

## CMC2000 Series

1 GHz Horizontal & Vertical Digital Splitters



### Overview

Reliability, quality and performance define the Antronix CMC2000 series digital splitter. Our horizontal and vertical digital splitters have been designed specifically for today's two-way broadband networks. Low intermodulation distortion and 40 dB port-to-port return band isolation prevent high power cable modem signals from distorting neighboring port signals. Capacitively coupled F-ports block AC surges and prevent hum modulation.

Additionally, our digital splitters are among the most robust in the industry. Every port on each CMC2000 series splitter is 6 kV ring wave surge protected, while our proprietary ferrites remain ultra-linear following several surges. To ensure years of reliable performance, Antronix's digital splitters are encased in a Zinc Alloy diecast housing with Nickel Alloy plating. The splitter ports are sealed to 15 psi and SCTE compliant with 1 inch spacing. The CMC2000 series digital splitters employ high "Q" surface mount technology (SMT) components, guaranteeing consistent performance over time and temperature. With over 90 versions available, there will be a CMC2000 digital splitter to meet your needs.

### Features/Benefits:

- **6 kV ring wave surge protected**  
All ports are protected against multiple 6 kV ring wave surges per IEEE specification C62.41 Category A3
- **-45 dBmV spurious and harmonics after 5 surges of 6 kV ring wave with a +55 dBmV return signal**  
Proprietary ferrite blend inhibits re-magnetization of the core due to voltage spikes from impulse noise or lightning. The ferrite remains ultra linear to prevent intermodulation where high level return carriers can affect forward path video signals.
- **Digital broadcast and HDTV ready**  
Compatible with existing and future networks
- **Flat 1 GHz bandwidth with minimal insertion loss**  
Supports present and future multimedia applications including video, data and telephony
- **35 dB return path output return Loss and 40 dB port-to-port return band isolation**  
Excellent return path performance compatible with two-way digitally modulated networks
- **Eclipse Contact Technology (ECT) F-port**  
Provides 400% more contact surface area for lower contact resistance and higher reliability
- **Capacitively coupled F-ports**  
Protects against core re-magnetization and saturation while blocking AC surges.
- **Zinc Alloy diecast housing and backplate w/ proprietary Nickel Alloy plating**  
Superior corrosion resistant plating combined with a diecast backplate protects the back of the housing where corrosion is more prominent
- **100 % soldered back**  
Ensures repeatable 120 dB RFI shielding
- **1 inch port-to-port spacing**  
**Flat 15 psi sealed, SCTE compliant F-ports**  
Prevents water migration in to the splitter and ensures an excellent ground connection
- **UV resistant label**
- **Integrated mounting tabs and heavy duty ground block for years of reliable service**

## Electrical Specifications – Horizontal Splitters

Model Number		CMC2002H	CMC2003H	CMC2003BH	CMC2004H	CMC2008H	CMC2016H
Specification	Freq (MHz)	Typ	Typ	Typ	Typ	Typ	Typ
<b>Insertion Loss</b>							
Maximum (dB)	5 - 14	3.3	3.3 / 6.5	5.5	6.8	10.8	13.5
	14 - 40	3.3	3.3 / 6.5	5.5	6.8	10.8	13.5
	40 - 200	3.3	3.3 / 6.5	5.5	6.8	10.8	14.0
	200 - 550	3.5	3.5 / 6.8	5.8	7.0	11.0	14.5
	550 - 750	3.7	3.6 / 7.2	6.0	7.2	11.5	14.5
	750 - 1000	3.8	3.8 / 7.8	6.2	7.6	12.0	15.0
<b>Isolation</b>							
Minimum (dB)	5 - 14	30	30	30	30	28	23
	14 - 40	40	40	36	40	40	26
	40 - 200	38	35	33	35	35	26
	200 - 550	35	35	28	30	28	26
	550 - 750	30	30	28	30	28	26
	750 - 1000	28	28	25	28	26	23
<b>Input Return Loss</b>							
Minimum (dB)	5 - 14	25	25	28	22	25	21
	14 - 40	30	28	30	22	30	22
	40 - 200	30	26	30	25	28	20
	200 - 550	28	25	25	25	25	20
	550 - 750	25	25	25	24	25	20
	750 - 1000	25	25	25	24	24	20
<b>Output Return Loss</b>							
Minimum (dB)	5 - 14	28	25	25	25	23	20
	14 - 40	40	40	35	38	35	21
	40 - 200	38	30	33	30	30	22
	200 - 550	28	28	25	25	28	22
	550 - 750	25	25	25	24	24	22
	750 - 1000	25	25	25	24	24	22
<b>RFI Isolation</b>							
dB (min)	5 - 1000			120			

