



F5-4511 Series 10/100Mbps to 4E1 Converter
F5-4513 User Manual
(Version: 3.2)

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1. Overview

F5-4511 Series F5-4513 Converter is the most new promoted product that can convert 10/100Mbps Ethernet to 4E1 Signal, and vice versa. This protocol converter can extend the bandwidth to 7.68Mbps. It is widely used in two LAN connecting, remote monitor and video broadcasting.

2. Features

- Compatible with ITU-T G703, G704 and G823
- Support 10Base-T, 100Base-TX protocol
- Enable any group of CH1-CH4 E1 channel to transmit the data at will
- Extend the bandwidth to 7.68Mbps when using 4E1 channels
- Support auto-inspection of effective E1 channel without interruption of data transfer.
- Automatically cut off the E1Channel when it has LOS and AIS alarm
- Support remote E1 Loop function
- 75/120 ohm Optional of E1 channel impedance
- Support VLAN & IEEE802.1q protocol
- Internal power supply, AC220V or DC-48V

optional

3. Specification

3.1 E1 Port

- Bit rate: 2.048 Mbps
- Line code: HDB3
- Standard: Compatible with ITU-T G703, G704
- Connector: Standard BNC Port, RJ45 Port
- Impedance: 75ohm &120ohm Optional
- Number of E1 channel: 4
- Jitter Performance: compatible with G.823

3.2 Ethernet Port

- Port Speed: 10/100Mbps Auto-Selection
- Auto-negotiation with half/full duplex
- Standard: Compatible with IEEE802.3u
- Connector: RJ45 (MDI/MDI-X Optional)
- Number of Ports: 1

3.3 Dimensions

- 420mm(W) × 184mm (D) × 44mm (H)

3.4 Power

- AC Power: 100V-240V, 0.4-0.2A, 50-60 Hz
- DC Power: -48V, 0.4A
- Consumption: Less than 3 Watts

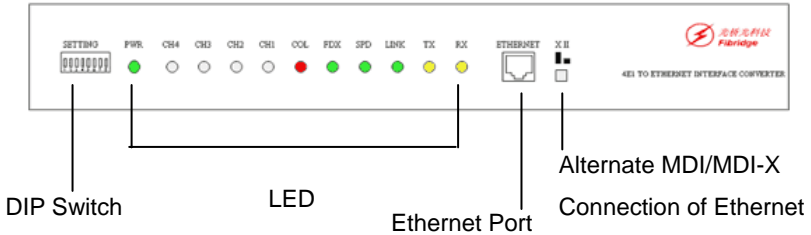
3.5 Environment

- Temperature: 0°C-50°C

- Humidity: 30%-90%

4. Panel

4.1 Front Panel



4.2 LED Description

Table 1: LED Status Description

LED	Color	Stat.	Description
RX	Yellow	BLINK	Receiving data
TX	Yellow	BLINK	Transmitting data
LINK	Green	ON	Ethernet port link OK
SPD	Green	ON	10Base-T
		OFF	100Base-TX
FDX	Green	ON	Full Duplex
		OFF	Half Duplex
COL	Red	ON	Ethernet Line Collision
		OFF	No Collision or Full Duplex
CH1	Red	ON	The 1st E1 Channel Lose
		OFF	Normal Working
CH2	Red	ON	The 2nd E1 Channel Lose

		OFF	Normal Working
CH3	Red	ON	The 3rd E1 Channel Lose
		OFF	Normal Working
CH4	Red	ON	The 4th E1 Channel Lose
		OFF	Normal Working
PWR	Green	ON	Power supply OK

4.3 DIP Switch Description

Table 2: DIP Switch Description

PIN	When ON	When OFF
1	See Table3: Ethernet Mode	
2		
3	Normal working	Local Loop
4	Normal working	Remote Loop
5	ON	
6	OFF	
7	IN-TIME Mode, for Video	Reliable Mode, for Data
8	BER limit: 10E-6	BER limit: 10E-5

Note: When one E1 channel 's BER limit is beyond the setting by pin 8, the device will automatically stop transmitting data through this channel.

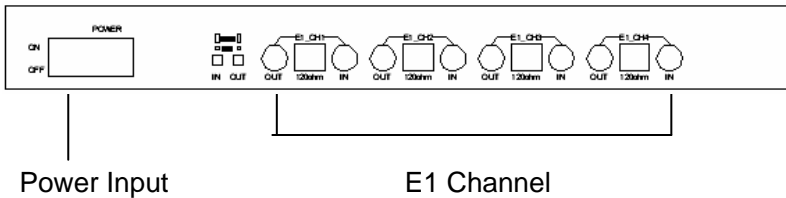
Table 3: Ethernet Mode Description

Pin1	Pin2	Description
OFF	OFF	10/100Mbps, Half/Full Duplex Auto-Negotiation
OFF	ON	10Mbps, Half/Full Duplex Auto-Negotiation
ON	ON	10Mbps, Full Duplex
ON	OFF	100Mbps, Full Duplex

4.4 Factory Setting of DIP Switch:

PIN	1	2	3	4	5	6	7	8
Stat.	OFF	OFF	ON	ON	ON	OFF	OFF	ON

4.5 Rear Panel



Definition of the 120ohm:

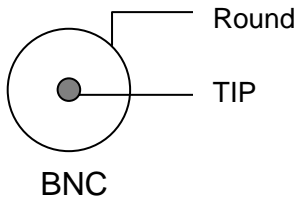
Pin	3	4	5	6	2,7	Other
Def.	TX+	TX-	RX-	RX+	GND	N.A.

4.6 Button 'IN' & 'OUT'

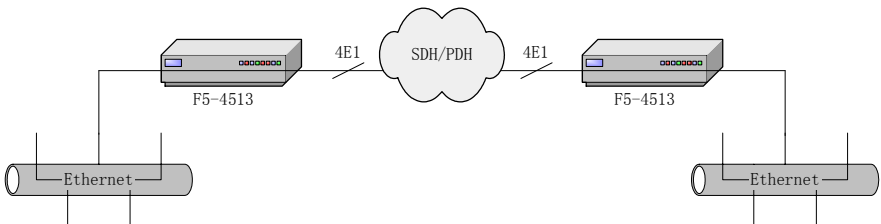
When press button IN down, the round of the 'IN port' of each E1 channel will be connected to GND, When let button IN up, the round of the 'IN port' of each E1 channel will float.

When press button OUT down, the round of the 'OUT port' of each E1 channel will be connected to GND, When let button OUT up, the round of the 'OUT port' of each E1 channel will float.

From below figure, you can find the meaning of 'round' and 'tip'.



5. Application



In point-point application, the F5-4513 should be used in pairs.

6. Order Information

Model:

F5-4511 Ethernet to 1-8 E1 Protocol Converter Series

P/N:

F5-4513A 10/100Mbps Ethernet to 4E1 converter, standalone, 220VAC power

F5-4513D 10/100Mbps Ethernet to 4E1 converter, standalone, -48VDC power