

# PRODUCT CATALOGUE

## Edition 1



**RF Test and  
Measurement  
Equipment**



**High Frequency  
RF Components**



**Research and  
Development**



**Custom Build**

## Leaders in Satcom RF Testing

Atlantic Microwave have been manufacturing microwave and RF components and equipment from our headquarters and R&D base in Braintree, England for over 30 years.

Our product range and capability includes both standard and custom-designed equipment, as well as multi-function modules and sub assemblies.

We supply to a global marketplace in Aerospace, Telecommunications, Government and Defence and Scientific Research via representatives and distributors worldwide.

## Research and Development

Within our dedicated engineering centre, we employ the very latest technology to ensure our products offer reliability in service. Our design, test and measurement facilities include environmental chambers, 40GHz Vector Network Analyser, Signal Generators and our 50GHz Spectrum Analyser, which enable us to meet the stringent requirements of the commercial, defence, aerospace and scientific sectors.

Atlantic Microwave also work closely with a number of UK and overseas Universities on advanced scientific research in the areas of radio astronomy, particle physics and high-energy physics, as well as state-of-the-art communication technologies.



All products are tested at our purpose-built facility in Braintree, UK

## Partnerships

Atlantic Microwave work with some of the world's leading manufacturers of high reliability components. We offer supply, design and support services to our customers. Our products are widely used in aerospace, military and scientific applications. This includes QMiCS (Quantum Microwave for Communications and Sensing).

Please visit our website for all up to date Atlantic Microwave news and product information  
[www.atlanticmicrowave.com](http://www.atlanticmicrowave.com)

## Our Focus

Reliability, resilience, and RF performance are at the heart of all ETL designs, driving product innovation and development. The adaptability and scale-ability of our solutions allows future expansion for growing Satcom users.



In 2019, ETL Systems acquired Atlantic Microwave to complement its existing range of RF distribution equipment. ETL's expertise is in the design and manufacture of ground station technology for RF signal handling.

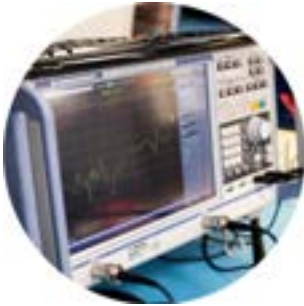
The company has been designing and manufacturing RF equipment since 1984, and from 2003 onwards benefited from the new management of Ian Hilditch and Dr Esen Bayar. In 2013, it received its third Queens Award for Enterprise, marking impressive growth in International Trade, and is now one of the world's leading RF manufacturers to the Satellite industry.

For more information about ETL Systems, please visit their website at [www.etlsystems.com](http://www.etlsystems.com).

Please visit our website for all up to date Atlantic Microwave news and product information  
[www.atlanticmicrowave.com](http://www.atlanticmicrowave.com)

## Our Customers

Our RF equipment is used by customers in a wide range of sectors.



**Test & Measurement**



**Marine**



**Wireless, Radio Links & Telecommunications**



**Scientific Research**



**Satellite Communications**



**Aerospace**



**Broadcaster**



**Government & Defence**

## Global Sales And Support

We ship to 112 countries, and have a team of experts handling your equipment through customs and shipping. Atlantic's worldwide partners provide support to our customers around the globe. To see if we have a dedicated partner in your region, please visit the website:

[www.atlanticmicrowave.com/worldwide-partners](http://www.atlanticmicrowave.com/worldwide-partners).



## Our Capabilities

Our in-house services and facilities provide a greater range of production capabilities for design, production and maintenance under the ISO 9001 Quality Management System.

Atlantic Microwave has achieved Stage 2 JOSCAR registration. Our JOSCAR number is 10025309.



In-house RF, PCB,  
mechanical and NPI  
design engineers

Custom build design  
with modest NRE costs








Support, FAT,  
commissioning and  
system training

Ad-hoc on-site support



100% testing at  
sub-assembly and  
finished product levels

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# Satcom RF Test Equipment

## Satcom RF Test Equipment

To meet the different satellite simulation and loop back testing requirements of the industry we have created a comprehensive range of innovative Satcom Test Equipment.

Our products cover all bands from L to Ku, DBS, Ka and Q. Because testing can be required anywhere, we supply equipment in a wide variety of housings, including some weatherised, portable and battery powered options.

### SNG Testing

Testing a Satellite News Gathering system by providing a loopback test for a vehicle mounted Ku-Band Antenna without the need to access a satellite.



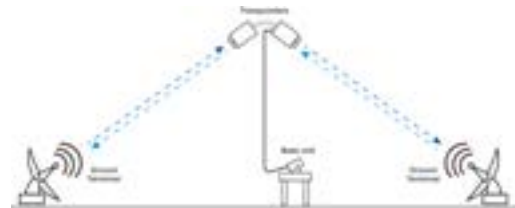
HAPS balloon takes its first test flight

### HAPS (High Altitude Pseudo Satellite) Testing

HAPS (High Altitude Pseudo Satellite) systems can be modelled using our bespoke Satellite Simulators. Atlantic Microwave's Satellite Simulators are suitable for many high altitude testing applications.

### Multi-path RF Signal Testing

Atlantic's Multi-Path Satellite Simulators enable the simultaneous testing of two satellite terminals by taking the Uplink/Transmit carrier from one ground system to the Downlink/Receive carrier of another and then offering a return path to test the complete system.





# Test Loop Translator Overview

## Test Loop Translator Range & Options

Test Loop Translators are designed to replace satellite links for test and alignment of earth station systems. Atlantic Microwave provides a wide range of TLT models covering Ka, Ku, L, C, Q, S, X and DBS frequency bands.

Incorporating fundamental frequency phase locked oscillators and double balanced mixers, the translators block-convert frequencies from Uplink to either Downlink or L-Band and from L-Band to Downlink for instantaneous monitoring of frequency, power levels and modulation.

The TLT range is available in housings to suit all applications, including as a 19" rack mountable system, bench & portable units, and ruggedised outdoor housings with Manual Control, Ethernet Control, and battery-powered models. Dual Channel and Reversible Signal Path options are available.

Test Loop Translator	ALT series	ALR series	ALD series	LNI series	PRT series	BLT series	BLR series	LBP series	LRU series
19" Rack Mount	✓	✓	✓	✓	✓	-	-	-	-
Bench Instrument	-	-	-	-	-	✓	✓	✓	-
Portable / Battery Powered	-	-	-	-	-	-	-	✓	✓
Ruggedised	-	-	-	-	-	-	-	-	✓
Fixed Local Oscillator	✓	-	-	-	-	✓	-	-	-
Variable Local Oscillator	-	✓	✓	✓	✓	-	✓	✓	✓
L-RX (Downlink)	-	✓	-	-	-	✓	-	-	-
TX-L (Uplink)	✓	✓	✓	✓	✓	-	-	-	✓
TX-RX (Whole System)	✓	✓	-	-	-	✓	✓	✓	✓

For our full range, along with up-to-date RF specifications, please visit our website [www.atlanticmicrowave.com](http://www.atlanticmicrowave.com)



# Test Loop Translators

## ALT Series

The ALT series of Test Loop Translators (TLTs) is designed to replace the satellite link for test and alignment of earth station systems.

Incorporating fundamental frequency phase locked oscillators and double balanced mixers, the translators block-convert frequencies from Uplink to either Downlink or L-Band for instantaneous monitoring of frequency, power levels and modulation.

The input path contains a front panel controlled continuously variable attenuator for reducing input power levels. Each unit also provides a reference frequency output and LO lock status.

1U high x 19" wide rack mount unit.



