

# Blonder Tongue

# 4K Modulator

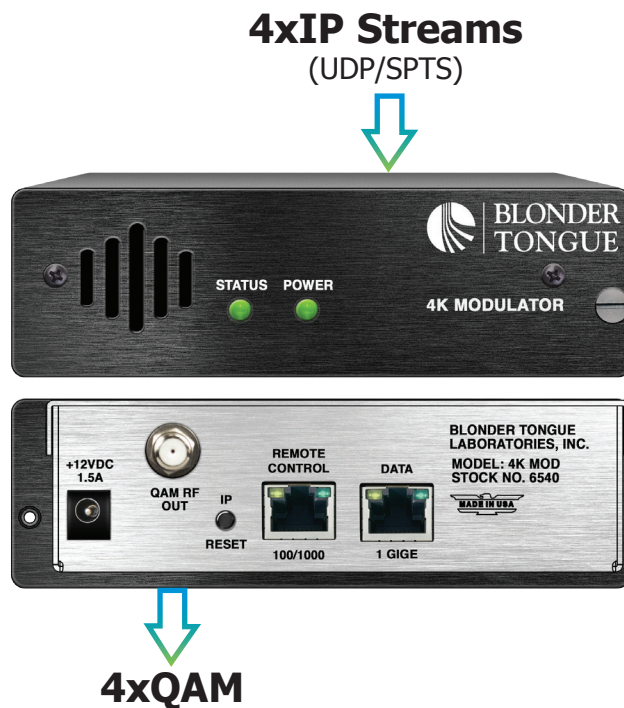
## 4K Content over RF

### SOLUTIONS FOR ALL YOUR APPLICATIONS

Blonder Tongue's cost-effective and easy-to-deploy **4K Modulator** enables distribution of 4K content over RF networks by mapping transport streams containing 4K (with H.265 encoding) onto RF QAM channels.

The **4K MOD** accepts up to 4xSPTS in H.265, H.264 or MPEG-2 formats, and outputs 4xQAM RF channels via an IP interface.

Comprehensive remote monitoring and control is accomplished using any standard Web browser via a front-panel 100/1000 Ethernet connection.



### Features

- Receives up to 4xSPTS individually via IP interface
  - Each SPTS cannot exceed 38.8 Mbps
  - Each SPTS can contain an H.265, H.264 or MPEG-2 program
- Each SPTS maps to an individual RF QAM channel
- Small form-factor stand-alone unit, or fits up to three units in standard 1RU
- Web-based management port for local and remote control

### Ordering Information

Model	Stock #	Description
4K MOD	6540 ST	4xIP inputs; 4xQAM outputs
HDE-3MCH	6389	1RU Rack mount chassis holds up to three units



Made in U.S.A.

Rev: 052417  
Blonder Tongue is ISO 9001:2015 Certified

# Specifications

## Input

<b>IP</b>	<b>Connector:</b>	RJ-45
	<b>Standard:</b>	1000Base-T Ethernet
	<b>Packet Format:</b>	4x UDP SPTS
	<b>Protocols:</b>	IGMPv2 Supported

## General

<b>Dimensions (W x D x H):</b>	5.65 x 14.1 x 1.72 inches (143.5 x 358.1 x 43.7 mm)
<b>Power:</b>	External Power Supply: Input 100-120VAC; 60 Hz / Output 12 VDC; 3A
<b>Power Dissipation:</b>	16 W
<b>Weight:</b>	1.75 lbs (0.79 kg)
<b>Operating Temperature:</b>	32 to 122 °F (0 to 50 °C)
<b>Storage Temperature:</b>	-13 to 158 °F (-25 to 70 °C)
<b>Operating Humidity:</b>	0 to 95% RH @ 35 °C max, non-condensing
<b>Storage Humidity:</b>	0 to 95% RH @ 35 °C max, non-condensing

## Output

<b>QAM</b>	<b>No. of Output Modules:</b>	1x Quad-QAM (total of 4 QAM channels)
	<b>Connector:</b>	1x "F" Female (rear-panel; for combined output)
	<b>Modulation:</b>	QAM 16, 32, 64, 128, and 256
	<b>Standards:</b>	ITU-T J.83; Annex A and B
	<b>DVB Symbol Rate:</b>	Variable; up to 7 MSymbol/sec (MBaud)
	<b>Frequency Range:</b>	54 to 1002 MHz
	<b>Tuning:</b>	CATV Channel Selectable (Ch. 2 to 158)
	<b>RF Level:</b>	+40 dBmV
	<b>RF Level Adjustment Range:</b>	+35 to +42 dBmV (1 dB increments)
	<b>Frequency Tolerance:</b>	± 0.5 kHz @ 77 °F (25 °C)
	<b>Frequency Stability:</b>	± 5 kHz over 32 to 122 °F (0 to 50 °C)
	<b>Amplitude Flatness:</b>	± 0.25 dB (over 6 MHz channel)
	<b>Phase Noise:</b>	-98 dBc (@ 10 kHz)
	<b>Spurious:</b>	-60 dBc

<b>Broadband Noise:</b>	-70 dBc (@ +40 dBmV output level, 5.5 MHz bandwidth)
<b>Impedance:</b>	75 Ω
<b>Spectral Inversion:</b>	Auto Recognition
<b>Carrier Suppression:</b>	45 dB
<b>Return Loss:</b>	14 dB typical
<b>Signal-to-Noise Ratio (SNR):</b>	40 dB typical
<b>MER:</b>	40 dB typical
<b>I/Q Phase Error:</b>	Less than 1 degree
<b>I/Q Amplitude Imbalance:</b>	Less than 1%

## Alarms/Monitoring/Control

<b>Local Monitoring:</b>	1x Power LED 1x Status LED
<b>Local Control:</b>	1x IP Reset button
<b>Remote Monitoring/Control:</b>	GUI-based menu via Web browser (1x RJ45 front-panel connector; 100/1000Base-T)

## Related Products

Model	Stock #	Description
4K Media Streamer	6543	Transport Stream (.ts) files to 4xQAM or IP