# FRM220-NMC-R3
## Network Management Controller

The FRM220-NMC-R3 is a Network Management Controller card that can be placed in a compatible FRM220 series chassis to provide device management functions. The management interface supports a local RS-232 serial console or remote TCP/IP management by Telnet, HTTP and SNMPv1, v2c 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 card 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.

## Features

NMC provides central management for FRM220-CH20, FRM220-CH08, FRM220-CH04A, CH02/SMT and CH02-NMC

- User interfaces for serial console, Telnet & Web
- Configure, monitor and provide fault management for all installed line cards
- Monitor power and fan status in chassis (CH20, CH08 & CH02/SMT only)
- Provides upgrade feature for most line card types
- SNMP agent for complete management by enterprise MIB
- Running System log with time stamping for SNTP (time server)
- Parameter management for quick configuration, configuration copy/backup/restore
- Card alias and inventory by type and serial number
- Linux Kernel based for high stability and reliability

## Specifications

| | |
|---|---|
| **Protocol** | IP, UDP, SNMP V1/V2c, TCP, ARP, ICMP, TFTP, HTTP |
| **Ports** | DB9-F (x1), RJ45(x1) |
| **Indicators** | PWR1, PWR2, FAN1, FAN2, ALM1, ALM2, STK, ACT, LAN LNK/SPD |
| **MIB Supported** | MIB II, Enterprise MIB |
| **Management** | Web GUI, Telnet, Console, SNMP |
| **Power** | 12VDC, 150mA |
| **Dimensions** | 159.5 × 20.8 × 88mm (D × W × H) |
| **Weight** | 120g |
| **Temperature** | 0~60 (Operating), -10 ~70 (storage) |
| **Humidity** | 5 ~ 90% (non-condensing) |
| **MTBF** | 65000 hrs |

## Ordering Information

| Model Name | Type | Description |
|---|---|---|
| **FRM220-NMC-R3** | Card | Network Management Controller card, support web, telnet, console, SNMP functions |

*Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details.*

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