# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





## Industrial Gigabit Ethernet to Fiber Converter and Repeater Combo

### **EF24 Series**



#### **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
- Works in Media Converter Mode or Fiber Repeater
  Mode

#### **Product Description**

EF24 Series Industrial Gigabit Ethernet to Fiber Converter and Repeater Combo provide media conversion between 10/100/1000 BASE-T(X) and 100/1000 BASE-F(X) (available in both SC and SFP fiber connectors) or media extension in 100/1000 BASE-F(X).

EF24 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.

Atop Technologies, Inc. TEL : +886-3-5508137 FAX: +886-3-5508131 sales@atop.com.tw http://www.atop.com.tw



Design and specification are subjected to change without notice. All product names referenced herein are registered trademarks of their respective companies.

| Specification                       |   |                   |  |  |
|-------------------------------------|---|-------------------|--|--|
| Technology                          |   |                   |  |  |
| Standards                           | IEEE 802.3 for 10BASE-T<br>IEEE 802.3u for 100BASE-T(X) and 100BASE-FX<br>IEEE 802.3ab for 1000BASE-T<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, Fx1_Link, Fx2_Link,Fx1_OAM, FP/MC, Fx_LLCF, Tx_LLCF   |                   |  |  |
| DIP Switch                          | Media Converter / Repeater mode, Fiber Speed mode, Link Transparency, TS-<br>1000 Terminal / Center mode, Power Save, Fiber Auto Negotiation, Jumbo<br>Frame, Cut-through |                   |  |  |
| Power Management                    |   |                   |  |  |
| Input Voltage                       | 9-48 VDC  |                   |  |  |
| Input Current                       | Max. 0.3A @ 9VDC  |                   |  |  |
| Connector                           | Removable 5-pin Terminal Block  |                   |  |  |
| <b>Reverse Polarity Protection</b>  | 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                              | EF24-1G-2Fm-SC-550M / EF24-1G-2Fs-SC-10 : 330g<br>EF24-1G-2SFP : 340g   |                   |  |  |
| 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)  |                   |  |  |
| <b>Optical Fiber Specifications</b> |   |                   |  |  |
| 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                              | EF24-1G-2Fm-SC-550M   | EF24-1G-2Fs-SC-10 |  |  |

Atop Technologies, Inc. TEL : +886-3-5508137 FAX: +886-3-5508131

sales@atop.com.tw http://www.atop.com.tw



Design and specification are subjected to change without notice.

All product names referenced herein are registered trademarks of their respective companies.

| Regulatory Approvals |  |                                     |   |        |
|----------------------|--|-------------------------------------|---|--------|
| Safety               | СВ   |                                     |   |        |
| EMC                  | FCC Part 15<br>EN55032<br>EN 61000-3<br>EN 61000-3<br>EN 55024 |                                     |   |        |
| Test                 |  | Item                                | Value                                     | Level  |
| 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      |
|                      |  | AC Power Port                       | ±2.0KV                                    | 3      |
| IEC 61000-4-4        | EFT  | DC Power Port                       | ±2.0KV                                    | 3      |
|                      |  | Signal Port                         | ±1.0KV                                    | 3      |
| IEC 61000-4-5        | Surge  | AC Power Port                       | Line-to Line±1.0KV                        | 3      |
|                      |  | AC Power Port                       | Line-to Earth±2.0KV                       | 3      |
|                      |  | DC Power Port<br>Signal Port        | Line-to Line±1.0KV<br>Line-to Earth±1.0KV | 3      |
| IEC 61000-4-6        | CS   | Conducted(Enclosure)                | 3 Vrms                                    | 2      |
| IEC 61000-4-8        | PFMF   | (Enclosure)                         | AC 50/60 Hz 10 A/m                        | 3      |
| IEC 61000-4-11       | DIP  | AC Power Port                       | -   | -      |
| Shock                | MIL-STD-81   | MIL-STD-810F Method 516.5           |   |        |
| Drop                 | MIL-STD-81   | MIL-STD-810F Method 516.5           |   |        |
| Vibration            | MIL-STD-81   | MIL-STD-810F Method 514.5 C-1 & C-2 |   |        |
| RoHS                 | Yes  | Yes                                 |   |        |
| MTBF                 | 372,537.84   | 372,537.84 hrs / 42.52 years (25°C) |   |        |
| Warranty             | 5 years  |                                     |   |        |

