agatel
iga connect®

# RELIABLE SECURE CONNECTIVITY

## XEF240 Series

### Industrial Gigabit Ethernet to Fiber Media Converter



agatel
iga connect®




# XEF240 Series

## Industrial Gigabit Ethernet to Fiber Media Converter

## FEATURE HIGHLIGHTS

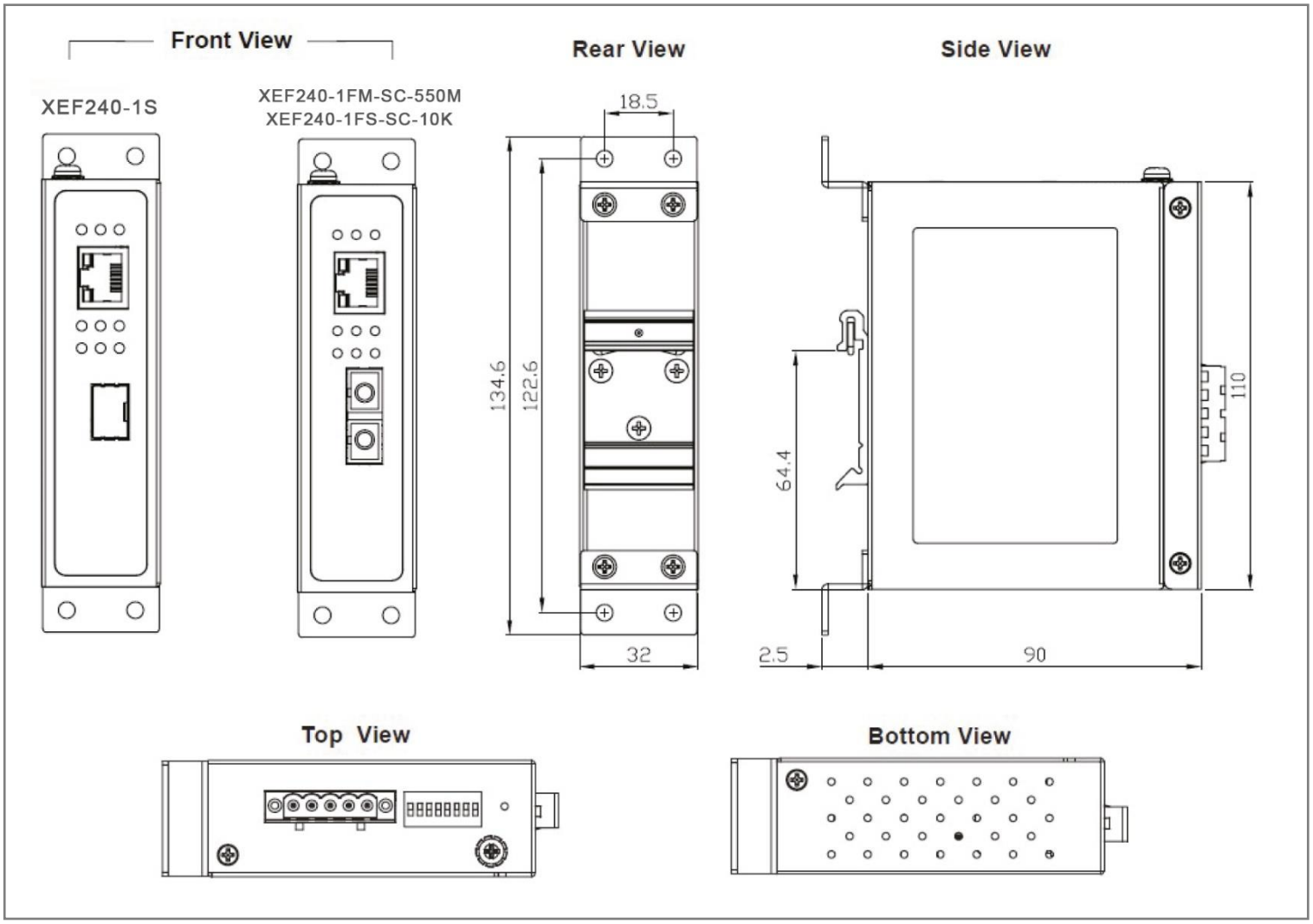
- Cut-Through Forwarding Mode
- Available in both SC and SFP Fiber Connectors
- Redundant Power Input
- Jumbo packets up to 9K bytes
- Link Fault Pass-Through (LFP) and Link Loss Carry Forward
- Operating Temperature: -10°C ~ 70°C

## PRODUCT DESCRIPTION

XEF240 Series Industrial Gigabit Ethernet to Fiber Converter provide media conversion between 10/100/1000 BASE-T(X) and 100/1000 BASE-(F)X (available in both SC and SFP fiber connectors).

