

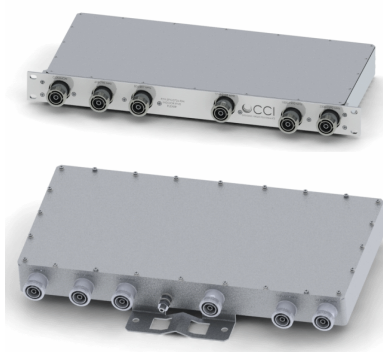


# Filters & Combiners

DATA SHEET

## Broadband Pentaplexer Combiner

5PX-0726-xx



- Indoor/Outdoor versions available
- Low Loss
- Good Isolation
- Good IM
- High reliability
- Full 700, SMR/850, PCS, AWS and WCS/2600 bands
- Rack/Wall Mount (Indoor); Pole/Wall Mount (Outdoor)

### Overview

Communication Components, Inc. Broadband Pentaplexer Combiner combines 700, SMR/850, PCS, AWS and WCS/2600 band Basestation Tx/Rx signals onto a common port. Specifically intended for use in feeder line limited sites or multi-band high power DAS systems, the CCI Pentaplexer models 5PX-0726-RM or 5PX-0726-O facilitate the addition of new technologies including LTE to existing sites while providing a low insertion loss and a high degree of isolation between systems. The cost and complexity of upgrading a Macro or DAS site is significantly reduced. The CCI Broadband Pentaplexer Combiner provides full band performance for each band with low insertion loss, low Intermodulation, and high power handling. Excellent return loss delivers the best match to the DAS system and base station, saving precious transmit power. The unit is available in both an indoor rack mountable version and an outdoor weather rated version.

### Technical Description:

The Broadband Pentaplexer Combiner consists of a multiple filters to combine (or divide) full band 700, SMR/850, PCS, AWS, and WCS/2600 Band signals. This unit can be used as either a splitter or combiner to aggregate multiple bands on a common line. All RF ports are DIN 7-16 connectors. The filters have been designed to minimize insertion loss while maximizing isolation. Particular attention has been given to the intermodulation performance of the Broadband Pentaplexer to minimize any passive intermodulation products from occurring. Note that there are Indoor and Outdoor versions available. The Indoor Version can be wall or 19" rack mounted and all DIN Connectors are fully IP68 rated and the unit body is Indoor rated for IP20. The Outdoor Version can be pole or wall mounted and all DIN Connectors are fully IP68 rated and the unit body is rated for IP67. The mounting kit is included as an accessory.



# Filters & Combiners

## SPECIFICATIONS

### Broadband Pentaplexer Combiner

5PX-0726-xx

#### Electrical Specification

RF Parameters	Ports	Frequency(MHz)	Specification	
Return Loss	Common	698 - 787	18 dB min., 20 dB Typ.	
		806 - 894	18 dB min., 20 dB Typ.	
		1850 - 1995	18 dB min., 20 dB Typ.	
		1710 - 1755	18 dB min., 20 dB Typ.	
		2110 - 2155	18 dB min., 20 dB Typ.	
		2310 - 2690	18 dB min., 20 dB Typ.	
	700	698 - 787	18 dB min., 20 dB Typ.	
	SMR/850	806 - 894	18 dB min., 20 dB Typ.	
	PCS	1850 - 1995	18 dB min., 20 dB Typ.	
	AWS	1710 - 1755	18 dB min., 20 dB Typ.	
		2110 - 2155	18 dB min., 20 dB Typ.	
		2310 - 2690	18 dB min., 20 dB Typ.	
	Insertion Loss	COM to 700	698 - 787	0.35 dB typ., 0.5 dB max.
		COM to SMR/850	806 - 894	0.35 dB typ., 0.5 dB max.
COM to PCS		1850 - 1995	0.35 dB typ., 0.5 dB max.	
COM to AWS		1710 - 1755	0.35 dB typ., 0.5 dB max.	
		2110 - 2155	0.35 dB typ., 0.5 dB max.	
COM to WCS/2600		2310 - 2690	0.35 dB typ., 0.5 dB max.	
Isolation	COM to 700	806 - 897	45 dB min.	
		1850 - 1995	50 dB min.	
		1710 - 1755	50 dB min.	
		2110 - 2155	50 dB min.	
		2310 - 2690	50 dB min.	
	COM to SMR/850	698 - 787	45 dB min.	
		1850 - 1995	50 dB min.	
		1710 - 1755	50 dB min.	
		2110 - 2155	50 dB min.	
		2310 - 2690	50 dB min.	
	COM to PCS	698 - 787	50 dB min.	
		806 - 897	50 dB min.	
		1710 - 1755	50 dB min.	
		2110 - 2155	50 dB min.	
		2310 - 2690	50 dB min.	
	COM to AWS	698 - 787	50 dB min.	
		806 - 897	50 dB min.	
		1850 - 1995	50 dB min.	
		2310 - 2690	50 dB min.	
		COM to WCS/2600	698 - 787	50 dB min.
		806 - 897	50 dB min.	
		1850 - 1995	50 dB min.	
		1710 - 1755	50 dB min.	
		2110 - 2155	50 dB min.	



