 10/100 RJ45 or 18 × 100 fiber
- › Onboard 1000 RJ45/SFP combo × 4
- › Multiple Super Ring
- › Precise traffic isolation
- › L2+ advanced security
- › Modbus/TCP managed
- › -40°C to 85°C
- › 1 × 85-264VAC + 2 × 24-48VDC [-2AC] 2 × 85-264VAC [-2HVDC] 2 × 88-370VDC



### JNM5-8TX

RJ45 module

- › 10/100 RJ45 × 8

### JNM5-2SFP/4SSC

Fiber module

- › 100 SFP slot × 2
- › 100 SC fiber × 4  
Single-mode 30km

### JNM5-2SFP/4MSC

Fiber module

- › 100 SFP slot × 2
- › 100 SC fiber × 4  
Multi-mode 2km

### JNM5-4TX/4SFP

RJ45+fiber module

- › 10/100 RJ45 × 4
- › 100 SFP slot × 4

### Unmanaged PoE switches

- › Reliable Powering delivery
- › Rugged housing
- › Aluminum body heat sink
- › IP31, fully sealed on top
- › Failure alarm

### Managed PoE switches

- › True industrial PoE capacity
- › Huge power delivery
- › Enhance system reliability from a node to the whole



**JetNet 3705f**  
5-port PoE switch/w fiber

- › 10/100 PoE x 4  
15W/port, max 60W in total
- › 100 SC fiber x 1  
[-s] single-mode 30km  
[-m] multi-mode 2km
- › Port and power failure alarm
- › -10°C to 70°C / [W] -40°C to 70°C



**JetNet 3710G**  
10-port Gigabit PoE switch

- › 10/100 PoE x 8  
15W/port, max 65W in total
- › 100/1000 RJ45 x 2
- › QoS packet priority
- › Port failure alarm
- › -25°C to 70°C



**JetNet 3806G**  
6-port Gigabit vehicle PoE switch

- › 10/100 PoE x 4  
15W/port, max 60W in total
- › 100/1000 RJ45 x 2
- › QoS packet priority
- › Port failure alarm
- › e Mark, 12-24VDC
- › -25°C to 60°C



**JetNet 3810G**  
10-port Gigabit vehicle PoE switch

- › 10/100 PoE x 8  
15W/port, max 65W in total
- › 100/1000 RJ45 x 2  
[Gf] 1000 SFP slot x 2  
[f] 100 SFP slot x 2
- › QoS packet priority
- › Port failure alarm
- › e Mark, 12-24VDC
- › -25°C to 60°C



**JetNet 5728G-24P-EU**  
28-port Gigabit high power PoE switch /w SFP

- › 10/100 PoE x 24  
30W/port, max 540W in total
- › 100/1000 RJ45/SFP combo x 4
- › Multiple super ring
- › Precise video isolation
- › IGMP quality video multicast
- › IP cam auto failure recovery
- › -25°C to 65°C (fanless)



**JetNet 3906G**  
6-port full Gigabit high power PoE switch

- › 100/1000 PoE x 4  
30W/port, max 120W in total
- › 100/1000 RJ45 x 1
- › 100/1000 SFP slot x 1
- › QoS packet priority
- › Port and power failure alarm
- › 12-36VDC
- › -40°C to 75°C

“ The JetPoE switches are best choices for real-time IP video surveillance and provide feasible deployment of standard PoE IP cameras.



**JetNet 3705**  
5-port PoE switch

- › 10/100 PoE x 4  
15W/port, max 60W in total
- › 10/100 RJ45 x 1
- › Port and power failure alarm
- › -20°C to 70°C / [w] -40°C to 70°C



**JetNet 4706**  
6-port PoE switch

- › 10/100 PoE x 4  
20W/port, max 80W in total
- › 10/100 RJ45 x 2
- › Multiple super ring
- › IGMP quality video multicast
- › IP cam auto failure recovery
- › -40°C to 60°C



**JetNet 4706f**  
6-port PoE switch/w fiber

- › 10/100 PoE x 4  
20W/port, max 80W in total
- › 100 SC fiber x 2  
[-s]single-mode 30km  
[-m] multi-mode 2km
- › Multiple super ring
- › IGMP quality video multicast
- › IP cam auto failure recovery
- › -40°C to 60°C



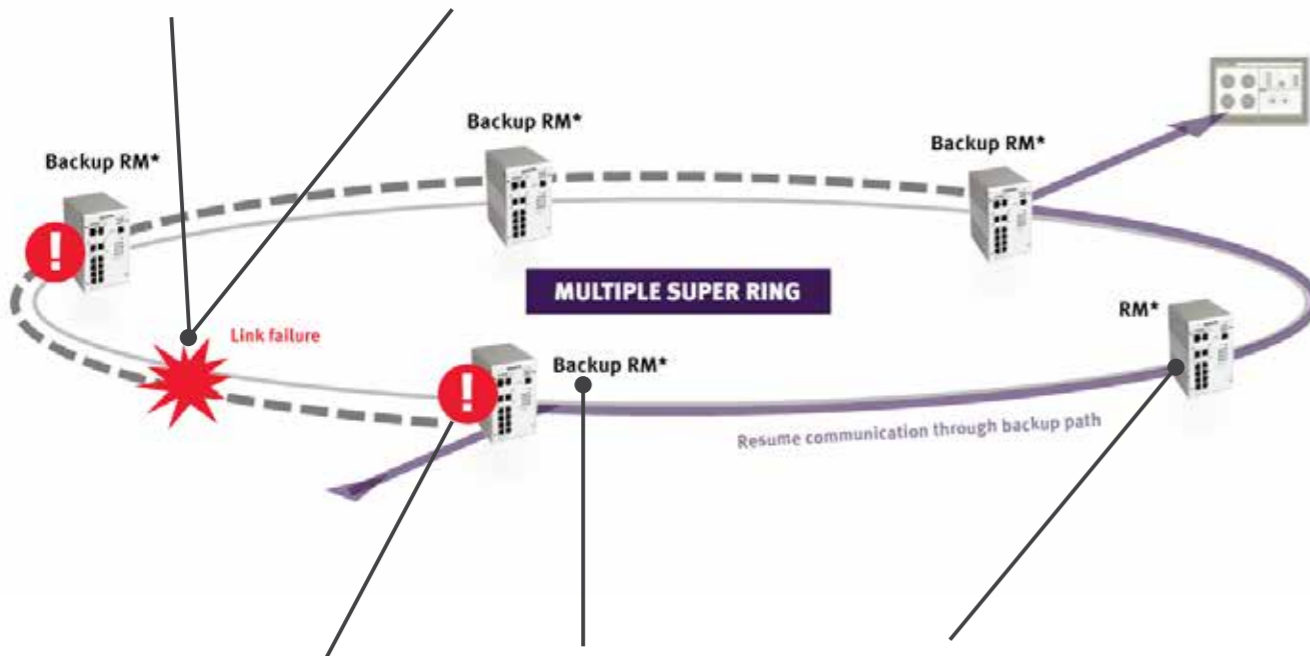
**JetNet 5310G**  
10-port Gigabit high power PoE switch /w SFP

