Industrial Media Converter Chassis - IRC200

- *Fan-less ,Rugged and Harden Design*
- *Wide Operation Temperature*
- *2U 19", 20-slot & Rack-Mountable*
- *Line Card and Power Supply Hot Swappable*
- *Network Management by NMC Card*
- *Optional Media Converter (Ethernet, Serial, Contact Closure Fiber)*
- *EN62368-1, CE and FCC Certified*

This 20 slot, industrial grade, media converter chassis, the IRC200, is a 2U rack, fan-less design, that supports two hot swappable modular power supplies. The twenty slots support one management card and up to nineteen media converter cards. The chassis is able to operate temperature ranges (-10~65°C). The media converter cards available support conversion for Fast Ethernet, Gigabit Ethernet, serial communications or I/O Contact Closure over fiber media. This chassis may be deployed in Industrial Ethernet, automation, security, intelligent transportation systems (ITS) and utility market applications where environmental conditions exceed commercial product specifications.

Features

- 2U 19", 20-slot & Rack-Mountable
- Fanless ,Rugged and Harden Design
- Wide Operation Temperature
- Line Card and Power Supply Hot Swappable
- Network Management by NMC Card
- Optional Media Converter (Ethernet, Serial and Contact Closure Fiber)

Specifications

Module Slot (Hotswap Modular)	1-slot for NMC Management Card	
	19-slot for Line Card	
	2-slot for Power Supply	
Power Supply (Hotswap Modular)	AC Power Module	AC Power 100-240VAC (88~264VAC) (IRC200-AC) Power on LED On/Off Switch IEC320 Power Connector
	DC Power Module	DC Power 48VDC (36~60VDC) (IRC200-DC) Power on LED On/Off Switch Removable Termintal Block 2 pin
Power Consumption	2.5W @110VAC	(Without module card)
	44.5W @110VAC	(With 1x IRC200-NMC, and 19x IRC200-2000MS module card)
	4.5W @48VDC	(Without module card)
	43.5W @48VDC	(With 1x IRC200-NMC, and 19x IRC200-2000MS module card)
Operation Temperature	-10~65℃	
Storage Temperature	-40~85℃	
Humidity	5%~90% (Non Condensing)	
Dimension	302 x 438 x 88mm (D x Wx H)	
Housing	Fanless, Rack Mount 2U, Rugged Metal, IP30 Protection	
Weight	4.4 kg	
Installation Mounting	19" Rack Mounting	

MTBF	2,233,738 Hours (IRC200-CH20) 155,277 Hours (IRC200-AC) 1,636,753 Hours (IRC200-DC) (MIL-HDBK-217)
Warranty	5 Years (Chassis & Card)
	2 Years (Power Supply)
Certification	
EMC	CE (EN55032, EN55035)
EMI	FCC
Safety	EN62368-1
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-31
Vibration	IEC 60068-2-6
Software (with IRC200-NMC Card)	
Protocol	IP, UDP, SNMP V1/V2c, TCP, ARP, ICMP, TFTP, HTTP
MIB	Supports MIB II and Enterprise MIB
Management Interface	Web GUI, Telnet, Console, SNMP
SNTP	Supported
Quick Configuration	Configuration File Copy/Backup/Restore
F/W Upgrade	For Line Card and Chassis
Configure, Monitor and Fault Management	For AIll Installed Line Cards

Modular Converter Cards

IRC200-NMC

Network Management Control Card

- Configure, monitor and provide fault management for all installed line cards
- Provides upgrade feature for line card
- Running System log with time stamping for SNTP (time server)
- Quick configuration, configurationcopy/backup/restore

IRC200-1000DS

1G 2R Multi-rate Transponder

- Transparent FE or GbE fiber media converter/repeater
- Perform optical repeater function (Re-amplification & Reshaping)
- Digital diagnostic monitoring of SFP modules
- Supports Link Fault Pass-Through LFTP function
- 2x SFP slot for FE or GbE SFP transceiver

