

# SBR Series Baseband Repeater

# COBHAM

The most important thing we build is trust.

The SBR Series Small Baseband Repeater from GMS can greatly increase the range and flexibility of your microwave link. When you need to increase range or overcome physical obstructions like mountains or buildings, the SBR is your solution! The SBR combines an XR Series receiver with a CT Series transmitter in a small integrated package. Both, the receiver and transmitter are set-up and monitored via the control panel. The XR Series receiver receives and demodulates the RF signal. The composite baseband signal is sent to the transmitter for modulation and retransmission at a user defined frequency. The receiver has both video and dual audio outputs for local monitoring of the repeater's received signal as well as a signal strength indicator. The transmitter outputs 1 Watt and can be boosted to over 40 Watts using one of GMS' power amplifiers. Both the receiver and transmitter are fully synthesized (frequency tunable) and can be factory set to operate (in-bands) within the L, S, or C-Bands.



## Specifications:

### Receive Section:

#### RF:

Frequency Bands: 0.9 – 6 GHz (In-Bands)  
Frequency Stability:  $\pm 0.005\%$   
Noise Figure: 5 dB L/S; 7 dB C typical  
Dynamic Range/Sensitivity: 75 dB \ -83 dBm: S/N weighted  
of 43 dB for L/S & 40 Db for C Typical  
Input Impedance: 50 Ohms

#### Video<sup>1</sup>:

Output Impedance: 75 Ohms  
Output Level: 1 Volt (peak to peak)  
De-emphasis: Per EIA/CCIR 525/625 line  
Frequency Response: 10 Hz-5 MHz NTSC; 5.5 MHz PAL

#### Audio<sup>1</sup>:

Subcarriers Available: 4.83, 5.6, 5.8, 6.0, 6.2, 6.5, 6.8, 7.02,  
7.5, 8.3, 8.5, 8.59 MHz; (any two)

Output Impedance: 600 Ohms balanced  
Output Level: +9 dBm

#### Connectors:

RF Input Connector:	J2, SMA		
A/V/ Power Connector:	J1, DB-15		
Pin	Signal	Pin	Signal
1	+11 to 15 VDC	9	Video out 1
2	Audio 2 Low	10	Video out 2
3	Audio 2 High	11	Digital Clock
4	Audio 1 Low	12	PLL Enable
5	Audio 1 High	13	Digital I/O
6	Analog GND	14	Video GND
7	Signal Strength	15	Comp. Video out
8	Audio GND		

#### Rx Power:

Voltage: 11-15 Vdc  
Current: 400 mA

### Transmit Section:

#### RF:

Frequency Range: 0.9 – 6 GHz (In-Bands)  
Frequency Stability:  $\pm 0.005\%$   
Power Output: 1W  
Spurious: Lower than -25 dBm  
Sensitivity:  $\pm 4$  MHz/Volt (FM)

#### Audio/Video (FM Modulated): Composite from Rx section.

#### Connectors:

RF Output Connector:	SMA Female		
Video Input Connector:	BNC Female		
Audio/Power Connector:	DB-9F		
Pin	Signal	Pin	Signal
1	DC Power (+12V)	6	Composite in
2	RS-232 Tx	7	RX Signal Strength
3	RS-232 Rx	8	SCL
4	Rx Lock Detect	9	SDL
5	GND		

#### Tx Power:

Voltage: 11 - 15 Vdc  
Current: 200 mA at 250 mW RF out  
560 Ma at 1W RF out

#### Combined Specifications:

#### Mechanical:

Size: 3.25" x 4.25" x 1.85"  
8.25cm x 10.8cm x 4.7cm  
17.89 oz./507.4 grams

#### Weight:

#### Environment:

Temperature: -20° to + 60° C  
Humidity: Up to 100% non-condensing

#### Power:

Voltage: 11-15 VDC  
Current: 600 mA at 250 mW RF out  
960 mA at 1W RF out

Specifications subject to change without prior notice  
Typical values shown unless min or max is specified  
100-DS0313X1 03/23/09 1 of 1

1916 Palomar Oaks Way, Suite 100 Carlsbad, CA 92008  
Tel. (760) 496-0055 [gms-sales@cobham.com](mailto:gms-sales@cobham.com)  
Fax. (760) 496-0057 GMS PRODUCTS