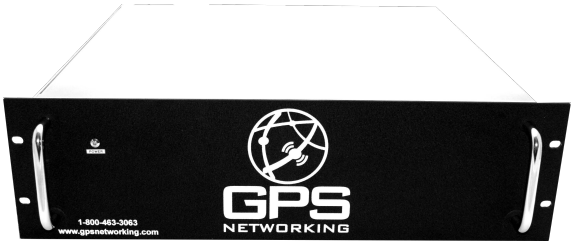
NRMALDCBS1X16

Networked Rack Mount Amplified 1X16 GPS Splitter
Technical Product Data



Features

- **Excellent Gain Flatness**
  [J1-J16] < 1.5dB
- **Extremely Flat Group Delay**
  Less that 1ns variation
- **Amplified 14dB gain typical**
  Custom Gain available by request
- **High Isolation Option**
  >35dB of isolation between adjacent output ports
- **DC Blocked Outputs feature 200 ohm loads**
  Prevents false antenna alarm faults
- **Phase Matched Outputs**
  Phase (J1 – J16) < 1.0°
- **LED Power Light**
- **-48VDC Power Option Available**
- **Durable Rugged Standard 3U Chassis**
- **Special Configurations available upon request**

Description

The NRMALDCBS1X16 Rack Mount Amplified 1X16 GPS Splitter (GNSS Splitter) is a one input, sixteen output device. The frequency response covers the entire L-band (all GPS/GNSS frequencies) with excellent gain flatness. In the normal configuration, the splitter is powered by an external DC source that supplies power to the splitter's internal amplifier and outdoor antenna. The outputs are DC blocked and loaded with 200Ω resistors to simulate the antenna current draw to prevent false antenna alarm faults. Product is ideally suited for timing and testing applications where the GPS/GNSS signal is required by as many as 16 devices simultaneously.

Electrical Specifications, $T_A = 25^0C$

Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	Ant – Any Output, Unused Outputs - 50Ω	1.1		1.7	GHz
In/Out Imped.	Ant, J1 - J16		50		Ω
Gain	Ant – Any Output, Unused Outputs - 50Ω	13	14.5	15.5	dB
Gain High Isolation	Ant – Any Output, Unused Outputs - 50Ω	-1.5	0	1.5	dB
Input SWR	All ports - 50Ω			2.0:1	-
Output SWR	All ports - 50Ω			1.5:1	-
Noise Figure	Normal Config., Ant – Any Output, Unused Outputs - 50Ω		3.8	4.3	dB
Gain Flatness	| L1 – L2 | ; Ant – Any Output, Unused Outputs - 50Ω		0.5	1.5	dB
Amplitude Balance	| J1 – J16 | ; Ant – Any Output, Unused Outputs - 50Ω			1.5	dB
Phase Balance	Phase (J1 – J16) ; Ant – Any Output, Unused Outputs - 50Ω			1.0	deg
Isolation	Hi Isolation Option, Adjacent Ports, Ant - 50Ω		35	40	dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$: Ant – J1 - J16, 50Ω			5	ns
Current	Amplifier Current Draw, All ports - 50Ω (typical 5v)			15	mA