Specification

Protocol	IP, UDP, SNMP V1/V2c, TCP, ARP, ICMP, TFTP, HTTP
MIB	Supported MIB II, Enterprise MIB
Management	Web GUI, Telnet, Console, SNMP
Ports	1x DB9-F for RS232 console, 1x RJ45 for 10/100Base-TX Ethernet
LED	PWR1, PWR2, ALM1, ALM2, STK, ACT, LAN LNK/SPD
Power Consumption	2W
Operation Temperature	-10°C~65°C
Storage Temperature	-40°C~85°C
Humidity	10 ~ 90% non-condensing
Chassis	IRC200-CH20 or IRC200-CH01M or IRC200-CH01
Dimensions	159.5 x 20.8 x 88mm (D x W x H)
Weight	120g
MTBF	1,337,311Hours (MIL-HDBK-217)
Warranty	5 Year
Certification	EN62368-1, CE and FCC

Specification

LED	Power, FX-Link1, FX-Link2
Power Input	Powered from Chassis (12VDC)
Power Consumption	1.5W
Operation Temperature	-10°C~65°C
Storage Temperature	-40°C~85°C
Humidity	10 ~ 90% non-condensing
Chassis	IRC200-CH20 or IRC200-CH01M or IRC200-CH01
Dimension	159.5 x 20.8 x 88mm (D x W x H)
Weight	130g
MTBF	4,054,842Hours (MIL-HDBK-217)
Warranty	5 Year
Certification	EN62368-1, CE and FCC

IRC200-2000MS

Web Smart OAM Managed 10/100/1000Base-T to 100/1000Base-X GbE Switch

- 1x RJ45 10/100/1000Base-T to 1x 100/1000Base-X SFP converter
- Ingress/Egress bandwidth control
- Supports in-band IEEE 802.3ah OAM management
- Firmware upgrade via Web
- Dying gasp (remote power failure detection on stand-alone)
- Supports Link Fault Pass-Through (LFPT) Function
- DDMI diagnostic function for SFP fiber transceiver
- 16 Tag VLAN Group
- USB Console port, Telnet, SNMP, Web management
- Flow control enable or disable
- Jumbo Frame 16K Packet
- Store and forward switching

Specification

Standards	IEEE 802.3, IEEE 802.3u IEEE 802.3ab, 802.3z, 802.3ah, 802.1Q
LED	Power, FX-Link, LAN Speed, LAN Link
Power Input	Powered from Chassis (12VDC)
Power Consumption	2.4W
Operation Temperature	-10°C~65°C
Storage Temperature	-40°C~85°C
Humidity	10 ~ 90% non-condensing
Chassis	IRC200-CH20 or IRC200-CH01M or IRC200-CH01
Dimension	159.5 x 20.8 x 88mm (D x W x H)
Weight	105g
MTBF	1,568,756Hours (MIL-HDBK-217)
Warranty	5 Year
Certification	EN62368-1, CE and FCC

IRC200-10/100i

10/100Base-TX to 100Base-FX In-Band Managed Converter

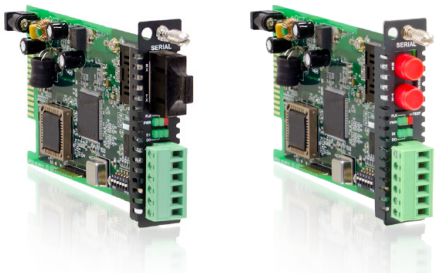
- 1x RJ45 10/100Base-TX to 1x SC/ST 100Base-FX Converter
- Auto-Negotiation / Auto MDI/MDIX in TP port
- Supports remote CPE power fail detect (dying gasp)
- Supports Link Fault Pass-Through (LFPT) and Far End Fault (FEF)
- Supports Loop Back Test
- Forward 2046 bytes (max.) packets in switch mode
- Forward 9K jumbo packets in converter mode
- Transparent Q in Q double tagged frame
- IEEE 802.1q Tag VLAN pass through
- Local / remote In-band management (Monitor and Configure) by the SNMP manager.
- Bandwidth control (Nx32Kbps or Nx512Kbps)
- IEEE 802.3x flow control
- Online local / remote f/w upgrade
- Store and forward switching

