

## Features:

- Repeater / DAS Cellular + GPS Combiner/Splitter
- Low Loss for GPS Frequencies ( $\leq 0.7\text{dB}$ )
- Low Loss for Cellular Frequencies ( $\leq 0.3\text{dB}$ )
- Excellent Cellular to GPS Isolation ( $\geq 60\text{dB}$ )
- GPS Group Delay & Variation Specified
- GPS DC Pass Thru (Cellular DC Block)
- Sealed to IP67 for Indoor or Outdoor Use

## Filter Specifications

Cellular Passband Frequency Range  
GPS Center Frequencies

618 - 960 MHz (Lower Cellular), 1710 - 2690 MHz (Upper Cellular)  
1575.42 MHz (GPS L1 Carrier), 1227.60 MHz (GPS L2 Carrier)

## Cellular Channel Specifications

Insertion Loss

0.30 dB max. (< 0.20 dB typical)

Input Power:

Average

40 watts minimum

Peak Envelope Power

800 W minimum

Tx Power Conditions

2:1 Antenna VSWR, +50C case temp & 2500m altitude

IMD in Rx Bands

-110dBm max. (2x+37dBm tones)

## GPS Channel Specifications

Insertion Loss

0.70 dB max. (< 0.50 dB typical)

L1/L2 Channel Bandwidth

20 MHz minimum

L1/L2 Channel Absolute Group Delay

20 nS maximum (17 nS typical)

L1/L2 Group Delay Variation

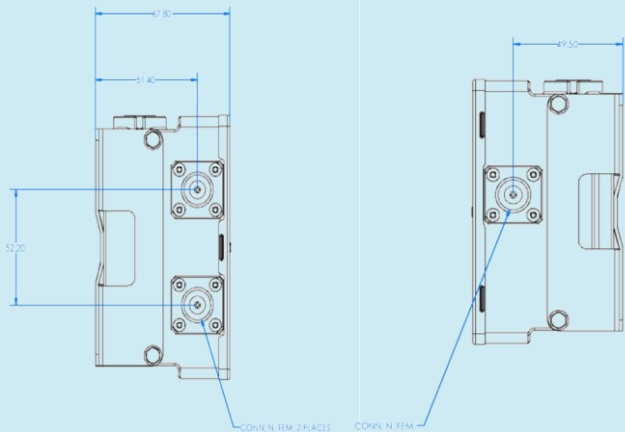
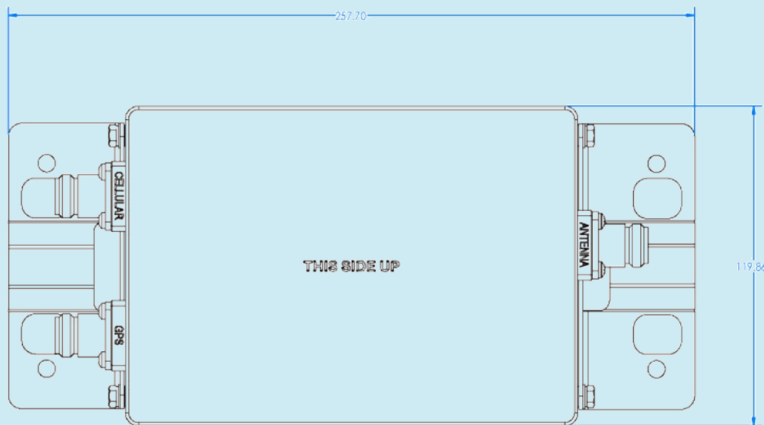
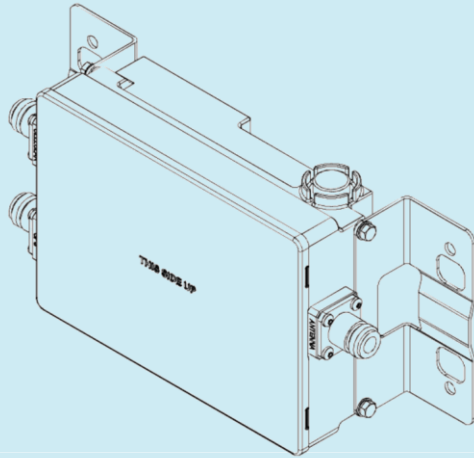
4 nS p-p maximum over L1/L2 BW

L1 to L2 Delay Matching

4 nS maximum over L1/L2 BW



# PXC021-GPS L1/L2 + Cellular Low Loss Cross-band Combiner



## Common Specifications

GPS-Cellular/Cellular-GPS Band	60 dB minimum (70 dB typical)
Return Loss (all ports)	18 dB minimum (22 dB typical)
Characteristic Impedance	50 ohms nominal (all ports)

## DC Pass Through Specifications

DC Transparency Path:	GPS to Antenna (Cellular Port DC Blocked) block
DC Transparency Power	+30 VDC @ 1.0A max. A/B
Voltage Drop @ 1.0A	< 0.2 V typical (0.3 V max.)

## Mechanical

Connectors (RF)	N Female (x3)
Ground Connection	M8 Lug w/locknut provided
Dimensions (mm)	257.70 D x 119.86 W x 67.80 H including connectors and brackets
Weight	3.1 lbs (1.4 kg) nominal

## Environmental

Operating Temp (°C)	-40 to +65
Altitude	Up to 3000 m
Ingress Protection	IP67
RoHS/WEEE	Compliant
Salt Fog	GR-487
Transportation Shock & Vibration	Per ETS 300-019-1-4, class 4.1
Lightning Protection	3kA per IEC 61312-1 (10/350 uS)

**EMEA**  
 Filtronic Wireless Ltd.  
 3 Airport West  
 Lancaster Way  
 Yeadon  
 United Kingdom  
 +44 174 062 5250

**Americas**  
 Filtronic Wireless Inc.  
 700 Marvel Rd  
 Salisbury  
 MD 21801  
 United States of America  
 +1 410 202 8811



www.filtronic.com  
 sales@filtronic.com

All rights reserved  
 Specifications are subject to change

DTS-PXC021-V1-1