

# Features and Benefits

# ANTRONIX®

## MGT2000-SE-G2 1.2 GHz Milenium Series Multi-tap

The Antronix Milenium MGT2000-SE-G2 series 1.2 GHz multi-taps lead the CATV industry in performance and reliability. The MGT2000-SE-G2 series provides low insertion loss and features Antronix's patented CamPort® and E-Option signal conditioning plug-in. All Milenium multi-taps mate to the Antronix USP baseplate for continuous video, data, telephony and power during faceplate changes\*.

The unmatched flexibility of the Milenium series multi-taps allows system engineers to adapt existing designs to new requirements expediently and without a complete system redesign. The MGT2000-SE-G2 series can quickly and easily be upgraded for WiFi powering or subscriber NIU powering with a simple faceplate exchange.

The innovative E-Option signal-conditioning multi-tap solves many network problems through a creative plug-in. A single plug-in can help increase signal-to-noise while suppressing ingress. Never before has adapting a system to meet the needs of VOD, VoIP, digital and data been so simple. A variety of E-Option signal conditioning plug-ins are available to condition either or both the return path and forward path. The E-Options will save you money and time while adapting your system to today's broadband requirements.



- **Wide 1.2 GHz Bandwidth**

Ultra low insertion loss with extended 1.2 GHz bandwidth for future services.

- **Extended Surge Protection**

6 kV Combination Wave surge withstand on all ports.

- **E-Option Drop Signal Conditioning Standard** Patent no. 6,570,465 B2

E-Option allows the signal conditioning at the tap to meet any network needs. Plug-in modules include:

CEG – Cable Equalizer

CSG – Cable Simulator

RAG – Return Path Attenuator

HP – High Pass Filter

HTG – High Tap Value Filter

- **Patented USP Bypass Switch**

Provides uninterrupted signal and power during faceplate changes.

- **CamPort® Sealed, Auto-Seizing F-ports**

>2000 grams seizing force on the center pin of the F-connector.

- **Rotational Seizure Posts**

One tap housing for either aerial or pedestal configuration.

- **Four Stage Corrosion Protection Process**

A 360 Aluminum alloy housing

Housing is impregnated with a sealer to prevent porosity

Clear chromate coating inside and out

Double baked-on coating of polyurethane for superior protection

- **Heat-Treated Stainless Steel Hardware with Proprietary Plating**

Reduces galvanic reactions and provides superb corrosion protection.

- **Integrated Drip Wells, Numbered Ports and Strip Gauge**

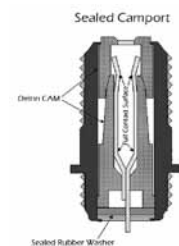
Provided to simplify installation and eliminate costly errors and additional truck rolls.

- **Ribbed Main Line Entry Ports**

Ensures proper adhesion of head shrink tubing for reliable mainline connections.

- **Backwards Compatible Faceplates\***

Most faceplates are backwards compatible with all Milenium multi-tap housings.