Specifications subject to change without notice

## Electrical Specifications – Vertical Splitters

Model Number	CMC2002V	CMC2003V	CMC2003BV	CMC2004V	CMC2006V	CMC2008V	
Specification	Freq (MHz)	Typ	Typ	Typ	Typ	Typ	
<b>Insertion Loss</b>							
Maximum (dB)	5 - 14	3.3	3.3 / 6.8	5.5	6.8	9.0	10.8
	14 - 40	3.3	3.4 / 6.8	5.5	6.8	9.0	10.8
	40 - 200	3.5	3.4 / 7.0	5.5	7.0	9.2	10.8
	200 - 550	3.5	3.6 / 7.2	5.8	7.2	9.4	11.0
	550 - 750	3.6	3.8 / 7.4	6.0	7.4	9.6	11.2
	750 - 1000	3.8	4.0 / 8.0	6.5	7.8	10.0	12.0

<b>Isolation</b>						
Minimum (dB)	5 - 14	25	25	25	25	25
	14 - 40	40	40	38	40	35
	40 - 200	35	30	35	35	28
	200 - 550	28	28	28	28	28
	550 - 750	28	28	28	28	26
	750 - 1000	25	25	25	25	25

<b>Input Return Loss</b>						
Minimum (dB)	5 - 14	22	22	22	22	22
	14 - 40	25	25	25	25	25
	40 - 200	22	22	22	22	22
	200 - 550	22	22	22	22	22
	550 - 750	22	22	22	22	22
	750 - 1000	22	22	22	22	22

<b>Output Return Loss</b>						
Minimum (dB)	5 - 14	22	22	22	22	22
	14 - 40	38	38	35	38	30
	40 - 200	28	28	22	28	25
	200 - 550	25	25	22	25	22
	550 - 750	22	22	22	22	22
	750 - 1000	22	22	22	22	22

<b>RFI Isolation</b>						
dB (min)	5 - 1000					120

## General Specifications

<b>Nominal Impedance</b>	75Ω
<b>F-Connector Type</b>	ANSI/SCTE-01 (formerly SCTE IPS-SP-400) Compliant ECT F-port
<b>F-Connector Torque Specs</b>	30 in. lbs.
<b>Surge Withstand</b>	6 kV Ring Wave Surge per IEEE C62.41 Category A3
<b>Second Harmonic</b>	-45 dBmV after five 6 kV ring wave surge with a +55 dBmV return input carrier

## Environmental Specifications

<b>Pressure Seal</b>	15 psi
<b>Operating Temperature</b>	-40 °C to 60 °C
<b>Corrosion Resistance</b>	Meets SCTE/ANSI Specification

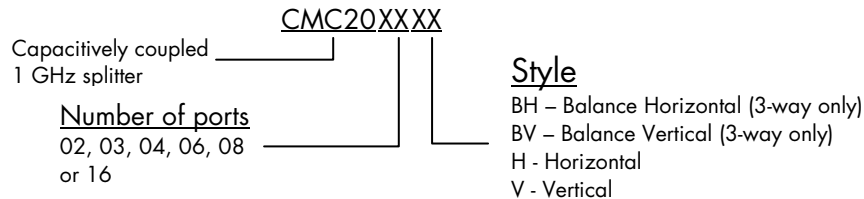
Specifications Subject to change without notice

## Physical Specifications

Dimensions (Tol. $\pm 0.5\text{mm}$ )	Length in (mm)	Width in (mm)	Depth in (mm)
<b>Model</b>			
CMC2002H	1.9 (48.0)	2.4 (61.0)	0.6 (16.2)
CMC2003H, CMC2003BH, CMC2004H	1.9 (48.0)	3.4 (86.0)	0.6 (16.5)
CMC2008H	2.1 (52.3)	4.0 (101.4)	1.2 (31.0)
CMC2016H	9.4 (238.5)	2.7 (68.2)	1.5 (38.0)
CMC2002V	1.4 (36.5)	2.3 (57.5)	1.1 (30.0)
CMC2003V, CMC2003BV, CMC2004V	1.6 (41.0)	3.3 (85.0)	1.2 (31.0)
CMC2006V, CMC2008V	2.8 (70.0)	3.5 (89.0)	1.2 (31.0)

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## Ordering Information



(Ex.) CMC2003BV: 3-way vertical splitter with balanced outputs