- › 10/100 PoE x 8  
30W/port, max 240W in total
- › 100/1000 RJ45/SFP combo x 2
- › Multiple super ring
- › Precise video isolation
- › IGMP quality video multicast
- › IP cam auto failure recovery
- › -40°C to 75°C

Network redundancy

**5ms failure recovery**  
Patented “multiple super ring” recovers a link failure in a blink. Minimize packet loss.

**0ms restoration**  
Patented “seamless restoration” guarantees no packet loss, no broadcast storm, no side-effect when you fix a broken ring.



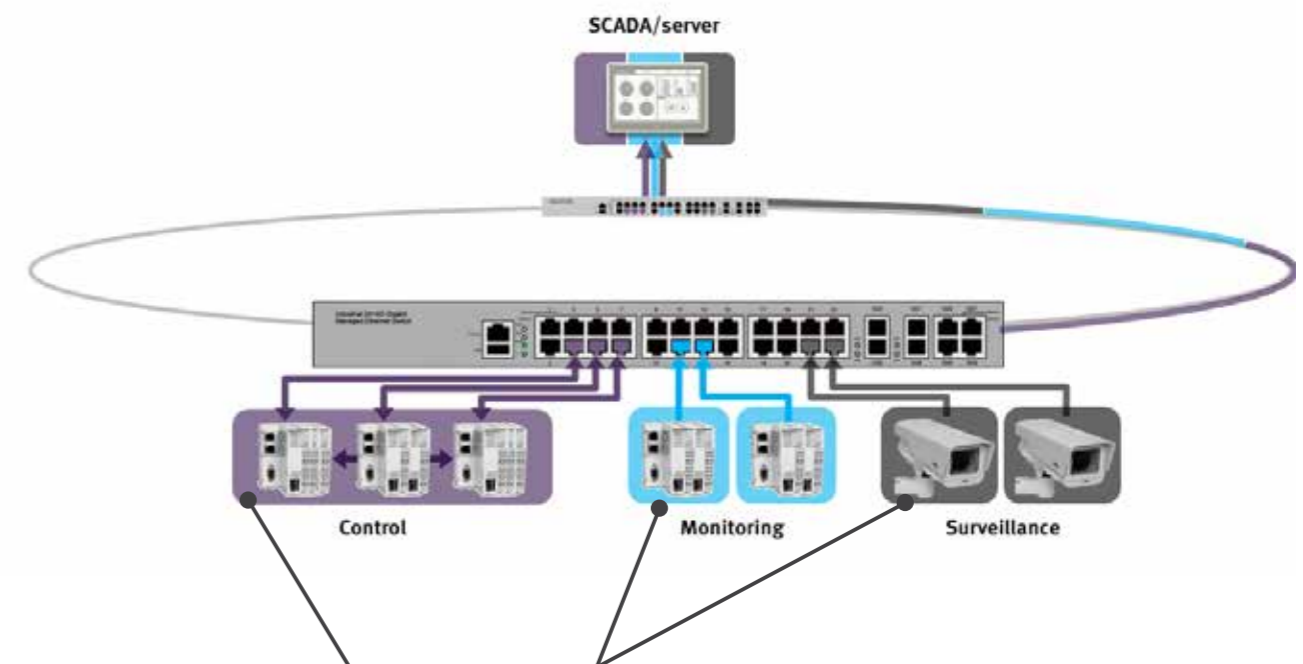
**Fast trouble shooting**  
Tells you the failure position by LED indication, relay alarm, warning message or topology map.

**No critical-point**  
Patented “ring manager backup” technology. All switches are ready to recover ring manager failure.

**Prevents mistakes**  
LED indication warns you if a ring link is plugged into a wrong ring port by mistake.

**Just easy**  
Create a ring, assign the ring ports, enable it. Done!  
*\* RM is auto-selected.*

Precise traffic isolation



**Fits industrial behavior**  
Precisely manage industrial network which includes subsystems with different traffic behaviors, “community” and “isolated”.

**Community group**  
Devices in a community are allowed to talk to one another, such as PLCs and SCADA in a control system.

**Isolated group**  
Devices that do not need to talk to each other, such as IED or IP cameras are isolated and can only send traffic to the server.

**Cleaner and safer**  
Traffic from subsystems/ devices are isolated all the way to destination. Prevents interference and enhances network security.

**Just easy**  
Simply create group with its type of behavior, assign the ports. Done!

## Advanced network security

### Network level defense

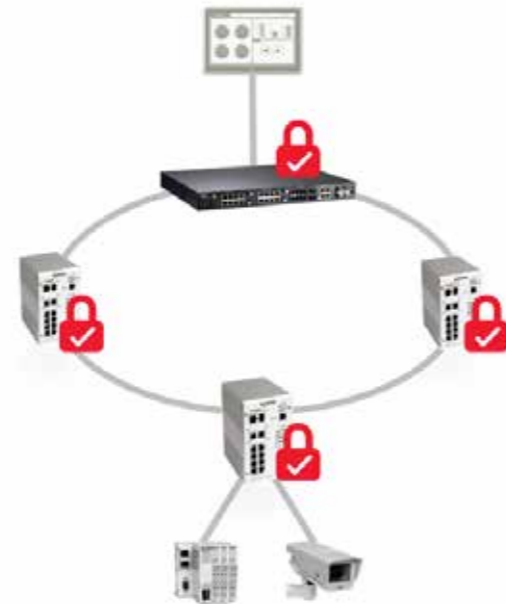
Prevents spoofing and deny-of-service attack to enhance data availability and integrity in industrial applications.