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General Characteristics	
<b>Impedance</b>	50 ohms
<b>Continuous Average Power</b>	60 W max.
<b>Peak Envelope Power</b>	500 W max. (700, 850), 1.2 kW max. (PCS, AWS), 650 W max. (WCS/2600) <-117 dBm (-160 dBc) typical (2 x +43 dBm tones) all bands (Indoor)
<b>Intermodulation Performance COM port</b>	<-112 dBm (-155 dBc) typical (2 x +43 dBm tones) all bands (Outdoor) <-127 dBm (-162 dBc) typical (2 x +35 dBm tones) all bands (Indoor & Outdoor)

### Environmental Specification

<b>Operating Temperature</b>	0 °C to +65 °C (Indoor) / -40 °C to +65 °C (Outdoor)
<b>Enclosure</b>	Indoor (IP20 minimum) / Outdoor IP68(Connectors), I67 (Unit Body)
<b>Relative Humidity</b>	0 - 45 % (Indoor) / 0 - 99% (Outdoor)
<b>MTBF</b>	>500,000 hours
<b>Lightning Protection</b>	8/20us, ±20KA max, 10 strikes each, IEC61000-4-5

### Mechanical Specification

Indoor Rack Mount	
<b>Connectors</b>	6 x 7-16 DIN female long neck
<b>Dimensions (w/o connectors &amp; panel) - Rack Mount (HxWxD)</b>	8.13 x 17.44 x 1.73 in. (206.5 x 443.0 x 44.0 mm)
<b>Dimensions (with connectors &amp; panel) - Rack Mount (HxWxD)</b>	9.21 x 19.02 x 1.73 in. (233.97 x 483.0 x 44.0 mm)
<b>Weight</b>	12.5 lbs (5.7 kg)
<b>Mounting</b>	19 in. rack mountable (Wall mounting bracket included)
Outdoor Pole Mount	
<b>Connectors</b>	6 x 7-16 DIN female long neck
<b>Dimensions (w/o connectors &amp; panel) (HxWxD)</b>	8.37 x 17.44 x 1.95 in. (212.5 x 443.0 x 49.52 mm)
<b>Dimensions (with connectors &amp; panel)(HxWxD)</b>	9.21 x 17.44 x 2.58 in. (238.78 x 443.0 x 62.52 mm)
<b>Weight (w/o Bracket)</b>	15.6 lbs (7.1 kg)
<b>Mounting</b>	Pole/Wall Mount

