



# CPDC4X1

## 4X1 GPS Combiner

### Technical Product Data



#### Features

- **Excellent Flatness**
- **Extremely Flat Group Delay**  
Less than 1ns variation
- **Low Insertion Loss**
- **Passes all GNSS Frequencies (Entire L-band)**
- **Provides Antenna redundancy**  
Allows receivers to function with a failed antenna
- **Phase Matched Outputs**
- **Special Configurations Available By Request**

#### Description

The CPDC4X1 GPS Combiner (GNSS Combiner) is a four input, one output device. The frequency response covers the entire L-band (all GNSS Frequencies) with excellent flatness. In the standard configuration, DC is passed from a connected GPS device through the combiner to both inputs (antenna ports). The connected GPS device or receiver will continue to maintain a GPS lock in the event of an antenna failure. Contact GPS Networking Technical Support for any questions regarding standard configurations or special configurations at [salestech@gpsnetworking.com](mailto:salestech@gpsnetworking.com) or 1-800-463-3063.

Electrical Specifications, T<sub>A</sub> = 25<sup>0</sup>C

Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	Ant – Any Output, Unused Outputs - 50Ω	1.1		1.7	GHz
Input/Output Impedance	Any Antenna/input to output		50		Ω
Input SWR	All ports - 50Ω			2.0:1	-
Output SWR	All ports - 50Ω			1.5:1	-
Insertion Loss	Any Antenna – Output, Unused Outputs - 50Ω	-7.5	-8.5	-9.5	dB
Gain Flatness	Any Input/Antenna port – Output,			1.0	dB
Amplitude Balance	Any Input/Antenna port – Output,			1.0	dB
Phase Balance	Any Input/Antenna port – Output,			1.0	deg
Isolation	Input Ports - Output - 50Ω	20			dB
Group delay Flatness	Input 1-4 – Output, 50Ω			1	ns

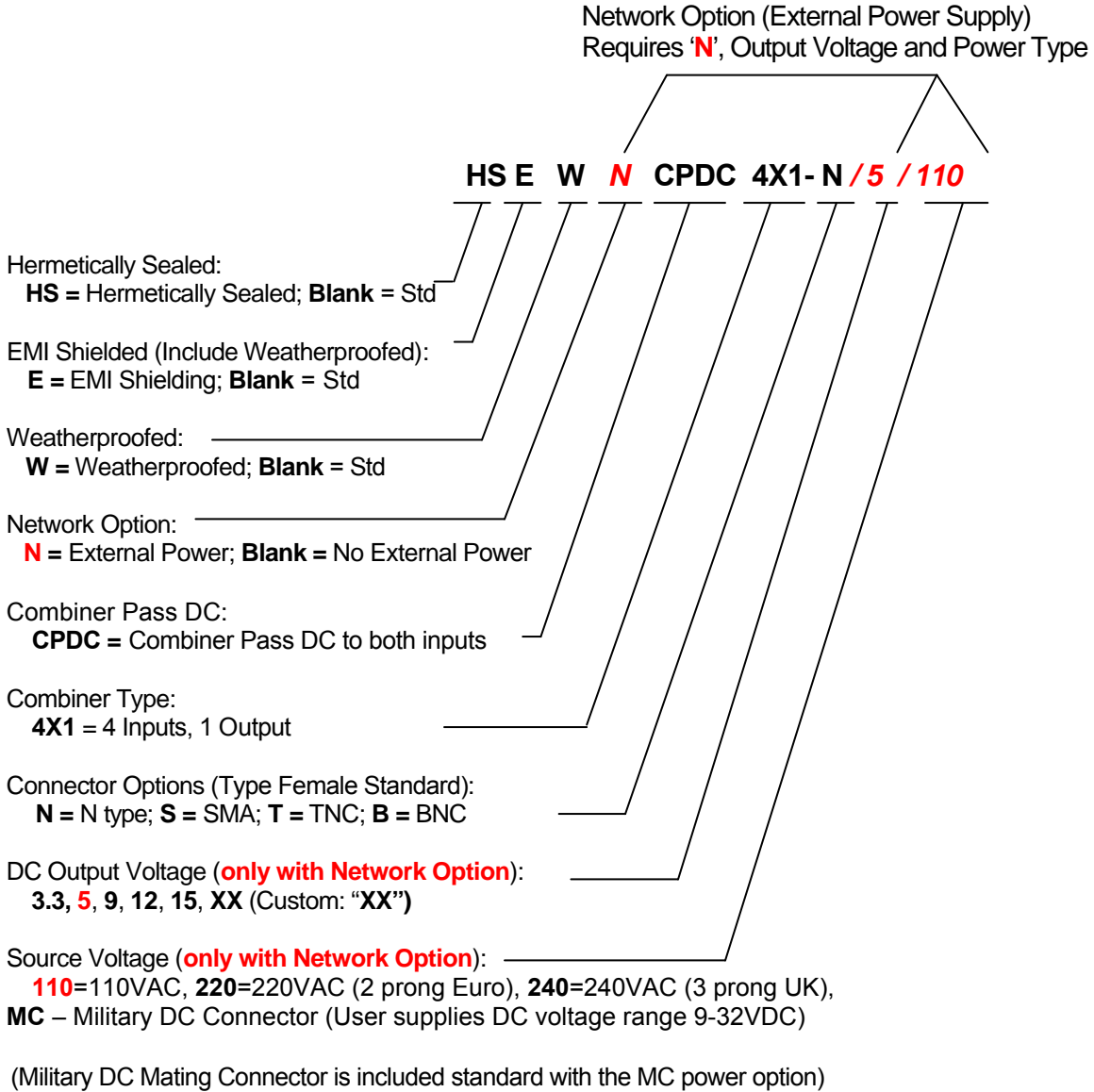
**External** Power Options (Networked Option)

