

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

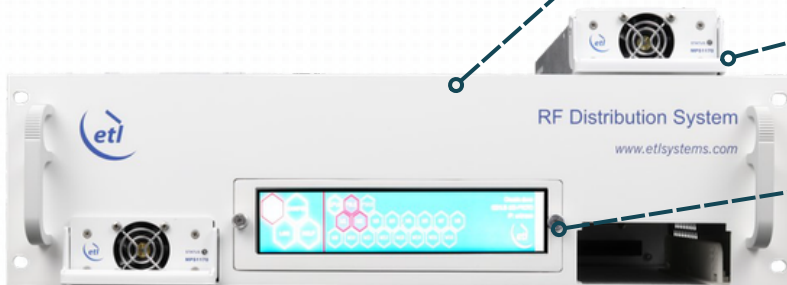
1:1 redundant amplifiers
for added resilience

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.