Specification

Standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3x
LED	Power, FEF, FX-Link, TX-SPD, TX-Duplex, TX-Link
Power Input	Powered from Chassis (12VDC)
Power Consumption	3W
Operation Temperature	-10°C~65°C
Storage Temperature	-40°C~85°C
Humidity	10 ~ 90% non-condensing
Chassis	IRC200-CH20 or IRC200-CH01M or IRC200-CH01
Dimension	159.5 x 20.8 x 88mm (D x W x H)
Weight	120g
MTBF	1,129,076Hours (MIL-HDBK-217)
Warranty	5 Year
Certification	EN62368-1, CE and FCC

IRC200-Serial

RS232/485 over Fiber



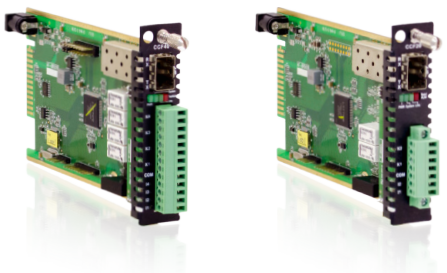
- Extend RS232/422/485 serial transmission distance over fiber
- In-band network management via terminal, Web or SNMP
- Selectable data interface for RS-232/ 485
- RS232/Async. 3 wire or 5 wire up to 256Kbps
- RS485/Async. 2 wire (half duplex) or 4 wire (full duplex) up to 1Mbps
- Software selectable 2 wire (half duplex) or 4 wire (full duplex) RS-485

Specification

Standards	EIA/TIA RS-485, RS-232
LED	Power, FX Link, DI, DO, Test
Power Input	Powered from Chassis (12VDC)
Power Consumption	2.5W
Operation Temperature	-10°C~65°C
Storage Temperature	-40°C~85°C
Humidity	10 ~ 90% non-condensing
Chassis	IRC200-CH20 or IRC200-CH01M or IRC200-CH01
Dimension	159.5 x 20.8 x 88mm (D x W x H)
Weight	130g
MTBF	1,611,089Hours (MIL-HDBK-217)
Warranty	5 Year
Certification	EN62368-1, CE and FCC

IRC200-CCF40 & IRC200-CCF20

◀ 4 Channel Contact Closure Fiber Converter
▶ 2 Channel Contact Closure Fiber Converter



- 30 VDC, 0.5 amp relay N.O. (Normally Open)
- Point-to-Point transmission architecture
- Plug-and-play design ensures ease of installation requiring no
- electrical or optical adjustments
- Relay contact for Carrier Detect, N.C. (Normally Close)
- Indicating LEDs are provided for confirming equipment operating status

Specification

Optical Interface	1 x SFP, Data rate 155Mbps Duplex mode: Full duplex Distance 2KM (Multimode), 30KM (Single-mode), depend on SFP transceiver Point-to-Point transmission architecture
Contacts	4 Channel Contact Closure, 4x Open/close Input, 4xRelay for output (IRC200-CCF40) 2 Channel Contact Closure, 2x Open/close Input, 2xRelay for output (IRC200-CCF20) Input Dry Contact Closure Output SPST Relay, 30 VDC @ 0.5 A, Resistive loads only. 0.5 A Relay contact Rating - normally open
LED	Contact Relay, Carrier Detect
Power Input	Powered from Chassis (12VDC)
Power Consumption	2.1W (IRC200-CCF40) 1.5W (IRC200-CCF20)
Operation Temperature	-10°C~65°C
Storage Temperature	-40°C~85°C
Humidity	10 ~ 90% non-condensing
Chassis	IRC200-CH20 or IRC200-CH01M or IRC200-CH01
Dimension	159.5 x 20.8 x 88mm (D x W x H)
Weight	200g (IRC200-CCF40) 190g (IRC200-CCF20)
MTBF	1,043,016Hours (IRC200-CCF40) 1,204,602Hours (IRC200-CCF40) (MIL-HDBK-217)
Warranty	5 Year
Certification	EN62368-1, CE and FCC

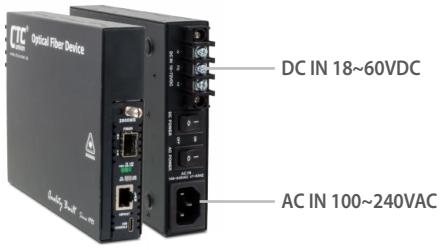
Standalone Chassis

IRC200-CH01M Chassis (Power Built-in)