### Traffic level defense

Prevents untrusted traffic from a trusted device, such as an infected server or SCADA. Only trusted traffic can flow in the network.

### Device level defense

Blocks any unknown and unwanted devices. Only trusted devices can access the network.



### Layer 2 security

Identifies a device by MAC address. Unknown devices are blocked. The most effective firstline protection for industrial applications.



### Layer 2+ security

Filters a traffic by source IP, destination IP, TCP/UDP ports, and precisely blocks unwanted traffic.

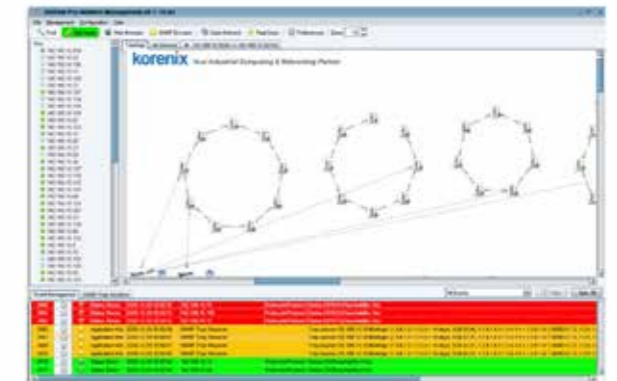


### Whitelist/blacklist made easy

Simply set up filters by a wildcard mechanism, which permits/denies one of, or a group of IP, or traffic flows to go through the network.

### Korenix NMS Network management system

- Manage from central or remote office
- Auto network discovery, topology map, failure positioning
- Batch firmware upgrade, configuration backup/restoration
- Event handling by email, pop up message, or user-defined actions
- Versions available for network size up to [32][64][128][256][1024] nodes [16] node version for free trial



### 3G/4G secure routers

- › All-in-one LTE router
- › Reliable VPN over WAN/SIM1/SIM2
- › Gateway redundancy
- › Network redundancy on the field
- › Secure management by OPC UA
- › High speed L3 routing



**JetWave 2316-LTE**  
 Wifi + WAN + switch + serial  
 redundant LTE secure router

- › Gigabit WAN x 1, LAN x 4, SFP x 2
- › 1x RS-232/422/485 serial server
- › High speed Wifi AP/client 360° up to 20m
- › IPSec VPN/open VPN/NAT/firewall/DMZ
- › WAN/LTE and gateway redundancy
- › Managed switch with MSR redundant ring
- › OPC UA managed
- › -40°C to 70°C

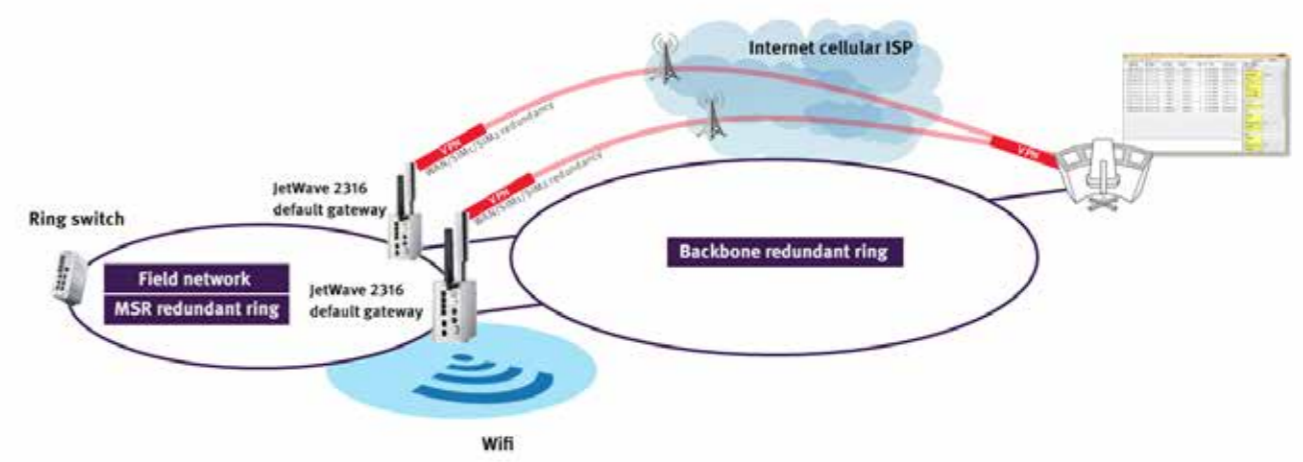
“ The JetWave 3G/4G wireless routers offer fast, secure and reliable communication with full gateway and network redundancy.

#### Secure

- › IPSec and OpenVPN support up to 256-bit encryption, 512-bit integrity and authentication
- › Inbound/outbound firewall, NAT/DMZ/Port forwarding
- › Secure Wifi with non-broadcast SSID, client isolation, authentication, and data encryption
- › OPC UA management with authentication, authorization, encryption and data integrity

#### Reliable

- › WAN/SIM redundancy
- › SIM1/SIM2 redundancy
- › Resilient VPN tunnel over WAN/SIM1/SIM2
- › MSR redundant ring with JetNet switches 5ms recovery and seamless restoration
- › MSR redundant gateway



#### Fast

- › High performance CPU for VPN and LAN/WAN routing
- › LAN/LTE routing 100Mbps DL/50Mbps UL
- › Hardware-based NAT routing
- › Non-blocking full Gigabit LAN switching
- › 2T2R Wifi up to 300Mbps

#### Easy

- › Works with dynamic IP
- › Wifi AP brings convenience and mobility to fieldwork
- › ‘Mobile Manager’ remote monitoring/configuration/maintenance
- › USB configuration/firmware restoration



## 3G/4G secure routers

- › Secure remote access
- › Dual SIM redundancy
- › WAN/cellular redundancy
- › OPC UA managed
- › Low power consumption



## Wireless APs

- › Rugged housing
- › High performance
- › Long distance
- › Wireless security
- › Quality fiberglass antenna