## Ku and Ka-Band Options

PRODUCTS										
Model	ALT-9800-KA	ALT-10300-KA	ALT-1750-KU	ALT-2300-KU	ALT-2550-KU	ALT-1800-KU	ALT-2050-KU	ALT-3050-KU	ALT-13050-KU	ALT-11800-KU
Frequency Band	Ka-band Tx to Ka-band Rx	Ka-band Tx to Ku-band Rx	Ku-band Tx to Ku-band Rx	Ku-band Tx to Ku-band Rx	Ku-band Tx to Ku-band Rx	Ku-band Tx to Ku-band Rx	Ku-band Tx to Ku-band Rx	Ku-band Tx to Ku-band Rx	Ku-band Tx to Ku-band Rx	Ku-band Tx to L-band Rx
Input Frequency	27500 - 31000MHz	28000 - 31500MHz	14000 - 14500MHz	14000 - 14500MHz	14000 - 14500MHz	12750 - 13250MHz	12750 - 13250MHz	14000 - 14500MHz	14000 - 14500MHz	12750 - 13250MHz
Output Frequency	17700 - 21200MHz	17700 - 21200MHz	12250 - 12750MHz	11700 - 12200MHz	11450 - 11950MHz	10950 - 11450MHz	10700 - 11200MHz	10950 - 11450MHz	10950 - 11450MHz	950 - 1450MHz
Attenuation Control	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.
Housing	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis
Dimensions	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide
RF Connectors & Impedances	50Ω SMA   50Ω 2.92mm K-type	50Ω SMA   50Ω 2.92mm K-type	50Ω SMA   50Ω BNC	50Ω SMA   50Ω BNC	50Ω SMA   50Ω BNC	50Ω SMA   50Ω BNC	50Ω SMA   50Ω BNC	50Ω SMA   50Ω BNC	50Ω SMA   50Ω BNC	50Ω SMA   50Ω BNC



## ALT Series

### BENEFITS & APPLICATIONS



- To replace the satellite link for test and alignment of earth station systems
- Labour and cost-effective testing method
- No requirement for live satellite link
- SNG testing
- VSAT terminal testing
- Satcoms & Teleports testing

## Other Bands & Custom Designs

### PRODUCTS

Model	ALT-7375-CL	ALT-4975-C	ALT-1750-KUE	ALT-2800-KUE	ALT-5100-DBS	ALT-5600-DBS-B	ALT-16350-DBS-B	ALT-16350-DBS-F	ALT-0175-S	ALT-6950-X
Frequency Band	C-band Tx to L-band RX	C-band Tx to L-band RX	Extended Ku-band Tx to Ku-band Rx	Extended Ku-band Tx to Ku-band Rx	Ku-band Tx to Ku-band Rx	Ku-band Tx to Ku-band Rx	Ku-band Tx to L-band Rx	Ku-band Tx to L-band Rx	S-band Tx to S-band Rx	X-band Tx to X-band Rx
Input Frequency	5925 - 6425MHz	5925 - 6425MHz	13750 - 14500MHz	13750 - 14500MHz	17300-17800MHz	17300-18100MHz	17300-18100MHz	17300-18400MHz	2025-2125MHz	7900-8400MHz
Output Frequency	1450 - 950MHz	950 - 1450MHz	12000 - 12750MHz	10950 - 11700MHz	12200 - 12700MHz	11700-12500MHz	950-1750MHz	950-2050MHz	2200-2300MHz	950-1450MHz
Attenuation Control	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.	0- 30dB Typ.
Housing	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis	19" 1U Chassis
Dimensions	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide	1U high x 13.5" x 19" wide
RF Connectors & Impedances	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA



# Test Loop Translators

## ALR Series



The ALR series of Ka-band Test Loop Translators (TLTs) features Synthesised Variable Frequency Local Oscillators (LOs) to provide the user with the most versatile and comprehensive operating configurations for translation of Uplink (Tx) frequencies to either Downlink (Rx) frequencies or to L-Band, and for L-Band to Downlink (Rx). These TLTs simulate the satellite transponder frequency conversion for system alignment and continuous quality monitoring.

Both the LO frequency and through path attenuation can be controlled either locally with direct readout on the front panel LCD or remotely via Ethernet with a virtual control panel.

1U high x 19" wide rack mount unit.

PRODUCTS					
Model	ALR-08801095-KA	ALR-25002700-KA	ALR-01490330-KU	ALR-16901860-KA	ALR-23302530-Q
Input Frequency	27500 - 31500 MHz	27500 - 31000 MHz	12750 - 14500 MHz	800 - 2600 MHz	43500 - 45500 MHz
Output Frequency	17700 - 21200 MHz	800 - 2600 MHz	10700 - 12750 MHz	17700 - 21200 MHz	20200 - 21200 MHz
Local Oscillator	Synthesised	Synthesised	Synthesised	Synthesised	Synthesised
Translation Band	Tx - Rx (whole system)	Tx - Rx (whole system)	Tx - Rx (whole system)	Tx - Rx (whole system)	Tx - Rx (whole system)
Housing	19" Rack	19" Rack	19" Rack	19" Rack	19" Rack
Local Control & Monitoring	Front panel push buttons & display	Front panel push buttons & display	Front panel push buttons & display	Front panel push buttons & display	Front panel push buttons & display
Remote Control & Monitoring	TCP/IP over Ethernet RJ45 connector	TCP/IP over Ethernet RJ45 connector	TCP/IP over Ethernet RJ45 connector	TCP/IP over Ethernet RJ45 connector	TCP/IP over Ethernet RJ45 connector
Dimensions	1U high x 343mm deep x 19" wide	1U high x 343mm deep x 19" wide	1U high x 343mm deep x 19" wide	1U high x 343mm deep x 19" wide	1U high x 343mm deep x 19" wide
RF Connectors & Impedances	50Ω SMA   50Ω 2.92mm K-type	50Ω SMA   50Ω 2.92mm K-type	50Ω SMA	50Ω SMA   50Ω 2.92mm K-type	50Ω 2.4mm   50Ω SMA



# Test Loop Translators

## ALD Series

The ALD series of Ka-band Test Loop Translators (TLTs) features dual channel operation with the ability to introduce different transfer characteristics in each channel.

One TLT instrument can be used in a variety of test applications for frequency conversions from Uplink (Tx) to Downlink (Rx) or to L-Band and from L-Band to Downlink (Rx).

Each channel may have different values of Conversion Gain, Attenuation Range, Filtering Characteristics and LO Frequency. Instruments are essentially customised for the desired application's parameters.

2U high x 19" wide rack mount unit.



### PRODUCTS

Model	ALD-KA-1001
Input Frequency	Channel 1: 27500 - 31000 MHz   Channel 2: 950 - 1700 MHz
Output Frequency	Channel 1: 950 - 1700 MHz   Channel 2: 17700 - 21200 MHz
Local Oscillator	Synthesised
Translation Band	Channel 1: TX - Rx or L / L - Rx   Channel 2: TX - Rx or L / L - Rx
Housing	19" Rack
Local Control & Monitoring	Front panel push buttons & display
Remote Control & Monitoring	TCP/IP over Ethernet RJ45 connector
Dimensions	2U high x 343mm deep x 19" wide
RF Connectors & Impedances	50Ω 2.92mm K-type   50Ω SMA



# Test Loop Translators

## LNI Series

The LNI (Low Noise Injection) series of Test Loop Translators (TLTs) provides the satellite communications engineer with a complete and versatile set up for off-satellite loop back testing of the transmit (Tx) signal to L-Band, combined with the ability to inject white symmetrical gaussian noise for simultaneous receiver and modem testing.



Input attenuation is controlled over a 60dB range in either 0.5dB or 0.25dB steps and local oscillator (LO) frequency in 25MHz steps. The white noise level is variable by up to 60dB in 0.25dB steps with an additional mute facility.

Local control of both the TLT and noise injection is done via front panel controls or remotely via Ethernet with an easy-to-use GUI. Frequency stability of the LO is derived from either the internal OCXO or from a system 10MHz reference. 2U high x 19" wide rack mount unit.

### PRODUCTS

	LNI-2500-2700-KA	LNI-1180-1305-KU
Model	LNI-2500-2700-KA	LNI-1180-1305-KU
Input Frequency	27500 - 31500 MHz	12750 - 14500 MHz
Output Frequency	800 - 2600 MHz	800 - 2600 MHz
Local Oscillator	Synthesised	Synthesised
Translation Band	Tx - L	Tx - L
Housing	19" Rack	19" Rack
Local Control & Monitoring	Front panel push buttons & display	Front panel push buttons & display
Remote Control & Monitoring	TCP/IP over Ethernet RJ45 connector	TCP/IP over Ethernet RJ45 connector
Dimensions	2U high x 343mm deep x 19" wide	2U high x 343mm deep x 19" wide
RF Connectors & Impedances	50Ω SMA   50Ω 2.92mm K-type	50Ω SMA



# Test Loop Translators

## PRT Series

The PRT series of Ka and Ku Band Test Loop Translators (TLTs) features technology to achieve reversible operation with the ability to introduce different transfer characteristics in the forward and reverse paths.

One TLT instrument can be used in a variety of test applications for frequency conversions from Uplink (Tx) to Downlink (Rx) or to L-Band and from L-Band to Downlink (Rx).

Forward and reverse paths may have different values of Conversion Gain, Attenuation Range, Filtering Characteristics and LO Frequency. Instruments are essentially customised for the desired application's parameters.

2U high x 19" wide rack mount unit.