Network Power Supply		
Source Voltage Options	VOLTAGE INPUT	
	110VAC	Transformer (Wall Mount)
	220 VAC (2 prong Euro)	Transformer (Wall Mount)
	240 VAC (3 prong UK style)	Transformer (Wall Mount)
	Customer Supplied DC (9-32 VDC)	2-pin Military DC Connector
Output Voltage Options <sup>(1)</sup>	DC VOLTAGE OUT	
	MAX CURRENT OUT FOR CORRESPONDING Vout	
	3.3V	110mA
	5V	125mA
	9V	140mA
	12V	180mA
	15V	220mA
Custom	TDB	
<b>Standard DC Configuration without External Power Option</b>		
	All ports pass DC	
<b>Standard DC Configuration with any External Power Option (AC/DC or Military DC)</b>		
	Output DC blocked	
	User Selected Output DC Voltage	
<b>RF Connector Options</b>		
Connector Options	CONNECTOR STYLE	
	CHARGE	
	Type N-female	NC
	Type SMA-female	NC
	Type TNC-female	NC
Type BNC-female	NC	

(1) With Networked Option, any RF port (input or output) can be selected Pass DC or Block DC.

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

Part Number Configuration

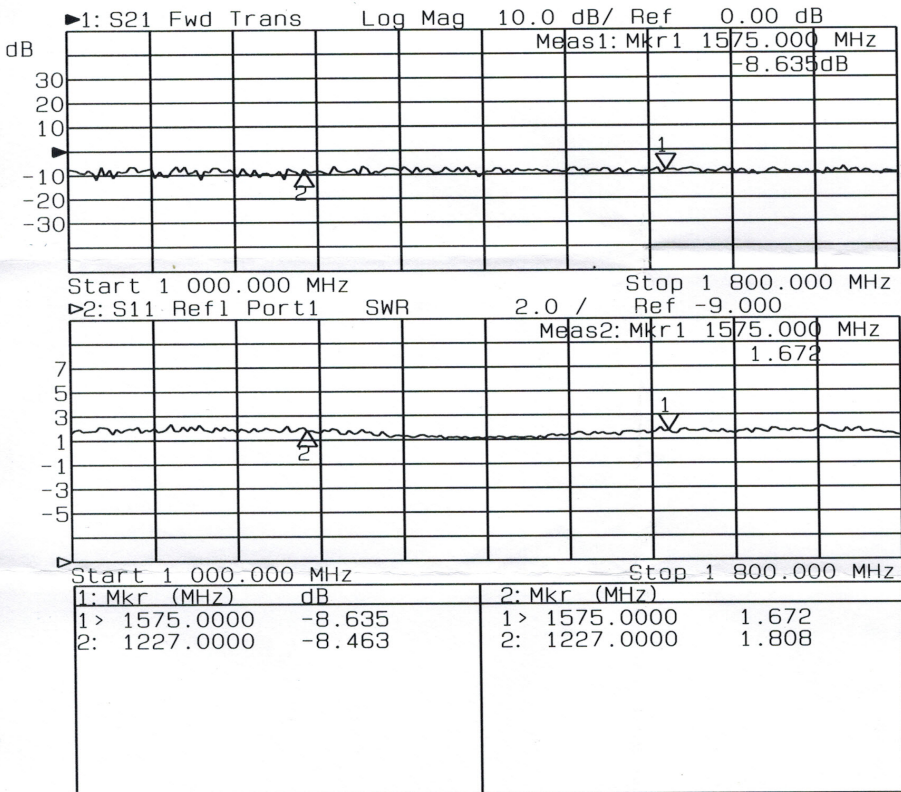


(Contact GPS Networking Technical Support at 719-595-9880 or [salestech@gpsnetworking.com](mailto:salestech@gpsnetworking.com) for any questions regarding non-standard configurations and corresponding part numbers)