**JetWave 2311-LTE**  
Wifi + WAN + redundant LTE secure router

- › Gigabit WAN x 1, LAN x 1
- › High speed Wifi AP or client 360° up to 20m
- › IPSec VPN/Open VPN
- › NAT/Firewall/DMZ
- › LAN/Wifi to WAN/LTE routing
- › WAN to LTE redundancy
- › OPC UA managed
- › -25°C to 70°C



**JetWave 2310**  
Redundant 3G secure router

- › Gigabit LAN x 2
- › IPSec VPN/Open VPN
- › NAT/firewall/DMZ
- › Hardware-based NAT routing
- › OPC UA managed
- › -25°C to 70°C



**JetWave 2310-LTE**  
Redundant LTE secure router

- › Gigabit LAN x 2
- › IPSec VPN/open VPN
- › NAT/firewall/DMZ
- › Hardware-based NAT routing
- › OPC UA managed
- › -25°C to 70°C



**JetWave 2311**  
Wifi + WAN + redundant 3G secure router

- › Gigabit WAN x 1, LAN x 1
- › High speed Wifi AP or client 360° up to 20m
- › IPSec VPN/open VPN
- › NAT/Firewall/DMZ
- › LAN/Wifi to WAN/3G routing
- › WAN to 3G redundancy
- › OPC UA managed
- › -25°C to 70°C



**JetWave 2450**  
Single radio outdoor wireless AP/router

- › 802.11a/g/n 2.4G
- › High speed up to 150Mbps
- › Wireless security
- › Support firewall/NAT/DMZ
- › Embedded antenna 30 up to 3km
- › N-type male slot for antennas
- › IP55 outdoor, -20°C to 70°C



**JetWave 4020**  
Dual band dual radio outdoor wireless AP/bridge

- › Support 802.11n 2.4G and 802.11ac 5.8G
- › High speed up to 1Gbps
- › Wireless security and VPN/NAT remote access
- › Fast roaming for moving station
- › Default 180° antenna up to 300m
- › IP67 outdoor, -40°C to 70°C



**JetWave 4020E**  
Dual band dual radio outdoor wireless AP/bridge

- › Support 802.11n 2.4G and 802.11ac 5.8G
- › High speed up to 1Gbps
- › Wireless security and VPN/NAT remote access
- › Fast roaming for moving station
- › High flexibility with external antennas
- › IP67 outdoor, -40°C to 70°C



**JetWave 3220**  
Dual radio industrial wireless AP/bridge

- › Dual radio 802.11a/b/g/n 2.4G/5G configurable
- › High speed up to 300Mbps
- › Wireless redundancy and security
- › Default 360° antenna up to 50m
- › EN50121-4 and e Mark
- › IP31, -40°C to 70°C



**JetWave 3220-SR**  
Single radio industrial wireless AP

- › 802.11a/b/g/n 2.4G/5G configurable
- › High speed up to 300 Mbps
- › Wireless security
- › Default 360° antenna up to 50m
- › EN50121-4 and e Mark
- › IP31, -40°C to 70°C

“ The Jetwave wireless access points provide rugged housing, high performance and long distance connectivity.

# Wireless AP selection guide

Choose the model according to scenario

## Local network

### Single coverage

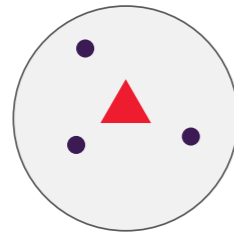
One WiFi service network

#### JetWave 2450

Up to 150Mbps data rate 360° coverage by optional antenna IP55 outdoor installation.

#### JetWave 3220-SR

Double data rate up to 300Mbps. Dual antenna enhance signal quality.



## Long distance

### Point-to-point

Bridges two sites without fiber construction

#### JetWave 2450

Default antenna up to 3km. IP55 outdoor installation.

#### JetWave 3220-SR

Cleaner 5G band less interference. Dual antennas enhance signal quality. Double data rate up to 300 Mbps.



### Dual coverage

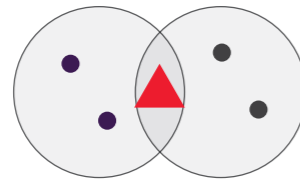
Points to separated areas or creates isolated networks

#### JetWave 3220

Dual antenna enhance signal quality 2.4G and 5G band in parallel IP31 industrial installation.

#### JetWave 4020E

Dual antenna enhance signal quality 2.4G and 5G band in parallel. IP67 outdoor installation.



### Double point-to-point

Link redundancy, transmission on link with better signal quality

#### JetWave 3220

Dual antennas signal quality. Separated links on 2.4G and 5G Active on quality link.

#### JetWave 4020

Dual antennas signal quality 2.4G and 5G separate links. IP67 outdoor installation.

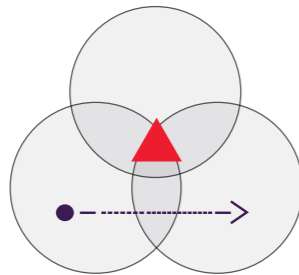


### Fast roaming area

Serves fast moving clients without link loss

#### JetWave 4020E

Up to 100ms fast roaming. Dual antenna enhance signal quality IP67 outdoor installation.



### Repeater

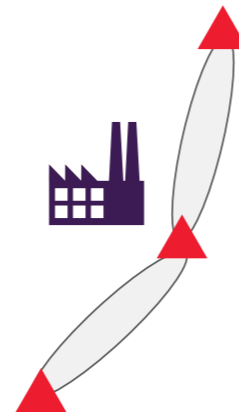
Extends distance or bypass obstacles

#### JetWave 3220

Cleaner 5G band less interference. Dual antennas signal quality.

#### JetWave 4020E

Cleaner 5G band less interference. Dual antenna signal quality. High speed multiple hopping.



## Local network + long distance

### Local network + point-to-point

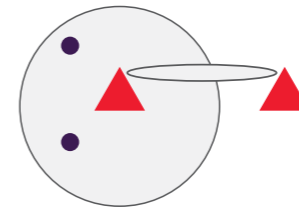
Bridges the wireless sites without fiber construction

#### JetWave 3220

2.4G band services clients. Cleaner 5G band for long distance.

#### JetWave 4020E

Support 2.4G and 5G band. IP67 outdoor installation.

