AAV628 Series

Ku-Band VSAT
Outdoor Transceiver

Agilis AAV628 Series Ku-Band SPT (Ku-Band Single Package Transceiver) is a highly cost-effective RF ODU (Outdoor Unit) Transceiver for Satellite Communication. It Is designed for voice, data and broadband VSAT communication used in different modulation formats including BPSK, QPSK, QAM and FM.

Agilis AAV628 SPT is a highly integrated ODU that comprises of Upconverter, SSPA (Solid State Power Amplifier), Down Converter, low phase noise synthesizer, power supply and built-in M&C. With independent frequency synthesizer, it enables end-users for transmission through different uplink and downlink transponders. In addition, Agilis has a wide range of SSPA booster options for higher power applications.

Agilis AAV628 SPT is suitable for SCPC (Single Channel Per Carrier), MCPC (Multi-Channel Per Carrier), DAMA (Demand Assigned Multiple Access) and TDMA (Time Division Multiple Access) applications.

Features

- Available for all Ku-Band frequencies
- Broadband data transmission
- Easy installation & configuration
- Built-in monitor and control
- Higher power options available
- Built-in image rejection filter
- Very stable OCXO reference oscillator
- Output power monitoring
- Electronically tuneable synthesizer for Transmit and Receive
- 1.0MHz frequency step size
- Redundancy ready
- Surge protection
- 70 or 140MHz IF interface

Enhanced Monitoring and Control

AAV628 Ku-SPT offers M&C via RS232/485. It features full remote M&C through Windows using PC.
These include:

- Tx/Rx level monitoring
- Temperature monitoring
- RF output ON/OFF
- Frequencies selection
- Gain control
- Automatic fault identification & alarm

Reliability

Field proven under harsh environment conditions, Agilis ODUs can withstand temperature ranging from -40°C to +60°C with up to 100% humidity.

Quality Assurance

All Agilis ODUs go through intensive active electrical stress screening with performance being monitored during screening.
In addition, all units undergo 100% waterproof test equivalent to IP65 to ensure normal operation during tropical, cold and harsh environment.

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Technical Specifications

Ku-Band Frequency Range (GHz)

Transmit	13.75 – 14.25 (Offset) 14.00 – 14.50 (Standard) 13.75 – 14.50 (Extended)
Receive	10.95 – 11.70 11.70 – 12.20 12.25 – 12.75

Transmit

Power	Output @P1dB (dBm) min	Min Gain (dB)	Typ AC Power Consumption (VA)
2W	33	58 – 63	100
4W	36	61 – 66	150
8W	39	64 – 69	150
16W*	42	70	150
25W*	44	70	250
40W*	46	70	330
80W*	49	70	560
100W*	50	75 – 85	1400
150W*	51.8	75 – 85	1300
200W*	53	75 – 85	2550

Input Frequency	70±18MHz (Optional 140 ±36MHz)
Output Frequency	Ku-Band
Frequency Step Size	1.0MHz
IF Input Power Range	-25 to -5dBm
Gain Flatness for 500MHz BW	±2.0dB max
For 36MHz BW	±1.25dB max
Gain Stability (-40°C to +60°C)	±2.0dB max
Gain Adjustment	20dB@ 0.5dB steps
Inter Modulation	-25dBc@ Relative to combine power of two carriers at 3dB total power backoff from Rated Output power
Spurious (36MHz BW)	-55dBc max
Phase Noise	
@ 100Hz offset	-60dBc/Hz
@ 1KHz offset	-70dBc/Hz
@ 10KHz offset	-80dBc/Hz
@ 100KHz offset	-90dBc/Hz
IF Input Interface	50Ω N-Type Female
RF Output Interface	WR75/G
Frequency Stability	±0.5 ppb/day

Monitor & Control

Interface	RS232/485
Optional Interface	FSK, Ethernet IP 10/100 Base-T, SNMP
Form "C" Relay Contacts	Optional

Compliance Standard

IEC 60950	International Safety Standard for Information Technology Equipment
ETSI EN 300 673	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Electromagnetic Compatibility (EMC) Standard for Very Small Aperture Terminal (VSAT)
ETSI EN 301 489-1	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Electromagnetic Compatibility Standard for Radio Equipment and Services

Environmental

Operating Temperatur	
Relative Humidity	

Receive (exclud

Input Frequency	(Optional 900 to 1700MHz)
Output Frequency	70±18MHz (Optional 140 ±36MHz)
Output Frequency(Optional)	950 to 1450MHz
Output Power@ P1dB	0dBm min
Frequency Step Size	1.0MHz
Gain	25dB min
Gain Adjustment	20dB @1dB steps
Gain Flatness (36MHz BW)	±1.25dB max
Gain Stability (-40° to +60°)	±3.0dB max
Intermodulation Product	-35dBc max
Spurious (36MHz BW)	-55dBc max
Phase Noise	
@ 100Hz offset	-60dBc/Hz
@ 1KHz offset	-70dBc/Hz
@ 10KHz offset	-80dBc/Hz
@ 100KHz offset	-90dBc/Hz
Input Interface	50Ω N-Type Female
Output Interface	50Ω N-Type Female

Power Supply

Input Voltage (Factory Preset)	220Vac (Optional 110Vac , 48Vdc)
DC Output Voltage to LNB	+13Vdc at RF IN connector

Phase Locked Low Noise Block (PL LNB)

Input Frequency	Ku-Band
Output Frequency	950 to 1700MHz
Noise Figure/Temperature at +25 °C	1.0dB / 75°K
Gain	58dB typ
Gain Flatness (36MHz BW)	±0.25dB max
External Reference	10MHz
Input Interface	WR75/G
Output Interface	50Ω N-Type Female

Mechanical

Dimensions	310L x 240W x 98H mm	(2W, 4W, 8W SPT)
	200L x 130W x 99.5H mm	(16W, 25W Booster)
	200L x 130W x 130H mm	(40W Booster)
	360L x 200W x 140H mm	(80W,100W Booster)
	495L x 440W x 175H mm	(150W Booster)
	550L x 440W x 350H mm	(200W Booster)
Weight	7.5kg	(2W, 4W, 8W SPT)
	3.5kg	(16W, 25W Booster)
	3.7kg	(40W Booster)
	10kg	(80W, 100W Booster)
	20kg	(150W Booster)
	50kg	(200W Booster)
Colour	White Powder Coat	

*Booster with 2W driver
Note: All specification are subject to change without notice.
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Request A Quote

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