

HQR145C

1:1 redundant L-Band Line Amplifier (variable gain 0...40dB)

The **HQR145C** represents a 1:1 redundant L-Band line amplifier (950...2150MHz) with variable gain adjustment in 1dB steps (0 - 40dB), slope equalization and various additional functionalities in a compact 1RU/19" rack-mount design. The unit comes with two independent and 1:1 redundant operating amplifier boards together with an internal RF switch and 1:1 redundant power-supplies.

The HQR145C's two high dynamic 1:1 redundant operating amplifier modules (hot-standby) each provide variable gain control 0...40dB so to achieve best performance within the network. The redundancy switching between the two amplifier modules is done nearly interruption free with a switchover time of <5ms.

The unit features variable gain control (MGC/ AGC*), slope-equalization, RF power monitoring, threshold alarming, 2 front-panel monitoring ports and 1:1 redundant dual power-supply (hot-swappable). Additional features such as AGC mode, switchable LNB-supply and a 10 MHz reference signal port are optionally available.

The **HQR145C** has a front-side LC-Display/keypads for local configuration. Front-side status LED's indicating amplifier and power-supply status. Remote control and configuration can be done via its rear-side Ethernet-Interface (WebGUI, SNMP).

This line amplifier is perfectly suited for RF distribution infrastructures in Teleports, Satellite Earth Stations, as well as Broadcast- and Broadband facilities wherever accurate RF power, highest stability and availability is necessary.



FEATURES & BENEFITS

- Space saving and compact 1RU/19" rack-mount design
- 1:1 redundant hot-standby operating amplifier modules
- Less than 5ms switchover between amplifiers 1 & 2
- Variable gain-adjust 0...40dB, 1dB steps (MGC/AGC*)
- Slope-equalization 0...7dB, 1dB steps
- RF-power monitoring for both amplifier-modules (Input & Output)
- Threshold alarm function and switchable output limiter
- 2 monitoring ports -20dB (Input & Output)
- Optionally with 10MHz external reference port, rear-side 50Ohm SMA(f)*
- Optionally Switchable LNB-supply (13/15/18V, 22kHz tone) including LNB current monitoring (400mA) with alarm shut-off*
- 1:1 redundant dual power supply (hot swappable)
- Front side status LED's indicating amplifier & power-supply status
- Local access & configuration via front side LC-Display/keypads
- Remote configuration via Ethernet-Interface, RS232/485* (WebGUI/SNMPv2c)

*Option

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TECHNICAL SPECIFICATIONS

➤ Dimensions:	1RU/19" rack-mount
➤ Power supply:	85...230V, 50/60Hz, 1:1 redundant (hot-swappable)
➤ Power consumption:	<10W
➤ Frequency-range:	950...2150MHz (L-Band)
➤ Input/output connectors:	50Ohm SMA(f), 50Ohm N(f)*, 75Ohm F(f)**
➤ Input Return loss:	18dB typ. (no slope)
➤ Output Return loss:	18dB typ.
➤ Frequency response:	±0,5dB typ., ±1,0dB max.
➤ Variable gain control:	0...40dB (accuracy ±0,5dB), 1dB steps
➤ Gain mode:	MGC/AGC
➤ Slope equalization:	0...7dB, 1dB steps
➤ Max. RF input power:	+3dBm (no damage)
➤ Max. RF output power:	+24dBm
➤ Noise figure:	<10dB @ full gain
➤ Spurious Free Dynamic Range:	< -76dBm
➤ IMA 3 @+20dBm:	< -40dBc typ.
➤ 1dB Compression point:	+24dBm @ full gain
➤ I/O Monitoring ports:	-20dB, for input and output, 50Ohm SMA(f), front-panel
➤ Amplifier switchover time:	<5ms
➤ Threshold alarm:	Adjustable -40dBm...+10dBm
➤ Output limiter:	Adjustable -30dBm...+17dBm
➤ 10MHz reference:	External, rear-panel, 50Ohm SMA(f)*
➤ LNB-supply:	Switchable 13/15/18VDC, 22kHz tone, ON/OFF, 400mA*
➤ Local access/configuration:	Front-panel LC-Display/keypads
➤ Remote access/configuration:	100Mbit Ethernet-Interface (WebGUI, SNMPv2c), RS232** or RS485**
➤ Status LED's:	Amplifier & Power-Supply monitoring
➤ MTBF / MTTR:	>400kHrs at 25°C / 24 hours
➤ Operating temperature:	0...45°C
➤ Storage temperature:	-10...70°C
➤ Humidity:	90% non-condensing
➤ RoHS:	Compliant

*Option / **Upon Request only

ORDER INFORMATION

Type	Short Description
HQR145C-50S	1:1 Redundant L-Band Line-Amplifier, max. gain 40dB, incl. 2 x Amplifier module HQA45MI, 50Ohm SMA(f), RF power monitoring, slope equalization., 1:1 redundant dual PSU, status LEDs, LC-Display/keypads, Ethernet-Interface (WebGUI, SNMP), 1RU/19" rack-mount

OPTIONS

Type	Short Description
HQR145C-Option-50N	RF-Input & Output N-Connector 50Ohm N(f)
HQR145C-LNB-10-Option	LNB-supply 13/15/18VDC, 22kHz, 10MHz external reference signal port rear-panel 50Ohm SMA(f)
HQR145C-Option-75F	RF-Input & Output F-Connector 75Ohm F(f) ** upon request only **