

# PHASE | VISLINK: Antenas e Amplificadores

- Antenas.....p. 2
- Barrel Booster.....p. 4
- Link L3205 Transmitter Case.....p. 6





# Antennas



Gigawave designs and manufactures a wide range of antennas to suit all microwave transmission requirements. The antennas are designed to perform in all conditions, and are used everyday throughout the world in a variety of broadcast and security applications.



## Omni/Hemi Antennas CO4-Omni CH02-Hemi

The CO4 and CH02 are circular polarised antennas designed to allow unrestricted movement of a transmitter or receiver. Both units provide full 360 degree coverage whilst the CH02 also has vertical in-fill which makes it particularly suitable for transmission to and from helicopters.

	CO4	CH02
Gain	4dBi	2dBi
Frequency	Available 1.3 - 13.8GHz	
Bandwidth	Typically 12% of RF frequency	
Axial Ratio	2dB (nom.)	2dB (nom.)
Pattern	Omnidirectional	Hemispherical
-3dB Point	40°	180°
Polarisation	Right or left circular	
Height	Frequency dependent	
Diameter	Contact factory for further information	



## Helix Antennas HX14-Hand Held Helix SX18-Single Helix DX21-Dual

Helix antennas are all circular polarised and have good axial ratio characteristics. As such they are ideally suited to a wide range of ENG applications where high directivity is important.

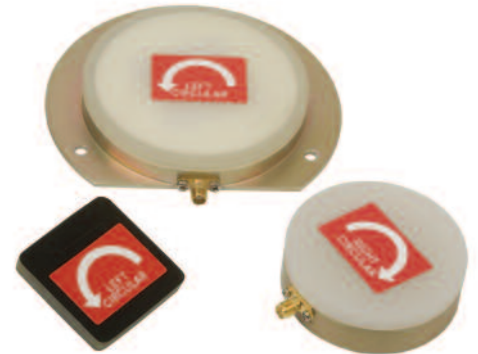
	HX14	SX18	DX21
Gain	14dBi	18dBi	21dBi
Frequency	Available 1.3 - 7.8GHz		
Bandwidth	Up to 20% of RF frequency		
Axial Ratio	2dB (nom.)	2dB (nom.)	2dB (nom.)
Pattern	Directional		
-3dB Point	40°	27°	20°
Polarisation	Right or left circular		
Height	Frequency dependent		
Diameter	Contact factory for further information		



## Low-Profile Antennas

The main advantages offered by low-profile patch antennas are low weight and minimum wind load. Typical applications are on-board camera systems, uplinks, downlinks, and other situations where minimal wind loading is required.

	PA6	PA9	PA12	PA18
Gain	6dBi	9dBi	12dBi	18dBi
Frequency	Available 1.3 - 13.8GHz			
Bandwidth	Typically 10% of RF frequency			
Axial Ratio	2dB (nom.)	2dB (nom.)	2dB (nom.)	2dB (nom.)
Pattern	Directional			
-3dB Point	90°	60°	40°	40°
Polarisation	Right or left circular			
Height	Frequency dependent			
Diameter	Contact factory for further information			



## Fan Beam Antennas

The FB10 and FB13 are high gain antennas providing 90 degree sector coverage. They are commonly installed on buildings and use remote switching to provide complete north/south/east/west coverage for central receive sites. Fan Beam antennas are also used to receive signals from digital wireless camera systems in sports stadiums and other locations.

	FB10	FB13
Gain	10dBi	13dBi
Frequency	Available 1.3 - 13.8GHz	
Bandwidth	Typically 10% of RF frequency	
Axial Ratio	2dB (nom.)	2dB (nom.)
Pattern	Directional	
-3dB Point H Plane	90°	90°
-3dB Point E Plane	40°	26°
Polarisation	Right/left circular or horizontal/vertical	
Height	Frequency dependent	
Diameter	Contact factory for further information	



**Collinear Antennas** - COL series antennas provide 360 degree coverage with relatively high gain. This makes them ideal as a cost effective central receive antenna or as a transmit antenna in specialised mobile applications. CPCOL antennas offer circular polarisation, which allows operation in medium multipath surroundings. They are therefore suitable for short to medium range helicopter air to ground transmissions.

