FRM220-CH20 & FRM220-CH08

**In-Band Managed
Multi-Service Platform**

The FRM220 series is a multi-service chassis platform, which provides a reliable solution of high density media converter modules for applications such as telecom operator, enterprise, long haul transmission and factory automation. All of critical components of FRM220 series chassis solution such as power modules, fans, management module and interface cards are hot swappable, allowing online field replacement.

FRM220 series is offered in two chassis densities, a 2U 20-slot (FRM220-CH20) and a 1U 8-slot (FRM220-CH08).

Common Features

- Supports AC/DC power module hot swappable and power redundancy
- Two alarm relays contact for critical events warning
- All modules and interface cards are hot swappable
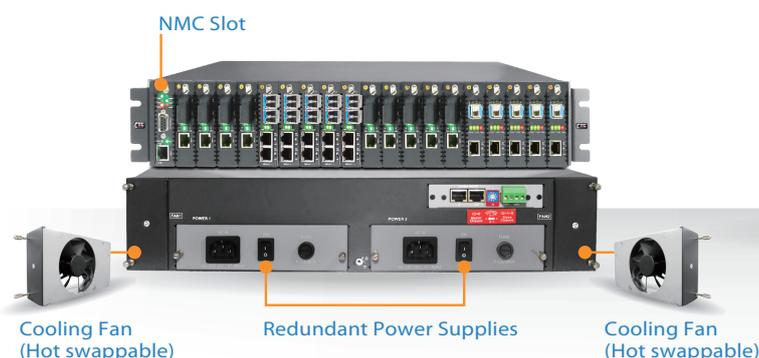- Chassis backplane consists of passive components

Specifications

Connectors		
	Console: RS232 (DB9)	
	LAN 10/100Base-TX RJ45	
Physical Specifications	Dimensions (D x W x H)	303 x 438 x 88 mm (CH20)
		310 x 440 x 44 mm (CH08)
	Weight (w/o Power)	5.2kg (CH20)
		3.5kg (CH08)
Power	AC	18~240VAC
	DC24	18~36VDC
	DC48	36~75VDC

Temperatures	
	Operating 0~60°C
	Storage -10~70°C
Humidity	5%~90% non-condensing
MTBF	65,000 hrs
Certification	FCC Class A, VCCI Class A, CE, RoHS compliant
Safety	UL 60950-1 (FRM220-CH20)

Chassis Overview

- **FRM220-CH20** (2U 19" 20 Slots)

NMC Slot

Cooling Fan
(Hot swappable) Redundant Power Supplies Cooling Fan
(Hot swappable)

- **FRM220-CH08** (1U 19" 8 Slots)

Alarm Relay   NMC Slot

Hot Swappable Power Supplies   Cooling Fans

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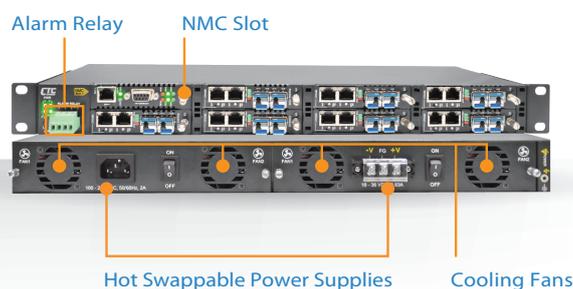
Main Features

