



CH20 / CH08 / CH04A

In-Band Managed Multi-Service Platform

Revised - 03. 2015



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-CH20 and FRM220-CH08 chassis such as power modules, fans, management module and interface cards are hot swappable, allowing online field replacement. FRM220-CH04A is a fixed type AC, DC power built-in chassis. The available power options are built-in AC, DC power or built-in AC+DC, AC+AC, DC+DC redundant power.

FRM220 series is offered in three chassis densities, a 2U 20-slot (FRM220-CH20), a 1U 8-slot (FRM220-CH08), and a 1U 4-slot (FRM220-CH04A)

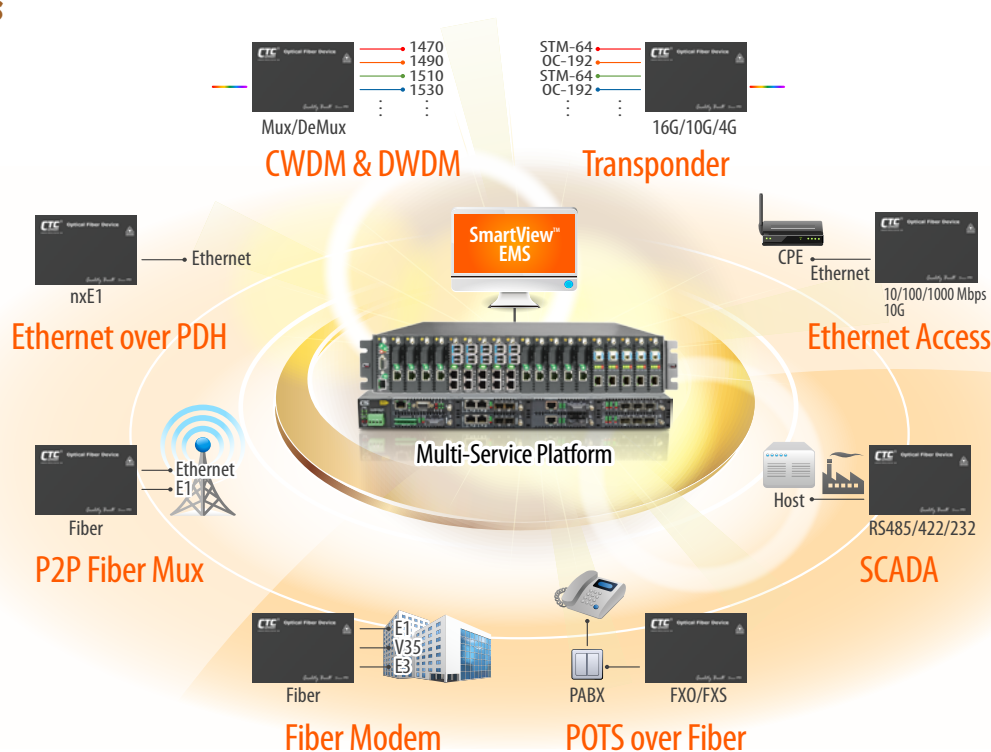
Features

- Supports AC/DC power module hot swappable and power redundancy (CH20 & CH08)
- Supports fixed type AC/DC power built-in and power redundancy (CH04A)
- Two alarm relays contact for critical events warning
- Interface cards are hot swappable
- Chassis backplane consists of passive components

Specifications

Connectors	Console: RS232 (DB9)	Power	AC	100~240VAC (CH20/CH08)
	LAN 10/100Base-TX RJ45		DC24	18~36VDC (CH20/CH08)
Physical Specifications	Dimensions (D x W x H)	303 x 438 x 88 mm (CH20)	DC48	36~75VDC (CH20/CH08)
		310 x 440 x 44 mm (CH08)	AC	100~240V (CH04A)
		170 x 310 x 44.7 mm (CH04A)	DC	18~75VDC (CH04A)
	Weight (w/o Power)	5.2kg (CH20)	Humidity	5%~90% non-condensing
3.5kg (CH08)		MTBF	65,000 hrs	
TBD (CH04A)		Certification	FCC Class A, VCCI Class A, CE, RoHS compliant	
Temperatures	Operating 0~60°C, Storage -10~70°C	Safety	UL 60950-1 (FRM220-CH20)	

Solutions



Main Features

• Module Cards for Deployment Scenarios

The FRM220-CH20, FRM220-CH08 and FRM220-CH04A have been designed as a Multi-service platform. This allows network administrators to deploy the chassis in a wide range of networks.

