

# FRM220-NMC-R5

## Network Management Controller-R5

### Network Management Controller Card

- » 2x 10/100/1000Base-T RJ45 plus 2x 100/1000Base-X SFP
- » Supports Security Features



The FRM220-NMC-R5 is a Network Management Controller card that can be placed in a compatible FRM220 series chassis to provide device management function. The FRM220-NMC-R5 features 2x 10/100/1000Base-T RJ45 plus 2x 100/1000Base-X SFP ports, supports remote TCP/IP management by **SSHv2, HTTPS** and **SNMPv1, v2c, v3** protocols and is designed to be hot swapped so that it may be field replaced without affecting any online service of any other rack cards. The FRM220-NMC-R5 also supports online firmware upgrade from TFTP server, using any user interface, without affecting any other inserted line card's transmissions. Support for any standard NMS is provided by the included enterprise MIB file. CTC Union also provides and maintains our own EMS (Element Management System) which is a Java based client/server manager for monitoring and maintaining a large number of network elements over a long period of time.

### List of support card for NMC-R5

**Transponder:** FRM220-100GE-2Q, FRM220-40G-2Q, FRM220-40G-1Q4S, FRM220-16G-3R, FRM220-10G-3R, FRM220-4G-3R

**Ethernet Switch:** FRM220-2000MS, FRM220A-2000EAS/4F

**Optical Protection Switch:** FRM220-OPS51

**EDFA:** FRM220-OAB21A, FRM220-OAP17

(For more details on these, please check our websites)

## Features

- User interfaces for SSH & Web
- Configure, monitor and provide fault management for all installed line cards
- Monitor power and fan status in chassis
- Provides upgrade feature for most line card types
- SNMP agent for complete management by enterprise MIB
- Running System log with time stamping by NTP (time server)
- Parameter management for quick configuration, configuration copy/backup/restore
- Card alias and inventory by type and serial number
- eCos Kernel based for high stability and reliability
- Supports IPv6, SNMP v1/v2/v3
- Supports USB Console management
- Supports secure authentication by IEEE802.1x, RADIUS or TACACS+



◀ FRM220-NMC-R5



( 2U/19" rack mountable, 20 slots )

FRM220-NMC R5 must be installed in to the first slot of chassis.

## Specifications

|                             |   |                                     |
|-----------------------------|---|-------------------------------------|
| <b>Optical Interface</b>    | Connector   | SFP LC × 2                          |
|                             | Data rate   | 100M/1000M                          |
|                             | Duplex mode   | Full duplex                         |
| <b>Electrical interface</b> | Connector   | UTP port × 2                        |
|                             | Data rate   | UTP 10M/100M/1000M (auto or forced) |
|                             | Duplex mode   | Full or Half Duplex (RJ-45)         |
|                             | Cable   | 10Base-T Cat. 3,4,5,5e UTP          |
|                             |   | 100Base-TX Cat. 5, 5e or higher     |
|                             |   | 1000Base-T Cat 5, 5e, 6 or higher   |
| <b>Standards</b>            | IEEE802.3, 802.3u, 802.3z, 802.3ad, 802.3x            |                                     |
| <b>Management</b>           | HTTPs, Syslog, IPv6, NTP, SNTP, Web/Telnet/SNMP/SSHv2 |                                     |
| <b>Jumbo Frame Size</b>     | 9.6K bytes  |                                     |
| <b>MAC Table Size</b>       | 8K  |                                     |
| <b>Indicators</b>           | Power, Fan, ALM, UTP Link/ACT, UTP Speed, Fiber Speed |                                     |
| <b>Power</b>                | Input   | 12VDC, 0.5A                         |
|                             | Consumption   | < 6W                                |
| <b>Dimensions</b>           | 155mm (D) × 88mm (W) × 39mm (H)                       |                                     |
| <b>Weight</b>               | 120g  |                                     |
| <b>Certification</b>        | CE, FCC, RoHS Compliant                               |                                     |

## Ordering Information

| Model Name    | Type | Description                        |
|---------------|------|------------------------------------|
| FRM220-NMC-R5 | Card | Network management controller card |