AAV700 C-Series

C-Band VSAT
Medium Power Outdoor Transceiver

Agilis AAV700 C-Series C-Band OHT (One Housing Transceiver) is a low cost RF ODU (OutDoor Unit) transceiver for satellite communication. It is designed for voice and data application operating in different modulation formats including BPSK, QPSK, QAM and FM.

Agilis AAV700 OHT is a very compact ODU that comprises of Power Supply, Upconverter, SSPA (Solid State Power Amplifier), Down Converter and low phase noise synthesizers. It has a built-in M&C for remote and local monitoring and control. In addition, Agilis has a wide range of SSPA booster options for higher power applications.

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

Features

- Available for all C-Band frequencies
- Broadband data transmission
- Low cost, compact model
- Easy installation & configuration
- Built-in monitor and control
- Higher power options available
- Very stable OCXO reference oscillator
- Electronically tuneable synthesizer
- Redundancy ready
- Surge protection
- 70 or 140MHz IF interface
- M&C Interface RS232/RS485/Ethernet (HTTP & SNMP)

Enhanced Monitoring and Control

Agilis AAV700 C-OHT 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 -40ºC to +60ºC 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

C-Band Frequency Range (GHz)

Frequency	Transmit	LNB (Receive)
Intelsat	5.850 – 6.425	3.625 – 4.200
Full C	5.850 – 6.725	3.400 – 4.200
Insat	6.725 – 7.025	4.500 – 4.800
ST-1/Palapa C	6.425 – 6.725	3.400 – 3.700

Transmit

Power	Output @P1dB (dBm) min	Min Gain (dB)	Typ AC Power Consumption (VA)
20W	43	68 – 73	195
40W	46	75 – 83	325
50W	47	75 – 83	355
60W	47.8	75 – 83	425

Input Frequency	70 / 140 ±18MHz
Output Frequency	C-Band
Frequency Step Size	500kHz (option 1KHz step size)
IF Input Power Range	-25 to -5dBm (typical)
Gain Flatness for Full BW	±2.0dB max
for 36MHz BW	±1.25dB max
Gain Adjustment	20dB@ 0.5dB steps
Gain Stability (-40°C to + 60°C)	±2.0dB max
Spurious (36MHz BW)	-55dBc max
Inter Modulation	-25dBc @ Relative to combine power of two carriers at 3dB total power backoff from Rated Output power
Phase Noise @ 100Hz offset	-60dBc/Hz
@ 1KHz offset	-73dBc/Hz
@ 10KHz offset	-83dBc/Hz
@ 100KHz offset	-93dBc/Hz
Input / Output VSWR	1.5 : 1 max
IF Input / L-Band input interface	50Ω N-Type Female
RF Output Interface	WR137
Frequency Stability	±0.5ppb/day

Power Supply

Input Voltage (Factory Preset)	220VAC, 110VAC or 48VDC (optional)
DC Output Voltage to LNB	+12VDC at RF IN Connector

Compliance Standard

IEC 609501-2nd Edition	International Safety Standard for Information Technology Equipment
ETSI EN 301 489-12	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) Standard for radio equipment and services; Part 12: Specific conditions for Very Small Aperture Terminal, Satellite Interactive Earth Stations operated in the frequency ranges between 4GHz and 30GHz in the fixed Satellite Service (FSS)
FCC Class A	Two levels of radiation and conducted emissions Limits for unintentional radiators (FCC Mark)

Environmental

Operating Temperature	-40ºC to +60ºC
Relative Humidity	Up to 100%

Low Noise Block (LNB)

Input Frequency	C-Band (Refer to above table)
Noise Temperature at 25°C	45ºK typ
Gain	63dB typ
Gain Flatness	±2.0dB max
Input VSWR	2.5 : 1
Output VSWR	1.7 : 1
RF Input Interface	WR229/G
RF Output Interface	50Ω N-Type Female

Receive (exclude LNB)

Input Frequency	C-Band
Output Frequency	70 / 140 ±18MHz
Frequency Step Size	500kHz
Gain	
IF	30dB min
L-Band	0dB min
Gain Flatness for Full BW	±2.0dB max
For 36MHz BW	±1.25dB max
Gain Stability (-40°C to +60°C)	±1.0dB max
Spurious	-50dBc max (carrier related) -60dBc max (carrier unrelated)
Intermodulation Product	-27dBc max
Phase Noise @ 100Hz offset	-60dBc/Hz
@ 1KHz offset	-73dBc/Hz
@ 10KHz offset	-83dBc/Hz
@ 100KHz offset	-93dBc/Hz
Input / Output VSWR	1.5 : 1 max
RF Input / IF Output Interface	50Ω N-Type Female
Frequency Stability	±0.5ppb/day
Gain Adjustment	40dB @ 0.5dB step

Monitor & Control

Interface	RS232/485
Optional Interface	Ethernet (SNMP & HTTP)

Mechanical

Dimensions	235L x 209W x 180H mm
Weight	7.8kg
Colour	White Powder Coat

Note: All specifications are subject to change without notice.
Rev. 050313

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