



# HQS Amplifier/Splitter Series

...designed for perfect signals



## Variable gain L-Band Amplifier with 8-way or 16-way Splitter

The HQS series represents professional 1:8 and 1:16 L-Band splitters with an integrated high dynamic variable gain line-amplifier supporting variable gain-control ranges of max. 0 to 25dB or 0 to 30dB. The 19"/1RU rack mount chassis HQS108C (1:8 splitter chassis) and HQS116C (1:16 splitter chassis) each with one amplifier slot allow insertion of the corresponding amplifier module HQA2535M or HQA3040M.

The HQS series features 1:1 redundant dual power supply (hot-swappable), variable gain control (MGC/AGC), slope equalization, RF power monitoring, switchable LNB-supply and a 10MHz external reference signal input.

The units have a front side LC-Display/keypads for user-friendly local configuration while front side status LED's indicating amplifier and power supply status. Remote configuration & monitoring can be done via its rear side Ethernet-Interface (WebGUI, SNMP).

This high quality HQS splitters together with the inserted line amplifier module provide various advantageous functionalities, superior RF performance and excellent signal quality are an ideal fit for any RF distribution infrastructure where accurate RF power, highest signal stability and availability is necessary such as Teleports, Satellite Earth-Stations, Broadcast facilities and CATV/IPTV headend platforms.



### FEATURES & BENEFITS

- ▶ Space saving 1RU/19" rack mount design
- ▶ HQS108C L-Band amplifier and high quality 1:8 splitter in one unit
- ▶ HQS116C L-Band amplifier and high quality 1:16 splitter in one unit
- ▶ Two high dynamic amplifier modules available (HQA2535M & HQA3040M)
- ▶ Variable gain control selectable as MGC (Manual Gain Control) or AGC (Automatic Gain Control)
- ▶ Supports slope-equalization 0 to 7dB, 1dB steps
- ▶ Equipped with front side monitoring port (-20dB)
- ▶ RF power monitoring (input/output) for each amplifier individually

- ▶ Threshold alarm function and switchable output limiter
- ▶ Switchable LNB-supply (13/15/18V, 22kHz, 400mA) with LNB current monitoring and alarm shut-off
- ▶ 10MHz external reference signal input, rear side 50Ohm SMA(f)
- ▶ Hot-swappable amplifier modules
- ▶ Local access & configuration via front side LC-Display/keypads
- ▶ Front side status LED's indicating amplifier and power supply status
- ▶ Remote configuration and monitoring via Ethernet-Interface (WebGUI, SNMP)
- ▶ 1:1 redundant dual power supply (hot-swappable)



### TECHNICAL SPECIFICATINOS AMPLIFIER CHASSIS

#### HQS108C-50/-75 (1:8 Splitter) / HQS116C-50/-75 (1:6 Splitter)

<b>Dimensions:</b>	1RU/19" rack mount
<b>Power Supply:</b>	85 – 230V, 50/60Hz, 1:1 redundant (hot-swappable)
<b>Power Consumption:</b>	<10W
<b>Amplifier Module Slots:</b>	1 slot for HQA2535M or HQA3040M
<b>Impedance/Connectors:</b>	50Ohm SMA(f) or 75Ohm F(f)*
<b>10MHz Reference Input:</b>	50Ohm SMA(f), external
<b>LNB-Supply:</b>	13/15/18V, 22kHz, 400mA
<b>Local Access/Configuration:</b>	LC-Display/keypads
<b>Remote Access/Configuration:</b>	100Mbit RJ45 Ethernet-Interface (WebGUI and SNMPv2c)
<b>Status LED's:</b>	Amplifier & power supply
<b>MTBF / MTTR:</b>	>400kHrs @ 25°C / 24 hours
<b>Operating Temperature:</b>	0°C to 45°C
<b>Storage Temperature:</b>	-10°C to 70°C
<b>Humidity:</b>	90%, non-condensing
<b>RoHS:</b>	Compliant

### TECHNICAL SPECIFICATINOS RF-PARAMETER

<b>Frequency Range:</b>	950 – 2150MHz (L-Band)	
<b>Gain Control Ranges (1dB Step):</b>	HQA2535M	1:8 Splitter: -10 to 15dB @ standard mode, 0 to 25dB @ high gain mode
	HQA3040M	1:16 Splitter: -14 to 11dB @ standard mode, -4 to 21dB @ high gain mode
		1:8 Splitter: -5 to 20dB @ standard mode, 5 to 30dB @ high gain mode
		1:16 Splitter: -9 to 16dB @ standard mode, +1 to 26dB @ high gain mode
<b>IMA3:</b>	HQA2535M & HQA3040M	1:8 Splitter: -40dBc @ +7dBm 1:16 Splitter: -40dBc @ +3dBm
<b>1dB Compression Point:</b>	HQA2535M & HQA3040M	1:8 Splitter: +13dBm 1:16 Splitter: +10dBm
<b>Noise Figure @ Full Gain:</b>	@ 1:8 splitter	≤6dB @ standard mode / ≤3dB @ high gain mode
	@ 1:16 splitter	≤6dB @ standard mode / ≤3dB @ high gain mode
<b>Frequency Response:</b>	±0,5dB, ±1dB max.	
<b>Slope Equalization:</b>	0 to 7dB, 1dB steps	
<b>RF Power Monitoring:</b>	70dB dynamic range	
<b>RF Output Power Max:</b>	@ 1:8 Splitter:	+15dBm
	@ 1:16 Splitter:	+12dBm
<b>Input/Output Return Loss:</b>	≥20dB typ., ≥16dB min.	
<b>Output-Isolation:</b>	>20dB, 23dB typ.	
<b>Spurious Free Dynamic Range:</b>	< -80dB	
<b>Monitoring Port:</b>	-20dB (front-side) SMA(f) 50Ohm	

**ORDER INFORMATION**

Type	Type-No.	Short Description	I/O Connectors
<b>HQS108C (Amplifier with 1:8 Splitter)</b>			
HQS108C-50S	9000871	HQS Amplifier/Splitter Chassis, 1 amplifier slot, with 1:8 L-Band Splitter	50Ohm SMA(f)
HQS108C-75F	9000867	HQS Amplifier/Splitter Chassis, 1 amplifier slot, with 1:8 L-Band Splitter	75Ohm F(f)
<b>HQS116C (Amplifier with 1:16 Splitter)</b>			
HQS116C-50S	9000872	HQS Amplifier/Splitter Chassis, 1 amplifier slot, with 1:16 L-Band Splitter	50Ohm SMA(f)
HQS116C-75F	9000869	HQS Amplifier/Splitter Chassis, 1 amplifier slot, with 1:16 L-Band Splitter	75Ohm F(f)
<b>HQA Amplifier module variants</b>			
HQA2535M	9000728	HQA active line amplifier module, 0 to 25dB & 5 to 35dB variable gain control range	
HQA3040M	9000727	HQA active line amplifier module, 0 to 30dB & 10 to 40dB variable gain control range	