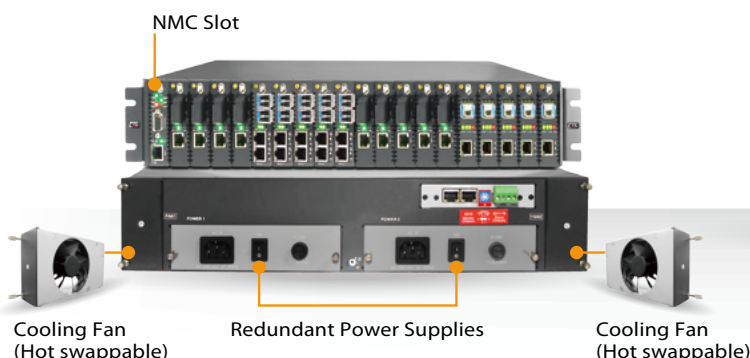
Technologies supported by the chassis include Fast/Gigabit Ethernet, E1/T1, V35/X21/RS-530, Serial RS-485/RS-422, Voice FXO/FXS, Repeater, Fiber Multiplexer, E1 Inverse Multiplexer, CWDM Mux/DeMUX and 10G/16G 3R Transponder

• Network Management

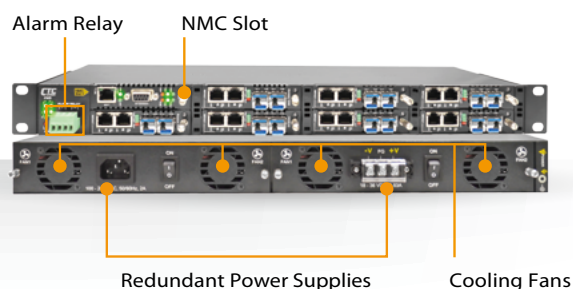
The FRM220-CH20, FRM220-CH08 and FRM220-CH04A require a NMC (Network Management Controller FRM220-NMC page: 2-4) card which must be installed into the first slot of chassis. The NMC card allows a network administrator the ability to configure and monitor the status of the blades. Management can be achieved 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.

Chassis Overview

• FRM220-CH20 (2U 19" 20 Slots)



• FRM220-CH08 (1U 19" 8 Slots)



• FRM220-CH04A (1U 4 Slots)



Ordering Information

Model Name	Type	Description
FRM220-CH20	Chassis	2U 20-Slot rack mount chassis with 20 line card blank plate
CH20-AC	Power	Chassis power module 100 ~ 240 VAC, IEC connector
CH20-DC24	Power	Chassis power module 18 ~ 36 VDC, 3 pin terminal block, 200W
CH20-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, 200W
CH08-AC	Power	Chassis power module 100 ~ 240 VAC, IEC connector, 120W
CH08-DC24	Power	Chassis power module 18 ~ 36 VDC, 3 pin terminal block, 200W
CH08-DC48	Power	Chassis power module 36 ~ 72 VDC, 3 pin terminal block, 200W
CH08-AC-L	Power	Chassis power module 100 ~ 240 VAC, IEC connector, 65W
CH08-DC24-L	Power	Chassis power module 18 ~ 36 VDC, 3 pin terminal block, 65W
CH08-DC48-L	Power	Chassis power module 36 ~ 72 VDC, 3 pin terminal block, 65W
CH04A-AC	Power	Four slot chassis with built-in AC power, 65W
CH04A-DC	Power	Four slot chassis with built-in DC power, 50W
CH04A-AD	Power	Four slot chassis with built-in AC+DC power (65W/50W)

Chassis
FRM220 -
 Example: FRM220 – CH20