## Electrical Specifications

### Milenium Series Multi-tap MGT2200-SE-G2

Model Tap Value	MGT (dB)	2204 4.0	2208 8.0	2211 11.0	2214 14.0	2217 17.0	2220 20.0	2223 23.0	2226 26.0	2229 29.0	2232 32.0									
<b>Frequency (MHz)</b>																				
<b>Tap Loss Tolerance (dB)</b>	5-20	1.5	1.5	1.5	1.5	1.5	1.8	1.8	1.5	1.5	1.5									
	20-900	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5									
	900-1000	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
	1000-1218	2.0	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
		Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg			
<b>Insertion Loss Max/Avg (dB)</b>	5	—	—	3.9	3.3	2.0	1.5	1.3	0.8	1.2	0.8	1.0	0.6	0.7	0.3	0.7	0.3	0.7	0.3	
	10	—	—	3.6	3.3	1.8	1.3	1.2	0.7	1.1	0.7	0.9	0.5	0.6	0.3	0.6	0.3	0.6	0.3	
	30-50	—	—	3.5	3.3	1.8	1.2	1.2	0.7	1.1	0.7	0.9	0.5	0.7	0.3	0.7	0.3	0.7	0.3	
	100	—	—	3.6	3.3	2.0	1.3	1.3	0.8	1.2	0.8	1.0	0.5	0.8	0.4	0.8	0.4	0.8	0.4	
	450	—	—	4.2	3.8	2.4	2.0	1.6	1.2	1.5	1.1	1.3	0.9	1.1	0.8	1.1	0.8	1.1	0.8	
	550	—	—	4.2	3.8	2.4	2.0	1.8	1.4	1.5	1.1	1.4	1.0	1.2	0.8	1.2	0.8	1.2	0.8	
	750	—	—	4.2	3.8	2.6	2.3	1.8	1.5	1.5	1.2	1.5	1.2	1.3	1.0	1.3	1.0	1.3	1.0	
	870	—	—	4.3	3.7	2.7	2.4	2.0	1.6	1.6	1.3	1.6	1.3	1.4	1.1	1.4	1.1	1.4	1.1	
	1000	—	—	4.3	3.8	3.0	2.6	2.3	1.9	1.6	1.3	1.6	1.4	1.6	1.2	1.6	1.2	1.6	1.2	
	1218	—	—	5.2	4.4	3.6	3.0	2.7	2.3	2.2	1.7	2.0	1.6	1.8	1.6	1.8	1.6	1.8	1.6	
<b>Output to Tap Isolation Min (dB)</b>	5-10	—	—	18	—	20	—	22	—	26	—	29	—	32	—	35	—	38	—	40
	10-750	—	—	21	—	24	—	26	—	30	—	33	—	36	—	38	—	40	—	42
	750-900	—	—	20	—	22	—	23	—	28	—	31	—	34	—	36	—	38	—	40
	900-1218	—	—	20	—	22	—	23	—	27	—	30	—	32	—	34	—	36	—	38
<b>Tap to Tap Isolation Min (dB)</b>	5-10	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20
	10-750	23	—	23	—	23	—	23	—	23	—	23	—	23	—	23	—	23	—	23
	750-1000	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20
	1000-1218	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20
<b>Input/Output Return Loss Min (dB)</b>	5-10	17	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18
	10-750	18	—	17	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18
	750-1000	17	—	16	—	17	—	17	—	17	—	17	—	17	—	17	—	17	—	17
	1000-1218	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16
<b>Tap Port Return Loss Min (dB)</b>	5-10	18	—	17	—	17	—	18	—	18	—	18	—	18	—	18	—	18	—	18
	10-750	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18
	750-1000	17	—	17	—	17	—	17	—	17	—	17	—	17	—	17	—	17	—	17
	1000-1218	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16
<b>Hum Mod @ 10 Amps Min (dB)</b>	5-50	—	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—	65
	50-600	—	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—	65
	600-750	—	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—	65
	750-1218	—	—	60	—	60	—	60	—	60	—	60	—	60	—	60	—	60	—	60

## Electrical Specifications

### Milenium Series Multi-tap MGT2400-SE-G2

Model Tap Value	MGT (dB)	2408 8.0	2411 11.0	2414 14.0	2417 17.0	2420 20.0	2423 23.0	2426 26.0	2429 29.0	2432 32.0									
<b>Frequency (MHz)</b>																			
<b>Tap Loss Tolerance (dB)</b>	5-20	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0									
	20-900	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5									
	900-1000	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
	1000-1218	2.0	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0									
		Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg				
<b>Insertion Loss</b> Max/Avg (dB)	5	—	—	3.9	3.4	2.0	1.4	1.3	0.8	1.2	0.9	1.0	0.6	0.7	0.3	0.7	0.3	0.7	0.3
	10	—	—	3.6	3.3	1.8	1.3	1.2	0.8	1.1	0.8	0.9	0.5	0.6	0.3	0.6	0.3	0.6	0.3
	30-50	—	—	3.5	3.2	1.8	1.2	1.2	0.8	1.1	0.7	0.9	0.5	0.7	0.3	0.7	0.3	0.7	0.3
	100	—	—	3.6	3.3	2.0	1.4	1.3	0.9	1.2	0.8	1.0	0.6	0.8	0.4	0.8	0.4	0.8	0.4
	450	—	—	4.2	4.0	2.4	2.0	1.7	1.2	1.5	1.2	1.3	1.0	1.1	0.8	1.1	0.8	1.1	0.8
	550	—	—	4.4	4.0	2.6	2.1	1.9	1.5	1.5	1.2	1.4	1.0	1.2	0.8	1.2	0.8	1.2	0.8
	750	—	—	4.4	4.0	2.8	2.4	1.9	1.6	1.6	1.3	1.5	1.3	1.3	1.0	1.3	1.0	1.3	1.0
	870	—	—	4.4	3.9	3.0	2.6	2.1	1.7	1.8	1.3	1.6	1.3	1.4	1.0	1.4	1.0	1.4	1.0
	1000	—	—	4.5	3.9	3.1	2.6	2.4	2.0	2.0	1.5	1.7	1.3	1.5	1.1	1.5	1.1	1.5	1.1
	1218	—	—	5.2	4.3	3.6	3.3	2.7	2.2	2.2	1.7	2.0	1.6	1.8	1.4	1.8	1.4	1.8	1.4
<b>Output to Tap Isolation</b> Min (dB)	5-10	—	—	20	—	22	—	26	—	30	—	32	—	34	—	36	—	40	—
	10-750	—	—	23	—	27	—	30	—	34	—	36	—	38	—	40	—	42	—
	750-900	—	—	22	—	25	—	28	—	33	—	34	—	36	—	38	—	40	—
	900-1218	—	—	22	—	25	—	28	—	30	—	32	—	34	—	36	—	38	—
<b>Tap to Tap Isolation</b> Min (dB)	5-10	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—
	10-750	23	—	23	—	23	—	23	—	23	—	23	—	23	—	23	—	23	—
	750-1000	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—
	1000-1218	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—
<b>Input/Output Return Loss</b> Min (dB)	5-10	17	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—
	10-750	18	—	17	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—
	750-1000	17	—	17	—	17	—	17	—	17	—	17	—	17	—	17	—	17	—
	1000-1218	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—
<b>Tap Port Return Loss</b> Min (dB)	5-10	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—
	10-750	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—
	750-1000	17	—	17	—	17	—	17	—	17	—	17	—	17	—	17	—	17	—
	1000-1218	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—
<b>Hum Mod @ 10 Amps</b> Min (dB)	5-50	—	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—
	50-600	—	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—
	600-750	—	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—
	750-1218	—	—	60	—	60	—	60	—	60	—	60	—	60	—	60	—	60	—