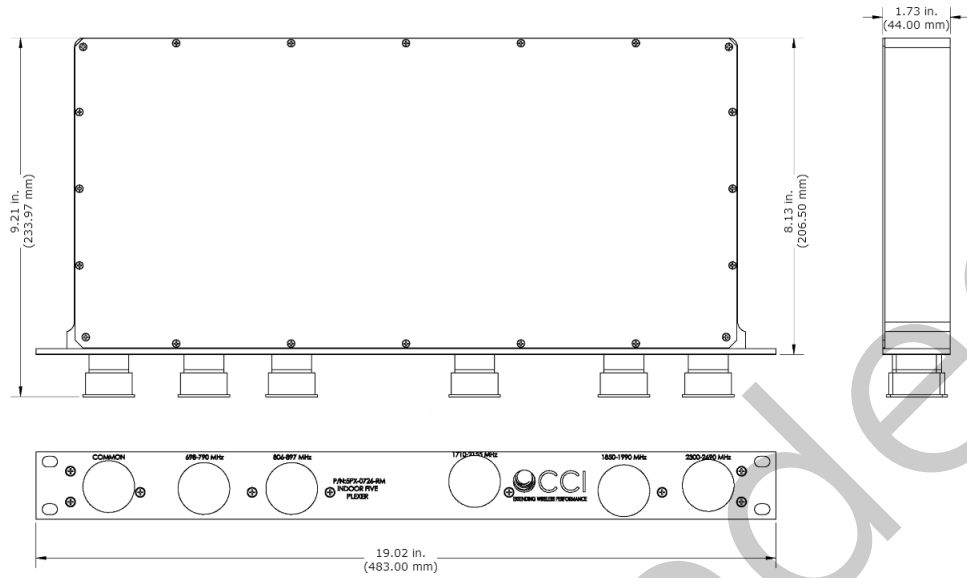


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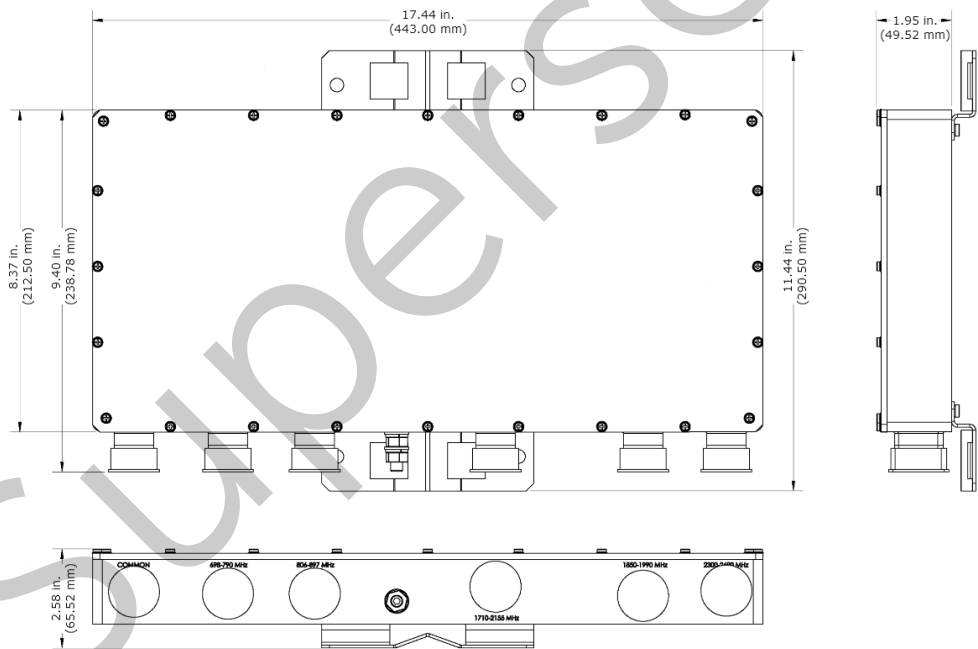
## SPECIFICATIONS

### Broadband Pentaplexer Combiner

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Indoor Broadband Pentaplexer (5PX-0726-RM) Outline Drawing



Outdoor Broadband Pentaplexer (5PX-0726-O) Outline Drawing



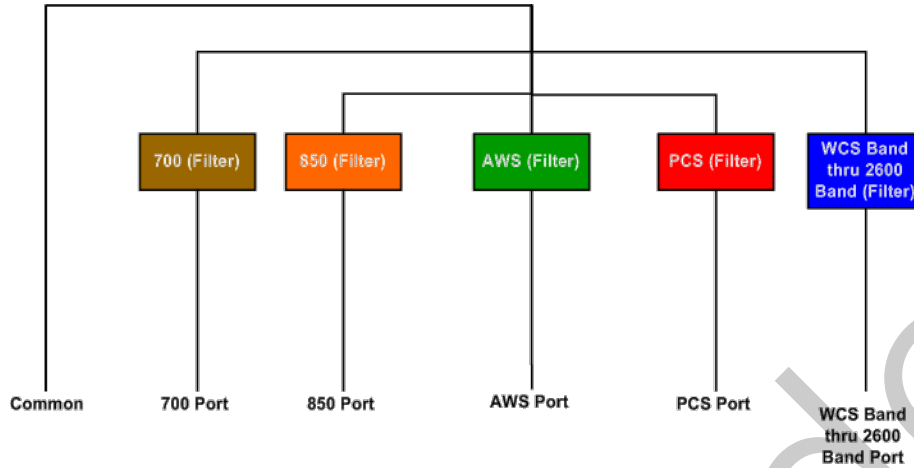
# Filters & Combiners

SPECIFICATIONS

Broadband Pentaplexer Combiner

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Block Diagram



Outdoor Broadband Pentaplexer (5PX-0726-O) Block Diagram



# Filters & Combiners

ORDERING

Broadband Pentaplexer Combiner

5PX-0726-xx

Parts & Accessories

**5PX-0726-RM** 19 in. Indoor Rack or Wall Mount Pentaplexer

**5PX-0726-O** Outdoor Pole/Wall Mount Pentaplexer

Superseded



# Filters & Combiners

STANDARDS &  
CERTIFICATIONS

Broadband Pentaplexer Combiner

5PX-0726-xx

Certifications

Federal Communication Commission (FCC) Part 15 Class B, CE, CSA US

Superseded



**CCI** Communication Components Inc.  
EXTENDING WIRELESS PERFORMANCE