

Users Manual
Section 2.1033 (C) (3)

AWS TRDU List10 Installation Guide

Product Name : AWS (Band Class 4) TRDU, KS-24841 List 10
Model Number : 849172416

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Revision History

Issue No.	Description	Date
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1 INTRODUCTION

1.1 System Overview

AWS TRDU List10 connect with BBU which made by Alcatel-Lucent. AWS TRDU is transiver system which is support LTE fuction in AWS frequency band range.

AWS TRDU is connected by optical cable.

CPRI Interface of one AWS TRDU List10 connect to BBU (LTE)

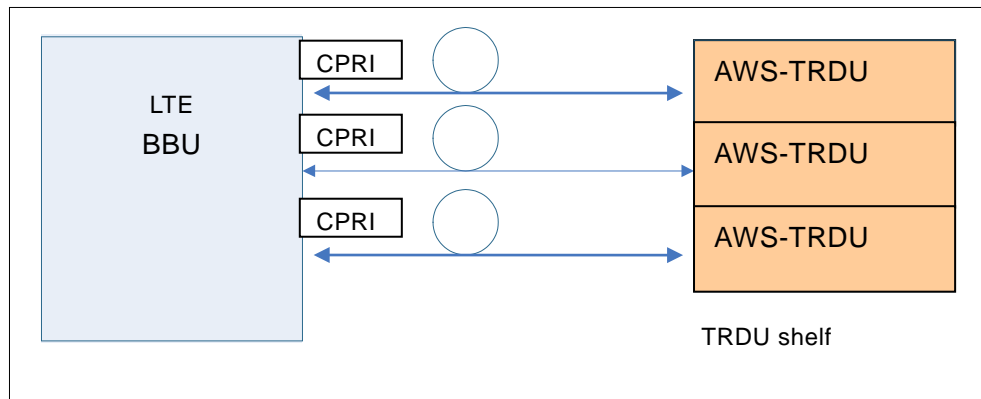


Figure 1-1 System Overview

1.2 Equipment Outline

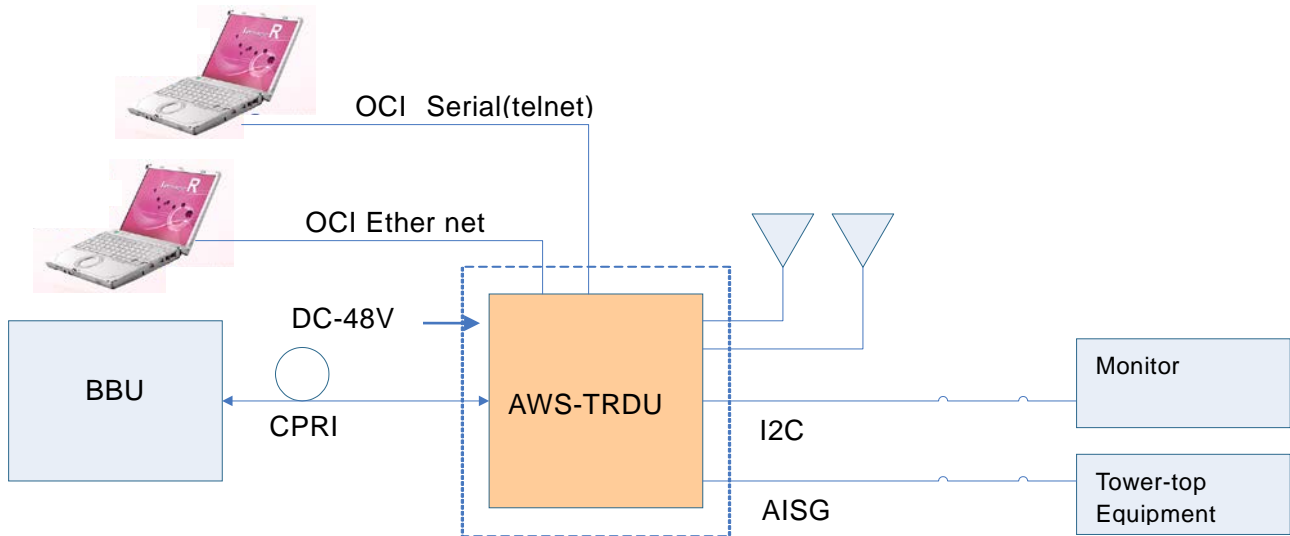


Figure 1-2 Equipment Outline

- ① Execute transmit and receive BBU and UL/DL Digital Signal by optical interface
- ② Enable to maintain TRDU with OCI (On site Configuration Interface) and Personal Computer.
- ③ Enable to use Alarm-interface detect function
- ④ AISG supply and control power function which is connected to tower-top equipment from TRDU.
- ⑤ This system support DC -48V power input
- ⑥ Execute several functions (Status-Control/Tranciver-Control/Mesurement/Failure -Control...) based on control message of BBU.
- ⑦ Enable to download Software (Control Software, DSP Firmware, FPGA Data) as remotely

1.3 Structural Outline

【Structure Outline】

- ① Thermal method is air-cooled engine(TRDU has no cooling fan)
- ② Enable to load next cable (Power Cable/Optical Cable/AISG Cable/ Antenna Cable /AUX Cable) from Front side of the TRDU.
- ③ There are LED in front side of the TRDU which can monitoring system status.