● Module Cards for Deployment Scenarios

The FRM220-CH20 has been designed as a Multi-service platform. This allows network administrators to deploy the chassis in a wide range of networks.
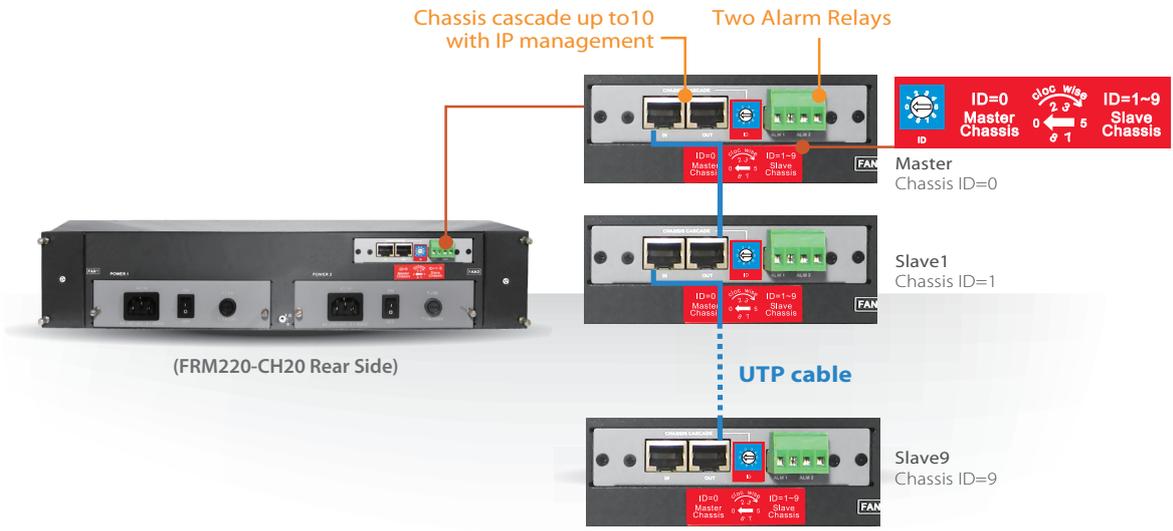
Technologies supported by the chassis include Fast/Gigabit Ethernet, E1/T1, V35/X21/RS-530, Serial RS-485/RS-422, Voice FXO/FXS, Repeater, Fiber Multiplexer, E1 Inverse Multiplexer, CWDM Mux/DeMUX and 10G 3R Transponder
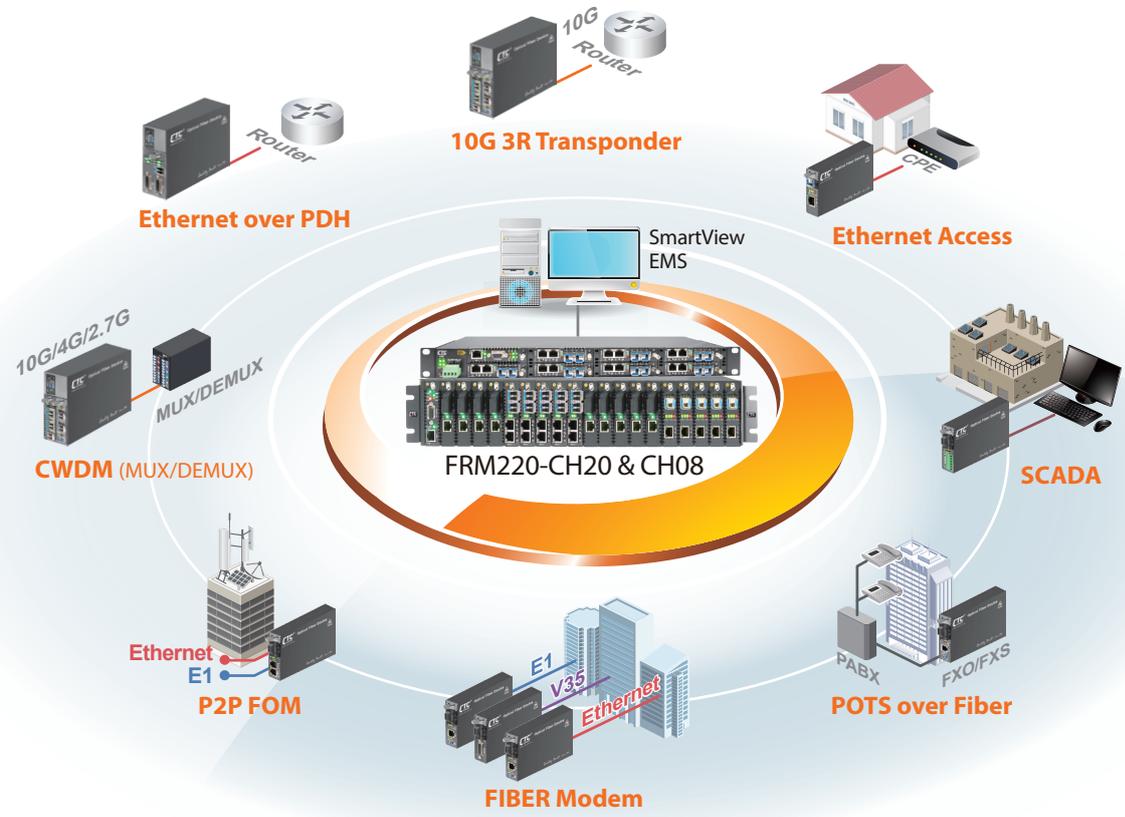
● Chassis Cascade (FRM220-CH20)

