

4-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 - 2150 MHz
operating frequency range

RF detection
for monitoring output signal levels

Variable gain & slope
to balance input signals

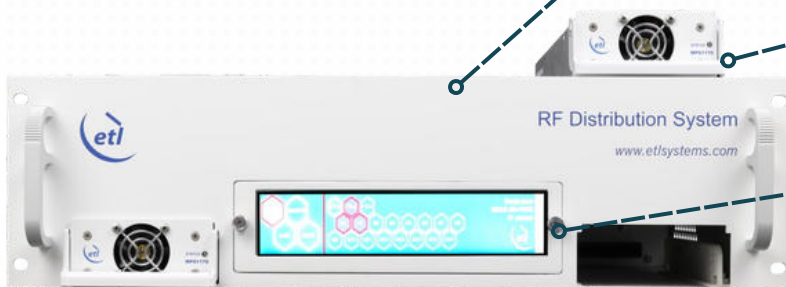
1:1 redundant amplifiers
for added resilience

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		4-way Active Splitter			
Module Slots Used		1			
Frequency Range		850-2150 MHz (L-band)			
Gain	Minimum	0 ± 2 dB			
	Maximum	28 ± 2 dB			
Gain Steps		0.25 ± 0.15 dB Monotonic Gain Control			
Slope Control Range		0 to 8 dB Pivot Point at 2150 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	16 dB
	Minimum	12 dB	12 dB	10 dB	10 dB
Output Return Loss	Typical	18 dB	18 dB	16 dB	16 dB
	Minimum	14 dB	14 dB	12 dB	12 dB
Gain Flatness	850 to 2500 MHz	± 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		9 dB typ., 11 dB max. @ max gain & 0 dB slope setting			
Reverse Gain		< -60 dB typical			
1dB GCP		7 dB typ., 5 dB min. @ max gain & 0 dB slope setting			
OIP3		19 dB typ., 16 dB min. @ max gain & 0 dB slope setting			
OIP2		29 dB typ., 26 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 -50 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			
LNB Power		13/18 V DC with 22kHz on/off, 450 mA max per card Maximum allowed power per chassis shall NOT exceed 100 W			
DC Coupling		All RF Input Ports DC blocked			
Temperature		Operating: 0 to 50°C Storage: -20°C to +75°C (equipment not powered)			
Location / Humidity / Altitude		Location: Indoor only Humidity: 20 to 90% non-condensing (relative) Altitude: 10,000ft/3000m AMSL (Above Mean Sea Level)			
Tech Spec Version		0.3			

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.