Performance

Typical Frequency Response: Input 1 - 4 To Output, (Type N connectors)

Input SWR: Input 1 - 4 to Output - 50Ω (Typical Type N connectors):



# Mechanical

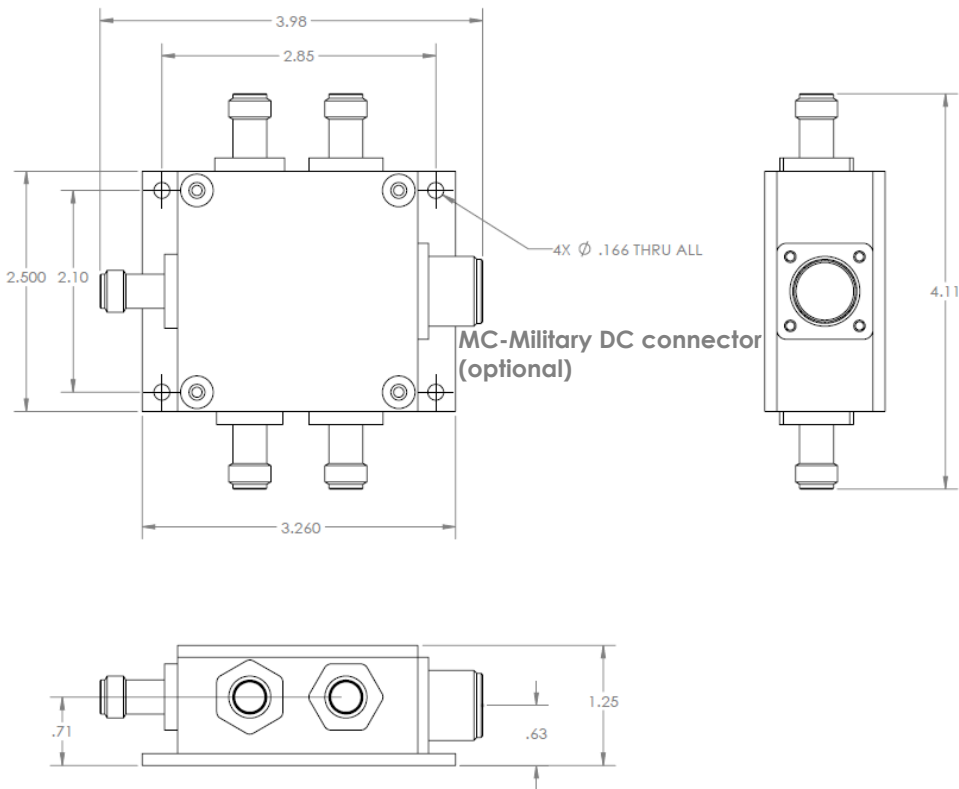
**Dimensions:** Height: 1.3"  
 Length (not including connectors) Body: 2.5"  
 Base Plate: 3.25"  
 Width (not including connectors): 2.5"

**Weight:** 12 oz. (336 grams)

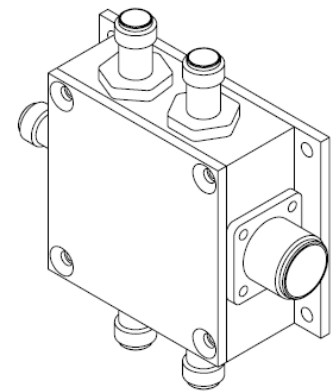
**Operating Temp. Range:** -40° to + 75°C

Finish Housing and Base Plate: ELECTROLESS NICKEL PLATED  
 MIL-C-26074C CLASS 1, .0001-.0003 MAX  
 Finish Lid: ANODIZE, TYPE II, CLASS 2, BLACK, per MIL-A-8625

NOTES:  
 1. CAD FILES AVAILABLE.



REVISIONS				
ZONE	REV.	DESCRIPTION	REV. BY	DATE
-	A	INITIAL RELEASE	-	-



GPS NETWORKING		Assy, 1x4 Military		Do Not Scale Dwg Remove All Burrs And Sharp Edges to .020 Rad Max	
Checked by:	BPC	Date:	07/02/15	Weight:	
Scale:		Quantity / Unit Qty:		Material:	
Part Angle Protection:	001 - 001	Notes:	See Note	Angle 1°	
Dwg Number:		SIZE	B	Rev	-
		SHEET		OF 1	1