Available Options

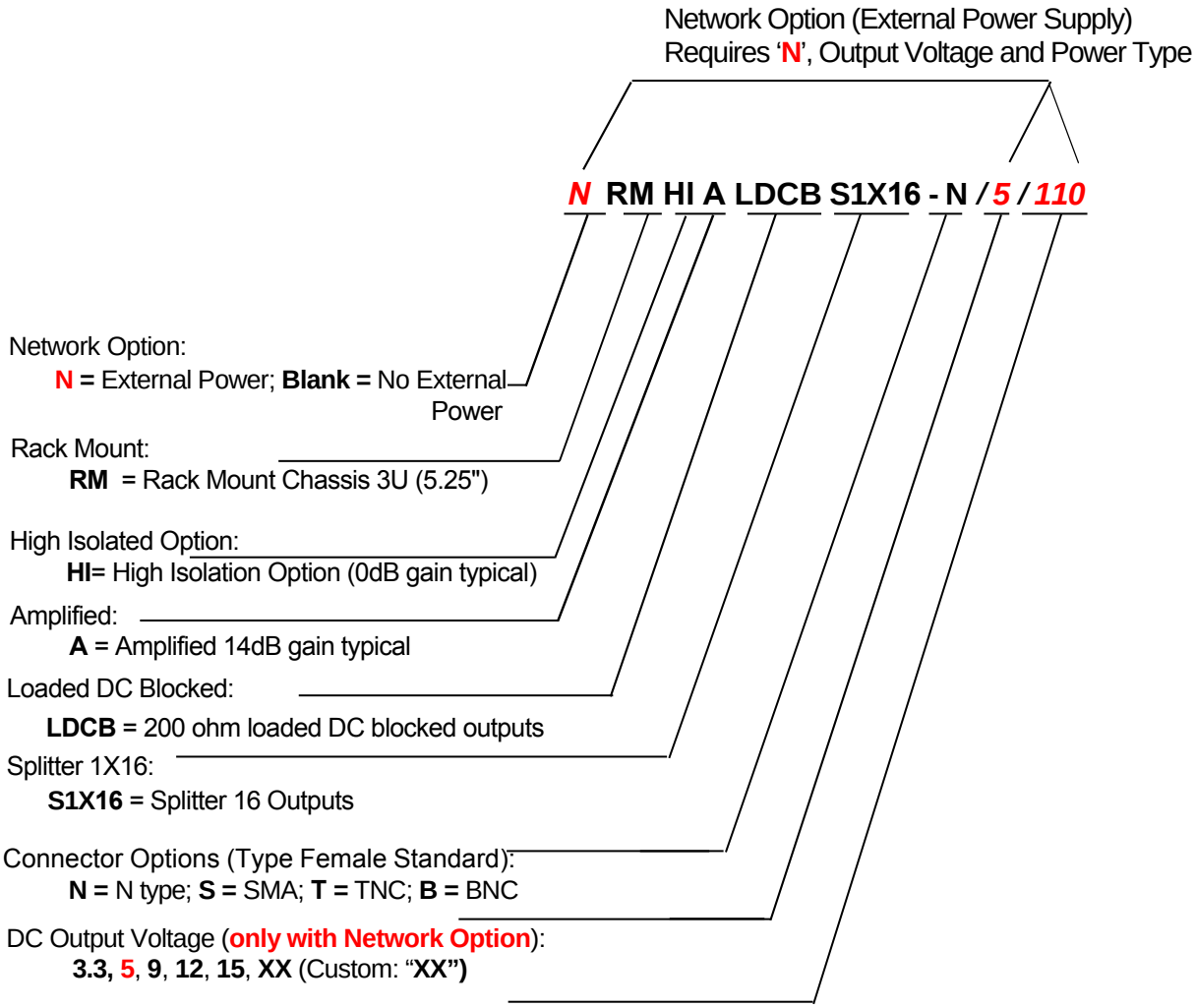
Network Power Supply		
Source Voltage Options	VOLTAGE INPUT	STYLE
	110VAC	Transformer (Wall Mount)
	220 VAC (2 Prong Euro)	Transformer (Wall Mount)
	240 VAC (3 prong UK)	Transformer (Wall Mount)
	Customer Supplied DC 9-32 VDC	Military Style Connector
Output Voltage Options (1)	DC VOLTAGE OUT	MAX CURRENT OUT FOR CORRESPONDING Vout(2)
	3.3 V	110mA
	5V	130mA
	9V	140mA
	12V	170mA
	15V	210mA
	Custom	TDB
Output Port Isolation		
	Standard Isolation 20dB typical; High Isolation 35dB minimum	
Pass/Block DC Options		
DC Blocked (1)	All Outputs DC blocked standard with any external power option	
RF Connector Options		
Connector Options	CONNECTOR TYPE (Female Std)	
	Type N, TNC, SMA and BNC	No Charge

(1) With Network Option, any RF port (input or output) can be DC blocked or can pass the network DC voltage.

(2) TA = $+50^oC$. Assuming Source of 110V or 220V Wall Mount Transformer. In general, maximum output current can be determined by:

$$Iout \leq 2.9 / (V_{sourceDC} - V_{out})\ A$$

Part Number Configuration



Example Part Number: NRMALDCBS1X16-N/5/MC+/-48)

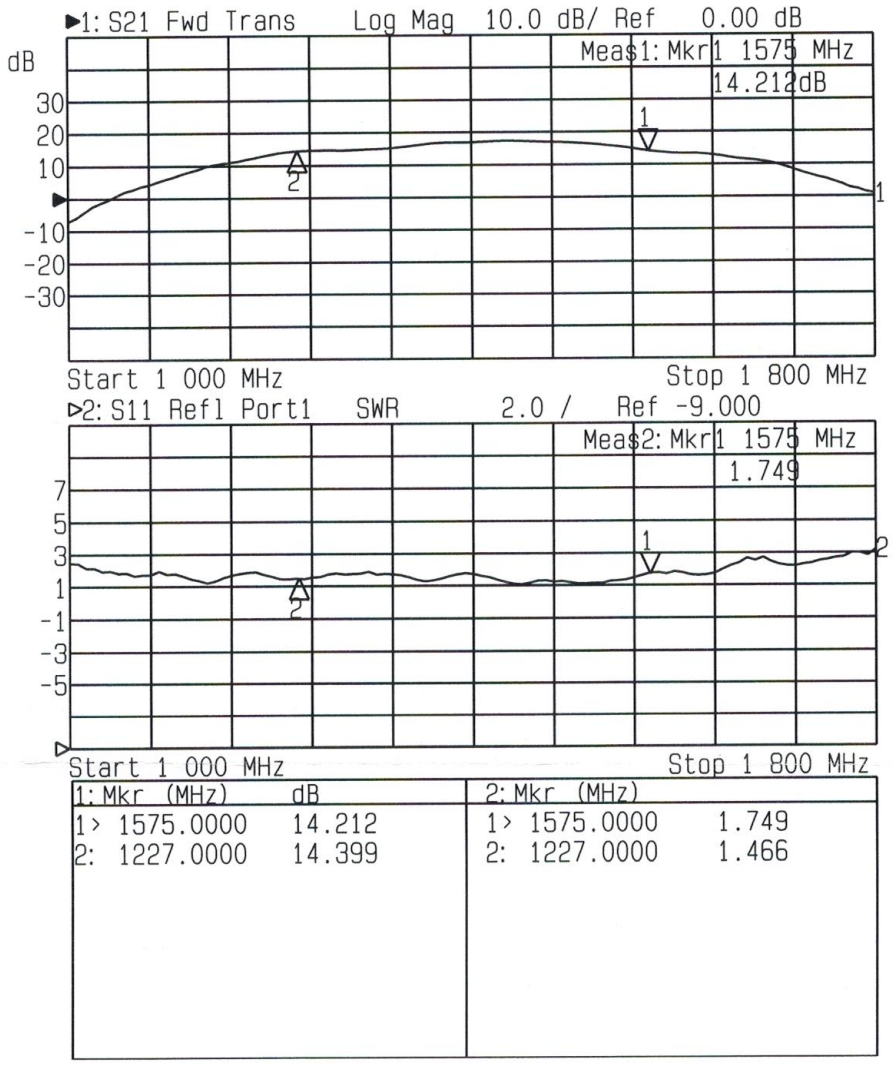
When no external power supply option (AC or DC) is selected, Output 1/J1 is Pass DC standard.
Whenever an external power supply option is selected, all outputs are DC blocked standard.

