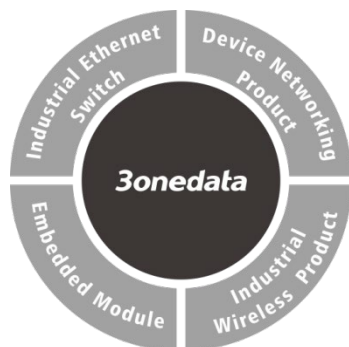


E485 Protocol Converter Quick Installation Guide



3onedata Co., Ltd.

Address: 3/B, Zone 1, Baiwangxin High Technology Industrial Park, Song Bai Road, Nanshan District, Shenzhen, 518108, China

Website: www.3onedata.com

Tel: +86 0755-26702688

Fax: +86 0755-26703485

【Package Checklist】

Please check the integrity of package and accessories while first using the product.

- | | |
|-----------------------------|---|
| 1. Protocol Converter | 2. B25 male head to DB9 female head cable |
| 3. Quick installation guide | 4. Certification |
| 5. Warranty card | |

If any of these items are damaged or lost, please contact our company or dealers, we will solve it ASAP.

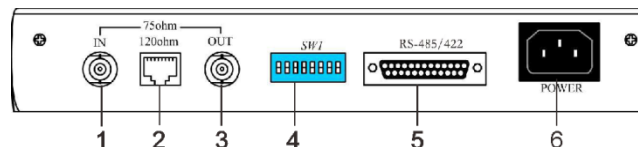
【Product Overview】

The product is an RS-485/422 port to E1 converter. Models as follows:

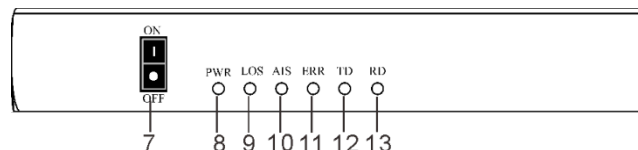
E485 (1 RS-485/422 port +1 E1 interface).

【Panel Design】

➤ Front view



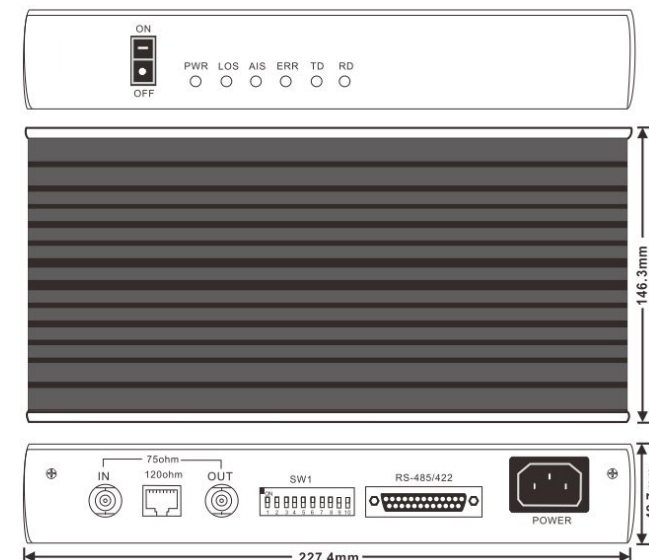
➤ Rear View



1. E1-75 Ω Wan unbalanced input interface
2. E1-120 Ω Wan balance input and output interface
3. E1-75 Ω Wan unbalanced output interface
4. DIP switch
5. RS-485/422 serial port
6. 220VAC terminal block for power input
7. Power supply switch
8. Power indicator
9. Losing synchronization alarm indicator
10. Upstream E1 link full 1 code alarm indicator
11. E1 link interrupt alarm indicator
12. Receive data indicator from G.703 network
13. Send data indicator to G.703 network

【Mounting Dimension】

Unit: mm

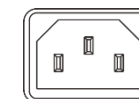


Notice before mounting:

- Don't place or install the device in area near water or moist, keep the relative humidity of the device surrounding between 5%~95% without condensation.
- Before power on, first confirm the supported power supply specification to avoid over-voltage damaging the device.
- The device surface temperature is high after running; please don't directly contact to avoid scalding.

【Power Supply Connection】

➤ AC power input



The device supports 1 AC power input, adopts 3-hole socket and is equipped with AC power switch. Power supply range: 220VAC.



