



1. Overview

The RB003 series is the IP over TDM converter, which supports the conversion from MAC frames to 1 – 16 E1 lines. The maximum bit rate is 31.68Mbps (16E1 lines). It not only provides alarms and status of the E1 line and Ethernet interface together with advanced management functions, but also supports the Local/ remote monitor and management via CLI commands. With low power consumption, high integration and well stability, it is a cost-competitive solution for the application in access network, such as the telecommunication, the electric power and the finance fields.

Compliant to international standards, the device can communicate with products from other vendors adopting the same standards.

2. Feature

- Compact design with 1U height, 19 inch, and can be installed on standard rack
- Realizes Ethernet transparent transmission over 1~ 16 E1s
- E1 interface
 - Provides 4/8/16 E1 interfaces, compliant to G.703, and balanced/unbalanced selectable
 - Jitter tolerance, jitter transfer characteristic and jitter generation fully comply with ITU-T G.823 and G.742 recommendations
 - Supports automatic removal and recovery of E1 channels that used for carrying payload. The E1 channels that have urgent alarm, such as LOS, AIS, LOF, LOMF, are removed automatically, and during this period, some Ethernet packets may be lost; It will be resumed when the fault dismisses
 - The differential delay between any two of the 16 E1 can be up to 220ms; when the factual differential delay exceeds 220ms, alarm is generated and Ethernet is cut off
 - The E1s in the local and remote side (E1 map) can be arranged arbitrarily
- Ethernet interface
 - Provides up to 4 shared Ethernet interfaces, 4 electrical Ethernet interfaces(FE) or 3 FE plus one optical Ethernet interfaces(FX), compliant with IEEE802.3 serial standard
 - The FE interface supports auto-negotiation, which can work in 100M full/half-duplex, 10M full/half-duplex mode
 - The FX interface supports auto-negotiation, which can work in 100M full/half-duplex mode
 - 1024 MAC address table and 5-minute aging time
 - Accepts frames with length between 64 and 1916 bytes (otherwise filtering)
 - Supports MAC address dynamic learning function with aging time of 5 minutes
 - Supports flow control
- Compliant to ITU-T standards
 - GFP-F encapsulation specified in ITU-T G.7041
 - Virtual concatenation (VCAT) specified in ITU-T G.7043
 - Link Capacity Adjustment Scheme (LCAS) specified in ITU-T G.7042
 - GFP frame mapping into single E1 channel specified in ITU-T G.8040
 - GFP frame mapping into nxE1 channel specified in ITU-T G.7043
- Redundant power supply, the power consumption is less than 8W
 - -48V DC single power access

- 220V AC single power access
- 220V AC double power access
- -48V DC double power access
- -48V DC&220V AC double power access

3. Product Options

Table 3-1 Product type

Product	Card type	Ethernet interface		E1	Connector	E1 impedance (Ω)
		FE	FX			
RB003	RB003-4E1BNC-4FE	4	0	4E1	BNC	75
	RB003-4E1BNC-3FE+1FX	3	1			
	RB003-4E1RJ48C-4FE	4	0	4E1	RJ48C	120
	RB003-4E1RJ48C-3FE+1FX	3	1			
	RB003-8E1RJ48C-4FE	4	0	8E1	RJ48C	120
	RB003-8E1RJ48C-3FE+1FX	3	1			
	RB003-8E1BNC-4FE	4	0	8E1	BNC	75
	RB003-8E1BNC-3FE+1FX	3	1			
	RB003-16E1RJ48C-4FE	4	0	16E1	RJ48C	120
	RB003-16E1RJ48C-3FE+1FX	3	1			
	RB003-16E1DB37-4FE	4	0	16E1	DB37	75
	RB003-16E1DB37-3FE+1FX	3	1			

4. Application

Figure 4-1 illustrates a typical point-to-point application. With RB003 system, the Ethernet is transferred over 1~16E1s. Compliant to the international standards, the RB003 can communicate with products from different vendors, adopting the same standards.

Note that RB003 can only support point-to-point application.

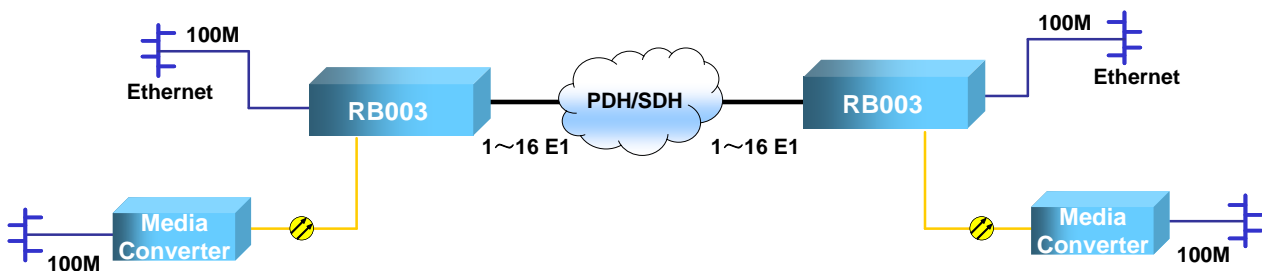


Figure 4-1 Point-to-Point application