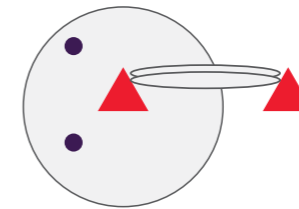


### Local network + double point-to-point

Communicates the wireless sites with reliable wireless links

#### JetWave 4020E\*

2.4G band services clients-cleaner 5G band for redundant point-to-point. Total throughput up to 1 Gbps. \* coming soon

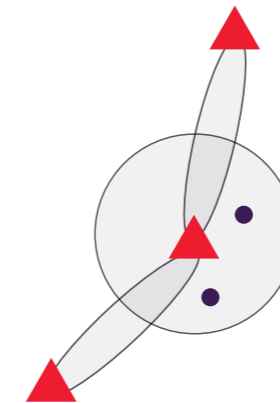


### Local network + repeater

High performance hopping through wireless sites

#### JetWave 4020E\*

2.4G band services clients. Cleaner 5G band for long distance hopping. Total throughput up to 1 Gbps. \* coming soon



## Local network + remote access

### M2M / vehicle

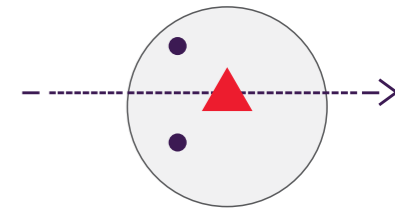
Stationary or moving wireless network with internet connectivity

#### JetWave 2311-LTE

VPN secure remote access. High performance routing. Low power consumption.

#### JetWave 3420

VPN secure remote access. High performance routing-traffic shaping. E Mark.



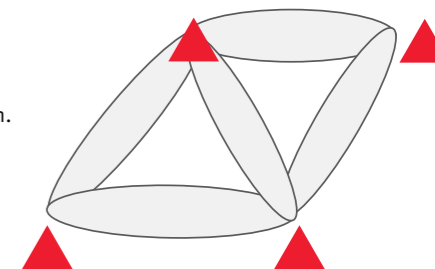
## WiFi backbone

### Reliable infrastructure

Creates a full coverage, scalable, self-healing wireless network

#### JetWave 4020E\*

Triple radios for multi path. IP67 outdoor installation. \* coming soon



# Wireless AP selection guide

## Optional antennas – manipulate distance and coverage

Model name	Number of antennas	Mode	Default / optional antenna	Covering angle	Line-of-sight distance <sup>(1)</sup>		Patch* / (extension) antenna cable
					JetWave-to-JetWave	JetWave-to-client <sup>(2)</sup>	
<b>JetWave 4020</b>		WiFi 2.4G	Default 9dBi	180°	~300 m	~100 m	-
		WiFi 5.8G	Default 10dBi	180°	~300 m	~100 m	-
<b>JetWave 4020E</b>	2 pairs	WiFi 2.4G	JWA-2.4G-9dBi-NF	360°	300~500 m	100~200 m	NM-NM-CFD400-1M*
			JWA-2.4G-15dBi-NF	360°	500~1000 m	300~500 m	NM-NM-CFD400-1M*
		WiFi 5.8G	JWA-5.8G-12dBi-NF	360°	300~500 m	100~300 m	NM-NM-CFD400-1M*
			JWDA-5.8G-15dBi-DP-2xNF	17°	500~1500 m	-	2 x NM-NM-CFD400-1M*
			JWDA-5.8G-23dBi-DP-2xNF	12°	1500~3000 m	-	2 x NM-NM-CFD400-1M*
<b>JetWave 3220</b> <b>JetWave 3220-SR</b>	2 pairs 1 pairs	WiFi 2.4G	Default 2.6dBi	360°	~100 m	~50 m	(RSM-RSF-RG316-1M)
			JWA-2.4G-5dBi-NF	360°	100~200 m	50~100 m	RSM-NM-CFD200-1.5M*
			JWA-2.4G-9dBi-NF	360°	200~500 m	100~200 m	RSM-NM-CFD200-1.5M*
			JWDA-2.4G-12dBi-NF	120°	400~800 m	200~400 m	RSM-NM-CFD200-1.5M*
			JWA-2.4G-15dBi-NF	360°	500~1000 m	300~500 m	RSM-NM-CFD200-1.5M*
		WiFi 5.8G	Default 3.6dBi	360°	~100 m	~50 m	(RSM-RSF-RG316-1M)
			JWA-5.8G-12dBi-NF	360°	100~500 m	50~300 m	RSM-NM-CFD200-1.5M*
			JWDA-5.8G-15dBi-DP-2xNF	17°	500~1500 m	-	2 x NM-NM-CFD400-1M*
			JWDA-5.8G-23dBi-DP-2xNF	12°	1500~3000 m	-	2 x NM-NM-CFD400-1M*
<b>JetWave 2450</b>	1 pair	WiFi 2.4G	Default 8dBi	3°	~3000 m	-	-
			JWA-2.4G-5dBi-NF	360°	100~200 m	50~100 m	(NF-NM-CFD400-1M)
			JWA-2.4G-9dBi-NF	360°	200~500 m	100~200 m	(NF-NM-CFD400-1M)
			JWDA-2.4G-12dBi-NF	120°	400~800 m	200~400 m	NF-NM-CFD400-1M*
			JWA-2.4G-15dBi-NF	360°	500~1000 m	300~500 m	(NF-NM-CFD400-1M)
<b>JetWave 2311-LTE</b> <b>JetWave 2316-LTE</b>	1 pair	WiFi 2.4G	Default 4dBi	360°	~20 m	~20 m	(RSM-RSF-RG316-1M)
			JWA-2.4G-5dBi-NF	360°	20~30 m	20~30 m	RSM-NM-CFD200-1.5M*
			JWA-2.4G-9dBi-NF	360°	30~50 m	30~50 m	RSM-NM-CFD200-1.5M*
			JWA-2.4G-15dBi-NF	360°	50~100 m	50~100 m	RSM-NM-CFD200-1.5M*
		LTE	Default	-	-	-	(RSM-RSF-RG316-1M)

(1) The practical distance and throughput are subject to environmental or architectural conditions.

(2) Client with the optional antenna, and the distance varies according to client's capability.