Notice:

- Power ON operation: First insert the power supply terminal block into the device power supply interface, and then plug the power supply plug contact and power on.
- Power OFF operation: First, remove the power plug,

and then remove the wiring section of terminal block.

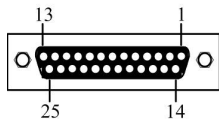
Please pay attention to the above operation sequence.

【E1 Port Connection】

The device provides 1 E1 port, interface type is BNC or RJ45, interface impedance is 75 Ω unbalanced (BNC) and 120 Ω balance (RJ45), supports interface 1500V electromagnetic isolation protection. 120 Ω RJ45 pins are defined as follows:

Pin No.	Function definition	Signal direction
1.	NC (reserved)	-
2.	RX+ (positive received data)	Input
3.	RX- (received data negative)	Input
4.	GND (Ground)	-
5.	GND (Ground)	-
6.	TX+ (sending data positive)	Output
7.	TX- (sending data negative)	Output
8.	NC (reserved)	-

【RS-485/422 Connection】



The device provides 1 RS-485/422 interface in the form of DB25 female head, which can be connected to the RS-485/422 device through the converter wire of DB25 male head to DB9 female head. The interface supports 600W surge protection and 15KV static protection. The pin definitions of RS-485/422 are shown as follows:

➤ RS-485:

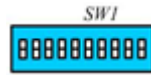
Pin No.	Function definition	Signal direction
1.	GND	-
3.	485-	Input / output
16.	485+	Input / output

➤ RS-422:

Pin No.	Function definition	Signal direction
1.	GND	-

2.	RD-	Output
3.	TD-	Input
14.	RD+	Output
16.	TD+	Input

【DIP Switch】



The device provides 1 set of DIP switch for impedance, BNC grounding, clock, loopback and factory setting. The functions are

defined as follows.

The settings of SW1 are as follows:

Category setting	DIP bit	Set the DIP to OFF	Set the DIP to ON	
Impedance	Bit 1	120 ohm	75 ohm	
BNC Grounding	Bit 2	No Grounding	OUT port grounding	
	Bit 3	No Grounding	IN Grounding	
Clock	Bit 4	Internal Clock	Line recovery clock	
Loopback	Bit 8	No loopback	E1 Loopback	
	Bit 9	No loopback	No loopback	
	Bit 10	Reserved	Reserved	
Restore Factory Settings				
Bit 1	Bit 2	Bit 3	Bit 4	Bit 5
ON	OFF	OFF	ON	OFF
Bit 6	Bit 7	Bit 8	Bit 9	Bit 10
OFF	OFF	OFF	OFF	OFF

【Indicator】

The device provides LED indicators to monitor the device working status with a comprehensive simplified troubleshooting; the function of each LED is described in the table as below:

LED	Indicate	Description
PWR	ON	The power supply is running normally
	OFF	Power supply is disconnected or running abnormally

LED	Indicate	Description
LOS	ON	E1 interface receives no code
AIS	ON	E1 interface receives full 1 code
ERR	ON	E1 link interrupt
TD	ON	Data received successfully
RD	ON	Data sent successfully



Notice:

Whether AIS alarm is caused by a line fault, depends on the actual situation. For example, when E1 port uses non-similar HDLC protocol, when data communication is not conducted, the whole 1-code signal must appear on the line, and the AIS indicator will alarm. Just as when the device was just powered on, the line not connected to the E1 port was full 0 codes, and the AIS light was not on. If the E1 port was carried on the outer loop, then the E1 port was full 1 code, and the E1 light would be naturally on.

【Specification】

Panel	
RS-485/422	1 RS-485/422, DB25 female head
E1 Interface	1 E1, BNC or RJ45, 75 Ω unbalanced (BNC) and 120 Ω balance (RJ45)
Indicator	Power indicator, losing synchronization alarm indicator, upstream E1 link full 1-code alarm indicator, E1 link interrupt alarm indicator, data receiving indicator from G.703 network, data sending indicator to G.703 network
Power Supply	
Power input	220VAC
Terminal block	Power supply outlet with switch;
Power Consumption	

Full-load	2W
Working Environment	
Working temperature	-25~70℃
Storage temperature	-40~85℃
Working humidity	5%～95% (no condensation)