Specification

Slot	1 slot for insertion module card
Console	1x RS232 for configuration
Power Input	AC 100-240VAC (IRC200-CH01M-AC) DC 18-60VDC (IRC200-CH01M-DC)
Housing	IP30, Metal Case
Installation	Desktop
Dimension	185 x 30 x 135mm (D x W x H)
Operating Temperature	-10~65°C
Humidity	5%~90%
Weight	1.2kg
MTBF	97,968 Hours (IRC200-CH01M-AC) 282,218 Hours (IRC200-CH01M-DC) (MIL-HDBK-217)
Warranty	5 Year
Certification	EN62368-1, CE and FCC

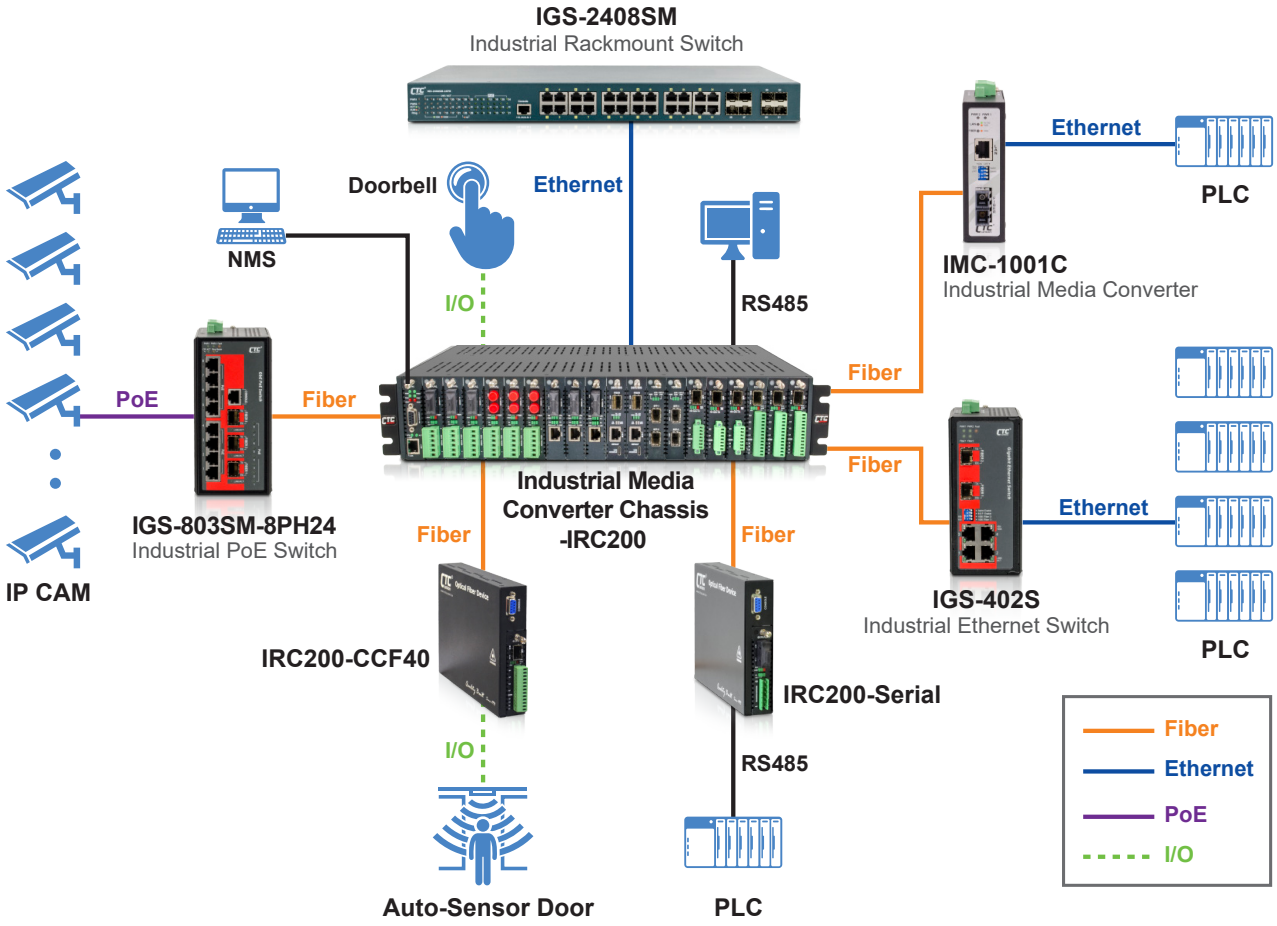
IRC200-CH01 Chassis (Power Built-in)