## Electrical Specifications

### Milenium Series Multi-tap MGT2800-SE-G2

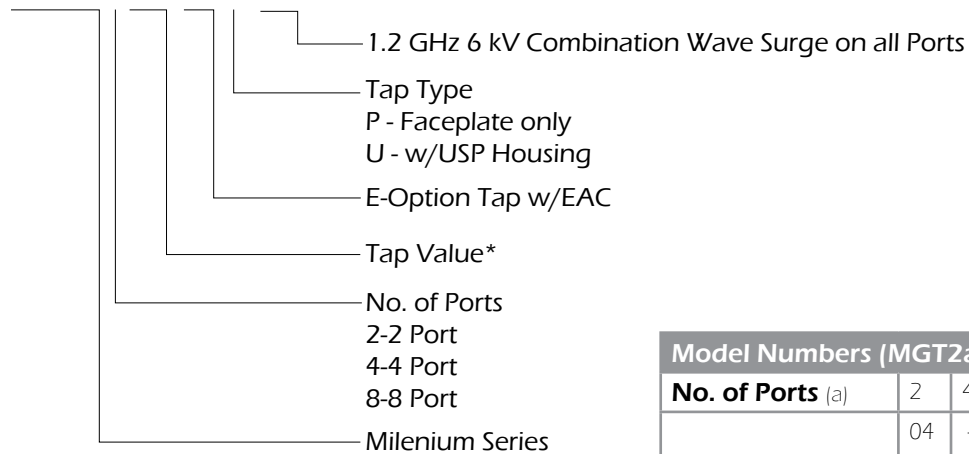
Model Tap Value	MGT (dB)	2812 11.5	2815 15.5	2818 18.0	2821 21.0	2824 24.0	2827 27.0	2830 30.0	2833 33.0								
<b>Frequency (MHz)</b>																	
<b>Tap Loss Tolerance (dB)</b>	5-20	1.5	1.8	1.5	1.5	1.5	1.5	1.5	1.5								
	20-900	1.8	1.8	1.5	1.5	1.5	1.5	1.5	1.5								
	900-1000	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5								
	1000-1218	3.0	3.2	3.0	3.0	3.0	3.0	3.0	3.0								
		Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg				
<b>Insertion Loss</b> Maxy/Avg (dB)	5	—	—	3.9	3.4	2.0	1.4	1.3	0.8	1.1	0.9	0.8	0.6	0.6	0.3	0.6	0.3
	10	—	—	3.6	3.3	1.8	1.3	1.2	0.7	0.9	0.8	0.7	0.5	0.5	0.3	0.5	0.3
	30-50	—	—	3.5	3.2	1.8	1.2	1.2	0.7	0.9	0.5	0.7	0.4	0.5	0.2	0.5	0.2
	100	—	—	3.6	3.3	2.0	1.4	1.3	0.8	1.1	0.7	0.8	0.5	0.6	0.3	0.6	0.3
	450	—	—	4.2	4.0	2.4	1.9	1.7	1.2	1.3	1.1	1.2	0.8	0.9	0.6	0.9	0.6
	550	—	—	4.4	4.1	2.6	2.0	1.9	1.2	1.5	1.2	1.4	0.9	1.0	0.7	1.0	0.7
	750	—	—	4.5	4.1	2.8	2.3	1.9	1.4	1.6	1.3	1.4	1.0	1.2	0.8	1.2	0.8
	870	—	—	4.5	4.1	2.9	2.5	2.1	1.5	1.8	1.3	1.4	1.2	1.3	0.9	1.3	0.9
	1000	—	—	4.5	4.0	3.1	2.7	2.3	1.7	2.0	1.6	1.6	1.4	1.5	1.0	1.5	1.0
	1218	—	—	5.2	4.5	3.6	3.3	2.8	2.3	2.2	2.1	2.0	1.8	1.8	1.5	1.8	1.5
<b>Output to Tap Isolation</b> Min (dB)	5-10	—	—	23	—	25	—	28	—	30	—	34	—	36	—	38	—
	10-750	—	—	25	—	30	—	32	—	34	—	36	—	38	—	40	—
	750-900	—	—	25	—	27	—	29	—	32	—	34	—	36	—	38	—
	900-1218	—	—	23	—	26	—	28	—	29	—	30	—	33	—	34	—
<b>Tap to Tap Isolation</b> Min (dB)	5-10	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—
	10-750	23	—	23	—	23	—	23	—	23	—	23	—	23	—	23	—
	750-1000	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—
	1000-1218	20	—	20	—	20	—	20	—	20	—	20	—	20	—	20	—
<b>Input/Output Return Loss</b> Min (dB)	5-10	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—
	10-750	17	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—
	750-1000	16	—	17	—	17	—	17	—	17	—	17	—	17	—	17	—
	1000-1218	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—
<b>Tap Port Return Loss</b> Min (dB)	5-10	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—
	10-750	18	—	18	—	18	—	18	—	18	—	18	—	18	—	18	—
	750-1000	17	—	17	—	17	—	17	—	17	—	17	—	17	—	17	—
	1000-1218	16	—	16	—	16	—	16	—	16	—	16	—	16	—	16	—
<b>Hum Mod @ 10 Amps</b> Min (dB)	5-50	—	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—
	50-600	—	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—
	600-750	—	—	65	—	65	—	65	—	65	—	65	—	65	—	65	—
	750-1218	—	—	60	—	60	—	60	—	60	—	60	—	60	—	60	—