### PRODUCTS

	PRT-KU-1002	PRT-KA-1001
Model	PRT-KU-1002	PRT-KA-1001
Input Frequency	12750 - 14500 MHz	27500 - 31000 MHz   Reverse path 950 - 1700 MHz
Output Frequency	950 - 1700 MHz	950 - 1700MHz   Reverse path 17700 - 21200 MHz
Local Oscillator	Synthesised	Synthesised
Translation Band	Tx - Rx or Tx - L   L - Rx	Tx - Rx or Tx - L   L - Rx
Housing	19" Rack	19" Rack
Local Control & Monitoring	Front panel push buttons & display	Front panel push buttons & display
Remote Control & Monitoring	TCP/IP over Ethernet RJ45 connector	TCP/IP over Ethernet RJ45 connector
Dimensions	2U high x 343mm deep x 19" wide	2U high x 343mm deep x 19" wide
RF Connectors & Impedances	50Ω SMA	50Ω 2.92mm K-type   50Ω SMA

# Test Loop Translators

## BLT Series

The BLT series of Test Loop Translators are Portable Bench Instruments designed to replace the satellite link for test and alignment of earth station systems operating in S, C, Ku or DBS frequency bands.

Incorporating fundamental frequency phase locked oscillators and double balanced mixers, the translators block convert frequencies from Uplink to either Downlink or L-Band and from L-Band to Downlink for instantaneous monitoring of frequency, power levels and modulation. The input path contains a front panel controlled continuously variable attenuator for reducing input power levels. Each unit also provides a reference frequency output and LO lock alarm.



Single and multi-band options are available.

Multiple transmit or receive frequency bands can be accommodated within a single Test Loop Translator and these can be selected from a front panel switch.

PRODUCTS							
Model	BLT-11300-KU	BLT-9800-KA	BLT-2300-KU	BLT-2550-KU	BLT2750-C	BLT-1750-KU	BLT-5600-DBS-B
Input Frequency	950 - 1450 MHz	27500 - 31000 MHz	14000 - 14500 MHz	14000 - 14500 MHz	950 - 1450 MHz	14000 - 14500 MHz	17300 - 18100 MHz
Output Frequency	12250 - 12750 MHz	17700 - 21200 MHz	11700 - 12200 MHz	11450 - 11950 MHz	3700 - 4200 MHz	12250 - 12750 MHz	11700 - 12500 MHz
Local Oscillator	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Translation Band	Tx - Rx or Tx - L   L - Rx	Tx - Rx or Tx - L   L - Rx	Tx - Rx or Tx - L   L - Rx	Tx - Rx or Tx - L   L - Rx	Tx - Rx or Tx - L   L - Rx	Tx - Rx or Tx - L   L - Rx	Tx - Rx or Tx - L   L - Rx
Housing	Portable Bench Instrument	Portable Bench Instrument	Portable Bench Instrument	Portable Bench Instrument	Portable Bench Instrument	Portable Bench Instrument	Portable Bench Instrument
Local Control & Monitoring	Front panel	Front panel	Front panel	Front panel	Front panel	Front panel	Front panel
Dimensions	110mm high x 260mm deep x 360mm wide	110mm high x 260mm deep x 360mm wide	110mm high x 260mm deep x 360mm wide	110mm high x 260mm deep x 360mm wide	110mm high x 260mm deep x 360mm wide	110mm high x 260mm deep x 360mm wide	110mm high x 260mm deep x 360mm wide
RF Connectors & Impedances	50Ω SMA	50Ω 2.92mm K-type   50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA





# Test Loop Translators

## BLR Series

The BLR series of Test Loop Translators is designed to replace the satellite link for test and alignment of earth station systems operating in S, C, Ku or DBS frequency Bands. Incorporating fundamental frequency phase locked oscillators and double balanced mixers, the translators block convert frequencies from Uplink to either Downlink or L-Band and from L-Band to Downlink for instantaneous monitoring of frequency, power levels and modulation.

Each unit also provides a reference frequency output and LO lock status.

Single and multi-band options are available.

Multiple transmit or receive frequency Bands can be accommodated within a single Test Loop Translator and these can be selected from the front panel. Portable Bench Instrument.



### PRODUCTS

Model	BLR-08801095-KA
Input Frequency	27500 - 31500 MHz
Output Frequency	17700 - 21200 MHz
Local Oscillator	Synthesised
Translation Band	Tx - Rx or Tx - L   L - Rx
Housing	Portable Bench Instrument
Local Control & Monitoring	Front control panel
Dimensions	150mm high x 260mm deep x 420mm wide
RF Connectors & Impedances	50Ω 2.92mm K-type   50Ω SMA

# Test Loop Translators

## LBP Series



Atlantic Microwave's portable, battery-powered Test Loop Translators feature Synthesised Variable Frequency Local Oscillators (LOs) to provide the user with the most versatile and comprehensive operating configurations for translation of Uplink (Tx) frequencies to either Downlink (Rx) frequencies or to L-Band, and for L-Band to Downlink (Rx). These translators simulate the satellite transponder frequency conversion for system alignment and continuous quality monitoring.

Both the LO frequency and through path attenuation can be controlled either locally with direct readout on the front panel LCD or remotely via Ethernet with a virtual control panel.

The TLT contains a 12V, 14AH rechargeable battery and is supplied with an external battery charger which connects to the unit via a 3 pin XLR connector and is powered from a 100-240V, 50-60Hz A/C supply.

### PRODUCTS

	LBP-08801095-KA	LBP-01490330-KU
Model	LBP-08801095-KA	LBP-01490330-KU
Input Frequency	27500 - 31500 MHz	12750 - 14500 MHz
Output Frequency	17700 - 21200 MHz	10700 - 12750 MHz
Local Oscillator	Synthesised	Synthesised
Translation Band	Tx - Rx or Tx - L   L - Rx	Tx - Rx or Tx - L   L - Rx
Housing	Portable Bench Instrument	Portable Bench Instrument
Local Control & Monitoring	Front panel	Front panel
Remote Control & Monitoring	TCP/IP over Ethernet RJ45 connector	TCP/IP over Ethernet RJ45 connector
Dimensions	150mm high x 260mm deep x 420mm wide	150mm high x 260mm deep x 420mm wide
RF Connectors & Impedances	50Ω 2.92mm K-type   50Ω SMA	50Ω SMA



# Test Loop Translators

## LRU Series

Atlantic Microwave's ruggedised, portable, battery-powered Test Loop Translators feature Synthesised Variable Frequency Local Oscillators (LOs) to provide the user with the most versatile and comprehensive operating configurations for translation of Uplink (Tx) frequencies to either Downlink (Rx) frequencies or to L- Band, and for L-Band to Downlink (Rx). These translators simulate the satellite transponder frequency conversion for system alignment and continuous quality monitoring.



Internal 10MHz reference. Both the LO frequency and through path attenuation can be controlled either locally with direct readout on the front panel LCD or remotely via Ethernet with a virtual control panel.

The TLT contains a 12V, 14AH rechargeable battery and an internal battery charger which is connected, via a Buccaneer 400 series connector, to a 100-240V, 50-60Hz A/C supply.

Single 8 x 16 & 16 x 8 configurations are also available upon enquiry.

PRODUCTS			
Model	LRU-08801095-KA	LRU-25002700-KA	LRU-11801305-KU
Input Frequency	27500 - 31500 MHz	27500 - 31500 MHz	12750 - 14500 MHz
Output Frequency	17700 - 21200 MHz	800 - 2600 MHz	950 - 2700 MHz
Local Oscillator	Synthesised	Synthesised	Synthesised
Translation Band	Tx - Rx or Tx - L   L - Rx	Tx - Rx or Tx - L   L - Rx	Tx - Rx or Tx - L   L - Rx
Housing	Compact Outdoor Unit	Compact Outdoor Unit	Compact Outdoor Unit
Local Control & Monitoring	Front panel	Front panel	Front panel
Remote Control & Monitoring	TCP/IP over Ethernet RJ45 connector	TCP/IP over Ethernet RJ45 connector	TCP/IP over Ethernet RJ45 connector
Dimensions	150mm high x 260mm deep x 420mm wide	150mm high x 260mm deep x 420mm wide	150mm high x 260mm deep x 420mm wide
RF Connectors & Impedances	50Ω 2.92mm K-type   50Ω SMA	50Ω 2.92mm K-type   50Ω SMA	50Ω SMA



# Satellite Simulator Overview

## Satellite Simulator Range & Options

Atlantic Microwave’s Satellite Simulators enable cableless RF testing of indoor or in-field mobile satellite communication systems, providing a loop-back test for Satcom terminals without the need to access the satellite.

Single band Satellite Simulator systems from Ka, Ku, DBS, Q-Band/K-Band and X-Band. As well as a Quadband Satellite Simulator system covering C, X, Ku and Ka-Band.

Atlantic Microwave’s Sat Sims can be offered as Multi-Path, Bench Instruments, Portable-Battery powered, Drone Mountable and Ruggedised RF test solutions.

Synthesised / Variable and Fixed local oscillator (LO) options available.