The FRM220-CH20 Chassis features cascadable management which allows managing a stack (up to 10 chassis) from a single IP address. Chassis are interconnected with standard UTP cables that carry control signals. Each chassis has its own ID, starting with the master chassis ID0 and cascading up to ID9

- Single IP managed chassis with 10 units cascaded max.
- Beneficial to centralizes management in one rack
- Scalability as the demand grows
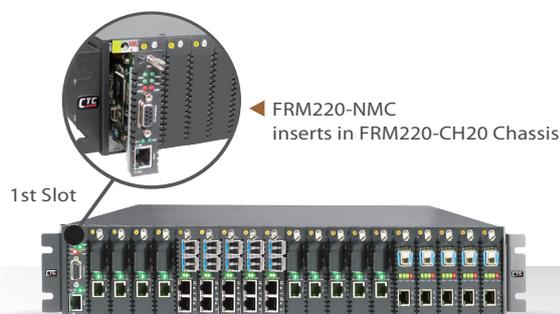
● **Network Management**

Both FRM220-CH20 and FRM220-CH08 require a NMC (Network Management Controller **FRM220-NMC**) card which must be installed into the first slot of chassis. The NMC card allows a network administrator the ability to configure and monitor the status of the blades. Management can be achieved locally over RS232, or over the network by Telnet, Web or SNMP. If the blades support Ethernet in the First Mile (IEEE 802.3ah), then the management module can also be monitored the status of a remote CPE.

FRM220-NMC

FRM220-NMC Features

- Supports local / remote monitor and configuration
- Supports local / remote online TFTP f/w upgrade
- Fiber transceiver status & info display
- Supports multiple accesses for SNMP management
- Supports Web GUI management, Telnet, Serial console

- Supports console RS-232 port and 10/100Base-T Ethernet port
- Supports SNMP standard MIB II and enterprise MIB
- Supports NTP time synchronization
- Supports syslog
- Supports 255 entries system log

FRM220-NMC inserts in FRM220-CH20 Chassis

1st Slot

FRM220-CH20

FRM220-NMC inserts in FRM220-CH08 Chassis

1st Slot

FRM220-CH08

Ordering Information

Model Name	Type	Description
FRM220-CH20	Chassis	2U 20-Slot rack mount chassis with 20 line card blank plate
FRM220-AC	Power	Chassis power module 100 ~ 240 VAC, IEC connector 200W
FRM220-DC24	Power	Chassis power module 18 ~ 36 VDC, 3 pin terminal block 200W
FRM220-DC48	Power	Chassis power module 36 ~ 72 VDC, 3 pin terminal block 200W
FRM220-CH08	Chassis	1U 8 slots rack mount chassis with 8 line card blank plate
FRM220-CH08-AC	Power	Chassis power module 100 ~ 240 VAC, IEC connector
FRM220-CH08-DC24	Power	Chassis power module 18 ~ 36 VDC, 3 pin terminal block
FRM220-CH08-DC48	Power	Chassis power module 36 ~ 72 VDC, 3 pin terminal block
FRM220-NMC	Card	Network Management Controller card, support web, telnet, console, SNMP functions

Chassis
FRM220 – ▢▢▢▢
Example: FRM220 – CH20

Power Type
FRM220 – ▢▢▢▢
Example: FRM220 – DC24

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