Specification

Slot	1 slot for insertion module card
Power Input	AC 100-240VAC (IRC200-CH01-AC ,IRC200-CH01-AA) DC 18-60VDC (IRC200-CH01-DC, IRC200-CH01-DD)
Housing	IP30, Metal Case
Installation	Desktop
Dimension	185 x 30 x 135mm (D x W x H)
Operating Temperature	-10~65°C
Humidity	5%~90%
Weight	0.8kg
MTBF	98,967 Hours (IRC200-CH01-AC) 290,805 Hours (IRC200-CH01-DC) (MIL-HDBK-217)
Warranty	5 Year
Certification	EN62368-1, CE and FCC

Application



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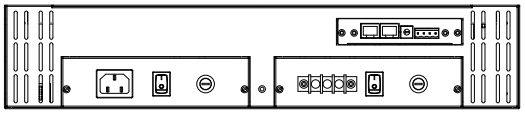
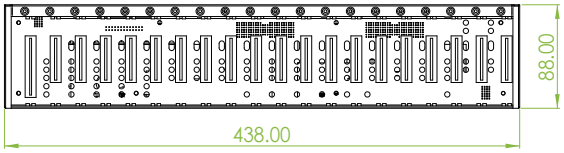
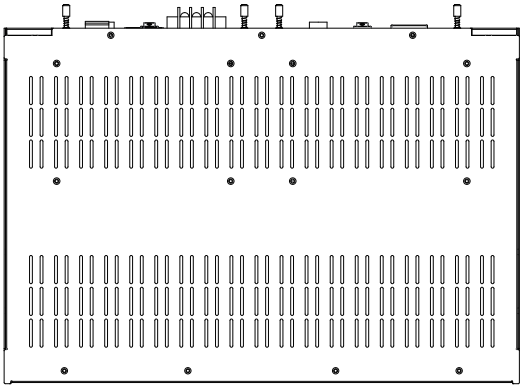
Dimensions



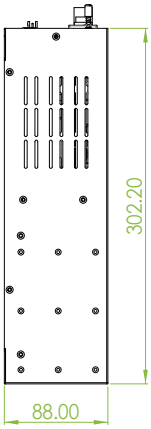
Rear View



Front View



Top View



Side View

Ordering Information

Model Name	Description
20 Slot Chassis	
IRC200-CH20	Industrial 19" 2U 20 slots Converter Chassis
Power Module for IRC200-CH20	
IRC200-AC	Power supply module 100~240VAC
IRC200-DC	Power supply module 36~60VDC
Module Cards	
IRC200-NMC	Network management control card
IRC200-10/100i	10/100Base-TX to 100Base-FX In-band management converter
IRC200-2000MS	Web managed OAM 10/100/1000Base-T to 100/1000Base-X converter
IRC200-1000DS	1000Base-X SFP to 1000Base-X SFP media converter
IRC200-Serial	RS-232/422/485 to fiber converter
IRC200-CCF40	4 channel contact closure Fiber (155M SFP) converter
IRC200-CCF20	2 channel contact closure Fiber (155M SFP) converter
1 Slot Standalone Chassis	
IRC200-CH01M-AC	Industrial 1 slot converter chassis with console, 100~240VAC input
IRC200-CH01M-AA	Industrial 1 slot converter chassis with console, dual 100~240VAC redundant power input
IRC200-CH01M-DC	Industrial 1 slot converter chassis with console, 18~60VDC input
IRC200-CH01M-DD	Industrial 1 slot converter chassis with console, dual 18~60VDC redundant power input
IRC200-CH01-AC	Industrial 1 slot converter chassis, 100~240VAC input
IRC200-CH01-AA	Industrial 1 slot converter chassis, dual 100~240VAC redundant power input
IRC200-CH01-DC	Industrial 1 slot converter chassis, 18~60VDC input
IRC200-CH01-DD	Industrial 1 slot converter chassis, dual 18~60VDC redundant power input