

AM9290 Series VSAT Redundancy Control System

Key Features

High reliability with independent TX and RX switching

Remote Monitoring Via serial interface

Remote Switching and Control of ODU/BUC

Manual Override via Local Control

Quick Response time upon failure detection

PC software to control the Redundancy system

Inbuilt Failsafe mechanism to ensure transmission over critical failure

Simple operation requires minimum Training

Applications

- ✓ Emergency Link Restoration
- ✓ Video Teleconferencing and broadcast
- ✓ Maintenance without downtime
- ✓ Mission critical data streaming applications

Amplus AM9290 series Outdoor Redundancy Control System manages 1:1 redundant chain of Transmitter and Receiver independently. It enables the Amplus family of Ku Band or C Band Transceivers and BUCs to be configured in redundant system application.

The AM9290 is designed to allow remote monitor and control of the Redundancy Control Unit (RCU) and also the setting and status of the connected Transceivers or BUCs continuously. RS485 interface is employed to enable long distance connection between the RCU (outdoor) and the PC terminal (indoor). The monitor and control software will be able to have full monitor and control functions of both the active path and stand by path.



The RCU system normally operates in a hot standby mode where it monitors the active transmit & receive chain (online path) and switches over automatically to the redundant path when a fault at either the transmit or the receive chain is detected. Although normally intended for unmanned, automatic operation, the switch can be locally & manually over ride by the operator. This is useful when there is a need to replace a particular TX or RX switch (or both) during maintenance. This feature also allows fault diagnosis to be performed on failed ODU/BUC while maintaining the link.

A Redundant system will consist of a AM9290 RCU and 2 units of Transceiver or BUC and one or two switches. For C Band application, one switch will be with WR229 interface for Receive path and one with WR137 interface for Transmit path. For Ku band application both switches will be in WR75 interface. Both switches include waveguide termination. Transmit path termination will be able to handle the power level of ODU/BUC. For customers who use BUC and need only redundant transmit, only one switch will be provided.

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Redundant Switching Equipment (RSE)	Frequency Range	70MHz (Transceiver) L Band (BUC)
	Input Power	-35dBm to -5dBm
	Maximum Input Power	+20dBm
	IF VSWR	1.3:1 typical
	IF Input impedance	50 Ω
	IF Input Connector	N-(F)
	Insertion Loss	3dB Max
	Isolation	50dB min
RF Waveguide Switch	Frequency Range	C Band Ku Band
	VSWR	1.1 : 1 max
	Impedance	50 Ω
	Interface Flange	For C-Band : WR-137 for TX & WR229 for RX WR-75 for Ku Band
	Insertion Loss	0.05dB max
	Isolation	60 dB Min
Operation Mode	Automatic Mode	1. Auto Path Switch-over upon failure of online path 2. Full Mesh Switch eg. (TX A/RX B), (TX B/RX A)
	Manual Mode	1. Manual Override via remote PC Interface 2. Manual Override via Local Control
Mechanical (RSE)	Dimension	Depend on transmit power requirement
	Weight	Depend on transmit power requirement
Environmental	Input Supply Voltage	220VAC, option: 110VAC
	Temperature (operating)	-40 to 60 °C
	Temperature (storage)	-40 to 85 °C
	Humidity	0 to 100%
Monitor & Control	RS485	Monitor & Control thru PC Terminal
		a) M& C Redundancy System :
		1. Online path Selection
		2. Auto Mode Selection
		3. Constant Monitoring of Online path and Offline path
		b) M&C of Connected Transceiver/BUC
		1. Channel Selection
		2. ODU Status
		3. Gain Adjustment
		4. Temperature Alarm
5. Out of Lock Alarm		