

8-Way L-Band Active Splitter

with variable gain & slope, internal amplifier redundancy, RF detection & LNB powering - for 3U GENUS chassis

The GENUS is a new generation of equipment for the ground segment to meet today's and future ground segment V/HTS requirements. The GENUS Habitat accommodates up to 17 RF modules. These can be inserted whilst the shelf is in service giving excellent levels of flexibility and resilience.

Splitter Modules



850 - 2500 MHz
operating frequency range

RF detection
for monitoring output signal levels

Variable gain & slope
to balance input signals

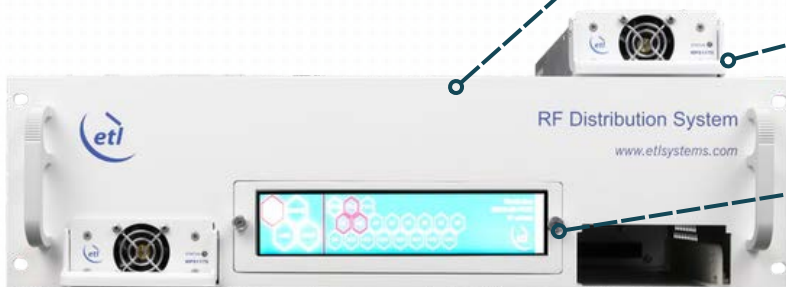
1:1 redundant amplifiers
for added resilience

LNB Powering
13/18V & 22KHz tone



Compact & Flexible
3U chassis holding up to 17 RF modules,
which can be mixed.

Chassis



Resilience
from dual redundant hot-swap power
supplies & field serviceable RF modules,
HMI, CPU & Fans

Local control & monitoring
via front panel capacitive HMI touchscreen.



Remote control & monitoring
via RJ45 Ethernet via RJ45,
10BaseT/100BaseTx, ETL TCP/IP protocol,
SNMPv3 & Web Browser Interface

Secure Communications
with SNMPv3, HTTPS

Splitter Module - Technical specifications and operating parameters

Function		8-way Active Splitter			
Module Slots Used		2			
Frequency Range		850 - 2500 MHz (L-band)			
Gain	Minimum	0 ± 2 dB			
	Maximum	24 ± 2 dB			
Gain Steps		0.25 ± 0.15 dB Monotonic Gain Control			
Slope Control Range		0 to 8 dB Pivot Point at 2500 MHz			
Slope Control Steps		1 ± 0.25 dB			
RF Connectors & Impedances		50Ω SMA	50Ω BNC	75Ω BNC	75Ω F-type
Input Return Loss	Typical	18 dB	18 dB	16 dB	12 dB
	Minimum	12 dB	12 dB	10 dB	10 dB
Output Return Loss	Typical	18 dB	18 dB	16 dB	14 dB
	Minimum	14 dB	14 dB	12 dB	12 dB
Gain Flatness	Full band	± 1.0 dB	± 1.0 dB	± 1.3 dB	± 1.4 dB
	Any 36 MHz	± 0.25 dB	± 0.25 dB	± 0.3 dB	± 0.35 dB
Noise Figure		10 dB typ., 12 dB max. @ max gain & 0 dB slope setting			
Reverse Gain		< -60 dB typical			
1dB GCP		3 dB typ., 2 dB min. @ max gain & 0 dB slope setting			
OIP3		15 dB typ., 12 dB min. @ max gain & 0 dB slope setting			
OIP2		25 dB typ., 21 dB min. @ max gain & 0 dB slope setting			
Isolation	Out to Out	23 dB min			
	Card to Card	50 dB min (Between cards set to same gain within parent chassis)			
In band, signal dependent spuri		<-85 dBm max Very low level spuri from CPU clock, switch mode PSU and other control electronics inside the chassis.			
Input RF Detection		0 to -40 dBm			
Redundancy		1:1 Auto switch over from main to standby is based on current sensing. Standby amp chain is cold standby redundant.			
Maximum Input Level		+20 dBm For no damage. None operational.			
Control Method		Via Chassis Local and remote as provided by selected chassis			
MTBF		>150,000 hrs			
DC Power Consumption		17 W Max			
Tech Spec Version		0.1			

Interface	
Control & Monitoring	Via Chassis - Local and remote as provided by selected chassis
LNB Voltage	Off / 13V / 18V / 22kHz Tone On/Off @ Input port.
LNB load	Up to 450mA Maximum Overcurrent protection: Current limited trip and restart. Note: If multiple splitters fitted in parent chassis, total LNB load should not exceed 80W
DC Coupling	All RF Input Ports DC blocked

Environmental	
Temperature	Operating: 0 to 50°C Storage: -20°C to +75°C (equipment not powered)
Location / Humidity	Location: Indoor only Humidity: 20 to 90% non-condensing (relative)
Altitude	Altitude: 10,000ft/3000m AMSL (Above Mean Sea Level)

Physical	
Weight	0.5 Kg
Dimensions	255mm x 45mm x 40mm maximum Genus 3U series mountable only
Module Finish	Open PCB card with connector faceplate

Please see separate datasheet for full 3U Genus chassis specifications (Model GNS-103-3U).

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.