Satellite Simulator Systems	DSS series	LSS series	SNG series	MSS series	RSS series	QSS series
Bench Instrument	-	-	✓	✓	-	✓
Portable / Battery Powered	-	✓	-	-	-	-
Ruggedised	-	-	-	-	✓	-
Drone Mountable	✓	-	-	-	-	-
Multi Channel	-	-	-	✓	-	✓
Ka-Band	✓	✓	-	✓	✓	✓
Ku-Band	✓	-	✓	✓	✓	✓
X-Band	-	-	-	✓	✓	✓
C-Band	-	-	-	-	-	✓
Q-Band / K-band	-	-	-	✓	✓	✓
Quadband	-	-	-	-	-	✓
Fixed Local Oscillator	✓	✓	✓	✓	✓	✓
Variable Local Oscillator	-	-	✓	✓	✓	✓

## DSS Series



The DSS series is a Payload Satellite Simulator housed in an IP65 rated weatherproof housing.

Either Ka-Band or Ku-Band.

It can have an input frequency ranging from 13.75 - 31.0 GHz and output frequency ranging from 10.95 - 21.2 GHz.

It is suitable for mounting to Drones, UAVs and High Altitude Platforms.



### APPLICATIONS



- Satcoms on the move testing
- Drone mounting
- UAV (Unmanned Aerial Vehicle) mounting
- HAP (High Altitude Platform) mounting

### PRODUCTS

	DSS-9800-Ka	DSS-2800-Ku
Model	DSS-9800-Ka	DSS-2800-Ku
Input Frequency	27500 - 31000 MHz	137500 - 14500 MHz
Output Frequency	17700 - 21200 MHz	109500 - 11700 MHz
Local Oscillator	Fixed	Fixed
Operating Band	Ka-Band	Ku-Band
Housing	Drone mountable/HAP, weatherproof	Drone mountable/HAP, weatherproof
Dimensions	82mm high x 118mm deep x 187mm wide	82mm high x 118mm deep x 220mm wide

**LSS Series**



Atlantic Microwave’s portable Satellite Simulator enables RF testing of mobile satellite communications systems without the need for cabling and with true portability for optimum equipment location.

These simulators are fitted with dual polarised horn antennas in both the Uplink and Downlink Bands.

For each frequency conversion there is a separate attenuator providing adjustment of signal levels to accommodate receiver sensitivity and range distance.



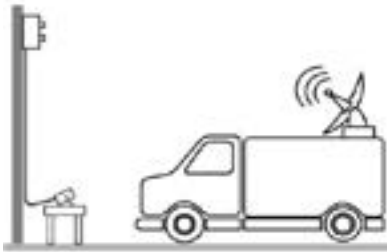
PRODUCTS		
Model	LSS-10300-Ka	LSS-9800-Ka
Uplink Frequency	28000 - 31500 MHz	27500 - 31000 MHz
Downlink Frequency	17700 - 21200 MHz	17700 - 21200 MHz
Local Oscillator	Fixed	Fixed
Operating Band	Ka-Band	Ka-Band
Housing	Portable	Portable
Dimensions	150mm high x 420mm deep x 260mm wide	150mm high x 420mm deep x 260mm wide

## SNG Series

Atlantic Microwave's Satellite Simulator systems are designed to provide a loop-back test for vehicle mounted Ku-Band antennas without the need to access the satellite.

Comprised of two units, the LSS series is a portable bench instrument, facilitating the testing and calibration of news gathering and outside broadcast systems off-satellite.

The base control unit is a convenient, portable bench instrument with the capability of both local and remote, ethernet control and this is connected to a wall or mast mounted transponder via a power and data cable.



### PRODUCTS

Model	SNG-0175-0330-Ku
Uplink Frequency	14000 - 14500 MHz
Downlink Frequency	10700 - 12750 MHz
Local Oscillator	Synthesised
Operating Band	Ku-Band
Housing	Portable Bench Instrument with Compact Outdoor Transponder
Dimensions	Base unit: 145mm high x 320mm deep x 255mm width Transponder: 115mm x 230mm deep x 330mm width
RF Connectors & Impedances	50Ω SMA

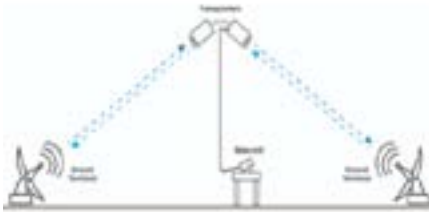
\*LNB DC only available with compatible chassis

## MSS Series



Atlantic Microwave's Multi-Channel Satellite Simulator simultaneously talks to two sets of ground equipment, enabling the user to run extensive and prolonged tests without the need to establish a live link to a satellite.

The system is supplied as a three-part solution - a base unit and two terminals. The bench unit can be both local and remote, ethernet control and connected by a power cable.



The two transponders are inter-connected - each capable of communicating with a fixed or mobile terminal in a choice of either X, Ku, DBS, Ka and Q Bands and with the ability to vary the path attenuation.

PRODUCTS					
Model	MSS-08801095-KA	MSS-01490330-KU	MSS-04500800-DBS	MSS-00650065-X	MSS-23302530-Q
Uplink Frequency	27500 - 31500 MHz	12750 - 14500 MHz	17300 - 18400 MHz	7900 - 8400 MHz	43500 - 45500 MHz
Downlink Frequency	17700 - 21200 MHz	10700 - 12750 MHz	10700 - 12700 MHz	7250 MHz - 7750 MHz	20200 - 21200 MHz
Local Oscillator	Synthesised	Synthesised	Synthesised	Fixed	Synthesised
Operating Band	Ka-Band	Ku-Band	Ku-Band	X-Band	Q-Band (Tx) - K-Band (Rx)
Housing	Portable Bench Instrument with Compact Outdoor Transponder	Portable Bench Instrument with Compact Outdoor Transponder	Portable Bench Instrument with Compact Outdoor Transponder	Portable Bench Instrument with Compact Outdoor Transponder	Portable Bench Instrument with Compact Outdoor Transponder
Dimensions	Base unit: 145mm high x 320mm deep x 255 wide Transponder: 115mm high x 230mm deep x 330mm wide	Base unit: 145mm high x 320mm deep x 255 wide Transponder: 115mm high x 230mm deep x 330mm wide	Base unit: 145mm high x 320mm deep x 255 wide Transponder: 115mm high x 230mm deep x 330mm wide	Base unit: 145mm high x 320mm deep x 255 wide Transponder: 115mm high x 230mm deep x 330mm wide	Base unit: 145mm high x 320mm deep x 255 wide Transponder: 115mm high x 230mm deep x 330mm wide
RF Connectors & Impedances	50Ω SMA   50Ω 2.92mm K-type	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA   50Ω 2.4mm



## RSS Series



Atlantic Microwave's ruggedised Satellite Simulator is portable and weatherproof, facilitating the testing and calibration of terminals off-satellite both inside and outdoors.

The base control unit is a weatherised, portable instrument with the capability of both local and remote, Ethernet control and this is connected to a mast mounted transponder via a power and data cable.



The transponder communicates with the system under test (SUT) via appropriately polarised gain horns, receiving at the SUT transmit (Tx) frequency and transmitting at the SUT receive (Rx) frequency, thereby completing the loop-back without satellite involvement.

### PRODUCTS

Model	RSS-08801095-KA	RSS-01490330-KU	RSS-04500800-DBS	RSS-00650065-X	RSS-23302530-Q
Uplink Frequency	27500 - 31500 MHz	12750 MHz - 14500 MHz	17300 - 18400 MHz	7900 - 8400 MHz	43500 - 45500 MHz
Downlink Frequency	17700 - 21200 MHz	10700 - 12750 MHz	10700 - 12700 MHz	7250 - 7750 MHz	20200 - 21200 MHz
Local Oscillator	Synthesised	Synthesised	Synthesised	Fixed	Synthesised
Operating Band	Ka-Band	Ku-Band	Ku-Band	X-Band	Q-Band (Tx) - K-Band (Rx)
Housing	Ruggedised portable housing with compact outdoor unit				
Dimensions	Base unit: 310mm high x 245mm deep x 380 wide Transponder: 115mm high x 230mm deep x 330mm wide				
RF Connectors & Impedances	50Ω 2.92mm K-type   50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA   50Ω 2.4mm

**QSS Series**



Atlantic Microwave's Quadband Satellite Simulator provides simultaneous loop-back testing for frequency bands C, X, Ku & Ka. Designed for use as part of a test-bed, it enables operational earth station set-up without the need for live connectivity to a satellite.



Growing demand for multiple connectivity on land, in the air and at sea requires accurate and reliable RF signal testing at multiple frequencies and in many different environments. Atlantic Microwave's QSS model is available with either indoor or outdoor housing rated to IP65 for exterior deployment. Typical applications include the testing of signal acquisition by ground station terminals, antenna pointing, VSAT testing, EMI testing and bent-pipe testing for mobile ground terminals.

The QSS series is fully customisable, with a choice of frequency bands, polarizations (both linear and circular) and conversion loss.