XEF240 Series comes with a DIP switch to configure or enable the more advanced functions including the fiber speed, fiber auto negotiation, link fail pass-through, terminal/center device, power saving, jumbo frame, and cut-through forwarding to reach the maximum flexibility.

## DIMENSIONS & LAYOUT



## SPECIFICATIONS

| | |
|---|---|
| **Switch core** | |
| Model Name | XEF240 |
| **Technology** | |
| Standards | IEEE 802.3 for 10BASE T<br>IEEE 802.3u for 100BASE-T(X) and 100BASE-FX IEEE 802.3ab for 1000BASE-T(X)<br>IEEE 802.3z for 1000BASE-X |
| **Interface** | |
| RJ45 Ports | 10/100/1000Base-T(X) auto negotiation speed |
| Fiber Ports | 100/1000BASE-(F)X or SFP Slot |
| LED Indicators | PWR1, PWR2, CT-TML, F_Mode, Fx_Link, LLCF_ON, Test, Tx_LLCF, Fx_LLCF |
| DIP Switch | Media Converter mode, Speed mode, Link Transparency, TS-1000 Terminal / Center mode, Power Save, Fiber Auto Negotiation, Jumbo Frame, Cut-through |
| **Power Management** | |
| Input Voltage | 9-48 VDC |
| Input Current | Max. 0.3A @ 9VDC |
| Connector | Removable 5-pin Terminal Block |
| Reverse Polarity Protection | Present |
| **Physical Characteristics** | |
| Housing | Metal, IP30 protection |
| Dimensions (W x H x D) | 32mm x 90mm x 110mm (1.26 x 3.54 x 4.33 in) |
| Weight | XEF240-1FM-SC-550M / XEF240-1FS-SC-10K: 320g XEF240-1S : 330g |
| Installation | DIN-Rail, Wall-Mount (optional kit) |
| **Environmental Limits** | |
| Operating Temperature | -10°C ~ 70°C (14°F ~ 158°F) |
| Storage Temperature | -40°C ~ 85°C (-40°F ~ 185°F) |
| Ambient Relative Humidity | 5 ~ 95%, 55°C (non-condensing) |

| **Optical Fiber Specifications** | | |
|---|---|---|
| Mode | Multi-mode | Single-mode |
| Distance | 550M | 10KM |
| Bit Rate | 1250Mbps | 1250Mbps |
| Wavelength (nm) | 850 | 1310 |
| Application | 1000Base-SX | 1000Base-LX |
| Tx Power (dBm) | -9.5~-4 | -9.5~-3 |
| Rx Sensitivity (dBm) | < -18 | < -20 |
| Remark | XEF240-1FM-SC-550M | XEF240-2FS-SC-10K |

## REGULATORY APPROVALS

| Environmental Limits | |
|---|---|
| Safety | CB (IEC62368-1/EN62368-1) |
| EMC | FCC Part 15, Subpart B, Class A EN55032<br>EN61000-6-4<br>EN 61000-3-2<br>EN 61000-3-3<br>EN 55024<br>EN 61000-6-2 |

| EMS Tests | | | | |
|---|---|---|---|---|
| Test | Description | | Test Levels | Severity Levels |
| IEC 61000-4-2 | ESD | Contact Discharge<br>Air Discharge | ±6KV<br>±8KV | 3<br>3 |
| IEC 61000-4-3 | RS | 80-1000MHz | 10 V/m | 3 |
| IEC 61000-4-4 | EFT | AC Power Port<br>DC Power Port<br>Signal Port | ±2.0KV<br>±2.0KV<br>±1.0KV | 3<br>3<br>3 |
| IEC 61000-4-5 | Surge | AC Power Port<br>AC Power Port<br>DC Power Port<br>Signal Port | Line-to Line±1.0KV<br>Line-to Earth±2.0KV<br>Line-to Line±1.0KV<br>Line-to Earth±1.0KV | 3<br>3<br>3<br>2 |
| IEC 61000-4-6 | CS | Conducted (Enclosure) | 10 Vrms | 3 |
| IEC 61000-4-8 | PFMF | (Enclosure) | AC 50/60 Hz 30 A/m | 4 |
| IEC 61000-4-11 | DIP | AC Power Port | - | - |
| Shock | MIL-STD-810F Method 516.5 | | | |
| Drop | MIL-STD-810F Method 516.5 | | | |
| Vibration | MIL-STD-810F Method 514.5 C-1 & C-2 | | | |
| RoHS | Yes | | | |
| MTBF | 415,681.88 hrs / 47.45 years (25°C) | | | |
| Warranty | 5 years | | | |