Optional antennas and lightning protector			
	<b>JWA-2.4G-5dBi-NF</b> <ul style="list-style-type: none"> <li>2.4G band, 5dBi</li> <li>horizontal 360° vertical 20°</li> <li>N-Type female connector</li> <li>70 × 54 × 220 mm, -40°C to 60°C</li> </ul>		<b>JWA-2.4G-9dBi-NF</b> <ul style="list-style-type: none"> <li>2.4G band, 9dBi</li> <li>Horizontal 360°, vertical 10°</li> <li>N-type female connector</li> <li>35 × 35 × 420 mm, -20°C to 60°C</li> </ul>
	<b>JWA-2.4G-15dBi-NF</b> <ul style="list-style-type: none"> <li>2.4G band, 15dBi</li> <li>Horizontal 360°, vertical 10°</li> <li>N-Type female connector</li> <li>51 × 51 × 1600 mm, -20°C to 60°C</li> </ul>		<b>JWDA-2.4G-12dBi-NF</b> <ul style="list-style-type: none"> <li>2.4G band, 12dBi</li> <li>Horizontal 120°, vertical 10°</li> <li>N-type female connector</li> <li>370 × 130 × 65 mm, -20°C to 60°C</li> </ul>
	<b>JWA-5.8G-12dBi-NF</b> <ul style="list-style-type: none"> <li>5.8G band, 12dBi</li> <li>Horizontal 360°, vertical 60°</li> <li>N-Type female connector</li> <li>35 × 35 × 420 mm, -20°C to 60°C</li> </ul>		<b>JWDA-5.8G-15dBi-DP-2xNF</b> <ul style="list-style-type: none"> <li>5.8G band, 15dBi</li> <li>Horizontal 17°, vertical 17°</li> <li>2 × N-Type female connectors</li> <li>210 × 210 × 73 mm, -20°C to 60°C</li> </ul>
	<b>JWDA-5.8G-23dBi-DP-2xNF</b> <ul style="list-style-type: none"> <li>5.8G band, 23dBi</li> <li>Horizontal 12°, vertical 12°</li> <li>2 × N-type female connectors</li> <li>330 × 330 × 47 mm, -40°C to 80°C</li> </ul>		<b>JWA-arrestor-5803</b> <ul style="list-style-type: none"> <li>0~6GHz lightning protector for N-type female antenna</li> <li>68 × 22 mm, -40°C to 65°C</li> </ul>
Patch / Extension cables			
	<b>NM-NM-CFD400-1M</b> <ul style="list-style-type: none"> <li>N-type male to N-type male, 1m</li> </ul>		<b>RSM-NM-CFD200-1.5M</b> <ul style="list-style-type: none"> <li>RP-SMA male to N-type male, 1.5m</li> </ul>
	<b>NF-NM-CFD400-1M</b> <ul style="list-style-type: none"> <li>N-type female to N-type male, 1m</li> </ul>		<b>RSM-RSF-RG316-1M</b> <ul style="list-style-type: none"> <li>RP-SMA male to RP-SMA female, 1m</li> </ul>

## Ethernet extender

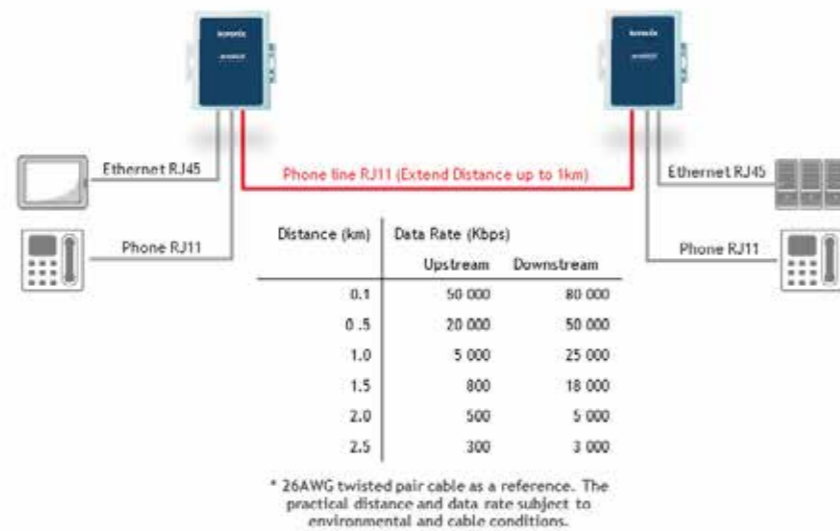
- › Simply extend ethernet distance up to 1km through a phone line or a twisted pair



### JetCon 2502

Peer-to-peer VDSL2  
Ethernet extender

- › 1 × RJ45
- › 2 × RJ11 for POTS/ISDN, VDSL2
- › Industrial grade EMC SNR noise protection
- › 1.5KVAC isolation
- › Support symmetric and asymmetric data rate
- › -40°C to 70°C



## Media converters and PoE injector

- › Rugged housing
- › Aluminum body heat sink
- › IP31, fully sealed on top
- › 1.5kV ViPot isolation
- › Failure alarm



### JetCon 1301

Compact 1-to-1 fiber media converter

- › 1 RJ45 to 1 SC fiber converter
- [-s] single-mode 30km
- [-m] multi-mode 2km
- › Link loss forwarding
- › Low latency for EtherCAT
- › -10°C to 70°C / [-w]-40°C to 80°C



### JetCon 1302

Slim 2-to-1 fiber media converter

- › 2 RJ45 to 1 SC fiber converter
- [-s] single-mode 30km
- [-m] multi-mode 2km
- › Port failure alarm
- › -10°C to 70°C / [-w]-40°C to 70°C



### JetCon 1702

2-channel Gigabit high power PoE injector

- › 100/1000 RJ45 × 2
- › 100/1000 PoE × 2
- 30W per port, 60W in total
- [-A] PoE on RJ45 pin 1,2,3,6
- [-B] PoE on RJ45 pin 4,5,7,8
- › PoE over-temperature, over-current, cable-short protect
- › -40°C to 75°C



### JetCon 2301

Hardened 1-to-1 fiber media converter

- › 1 RJ45 to 1 SC fiber converter
- [-s] single-mode 30km
- [-m] multi-mode 2km
- › Link loss forwarding
- › Low latency for EtherCAT
- › Port and power failure alarm
- › EN50121-4 rated
- › -25°C to 70°C / [-w]-40°C to 75°C



### JetCon 2302

Hardened 2-channel fiber media converter

- › 2 RJ45 to 2 SC fiber converter or 4-port unmanaged switch
- [-s] single-mode 30km
- [-m] multi-mode 2km
- › Low latency for EtherCAT
- › Port and power failure alarm
- › -25°C to 70°C / [-w]-40°C to 75°C

“ The JetCon range includes simple Ethernet extenders and media converters for robust, reliable communication.