PRODUCTS	
Model	QSS-131000
Input Frequency	C-Band: 5850 - 6425 MHz X-Band: 7900 - 8400 MHz Ku-Band: 14000 - 14500 MHz Ka-Band: 30000 - 31000 MHz
Output Frequency	C-Band: 3625 - 4200 MHz X-Band: 7250 - 7750 MHz Ku-Band: 10950 - 12750 MHz Ka-Band: 20200 - 21200 MHz
Local Oscillator	Synthesised
Operating Band	C-Band   X-Band   Ku-Band   Ka-Band
Housing	Outdoor Weatherproof Unit
Dimensions	180mm high x 400mm deep x 310mm wide



# Noise Generators Overview

## Noise Generator Range & Options

Atlantic Microwave offers manual broadband and Ethernet control broadband Noise Generators in both bench instrument or 19" rack mountable housings.

Manual broadband Noise Generators provide up to 1 watt of white Gaussian noise output in several models over the 10Hz to 18GHz frequency range and are designed to be used either as laboratory instruments or as built-in system test facilities. The noise, which is diode generated, is amplified and the level can be varied in 1dB steps from 0 to 10dB or optionally in 0.1dB steps from 0 to 101dB.

Ethernet controlled Noise Generators provide up to 1 watt of white Gaussian noise output in several models over the 10Hz to 18GHz frequency range, with custom options to 40GHz. They are designed to be used either as laboratory instruments or as built-in system test facilities. The noise, which is diode generated, is amplified and the level can be varied in steps from 0 to 60dB depending upon the attenuator range option chosen. Control of the output level is via a remote GUI and can also be affected locally with the front panel controls and LCD screen.

There are a range of standard products available. Atlantic Microwave is also able to offer custom-designed solutions for specific applications.

Noise Generator Systems	ANG Series	RNG Series
Bench Instrument	✓	✓
Portable / Battery Powered	✓	-
Ruggedised / Battery Powered	-	-
Drone Mountable	-	-
Multi Channel	-	-

# Noise Generators

## ANG Series



Atlantic Microwave's Noise Generator provides up to 1 watt of white Gaussian noise output over 10MHz to 18GHz frequency range.

The noise, which is diode generated, is amplified and the level can be varied in 1dB steps from 0 to 10dB or optionally in 0.1dB steps from 0 to 111dB. A range of standard options are available, and we are able to provide custom solutions for specific application requirements.

This Noise Generator is designed to be used either as a laboratory instrument or as part of built-in system test facilities.

Portable Bench Instrument.

PRODUCTS					
Model	ANG-1609	ANG-1603	ANG-1612	ANG-2618	ANG-1810
Operating Frequency	100Hz-1GHz	10Hz-500KHz	1MHz-2GHz	2GHz-18GHz	2MHz-500MHz
Control & Monitoring	Local only via front panel				
Housing	Portable Bench Instrument				
Dimensions	370 x 110 x 300 mm				
RF Connectors & Impedances	50Ω SMA				

## RNG Series



Atlantic Microwave's broadband Noise Generator provides up to 1 watt of white Gaussian noise output over 10Hz to 18GHz frequency range. Custom-build options are available up to 40GHz

Control of the output level is either via a remote GUI or locally using the the front panel controls and LCD screen. Select models also feature an output mute option.

This Noise Generator is designed to be used either as a laboratory instrument or as part of built-in system test facilities.

19" x 1U rack mount.

PRODUCTS					
Model	RNG-1624	RNG-1601	RNG-1609	RNG-1803	RNG-2618
Operating Frequency	2GHz-4GHz	10Hz-20KHz	100Hz-1GHz	500Hz-500KHz	2GHz-18GHz
Control & Monitoring	Local via front panel and push buttons & display Remote via TCP/IP over Ethernet RJ45 connector				
Housing	Rack Mount				
Dimensions	19" x 1U x 13.5"				
RF Connectors & Impedances	50Ω SMA				



## Converters Overview

### Converter Range & Options

Atlantic Microwave Converters are designed for Satcom test applications. They offer a cost-effective solution for converting from L-band to all common Satcom uplink and downlink frequencies.

All Upconverter models incorporate fundamental frequency phase locked oscillators and double balanced mixers. They are weatherproof and can therefore be externally mounted, with DC supplied on the L-band RF input.

Select Downconverter models include an internal 10 MHz reference source. Agile or block Downconverter options are available, as well as single and dual band models.

Typical applications include Satcoms testing, telemetry, tracking & command (TTC), within Teleports, and Defence applications.

#### BENEFITS & APPLICATIONS



- Satcoms testing
- Teleports and earth stations
- Satellite operators
- Government and Defence
- Telemetry
- Cost effective
- Various mounting options
- Remote mounting
- Weatherproof





# Upconverters

## SUC Series



Atlantic Microwave Upconverters are designed for Satcom test applications that offer a cost-effective solution for converting from L-band to all common Satcom uplink frequencies. All models incorporate fundamental frequency phase locked oscillators and double balanced mixers and can be remote mounted with DC supplied on the L-band RF input.

The SUC series of weatherproof Masthead Upconverters, offer a cost effective uplink test signal solution for converting from L Band to all common satcom uplink frequencies.



All models incorporate fundamental frequency phase locked oscillators and double balanced mixers. The Converters are designed for remote mounting, with DC supplied on the L-Band RF input.

### PRODUCTS

Model	SUC-4975-C	SUC-28900-KA	SUC-16350-DBS-B	SUC-11800-KU	SUC-1075-S S	SUC-6950-X
Input Frequency	800-2800MHz	800-2800MHz	800-2800MHz	800-2800MHz	800-2800MHz	800-2800MHz
Output Frequency	Model Specific in S to Q Band	Model Specific in S to Q Band	Model Specific in S to Q Band	Model Specific in S to Q Band	Model Specific in S to Q Band	Model Specific in S to Q Band
Local Oscillator	+/-1ppm over -10 to +50C	+/-1ppm over -10 to +50C	+/-1ppm over -10 to +50C	+/-1ppm over -10 to +50C	+/-1ppm over -10 to +50C	+/-1ppm over -10 to +50C
Translation Band	L to C-Band	L to Ka-Band	L to DBS-Band	L to Ku-Band	L to S-Band	L to 7900-8400MHz
Housing	Outdoor, Weather-proof to IP65	Outdoor, Weather-proof to IP65	Outdoor, Weather-proof to IP65	Outdoor, Weather-proof to IP65	Outdoor, Weather-proof to IP65	Outdoor, Weather-proof to IP65
Dimensions	166 x 128 x 78mm	166 x 128 x 78mm	166 x 128 x 78mm	166 x 128 x 78mm	166 x 128 x 78mm	166 x 128 x 78mm
RF Connectors & Impedances	50Ω SMA	50Ω 2.92mm K-type   50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA



# Downconverters

## SDC Series



Atlantic Microwave Downconverters are designed for Satcom test applications that offer a cost-effective solution for converting from L-Band to all common Satcom Downlink frequencies.

The SDC series of Downconverters offer a cost effective downlink test signal solution for converting from Ku-band to all common satcom downlink frequencies.

PRODUCTS				
Model	SDC-975010750-DB-KU	SDC-9202040-L	SDC-1005011050-KU	SDC-1533-L
Input Frequency	10.70-12.75GHz	950-2150MHz	11.0-12.75GHz	1700-2400MHz
Output Frequency	950-2000MHz	30-110MHz	950-2000MHz	167-867MHz
Local Oscillator	9750-10750MHz	920-2040MHz		1533MHz
Translation Band	Ku-Band to L-Band	L-Band to IF	Ku-Band to L-Band	L-Band to UHF
Housing	2U Rack Mount housing	1U Rack Mount housing	1U Rack Mount housing	1U Rack Mount housing
Dimensions	19" wide x 2U high x 13.5" (343mm) wide	9" wide x 1U high x 13.5" (343mm) wide	1U high x 350 mm deep x 19 inches wide	1U high x 350 mm deep x 19 inches wide
RF Connectors & Impedances	50Ω SMA	50Ω BNC   50Ω SMA	50Ω SMA	50Ω SMA



# Signal Generators Overview

## Signal Generator Range & Options

Atlantic Microwave's Ethernet controlled Signal Generator range provides economical and versatile solutions where there is a need to input microwave frequencies for test purposes. They are typically used at antenna sites, equipment cabins, laboratories related to satellite communications, radar systems, and EW systems.

Covering frequencies from 0.5 to 46 GHz in bands specific to individual industries' requirements and also available for general purpose applications, these instruments are controllable either locally or remotely via a GUI.

They are designed to be flexible, thereby facilitating the application of more efficient testing regimes. Both the frequency and the level can be controlled by the user, and a range of housing options are available.

For our range of Miniature Signal Generators, see page 54.