# ORDERING INFORMATION

| Ordering information | |
|---|---|
| **Model Name** | **Enclosure** |
| XEF240-1FM-SC-550M | Industrial Gigabit Ethernet-to-Fiber Media Converter, multimode, SC connector, Link Fault Pass- Through, Auto Speed, 550 M |
| XEF240-1FS-SC-10K | Industrial Gigabit Ethernet-to-Fiber Media Converter, single-mode, SC connector, Link Fault Pass- Through, Auto Speed, 10 KM |
| XEF240-1S | Industrial Gigabit Fast Ethernet-to-Fiber Media Converter, Link Fault Pass-Through, Auto Speed, SFP |

| Optional Accessories | |
|---|---|
| **Model Name** | **Description** |
| XPA-315-12-Y-LV6-US | Y-Type power adaptor, 100~240VAC input, 1.25A @ 12VDC output, US plug, LV6 |
| XPA-315-12-Y-LV6-EU | Y-Type power adaptor, 100~240VAC input, 1.25A @ 12VDC output, EU plug, LV6 |
| XWK-315-A-BK | Aluminum Wall Mount Kit, Black |
| XTR-28-SX-550M | SFP Transceiver, 1250Mbps, 850nmVCSEL, Multi-mode, 550m, 3.3V, -20~85°C |
| XTR-38-SX-2K | SFP Transceiver, 1250Mbps, 1310nmFP, Multi-mode, 2km, 3.3V, -40~85°C |
| XTR-38-LX-10K | SFP Transceiver, 1250Mbps, 1310nmFP, Single-mode, 10km, 3.3V, -40~85°C |
| XTR-38-LX-30K | SFP Transceiver, 1250Mbps, 1310nmDFB, Single-mode, 30km, 3.3V, -40~85°C |
| XTR-38-FM-2K | SFP Transceiver, 155Mbps, 1310nmLED, Multi-mode, 2km, 3.3V, -40~85°C |
| XTR-38-FS-30K | SFP Transceiver, 155Mbps, 1310nmFP, Single-mode, 30km, 3.3V, -40~85°C |

agatel
iga connect®

## WHO WE ARE

Built on 20 years of experience in designing and manufacturing industrial networking products, **Agatel** was established from the UK to serve the infrastructure and industrial sectors in EMEA markets with reliable connectivity for mission-critical systems in demanding environments.

Experienced in hardware and software design and integration, we produce high-quality yet cost-effective industrial networking and communication products with great customization capabilities and robust implementations, equipping our customers for reliable secure industrial networks.

## WHAT WE OFFER

The needs of our customers' industry are different from those of corporate IT environments – industrial operating environments are tough and the impact of failure in the field can lead to business threatening situations, hence our products will have lifetimes in excess of 20 years.

From entry-level to high-performance industry-certified hardware, **Agatel** offers a full solution spectrum to suit our customers' budgets and application requirements, with features such as industrial-grade reliability, integrated security, network redundancy, and advanced performance.

Our product solution profile includes industrial Ethernet switches, network time servers, media converters, industrial wireless devices, and serial device servers, covering a wide array of mission-critical applications such as automation, security, transport, water, oil and gas, and power grids.

## WHY CHOOSE US

We help our customers reduce downtime and operational costs of their industrial applications in harsh environments. Leading system integrators in EMEA rely on our niche technical expertise and product quality to increase their applications' robustness, revenues, and competitive differentiation.

**Agatel** ruggedized high-quality solutions are designed to deliver zero-network-downtime for harsh project demands, allowing for reliable connectivity to keep people and assets safe and secure in harsh and hazardous environments, and allowing customers to focus on growing their business.

**Agatel Ltd**

1st Floor, Apex House
Calthorpe Road, Edgbaston
Birmingham B15 1TR
United Kingdom

Tel: +44 121 809 8855
E-mail: info@agatel.co.uk
Website: www.agatel.co.uk