## Serial converters

- › For use in harsh environments
- › Rugged design
- › Reliable communication



### JetCon 2201w

RS232 to RS422/485 serial converter

- ▶ Auto baud rate and direction
- ▶ Data rate up to 921.6kbps
- ▶ 15KV ESD protection
- ▶ -40°C to 70°C
- ▶ [-i] isolation

### JetCon 2401

RS232/422/485 to fiber serial converter

- ▶ Full duplex peer-to-peer or half duplex ring connection
- ▶ Data rate up to 921.6kbps
- ▶ 100 ST fiber [-s] single-mode 40km [-m] multi-mode 5km
- ▶ Auto baud rate and direction
- ▶ 15KV ESD protection
- ▶ -20°C to 70°C / [w]-40°C to 70°C

“ The JetCon serial converters provide simple conversion to serial interface and fiber media.

## SFP fiber transceivers

### 100 Mbit



	Fiber transceiver	Speed	Distance	Wave-length	Operation temperature
SFP100MM/SFP100MM-w	Multi-mode	100Mbps	2km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100MMD/SFP100MMD-w	Multi-mode	100Mbps DDM	2km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100MM5/SFP100MM5-w	Multi-mode	100Mbps	5km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100MM5D/SFP100MM5D-w	Multi-mode	100Mbps DDM	5km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM30/SFP100SM30-w	Single-mode	100Mbps	30km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM30D/SFP100SM30D-w	Single-mode	100Mbps DDM	30km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM60/SFP100SM60-w	Single-mode	100Mbps	60km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM60D/SFP100SM60D-w	Single-mode	100Mbps DDM	60km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM80/SFP100SM80-w	Single-mode	100Mbps	80km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM80D/SFP100SM80D-w	Single-mode	100Mbps DDM	80km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM100/SFP100SM100-w	Single-mode	100Mbps	100km	1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM100D/SFP100SM100D-w	Single-mode	100Mbps DDM	100km	1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM120/SFP100SM120-w	Single-mode	100Mbps	120km	1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM120D/SFP100SM120D-w	Single-mode	100Mbps DDM	120km	1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM20B13/SFP100SM20B13-w	Single-mode	100Mbps BIDI/WDM	20km	TX 1310nm, RX 1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM20B13D/SFP100SM20B13D-w	Single-mode	100Mbps BIDI/WDM DDM	20km	TX 1310nm, RX 1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM20B15/SFP100SM20B15-w	Single-mode	100Mbps BIDI/WDM	20km	TX 1550nm, RX 1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM20B15D/SFP100SM20B15D-w	Single-mode	100Mbps BIDI/WDM DDM	20km	TX 1550nm, RX 1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM40B13/SFP100SM40B13-w	Single-mode	100Mbps BIDI/WDM	40km	TX 1310nm, RX 1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM40B13D/SFP100SM40B13D-w	Single-mode	100Mbps BIDI/WDM DDM	40km	TX 1310nm, RX 1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM40B15/SFP100SM40B15-w	Single-mode	100Mbps BIDI/WDM	40km	TX 1550nm, RX 1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM40B15D/SFP100SM40B15D-w	Single-mode	100Mbps BIDI/WDM DDM	40km	TX 1550nm, RX 1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM60B13/SFP100SM60B13-w	Single-mode	100Mbps BIDI/WDM	60km	TX 1310nm, RX 1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM60B13D/SFP100SM60B13D-w	Single-mode	100Mbps BIDI/WDM DDM	60km	TX 1310nm, RX 1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM60B15/SFP100SM60B15-w	Single-mode	100Mbps BIDI/WDM	60km	TX 1550nm, RX 1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFP100SM60B15D/SFP100SM60B15D-w	Single-mode	100Mbps BIDI/WDM DDM	60km	TX 1550nm, RX 1310nm	-10°C to 70°C/-40°C to 85°C(W)

### 1 Gbit



	Fiber transceiver	Speed	Distance	Wave-length	Operation temperature
SFPGSX/SFPGSX-w	Multi-mode	1000Base-SX	550m	850nm	-10°C to 70°C/-20°C to 85°C(W)
SFPGXSD/SFPGXSD-w	Multi-mode	1000Base-SX DDM	550m	850nm	-10°C to 70°C/-20°C to 85°C(W)
SFPGSX2/SFPGSX2-w	Multi-mode	1000Base-SX	2km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGSX2D/SFPGSX2D-w	Multi-mode	1000Base-SX DDM	2km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL10/SFPGXL10-w	Single-mode	1000Base-LX	10km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL10D/SFPGXL10D-w	Single-mode	1000Base-LX DDM	10km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXLH30/SFPGXLH30-w	Single-mode	1000Base-LHX	30km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXLH30D/SFPGXLH30D-w	Single-mode	1000Base-LHX DDM	30km	1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXD50/SFPGXD50-w	Single-mode	1000Base-XD	50km	1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXD50D/SFPGXD50D-w	Single-mode	1000Base-XD DDM	50km	1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGZX70/SFPGZX70-w	Single-mode	1000Base-ZX	70km	1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGZX70D/SFPGZX70D-w	Single-mode	1000Base-ZX DDM	70km	1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL10B13/SFPGXL10B13-w	Single-mode	1000Base-LX BIDI/WDM	10km	TX 1310nm, RX 1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL10B13D/SFPGXL10B13D-w	Single-mode	1000Base-LX BIDI/WDM DDM	10km	TX 1310nm, RX 1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL10B15/SFPGXL10B15-w	Single-mode	1000 Base-LX BIDI/WDM	10km	TX 1550nm, RX 1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL10B15D/SFPGXL10B15D-w	Single-mode	1000 Base-LX BIDI/WDM DDM	10km	TX 1550nm, RX 1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL20B13/SFPGXL20B13-w	Single-mode	1000 Base-LX BIDI/WDM	20km	TX 1310nm, RX 1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL20B13D/SFPGXL20B13D-w	Single-mode	1000 Base-LX BIDI/WDM DDM	20km	TX 1310nm, RX 1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL20B15/SFPGXL20B15-w	Single-mode	1000 Base-LX BIDI/WDM	20km	TX 1550nm, RX 1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL20B15D/SFPGXL20B15D-w	Single-mode	1000 Base-LX BIDI/WDM DDM	20km	TX 1550nm, RX 1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL40B13/SFPGXL40B13-w	Single-mode	1000 Base-LX BIDI/WDM	40km	TX 1310nm, RX 1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL40B13D/SFPGXL40B13D-w	Single-mode	1000 Base-LX BIDI/WDM DDM	40km	TX 1310nm, RX 1550nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL40B15/SFPGXL40B15-w	Single-mode	1000 Base-LX BIDI/WDM	40km	TX 1550nm, RX 1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL40B15D/SFPGXL40B15D-w	Single-mode	1000 Base-LX BIDI/WDM DDM	40km	TX 1550nm, RX 1310nm	-10°C to 70°C/-40°C to 85°C(W)
SFPGXL60B13	Single-mode	1000 Base-LX BIDI/WDM	60km	TX 1310nm, RX 1550nm	-10°C to 70°C
SFPGXL60B13D	Single-mode	1000 Base-LX BIDI/WDM DDM	60km	TX 1310nm, RX 1550nm	-10°C to 70°C
SFPGXL60B15	Single-mode	1000 Base-LX BIDI/WDM	60km	TX 1550nm, RX 1310nm	-10°C to 70°C
SFPGXL60B15D	Single-mode	1000 Base-LX BIDI/WDM DDM	60km	TX 1550nm, RX 1310nm	-10°C to 70°C