### BENEFITS & APPLICATIONS



- Satellite bands L, S, C, X, Ku, DBS, Ka, Q
- Frequency steps from 1 KHz
- Local & remote control with GUI
- Internal or external reference
- Ethernet or RS485 control
- Good phase noise
- Choice of housing

## ESG Series

Atlantic Microwave's ESG range of Ethernet-controlled Signal Generators covers a wide range of microwave frequencies from 0.5GHz to 31.5GHz, with custom options available up to 46GHz, and all of the common Satcom frequency bands, including L, S, C, Ku, DBS, Ka and Q-Band.



ESG models can be operated either locally via the front panel controls and LCD screen or remotely via Ethernet or RS485 connection. All models offer good phase noise and a switchable 10MHz internal or external reference source, with frequency steps from 1KHz to 25MHz.

Housing options include standard rack mount, Portable Bench Instrument, ruggedised portable instrument or weatherproof ODU (remote control only).

In the standard housing, ESG series models are 19" x 1U x 13.5".

PRODUCTS					
Model	ESG-0200-0800	ESG-1800-2600	ESG-2650-3150	ESG-0050-20	ESG-0149-0330
Operating Frequency	2GHz-8GHz	18GHz-26GHz	26.5GHz-31.5GHz	0.5GHz-20GHz	1.495GHz-3.3GHz
Control & Monitoring	Local via front panel and push buttons & display Remote via TCP/IP over Ethernet RJ45 connector				
Housing	Rack Mount				
Dimensions	19" x 1U x 13.5" (343mm)				
RF Connectors & Impedances	50Ω SMA	50Ω SMA	50Ω 2.92mm K-type   50Ω SMA	50Ω SMA	50Ω SMA

## Splitter Range & Options

Atlantic Microwave's Splitters / Dividers provide a convenient-to-use signal splitter option, which is ready to install in a 19" rack system.

Standard models are available to cover transmit and receive frequencies in all commonly used satellite communication bands from L through to S, C, X, Ku, DBS, Ka to Q.

Standard divisions are 8, 16 or 32 ways but custom split ratios can also be economically provided.

System cabling can also be provided from the Atlantic Microwave range – DC to 50GHz.

### BENEFITS & APPLICATIONS



- L, S, C, X, Ku, DBS, Ka and Q-Bands
- 8, 16 or 32 way
- 19" rack mount
- Wide choice of connectors
- Easily installed
- High isolation input and output options

## SDT Series

Atlantic Microwave's Splitters / Dividers provide a convenient-to-use signal splitter option, which is ready to install in a 19" rack system.

Standard models are available to cover transmit and receive frequencies in all commonly used satellite communication bands from L through to S, C, X, Ku, DBS, Ka to Q.

Standard divisions are 8, 16 or 32 ways but custom split ratios can also be economically provided.

System cabling can also be provided from the Atlantic Microwave range – DC to 50GHz.



### PRODUCTS

Model	SDT-07000850-16	SDT-17502150-32	SDT-27503150-16	SDT-12002000-16	SDT-00800260-16	SDT-40005000-16	SDT-03500650-16
Operating Frequency	7GHz-8.5GHz	17.5GHz-21.5GHz	27.5GHz-31.5GHz	12GHz-20GHz	0.8GHz-2.6GHz	40GHz-50GHz	3.5GHz-6.5GHz
Translation Band	C-Band	DBS-Band	Ka-Band	Ku-Band	L-Band	Q-Band	S-Band
Housing				Rack Mount			
Dimensions	19" x 1U x 13.3" (343mm)	19" x 1U x 13.3" (343mm)	19" x 1U x 13.3" (343mm)	19" x 1U x 13.3" (343mm)	19" x 1U x 13.3" (343mm)	19" x 1U x 13.3" (343mm)	19" x 1U x 13.3" (343mm)
RF Connectors & Impedances	50Ω SMA	50Ω SMA	50Ω 2.92mm K-type   50Ω SMA	50Ω SMA	50Ω SMA	50Ω 2.4mm   50Ω SMA	50Ω SMA

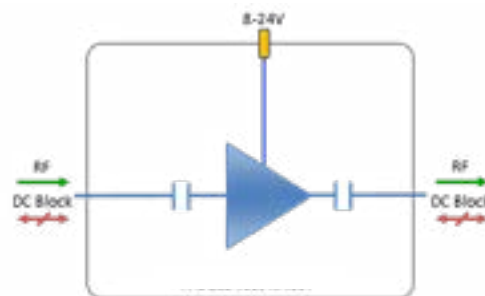


# Amplifier Overview

## Amplifier Range & Options

Atlantic Microwave Amplifiers are designed to compensate for losses in microwave and RF signal paths, either between system components and across site or as a driver for high power transmission amplifiers.

The amplifiers operate in specific C, Ku, DBS and Ka uplink or downlink frequencies and some multi-band models provide the versatility of covering both up - and downlink frequencies.



### BENEFITS & APPLICATIONS



- L, C, X, Ku, DBS, Ka-Bands
- Multi-bands
- Driver & cross site
- Flat response
- 1U rack height/portable
- Custom options



## ASL Series



Atlantic Microwave Amplifiers are designed to compensate for losses in microwave and RF signal paths, either between system components and across site or as a driver for high power transmission amplifiers.

The amplifiers operate in specific C, Ku, DBS and Ka Uplink or Downlink frequencies and some multi-band models provide the versatility of covering both up and Downlink frequencies.

Alternatively, some models cover more than one link frequency regime.

### PRODUCTS

Model	ASL-036064	ASL-280310	ASL-009020	ASL-173184	ASL-000002	ASL-117145
Translation Band	C-Band	Ka-Band	L-Band	DBS-Band	IF Line	Ku-Band
Housing	Rack Mount					
Control & Monitoring	Local only via front & rear panels					
Dimensions	19" x 1U x 13.3"	19" x 1U x 13.3"	19" x 1U x 13.3"	19" x 1U x 13.3"	19" x 1U x 13.3"	19" x 1U x 13.3"
RF Connectors & Impedances	50Ω SMA	50Ω 2.92mm K-type   50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA



## BSL Series



Model BSL Series are designed to compensate for losses in microwave and RF signal paths, either between system components and across site or as a driver for high power transmission amplifiers.

This portable amplifier operates in Ku-Band Uplink or Downlink frequencies.

PRODUCTS						
Model	BSL-036042	BSL-177212	BSL-009017	BSL-072084	BSL-000002	BSL-127145
Translation Band	C-Band	Ka-Band	L-Band	X-Band	IF Line	Ku-Band
Housing	Portable Bench Instrument					
Local Control & Monitoring	Local only via front panel					
Dimensions	260x110x360mm	260x110x360mm	260x110x360mm	260x110x360mm	260x110x360mm	260x110x360mm
RF Connectors & Impedances	50Ω SMA	50Ω 2.92mm K-type   50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA	50Ω SMA



# Modular System

## Genus 1U Chassis

The Genus chassis has a modular design which can house any combination of compatible modules within the unit. Supplying operators with a flexible and scalable solution, that reduces spare parts and rack space requirements. The 1U chassis houses up to 17 RF modules including Amplifiers, BUC/LNB Power Supply's, Frequency Converters, Matrices, RF over Fibre, Redundancy Switches and Test Loop Translators, which can be mixed.



Providing a compact 1U system that is smaller in comparison with traditional 19" solutions, which could require 2U, 3U, 4U or more to achieve the same functionality. The Genus chassis provides a cost-efficient solution with field-replaceable components.

The RF modules are field-serviceable and can be inserted whilst the shelf is in service, giving excellent levels of flexibility and resilience. With additional reliability from dual redundant hot-swap power supplies & field serviceable RF modules, HMI, CPU and optional user replaceable internal and external 10MHz reference source.



### BENEFITS & APPLICATIONS



- Teleports, ground stations, maritime high resilience applications and unmanned sites
- High resilience RF distribution where single points of failure can be minimised
- Redundancy applications for remote satellite teleports.
- V/HTS gateways
- Signal distribution – Amplifiers, BUC/LNB Power Supplies, Frequency Converters, Matrices, RF over Fibre, Redundancy Switches, Test Loop Translators are available
- Cost-efficient



## Test Loop Translator for 1U Chassis

The Genus series Test Loop Translators are designed to be housed in the Genus 1U chassis, with 60dB attenuation and LO synthesised frequency independently controlled via local or remote control.



The 1U chassis has capacity for up to 2 TLT modules. These can be upconverters, downconverters, or a combination of both.