1.4 Specification

1.4.1 System Specification

No	Item	Content	Remark
1	Input Power	-48V (-37V~-57V)	
2	Power Consumption	Less than 650W	
3	Weight	Less than 15kg	
4	Temperature range	-40~+60°C	
5	Humidity range	5~95%	
6	Dimension	Width 110 mm Height 355 mm (not include guide rail) Depth 360 mm	
7	Thermal Type	naturally air cooled engine	
8	Setting Location	Inside	

1.4.2 Optical Module Specification

No	Item	Condition/etc	Remark
1	Optical Center Length	<Primary port> DL : 1550 nm、UL : 1310 nm <Secondary port> Mix mode : 1550 nm/1310 nm	
2	Bit Rate	<Primary port> 1.2288 Gbps~6.1440 Gbps <Secondary port> 2.4576 Gbps~6.144 Gbps	
3	Transmission Distance	<Primary port> Maximum 20 km <Secondary port> Maximum 50m	

1.4.3 AWS TRDU Specification

No	Item	Type	Remark
1	Support Technologies	LTE	
2	RF Output Power	67W/Branchx2 134W/Branchx1	
3	Downlink RF Frequency	2110 MHz –2155 MHz	
4	Uplink RF Frequency	1710 MHz –1755 MHz	
5	Number of Carrier	LTE : 4Carriersx2	

2 Installing the TRDU

2.1 Appearance



4- ϕ 5.5 holes for Equipment mounting and Ground Lugs
(There are 2- ϕ 5.5 holes on opposite side)

Figure 2-1 Appearance of the TRDU with connector covers

2.2 User Interface

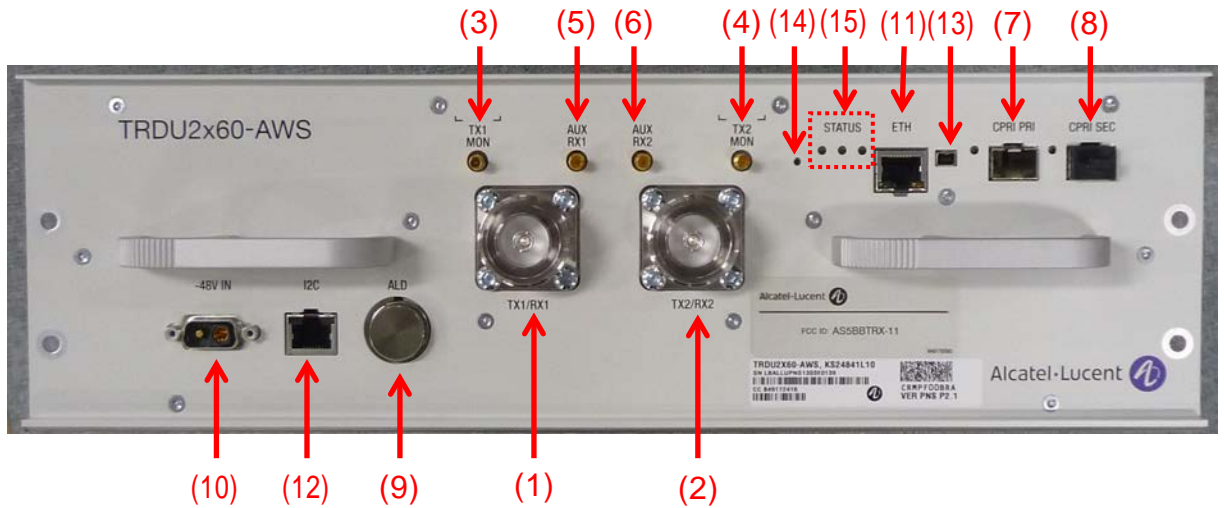


Figure 2-2 User Interface

Table 2-1 Connectors, LED, Reset button etc.

No.	Connector Name	Connector Type and Comment	
1	TX/RX 1	7/16 DIN F	
2	TX/RX 2	7/16 DIN F	
3	TX1 Mon	DIN 1.0/2.3 F	
4	TX2 Mon	DIN 1.0/2.3 F	
5	AUX RX1	DIN 1.0/2.3 F	
6	AUX RX2	DIN 1.0/2.3 F	
7	CPRI PRI	SFP Connector	Tyco Electronics 1888247-1
		SFP Shield Cage	Tyco Electronics 2007198-1
8	CPRI SEC	SFP Connector	Tyco Electronics 1888247-1
		SFP Shield Cage	Tyco Electronics 2007198-1
9	ALD	Female 8-pin circular connector, per IEC 60130-9	
10	DC -48V IN	2W2 2-pin D-sub circular connector Amphenol P-FCE17-E2W2SB-FN5-RevB	
11	ETH(Ethernet)	RJ 45	
12	I2C	RJ 45	
13	Serial Port	4-pin Firewire socket, per IEEE1394	
14	Reset Button	-	
15	Status LED	-	

2.3 Status LED

Table 2-2 LED Display States

No.	State	Green LED	Yellow LED	Red LED
1	No Power Supplied	Off	Off	Off
2	Initial Power On	Solid	Solid	Solid
3	Normal Operation	Solid	Off	Off
4	Standby	Off	Solid	Off
5	Critical HW Failure	Off	Off	Solid
6	Partial or Non-Critical Failure	Solid	Off	Solid
7	Tmporary HW Critical Fault	Off	Off	Flash
8	Slave CPRI Link External Failure	Off	Solid	Solid
9	External Antenna Failure	Solid	Off	Flash
10	Software Download	Off	Flash	Off
11	Background Software Download	Solid	Flash	Off
12	External Power Supply Failure	Flash	Flash	Flash
13	Reset Button	Solid	Solid	Solid

3 FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Properly shielded and grounded cables and connectors must be used for connection to host computers and / or peripherals in order to meet FCC emission limits.

Data transmission is always initiated by software, which is then passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinues transmission in case of either absence of information to transmit or operational failure.

FCC Part 15: This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

RF approval: This equipment complies with Part 2, Subpart J – Equipment Authorization Procedures, of the FCC Rules.

This device complies with Part 27- MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES, Subpart 27.53 (h)