LC connectors

Bi-directional (BIDI) fibre transceivers up to 60 km

Digital Diagnostics Monitoring (DDM)

Wave Division Multiplex (WDM)

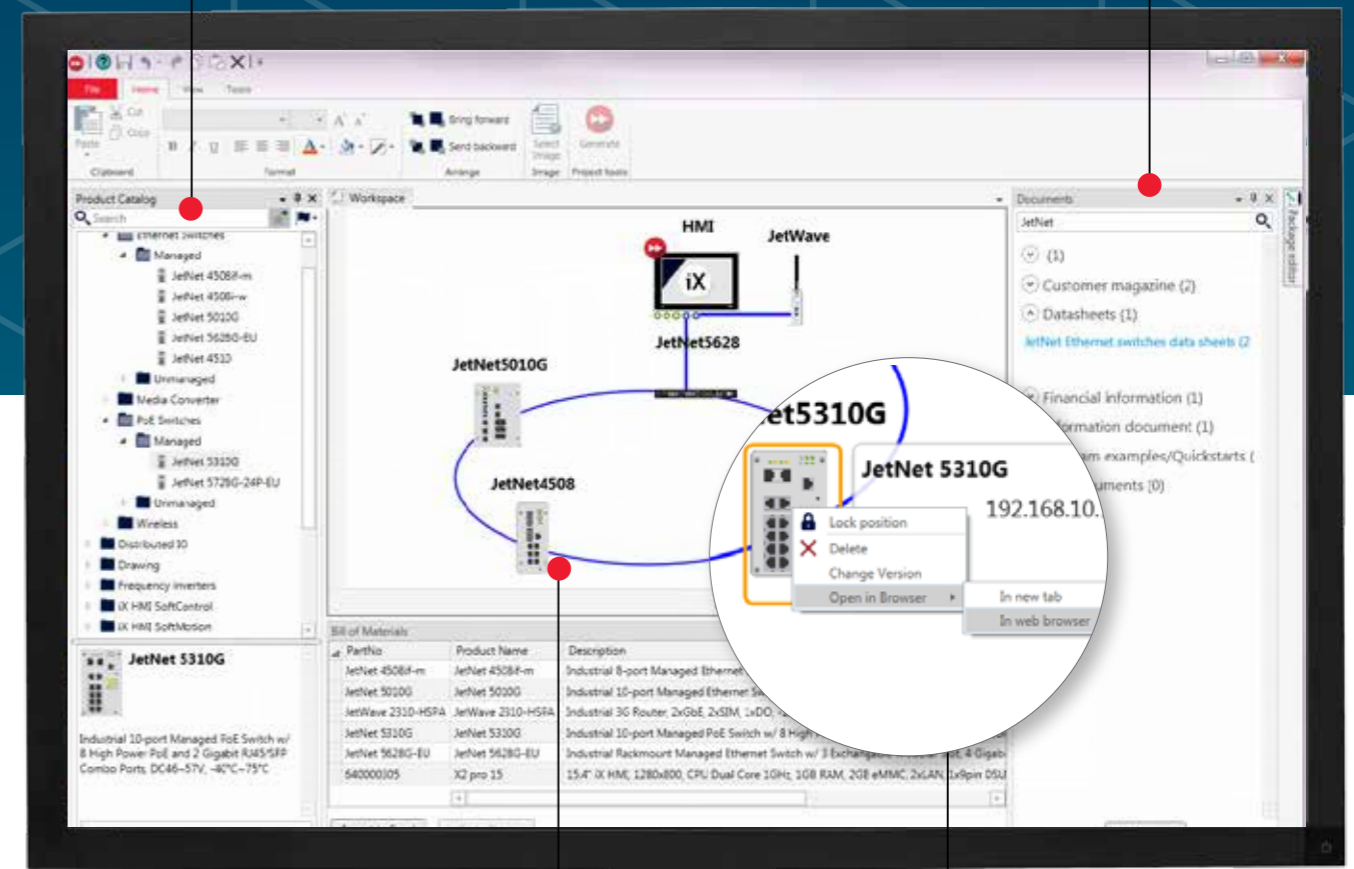
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## Features

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Beijer Electronics is a high technology company active in industrial automation and data communication. The company develops and markets competitive products and solutions that focus on the user. Since its start-up in 1981, Beijer Electronics has evolved into a multinational group with sales of 1,375 MSEK 2015. The company is listed on the NASDAQ OMX Nordic Stockholm Small Cap list under the ticker BELE. [www.beijerelectronics.com](http://www.beijerelectronics.com)

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