



OrTes VSAT Train System

AL-3601-TxRx / AL-3602-TxRx
Ku-Band Satcom System



(AL-3602)

In today's dynamic world, having access to broadband networks anywhere and anytime, has become essential. Whether at home, at work or traveling, OrTes (Orbit & TeS) VSAT Train System Satcom solution keeps you in touch - always.

OrTes offers the ultimate solution - a

VSAT Ku-Band Mobile Stabilized Antenna System for high-speed trains. Characterized by a low profile Radome to suit high-speed trains, this highly efficient system allows passengers to maintain their daily routine while traveling, saving time and cost.

The OrTes VSAT Train System is highly immuned to EMI, including the one generated from the high power cables that run above many of these trains. With no need for an external compass, tracking is achieved by a combination of solid-state rate gyro, a GPS receiver and an NBR (Narrow Band Receiver), enabling accurate and reliable satellite tracking.

The OrTes VSAT Train System includes a 3 axes stabilized pedestal incorporating a unique elevation motion of the reflector. Additionally, the OrTes VSAT Train System can be fully configured and monitored locally, using PC based software, It can also be managed remotely via Telnet and SNMP based management software. Network management applications provide centralized control of all network nodes, including interface configuration, connection setup, alarms and monitoring.

OrTes VSAT Train System is an easy to operate plug & play system, which is completely independent of the train, requiring a 24 Volt DC power source only and it communicates with the management station by means of its SNMP agent (via TCP/IP connection).

OrTes VSAT Train System - two models:

- AL-3601 - Ultra Low Profile
- AL-3602 - Low Profile

Key Features

- Ku-band
- High gain, low and ultra-low, profile antenna
- 3 Axes Stabilized System (Polarization, Elevation, Azimuth)
- Fully independent of the train (requires only a single DC source)
- Fully automatic acquisition and tracking modes, no-operator intervention
- Tracking process that combines Step-Track with inertial stabilization (rate gyro or IMU)
- Fast reacquisition of satellites upon exiting from tunnels or stations
- Very high EMI immunity*
- High EIRP & G/T
- Broadband data rate - Typical downlink: 20 Mbps, uplink: 1 Mbps**
- Compliance with applicable ITU, ETSI and FCC regulations
- IP Interface with the Modem (Ethernet), including M&C of the Control System and the BUC, (such as temperature and Cease Tx)
- Compliance with EN 50155 Train Standard

* Especially against high current cables or ferromagnetic influence.

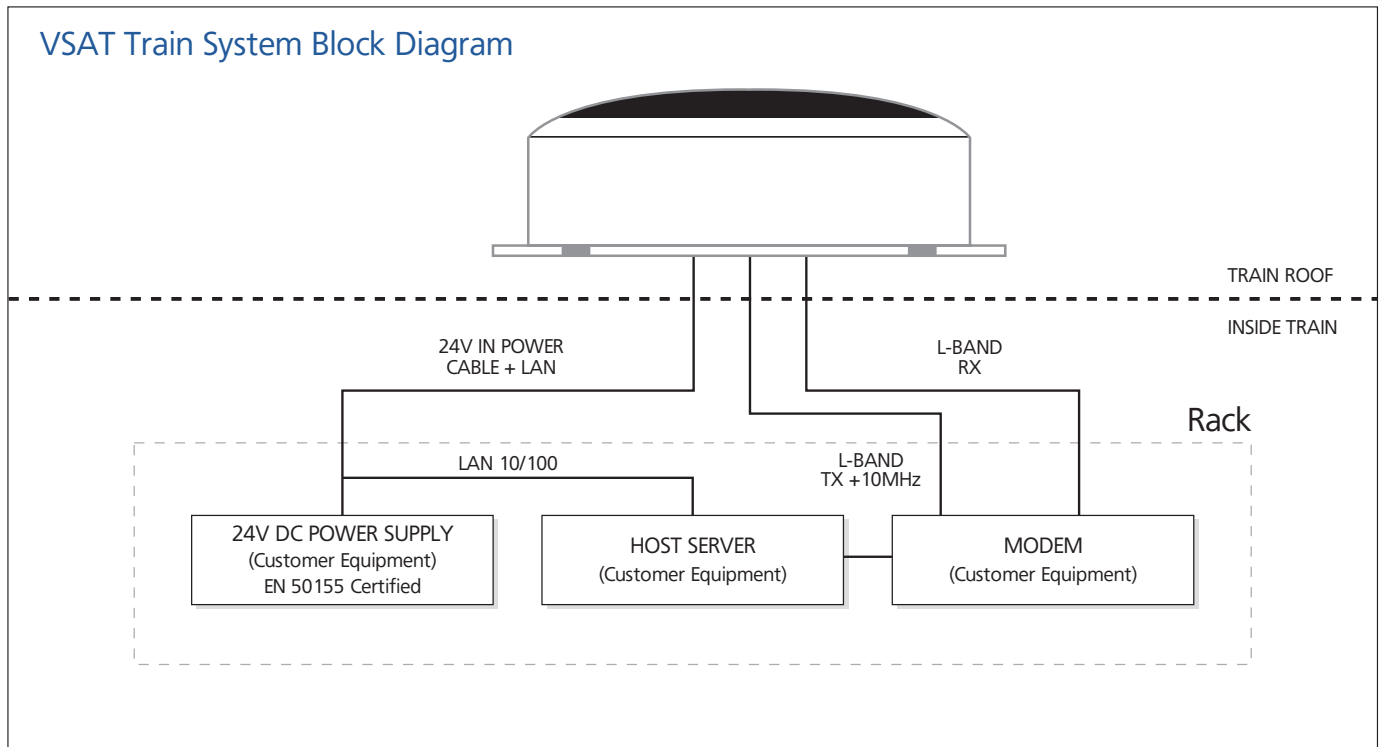
** Typical for AB3, can vary with other satellites.



Technical Specifications

Positioner Performance Specifications					Antenna/Rf Sub-System Specifications					System Specifications		
PARAMETER	UNITS	VALUES			PARAMETER	UNITS	VALUES			PARAMETER	UNITS	VALUES
		Polarization	Elevation	Azimuth			AL-3601	AL-3602				
Velocity	Deg/sec	20	20	20	Frequency Range	Rx Tx	GHz	10.95 - 12.75 14.00 - 14.50				
Acceleration	Deg/sec ²	20	20	20	Antenna Gain (mid-range)	Rx Tx	dB	33 34	34 35.4			
Linear Acceleration Survival	G	5 longitudinal, 2 transversal			System G/T (@ 10.95GHz)		dB/K	11.5	13			
Linear Acceleration Operating Backlash	Deg.	0.2			System EIRP: (with 8W BUC)		dBW	42	43.5			
Pointing accuracy	Deg.	1	0.5	0.1	Cross Pol. Discrimination		dB	> 30				
Travel	Deg.	180	15 to 70*	360 Continuous	Polarization (motorized)			Linear: Tx (V) & Rx (H) Or Tx (H) & Rx (V)				
* Note: The Elev. travel is available in 2 options. Option A: 15 to 50, Option B: 35 to 70. Consult Factory												

Physical Dimensions			
PARAMETER	UNITS	VALUES	
		AL-3601	AL-3602
Diameter	cm/inch	105.8 / 41.6	
Height	cm/inch	36.0/14.0	48.8/19.2
Weight	Kg/lb	94/207	96/211



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