(Contact GPS Networking Technical Support at 719-595-9880 or salestech@gpsnetworking.com for any questions regarding non-standard configurations and corresponding part numbers)

Performance:

NRMALDCBS1X16 (Standard Gain)

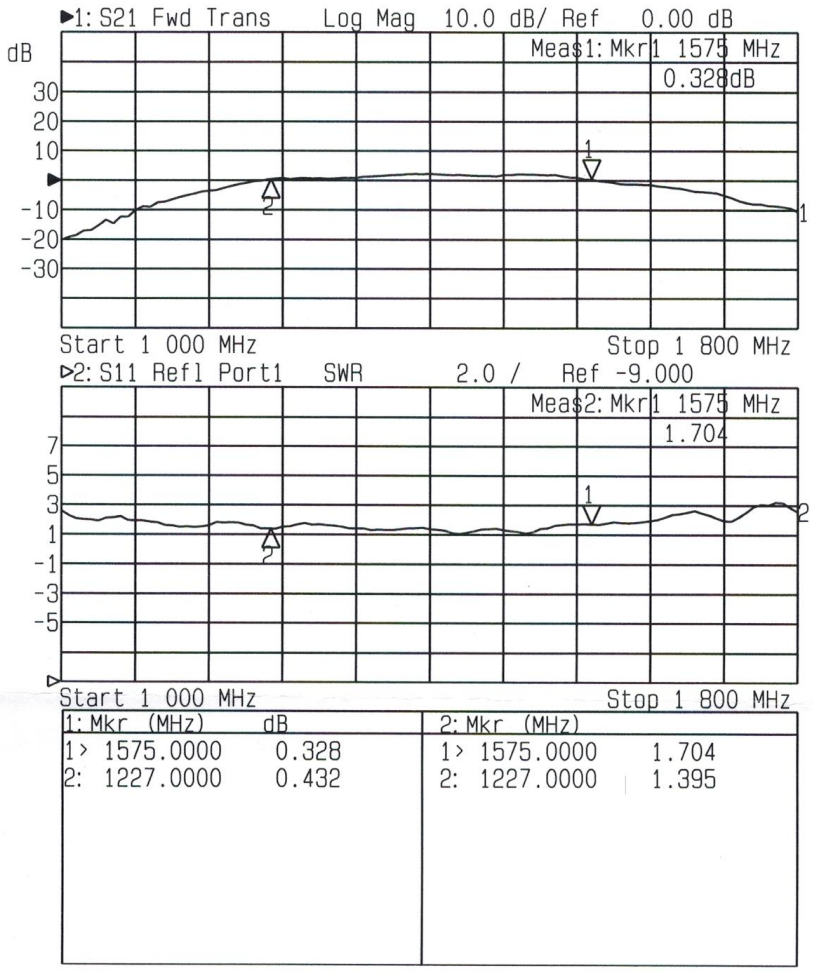
Input SWR (Ant. Port) and Frequency Response: Ant. To J1-J16) (Typical, type N connectors):



Performance:

NRMHIALDCBS1X16 (High Isolation Typical Gain)

Input SWR (Ant. Port) and Frequency Response: Ant. To J1-J16) (Typical, type N connectors):



Mechanical

Dimensions:	Height: 5.25”
	Length: 8.5”
	Width: 17.0”
Weight:	approximately15 lbs.
Operating Temp. Range:	-40^{o} to + 75^{o}C