### BENEFITS & APPLICATIONS



- To replace the satellite link for test and alignment of earth station systems operating in the C to L frequency bands
- SNG testing
- Satcoms & Teleports testing



### PRODUCTS

Model	TLT-D-C3L1-1005-S5S5	TLT-D-C2C1-1002-S5S5	TLT-D-K3K1-1003-S5S5	TLT-D-K4KX-1004-K5K5
Operating Input Frequency	5.725-6.725GHz	5.725-6.725GHz	12.75-14.5GHz	27.0-31.0GHz
Operating Output Frequency	0.95—1.95GHz	3.4-4.4GHz	10.7-12.75GHz	17.3-21.2GHz
Translation Band	C to L-Band	C-Band input C-Band output	Ku-Band input Ku-Band output	Ka-Band input Ka-Band output
Housing	19" Genus Chassis	19" Genus Chassis	19" Genus Chassis	19" Genus Chassis
Local Control & Monitoring	Front panel push buttons & display	Front panel push buttons & display	Front panel push buttons & display	Front panel push buttons & display
Remote Control & Monitoring	TCP/IP over Ethernet RJ45 connector	TCP/IP over Ethernet RJ45 connector	TCP/IP over Ethernet RJ45 connector	TCP/IP over Ethernet RJ45 connector
Dimensions	1U high x 343mm deep x 19" wide	1U high x 343mm deep x 19" wide	1U high x 343mm deep x 19" wide	1U high x 343mm deep x 19" wide
RF Connectors & Impedances	50Ω SMA	50Ω SMA	50Ω SMA	50Ω 2.92mm K-type   50Ω SMA

## Noise Generator for 1U Chassis

The 1U chassis has the capacity for 16 modules per chassis including one Noise Generator module.



### BENEFITS & APPLICATIONS

- Remote and local operation
- 50—2500MHz
- White symmetrical Gaussian noise
- Flat output
- Fine attenuation control

### PRODUCTS

Model	IST-G1S-B3-01-S5
Operating Frequency	50-2500MHz
Housing	Genus 1U Chassis
Control & Monitoring	Local via front panel and push buttons & display Remote via TCP/IP over Ethernet RJ45 connector
Dimensions	1U high x 550mm deep x 19" wide
RF Connectors & Impedances	50Ω SMA

## Signal Generator for 1U Chassis



Signal Generators covering VHF, UHF, L, C, X, Ku, DBS, Ka, Q, and V-bands, housed in the compact, multi-configurable Genus 1U chassis.

Covering a range of frequencies, offering flexibility in a compact and lightweight housing.

Remotely controllable via webpage through ethernet port or locally controllable using HMI touchscreen.



### BENEFITS & APPLICATIONS



- Wide range of satellite bands
- Ideal for precision applications
- 10 KHz frequency steps
- Optional external reference
- Compact 1U chassis
- Remote & local control

### PRODUCTS

Model	SG-G1S-QX-04-K5	SG-G1S-KX-03-S5	SG-G1S-B3-01-S5	SG-G1S-KAX-05-K5	SG-G1S-QX-06-K5	SG-G1S-CX-02-S5
Operating Frequency	20-52GHz	50MHz-20GHz	50MHz-3GHz	50MHz-40GHz	50MHz-52GHz	50MHz-6GHz
Housing	Genus 1U Chassis					
Control & Monitoring	Local via front panel and push buttons & display Remote via TCP/IP over Ethernet RJ45 connector					
Dimensions	1U high x 550mm deep x 19" wide	1U high x 550mm deep x 19" wide	1U high x 550mm deep x 19" wide	1U high x 550mm deep x 19" wide	1U high x 550mm deep x 19" wide	1U high x 550mm deep x 19" wide
RF Connectors & Impedances	50Ω 2.92mm K-type   50Ω SMA	50Ω SMA	50Ω SMA	50Ω K-type	50Ω 2.92mm K-type   50Ω SMA	50Ω SMA



# RF Components Overview

## RF Components Range & Options

With RF Components Atlantic Microwave recognise that not every application can be satisfied with a standard product and, therefore, many of the components we supply are either variations of standard products or completely custom in design.



For our full range, along with up-to-date RF specifications, please visit our website [www.atlanticmicrowave.com](http://www.atlanticmicrowave.com).



## Antennas



Horn Antennas

The Atlantic Microwave Horn, Patch and Spiral Antennas show uniform gain through their frequency span, resulting in excellent performing characteristics.

The convenient shape reduces the antenna volume and weight making them suitable for mobile applications during operation.

Made of lightweight corrosion-resistant aluminium, the antennas have been designed to provide years of trouble-free indoor and outdoor operational capabilities, in a fixed location, ideally suited for EMI testing, system integration, CATR, direction finding, surveillance and antenna gain and pattern measurements.

The closed Radome can adapt to different light and weather conditions and harsh working environment.



Patch Antennas

### APPLICATIONS



- EMI testing
- System integration
- Compact antennas test range (CATR)
- Direction finding surveillance
- Antenna gain & pattern measurements



Spiral Antennas





# RF Components

## Amplifiers

Atlantic Microwave offer a range of amplifiers which cover from 0.3GHz - 30GHz (IF, C-Band, S-Band, L-Band, Ku-Band, Ka-Band) and broadband frequency ranges.



AOX Series

The AOX series are a range of miniature, versatile, small signal, low noise amplifier modules which have a multi-octave bandwidth and a very wide operating temperature range. The MIC design utilises GaAs PHEMT distributed amplifier MMIC technology, together with proprietary matching circuits within a robust light-weight aluminium alloy housing fitted with SMA Female connectors.

Our drop-in series of miniature amplifiers utilise thin film and MMIC technology to provide very versatile and reliable gain modules. Each amplifier can be used either as a modular unit with the SMA female connectors fitted or inserted directly into a microwave assembly with the connectors removed. In addition to the standard models listed, custom units can be offered to meet the requirements of specific applications.



Drop-in Series

### BENEFITS



- Ultra wide temperature range
- Excellent gain flatness
- Low voltage
- Low cost
- Low noise
- High efficiency
- Small size
- Excellent linearity
- High gain
- Flat response

### APPLICATIONS



- RFI/EMC testing
- Broadcasting
- Telecommunications
- Cellular radio
- Satcom
- Receiver systems
- TWT replacement
- Radar & Defence systems
- Countermeasures
- Remote antenna site testing



## Attenuators



Atlantic Microwave's attenuators reduce the amplitude level of an incoming signal for DC - 3GHz, DC - 6GHz, DC - 18GHz, DC - 26.5GHz and DC - 40GHz frequency ranges.

We also supply Attenuator Kits, which are a useful engineering aid, ideal for test and design applications in the laboratory.

The kits are provided in a convenient to use, organised storage box with individual compartments for each attenuation value.

Attenuator Kits are available in DC-3GHz, DC-6GHz and DC-18GHz frequency ranges.





## Bias Tees



Atlantic Microwave's Bias Tees, ABT series, are 3-port devices which allow DC bias to be either added to or subtracted from an RF signal line without affecting the RF signal.

These Bias Tees can be used in transmission systems to deliver DC power and RF signal to amplifier and frequency converter components using only one coaxial cable.

### BENEFITS & APPLICATIONS



- Ultra wide temperature range
- Only one coaxial cable needed
- Signal is unaffected

## Circulators



Atlantic Microwave's coaxial circulators are designed for low power applications in communications, test and measurement and scientific research applications requiring excellent RF performance in a compact and economic package.

### BENEFITS & APPLICATIONS



- Compact design
- SMA connectors
- Communications
- Test and measurement
- Scientific research





# RF Components

## Couplers

Atlantic Microwave offer directional and hybrid couplers, which operate over a range of frequencies with 3, 6, 10, 20 and 30dB coupling factor options.



### BENEFITS & APPLICATIONS



- Miniature size
- High isolation
- Low VSWR
- RF shielded
- Low loss
- Good coupling accuracy
- High directivity
- Narrow and broadband units

## DC Blocks

Atlantic Microwave's ADB series of DC Blocks contain a capacitor in series with the conductors to prevent the flow of DC and audio frequencies whilst permitting RF signals to flow with minimum interference up to 40GHz. Available in a choice of Inner, Outer and Inner-Outer types.



### BENEFITS & APPLICATIONS



- Miniature size
- Choices of inner, outer and inner-outer



# RF Components

## Detectors

Atlantic Microwave offer tunnel diode and zero bias detectors.



### BENEFITS & APPLICATIONS



- High sensitivity
- Low VSWR
- Flat response
- Low output resistance
- No bias
- High temperature stability

## Filters

Atlantic Microwave offers a standard range of low pass, high pass, band pass and band stop filters for a range of frequencies. We also offer a bespoke filter design and production service, which is available at low volume.



### BENEFITS & APPLICATIONS



- Miniaturised suspended substrate
- Quasi-elliptical function
- Excellent temperature stability
- Very rugged design
- Higher frequencies available on request



## Isolators

Atlantic Microwave offer coaxial, drop-in, low frequency and VHF isolators.

Coaxial Isolators are designed for low power applications in communications, test and measurement and scientific research applications requiring good RF performance in a compact and economic package.



### BENEFITS & APPLICATIONS



- Compact design
- Fast delivery
- Internal load
- Economic
- Communications
- Test and measurement
- Scientific research applications

## Oscillators

Atlantic Microwave's phase locked oscillators are available with internal and external reference options and a range of output frequency options.