| Ordering Information |  |
|----------------------|--|
| EF24-1G-2Fm-SC-550M  | Industrial Gigabit Ethernet-to-Fiber Media Converter and Repeater,           |
|                      | multimode, SC connector, Link Fault Pass-Through, Auto Speed, 550 M          |
| EF24-1G-2Fs-SC-10    | Industrial Gigabit Ethernet-to-Fiber Media Converter and Repeater, single-   |
|                      | mode, SC connector, Link Fault Pass-Through, Auto Speed, 10 KM               |
| EF24-1G-2SFP         | Industrial Gigabit Fast Ethernet-to-Fiber Media Converter and Repeater, Link |
|                      | Fault Pass-Through, Auto Speed, SFP  |

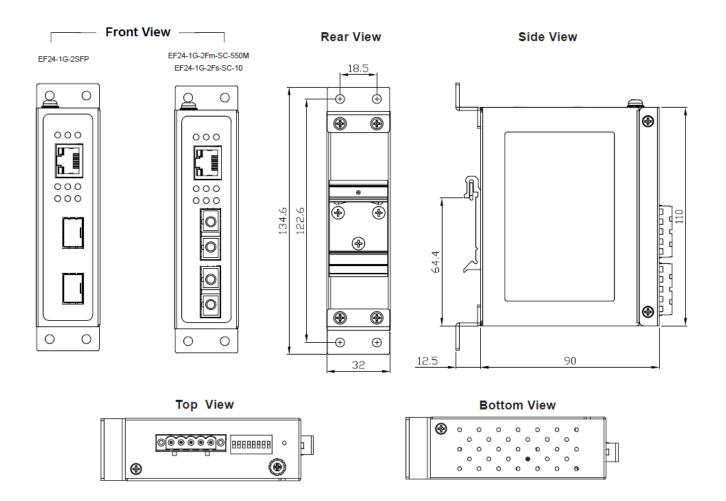
Atop Technologies, Inc. TEL : +886-3-5508137 FAX: +886-3-5508131 sales@atop.com.tw http://www.atop.com.tw



Design and specification are subjected to change without notice. All product names referenced herein are registered trademarks of their respective companies.

| Optional Accessories |  |  |
|----------------------|--|--|
| APU10-108            | Y-Type power adaptor,100-240VAC input,0.41A @ 24VDC output, US plug    |  |
| APU11-108            | Y-Type power adaptor,100-240VAC input,0.41A @ 24VDC output, EU plug    |  |
| WMK-315-Black        | Aluminum Wall Mount Kit, Black   |  |
| LM28-C3S-TI-N        | SFP Transceiver, 1250Mbps, 850nmVCSEL, Multi-mode, 550m, 3.3V, -20~85C |  |
| LM38-C3S-TI-N        | SFP Transceiver, 1250Mbps, 1310nmFP, Multi-mode, 2km, 3.3V, -40~85C    |  |
| LS38-C3S-TI-N        | SFP Transceiver, 1250Mbps, 1310nmFP, Single-mode, 10km, 3.3V, -40~85C  |  |
| LS38-C3L-TI-N        | SFP Transceiver, 1250Mbps, 1310nmDFB, Single-mode, 30km, 3.3V, -40~85C |  |
| LM38-A3S-TI-N        | SFP Transceiver, 155Mbps, 1310nmLED, Multi-mode, 2km, 3.3V, -40~85C    |  |
| LS38-A3S-TI-N        | SFP Transceiver, 155Mbps, 1310nmFP, Single-mode, 30km, 3.3V, -40~85C   |  |

#### **Mechanical Dimensions**



Atop Technologies, Inc. TEL:+886-3-5508137 FAX:+886-3-5508131 sales@atop.com.tw http://www.atop.com.tw



Design and specification are subjected to change without notice. All product names referenced herein are registered trademarks of their respective companies.

V2.0