ETL Systems
Excelling in RF Engineering

Model Number:
DIV-G3-S6-401-XXXX

4-way S-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.

Typical applications:

- Distribution of multiple polarities into a teleport
- Signal distribution into standby IRDs
- Expansion of ETL's RF matrix range
- Linking RF Matrices in expanding satellite teleports.
- Can be used for a high density RF distribution chassis where rack space is limited.
- As a replacement for non hot-swap passive systems to improve system design.

Splitter Modules

850 - 3150 MHz operating frequency range

LNB Powering 13/18V & 22KHz tone

RF detection for monitoring input signal levels

Variable gain & slope to balance input signals

1:1 redundant amplifiers for added resilience

Chassis

Compact chassis which can house up to 17 RF modules

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

Remote control & monitoring via RJ45 Ethernet port with SNMP & web browser interface

Secure Communications with SNMPv3, HTTPS

Local control & monitoring via LEDs on modules

ETL Systems

Excelling in RF Engineering

Model Number: DIV-G3-S6-401-XXXX

Splitter Module - Technical specifications and operating parameters					
Function		4-way Active Splitter			
Module Slots Used		1			
Frequency Range		850-3150 MHz (Extended L-Band / S-Band)			
Gain	Minimum	0 ± 2 dB			
	Maximum	28 ± 2 dB			
Gain Flatness	850 to 2450 MHz	± 1.0 dB			
	850 to 3150 MHz	± 2.0 dB			
	Any 36 MHz	± 0.25 dB @ 50 Ohm, ± 0.32 dB @ 75 Ohm,			
Gain Steps		0.25 ± 0.15 dB Monotonic Gain Control			
Slope Control Range		0 to 10 dB Pivot Point at 3150 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 (850-2450 MHz) 12 dB (2450-3150 MHz)	16 dB (850-2450 MHz) 12 dB (2450-3150 MHz)
	Minimum	12 dB	12 dB	10 dB (850-2450 MHz) 8 dB (2450-3150 MHz)	10 dB (850-2450 MHz) 8 dB (2450-3150 MHz)
Output Return Loss	Typical	18 dB	18 dB	16 dB (850-2450 MHz) 12 dB (2450-3150 MHz)	16 dB (850-2450 MHz) 12 dB (2450-3150 MHz)
	Minimum	14 dB	14 dB	12 dB (850-2450 MHz) 8 dB (2450-3150 MHz)	12 dB (850-2450 MHz) 8 dB (2450-3150 MHz)
Reverse Gain		< -60 dB typical			
Noise Figure	Typical	9 dB At maximum gain & 0 dB slope setting			
	Maximum	11 dB At maximum gain & 0 dB slope setting			
1dB GCP	Typical	7 dBm At maximum gain & 0 dB slope setting			
	Minimum	5 dBm At maximum gain & 0 dB slope setting			
OIP3	Typical	19 dBm At maximum gain & 0 dB slope setting			
	Minimum	16 dBm At maximum gain & 0 dB slope setting			
OIP2	Typical	29 dBm At maximum gain & 0 dB slope setting			
	Minimum	26 dBm At maximum 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 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 –50 dBm			
Amplifier 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 & Control		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 Output 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		1.2			

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.

ETL SYSTEMS LIMITED
Coldwell Radio Station
Madley
Hereford
England HR2 9NE

TELEPHONE
+44 (0)1981 259020

EMAIL
info@etlsystems.com

FACSIMILE
+44 (0)1981 259021

WEB
www.etlsystems.com

RoHS COMPLIANT Pb-Free

ISO 9001 QUALITY MANAGEMENT UKAS MANAGEMENT SYSTEMS 015

V 2.0 E&OE