### BENEFITS & APPLICATIONS



- Compact size
- Low spurious
- Good phase noise
- Internal or external reference
- Low current
- Custom design
- Low microphonics



# RF Components

## Splitters / Dividers



Atlantic Microwave's passive power dividers/splitters cover a range of frequencies up to 40GHz and are available in 2-way, 4-way and 8-way modules.

### BENEFITS & APPLICATIONS



- Miniature size
- Flat response
- High isolation
- RF shielded
- Robust construction
- Low insertion loss
- Wide band operation
- Stable performance over temperature
- High power handling capability
- Very cost effective



## Terminations

The XMA terminations are power absorbing loads properly matched to the characteristic impedance of a transmission line to prevent signals from reflecting off the end.



### BENEFITS & APPLICATIONS



- Convection cooled
- Low VSWR
- Miniature size



# RF Components

## Switches

Atlantic Microwave's range of coaxial & PIN Diode switches are available as transfer, SPST, SPDT, SP4T, SP6T, SPXT and DPDT.



### BENEFITS & APPLICATIONS



- Low insertion loss
- High isolation
- Fast switching speed
- Failsafe
- Without indicators
- Low PIM
- Various connector options
- Various voltage options
- Octave & multi-octave
- LTT control

## Synthesisers

Atlantic Microwave's range of synthesisers operate over a range of frequency ranges with internal and external reference options.

The Miniature Single Phase-Locked Loop Frequency Synthesisers offers excellent performance combined with small size and a high degree of versatility.



### BENEFITS & APPLICATIONS



- Miniature size
- High degree of versatility
- Good phase noise
- Non-volatile memory
- Excellent performance
- Telecommunications
- Radar
- Test instrumentation



## Signal Generators



Atlantic Microwave's miniature signal generators provide a USB Control Interface connection to an unpowered hub with coaxial power input.

Our Miniature Signal Generators provide a compact solution where there is a need to input microwave frequencies from 25 – 3000MHz on L, S and C band or 25 – 6000MHz on L, S and C band.

The Miniature Signal generator are remotely controllable in frequency and level via a GUI or by terminal applications (ASCII commands).

The devices are controlled via USB, Ethernet or RS-232.

Higher frequency signal generators are available on request.



### BENEFITS & APPLICATIONS



- Miniature size
- USB & Ethernet interface
- Full range tuning
- Frequency & level control
- Non-volatile memory
- RoHS compliant
- External or internal reference



## Cables & Accessories



Atlantic Microwave can provide a range of coaxial and test cable assemblies to suit your requirements.

Atlantic's coaxial cable assemblies provide the microwave system designer with versatile solutions to equipment and subassembly cabling, without the need for detailed design of semi-rigids.

Atlantic's ASF series is comprised of a copper/tin composite outer conductor. The cable can be handformed in situ while maintaining performance, similar to formed copper semi-rigid of equivalent size. The high resistance to work-hardening allows for subsequent bend adjustments.

Atlantic's AFX series is comprised of a braided outer conductor over a silver plated spiral strip. The cable can be repeatedly flexed maintaining performance, equivalent to formed copper semi-rigid of equivalent size.



### BENEFITS & APPLICATIONS



- Wide choice of lengths
- Weight saving
- Very cost effective
- Reformable
- Anti-torque connectors
- Wide range of alternative connectors
- Flexible

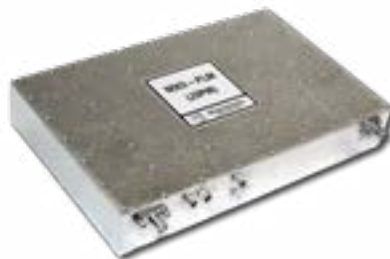
# UK Authorised Supplier

Atlantic Microwave distribute and stock active, passive and control RF Microwave components and interconnects.

We are a UK Authorised Supplier for a number of carefully selected technology partners in the microwave and RF industry.

Within the UK, Atlantic Microwave distribute components from:

- XMA
- BeRex
- Luff Research
- Wenzel Associates
- Weinschel Associates
- Precise Time & Frequency
- Relcomm



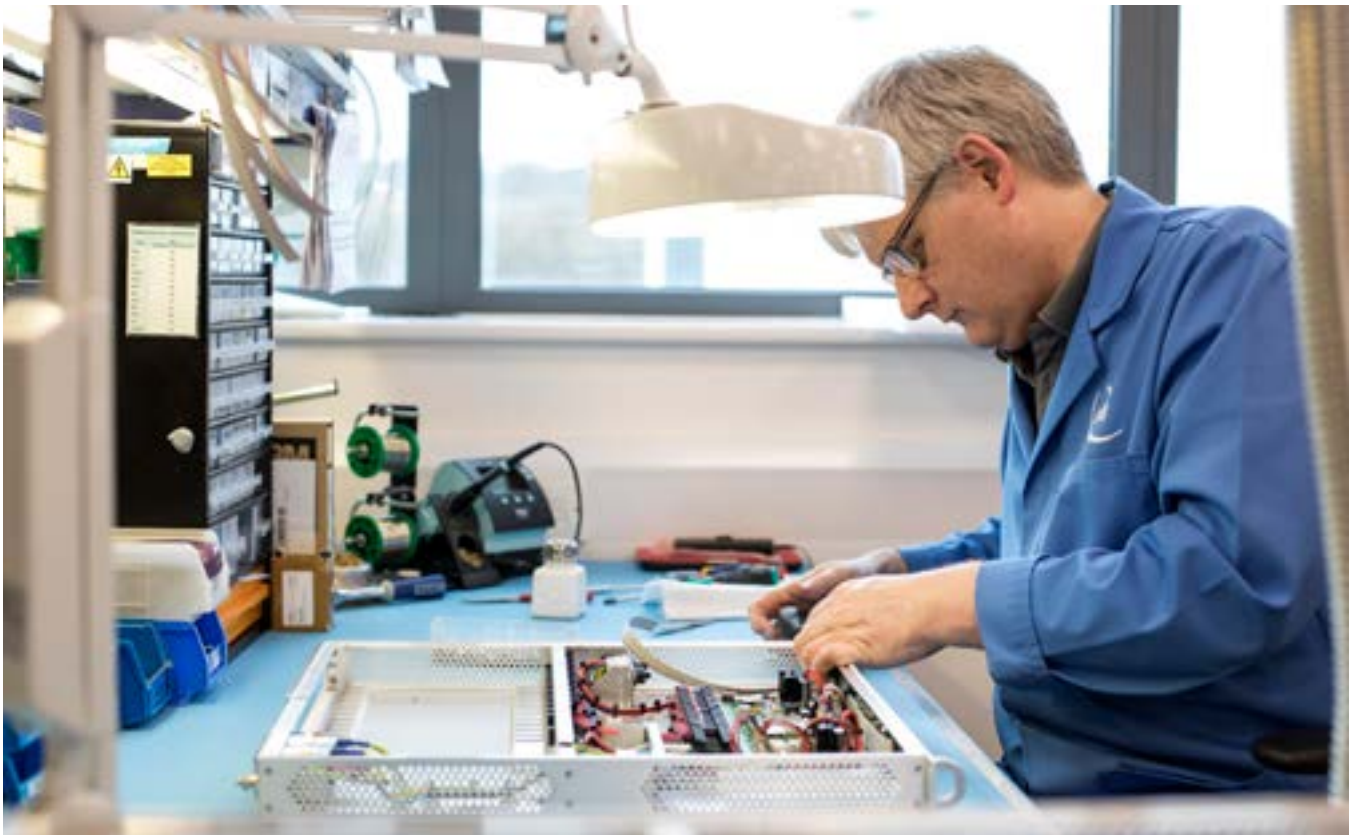


# New Products – Coming Soon


Atlantic Microwave has a heritage of excellence and a culture of innovation, so our range of RF products is always growing.

We have new products launching in the next 12 months as we expand our range of Satcom test equipment to cover new bands, as well as diversifying our leading RF components range.

Visit our website for up to date information, where you can find out which international exhibitions our team is attending, see new product launches, sign up to our e-newsletter, or follow us on social media for the latest announcements.



For up to date information, please visit our website  
[www.atlanticmicrowave.com](http://www.atlanticmicrowave.com).

 UK Office:  
Telephone: +44(0)1376 550 220  
Email: [sales@atlanticmicrowave.co.uk](mailto:sales@atlanticmicrowave.co.uk)

  
**Atlantic Microwave**  
A Division of ETL Systems







# Atlantic Microwave

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Leaders in Satcom RF Testing  
[www.atlanticmicrowave.com](http://www.atlanticmicrowave.com)

 UK Office:

Telephone: +44(0)1376 550 220

Email: [sales@atlanticmicrowave.co.uk](mailto:sales@atlanticmicrowave.co.uk)

