

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
- Fan-less ,Rugged and Harden design
- Wide operation temperature
- Line Card and Power supply Hot Swappable
- Network Management by NMC Card
- Optional Media Converter (Ethernet, Serial, 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 Terminal 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°C | |
| Storage Temperature | -40~85°C | |
| Humidity | 5%~90% (Non Condensing) | |
| Dimension | 302 x 438 x 88mm (D x W x 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 | Support MIB II, 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 All 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



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 |

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

| | |
|-----------------------|--|
| 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

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

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-CCF20) (MIL-HDBK-217) |
| Warranty | 5 Year |
| Certification | EN62368-1, CE and FCC |

Standalone Chassis

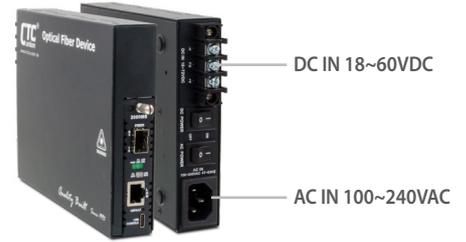
IRC200-CH01M Chassis (Power Built-in)



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 |

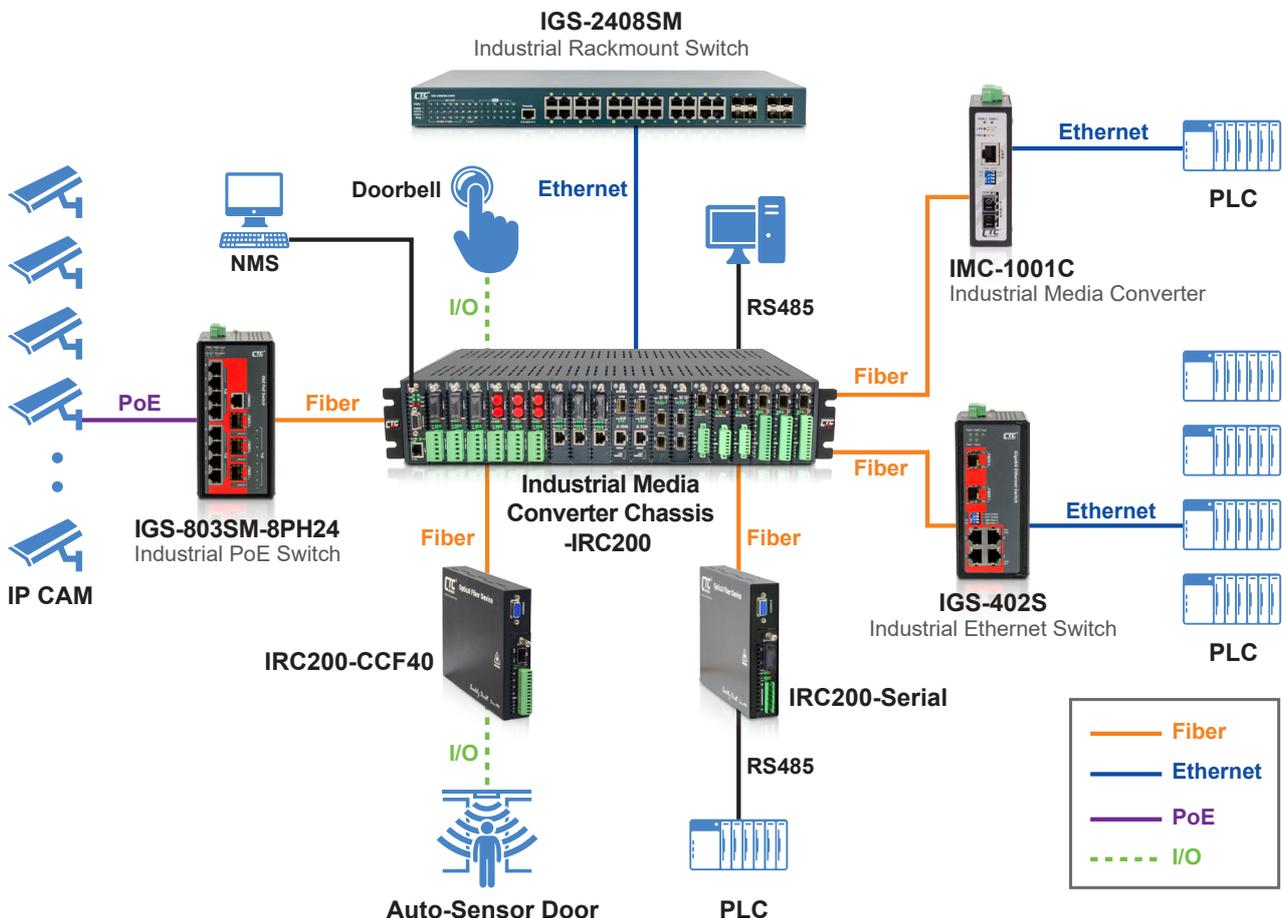
IRC200-CH01 Chassis (Power Built-in)



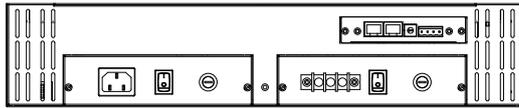
Specification

| | |
|-----------------------|--|
| 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 |

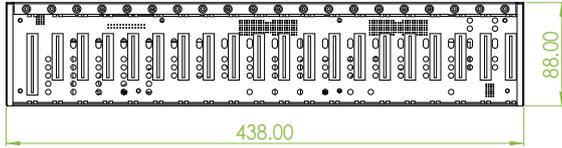
Application



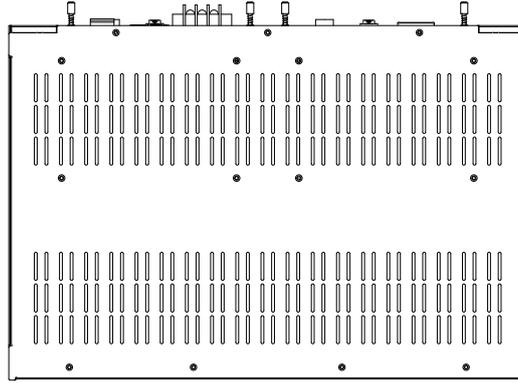
Dimensions



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 |