4-way L-Band Active Splitter

with variable gain & slope, internal amplifier redundancy, & RF detection - 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

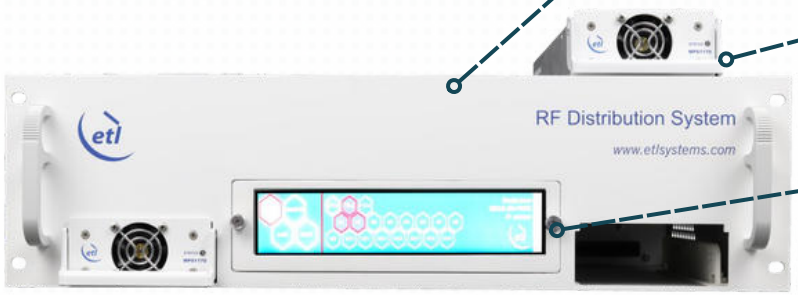
RF detection
for monitoring output signal levels

Variable gain & slope
to balance input signals

1:1 redundant amplifiers
for added resilience

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 Flatness	850 to 2150 MHz	± 1.0 dB			
	Any 36 MHz	± 0.25 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	11 dB	12 dB
	Minimum	12 dB	12 dB	8 dB	10 dB
Output Return Loss	Typical	18 dB	18 dB	14 dB	14 dB
	Minimum	14 dB	14 dB	12 dB	12 dB
Reverse Gain		< -60 dB typical			
Noise Figure		9 dB typ., 11 dB max. @ max gain & 0 dB slope setting			
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 the same gain within the parent chassis)			
In band, signal dependent spurii		<-85 dBm max Very low level spurii 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.			
MTBF		>150,000 hrs MTBF of each amp module. These are hot swap.			
Maximum Input Level		+20 dBm For no damage. None operational.			
Control Method		Via Chassis Local and remote as provided by selected chassis			
LNB Power		N/A			
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)			

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.