



## FRM220A-1002ES

2× 10/100/1000Base-T + 2× 100/1000Base-X  
SFP GbE Switch

The FRM220A-1002ES is a dual copper and dual fiber Gigabit Ethernet switch designed to make conversion between 10/100/1000Base-T and 100/1000Base-SX/LX with SFP connector. With SNMP and Web-based management in the FRM220 or FRM220A chassis the network administrator can monitor, configure and control the activity of each FRM220A-1002ES switch card locally via the chassis management. Based on a powerful L2 switch architecture, this converter supports bandwidth control, duplex and speed configuration, VLAN tagging, Q-in-Q, QoS, jumbo frames as well as auto laser shutdown, and link fault pass through. When placed stand-alone, this card may only be managed via local serial console when placed in a CH01M single slot type chassis.

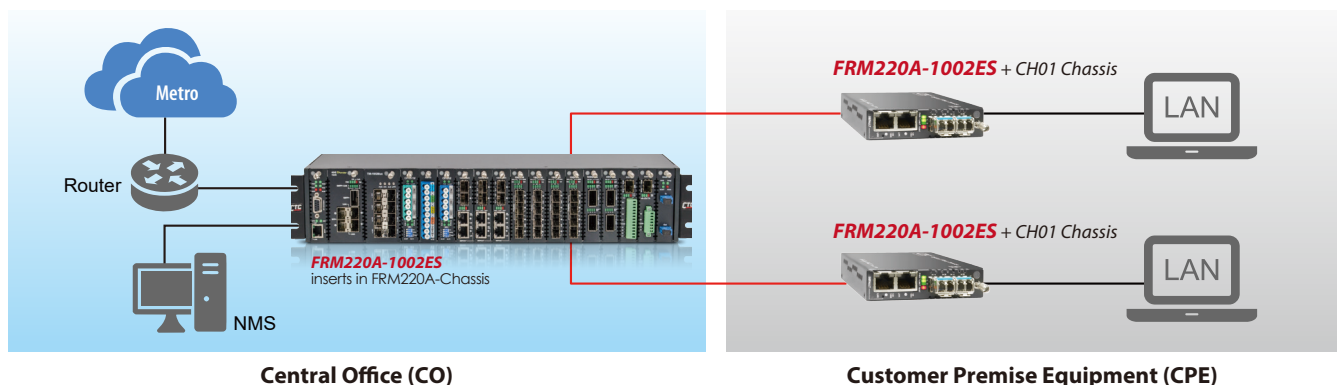
### Features

- 2-Port 10/100/1000Base-T and 2-Port 100/1000Base-X Switch
- Auto-Cross over for MDI/MDIX in TP port
- Auto-Negotiation or manual mode in TP port
- Supports flow control Enable or Disable
- Supports Jumbo Frame 10K Bytes
- Supports 16 Tag VLAN Group
- Supports Double VLAN tag (Q-in-Q)
- Supports Bandwidth control
- Supports Loop Back Test
- Supports Link Fault Pass-Through (LFPT) Function
- Supports Auto Laser Shutdown (ALS) Function
- Supports local management on FRM220A rack management.
- Console management on stand-alone.
- Supports D/D function for SFP fiber transceiver
- Provide Product information for management

### Specifications

|                          |   |   |                      |  |  |                           |
|--------------------------|---|---|----------------------|--|--|---------------------------|
| <b>Optical Interface</b> | Connector   | SFP LC  | <b>Certification</b> | FCC Part 15 Class A, CE Mark           |  |                           |
|                          | Data rate   | 125Mbps, 1250Mbps                                 |                      | <b>Electrical Interface</b>            | Connector  | RJ45                      |
|                          | Duplex mode   | Full duplex                                       |                      |  | Data rate  | 10Mbps, 100Mbps, 1000Mbps |
|                          | Fiber   | MM 50/125μm, 62.5/125μm<br>SM 9/125μm             |                      | Cable                                  | 10Base-T Cat.3, 4, 5, UTP<br>100Base-TX Cat.5, 5e or higher<br>1000Base-X Cat.5e or higher |                           |
|                          | Distance  | MM 2km, SM 15/30/50/80/120km<br>WDM 20/40/60/80km |                      | <b>Power</b>                           | 12VDC  |                           |
| Wavelength               | MM 1310nm, SM 1310,1550nm<br>WDM 1310Tx/1550Rx (type A)<br>1550Tx/1310Rx (type B) | <b>Power Consumption</b>                          | < 12W                |  |  |                           |
| <b>Standards</b>         | IEEE 802.3, IEEE 802.3u, 802.3z, 802.3ab, 802.1Q, 802.3X, 802.1ad                 |   | <b>Dimensions</b>    | 159.5 × 20.8 × 88mm (D×W×H)            |  |                           |
| <b>Indications</b>       | PWR, LNK1, LNK2, TEST, LAN Link, LAN SPEED  |   | <b>Weight</b>        | 130g                                   |  |                           |
|                          |   |   | <b>Temperature</b>   | 0~50°C (Operating), -10~70°C (Storage) |  |                           |
|                          |   |   | <b>Humidity</b>      | 0 ~ 95% non-condensing                 |  |                           |

### Application



### Ordering Information

| Model Name     | Description  |
|----------------|--|
| FRM220A-1002ES | 2-Port 10/100/1000Base-T and 2-Port 100/1000Base-SX/LX SFP GE switch card (Optional SFP) |