**Parabolic Antennas** - Feeds are available from 0.8GHz to 24GHz with spun aluminium reflectors from 0.3m to 1.2m. These are ideal for portable point-to-point and long distance outside broadcast applications.

**Horn Antennas** - Available in a variety of designs to suit specific customer requirements, using either conventional or stripline construction for minimum size and weight. Typical applications are hand held mobile or short range point-to-point transmissions in frequency bands above 7GHz.

**Specialised Antennas** - Gigawave is always pleased to design antennas to meet special customer requirements.

Gigawave designs and manufactures a wide range of portable and fixed microwave equipment for television outside broadcasts, electronic newsgathering and security applications.

**Important Information:**

Some products are supplied in SD (Standard Definition) only versions. Please contact the Gigawave Sales Team for HD (High Definition) upgrade options.

Specifications may alter at the discretion of Gigawave or to meet customer specific requirements.



# L3211 Barrel Booster



## Barrel Booster

### Overview

The L3211 Barrel Booster has been specifically tailored for wireless camera back applications. Designed to fit directly onto the RF output from the Link range of transmitters, this unit is small, lightweight and easy to use. This amplifier includes ALC (Automatic Level Control) in order to provide a constant RF output power for all transmitter power level settings. The L3211 has a wide DC operating range (9-28V) and can be powered via the RF input connector\* or using the Lemo power cables supplied with the unit. These power cables allow the option to connect to the Lemo power socket on the wireless transmitter or to the D-Tap adaptor from an IDX or Anton Bauer battery plate.

Incorporating LDPD (Link Digital Pre-Distortion) for improved adjacent channel rejection, integral harmonic filtering and a power save mode this amplifier is a must have addition to any wireless camera system where extended range is required.

\* Switchable phantom power to the L3211 barrel booster is provide in the L1530-1927 RF module.

### Features

- Boosts RF transmitter power for extended range.
- Provides optimal trade-off between transmit power, DC power consumption and spectral efficiency.
- Small, light-weight & robust construction.
- Designed to mate directly to the Link range of camera back transmitters.
- Incorporates LDPD (Link Digital Pre-Distortion) for improved adjacent channel rejection.
- Includes input and output RF harmonic filters to ensure regulatory compliance.
- ALC (Automatic Level Control) maintains a constant RF output for all transmitter settings.
- Can also be operated as a fixed gain power amplifier for user defined RF output powers.
- RF output fully protected against mis-match damage.
- Powered via RF input connector or external Lemo connector.
- Power save mode when RF muted.
- Wide DC (9-28V) operating range.
- Tri-colour LED indicates unit status and RF output mode setting.

# Specifications

Electrical  
At 20±5°C ambient

Parameter	Conditions	Min	Typ	Max	Units	Comment
Frequency Range	L3211-2027	2000	-	2700	MHz	
	L3211-6475	6400	-	7500	MHz	Does not include LDPD
RF Output Power	ALC Mode	+28 (0.63)	28.75(0.75)	+30 (1.0)	dBm (W)	
RF Input Power Range	ALC Mode	+10 (10)	-	+24 (250)	dBm (mW)	
Gain	Fixed Gain Mode	10	-	15	dB	
Spectral Regrowth	Adjacent Channel	-	-	-40	dBc	EN 302 064-1 §7.3.4
	Alternate Channe	-	-	-46		
Spurious	25MHz - 1GHz	-	-	0.25(-36)	nW(dBm)	EN 302 064-1 §7.4.6
	1GHz - 27GHz	-	-	1(-30)		
Return Loss	-	10	-	-	dB	
RF Input Damage Level	CW			+27 (0.5)	dBm (W)	
	Pulsed			+36 (4)		
Static Protection	Direct Discharge			8	kV	IEC61000-4-2
	Air Discharge			15		
Temperature Rise	Above Ambient		32		°C	IEC60417-5041
Supply Voltage		9		28	V	
Power Consumption	RF OFF		7.5		W	
	RF ON		14		W	

## Compliance

Standard	Class/Category	Version
ETSI EN 302 064-1	Category 1	V1.1.2
ETSI EN 301 489-28	Class B	V1.1.1

Optional power cables are available as listed below

9003434	Barrel Booster ALC Power Cable (Lemo straight)
9003435	Barrel Booster ALC Power Cable (IDX D-TAP)
9003437	Barrel Booster ALC Power Cable (Anton Bauer P-TAP)
9003438	Barrel Booster ALC Power Cable (Lemo right-angle)
9007896	Barrel Booster ALC Power Cable (XLR 3pin)
9008305	Barrel Booster Power Cable (Fixed Gain Lemo)
9008304	Barrel Booster Power Cable (Fixed Gain IDX D Tap)
9011941	Barrel Booster Power Cable (75cm un-terminated)



## Environmental

### Operating Temperature

(Portable Equipment)  
• -10°C to +50°C

### Storage Temperature

• -20°C to +80°C

### Humidity

• 95%  
• Non-Condensing

### IP Rating

• 54

## Mechanical

### RF/DC Input Connector

• 50Ω N Type (M)

### RF Output Connector

• 50Ω N Type (F)

### Power Connector

• 6-Pin Lemo Socket

### Phantom Power

• Applied to RF Input Connector

### Weight

• 0.32Kg

### Length

• 106mm (inc. connectors)

### Diameter

• 62mm

### Status Indicator

• Green (DC Power/ALC OK)  
• Orange (DC Power OK/Fixed Gain)

Power Connector 6-Pin Lemo Socket

### L3211 Socket

• EEG.OB.306 CLV

### Mating Plug

• FGG.OB.306 CLA (straight)  
• FHG.OB.306 CLA (right-angle)

### Pin Out

• 1 & 2: GND, 3 & 4: +VE, 5 & 6: NC

Note: When operating the barrel booster in the 'Fixed Gain' mode the RF output power is no longer controlled by the barrel booster's ALC and therefore it is the operator's responsibility to ensure that the RF drive into the barrel booster is at an appropriate level not to cause over-drive or damage and to maintain regulatory compliance.



Hot surface, do not touch barrel booster heat sink surface during operation.



# LINK L3205 Transmitter Case



## High Power Suitcase Amplifier for Camera Back Transmitter

### Overview

The Link transmitter case provides a portable 5 Watt power amplifier for traditional camera back transmitters. The transmitter can be mounted into the case using standard battery mounts and is easily removed to convert back to a camera back operation.

Power, audio, video and data are all routed to the transmitter from an external connection panel.

### Connections and Controls

The control panel inside the case controls the RF output and power. LED indicators report RF and power levels.

### Features

- 5 watt power amplifier
- Mounting for camera transmitter using standard camera mounts: Sony V-mount / IDX, PAG and Anton Bauer
- Weatherproof case with power, audio, video and data connections
- Storage pouches inside hinged cover
- 12 - 28V DC with optional AC to DC adapter
- Easy to transport while meeting airline guidelines

# Specifications

## General:

- RF output.....37dBm/5W ultra-linear COFDM
- Output adjustment.....1 to 5 Watts
- IM3 .....+63dBm
- AGC.....Protected Input  
(third Order Inter-Modulation)
- Frequency Range.....2.0 - 2.4GHz  
2.5 - 2.7GHz  
3.4 - 3.6GHz
- Baseband input via TX.....NTSC, PAL, SDI or ASI  
2 x balanced analogue audio (line level)
- Power requirements .....12 - 28V DC 140Watts  
(Optional 100 - 240V AC adapter)

## Physical:

- Dimensions ..... (W x H x D) 43 x 34 x 24cm  
16.9 x 13.4 x 9.6"
- Weight (without TX).....16.4Kg  
14lbs 8oz

## Inside Control Panel:

- Off - Remote / On.....Toggle switch
- Fuse.....20 Amp
- Reset switch.....Push type

## Indicators:

- Power.....Green
- Low volts.....Red
- RF out .....Amber

## Connection Panel (side):

- RF out.....N type
- DC in.....Speakon NL2 bucaneer
- Audio CH 1 (L).....XLR
- Audio CH 1 (R).....XLR
- Control and data.....12 pin bucaneer
- Composite, SDI, ASI .....BNC

## Options:

- AC to DC power adapter



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