## Specifications Milenium Series Multi-tap

General	
Nominal Impedance	75 Ω
F-connector Type	ANSI/SCTE-01 (formerly SCTE IPS-SP-400) Compliant CamPort® F-port
Surge Withstand	6 kV Combination Wave Surge per IEEE C62.41 Category B3 on all Ports
Power Rating	12 Amps Continuous, 60 to 90 VAC
Screening Effectiveness	105 dB (min)
Environmental	
Pressure Seal	15 psi
Operating Temperature	-40 °C to 60 °C
Corrosion Resistance	Meets ANSI/SCTE Specification

### Ordering Information


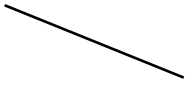
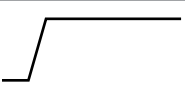


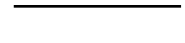
#### MGT2XYZ-SE-Z-G2



Model Numbers (MGT2abb)*				Color Code	
No. of Ports (a)	2	4	8		
*Tap Value (bb)	04	-	-	Green	
	08	08	-	Black	
	11	11	12	Gold	
	14	14	15	Royal Blue	
	17	17	18	Dark Blue	
	20	20	21	Dark Orange	
	23	23	24	Light Orange	
	26	26	27	Red	
	29	29	30	Purple	
	32	32	33	Hot Pink Red	
	-	35	36	Green	
	-	-	39	Black	

Table 1. Tap Value Color Codes

## E-Option Plug-in Conditioner Milenium Series Multi-tap Ordering Matrix

Plug in Conditioner	(XXX)	Filter Shape	Conditioner Value (YY)
<b>Cable Equalizer</b>	CEG		02, 04, 06, 08, 10, 12, 14 or 16 (dB) (Equalization at 1002 MHz)
<b>Cable Simulator</b>	CSG		03, 06, 09 or 12 (dB) (Cable simulation at 1002 MHz)
<b>Return Path Attenuator</b>	RAG		02, 04, 06, 08, 10, 12, 14, 16 or 18 (dB)
<b>High Tap Filter</b>	HTG		03, 06, 09, 12 or 15 (dB)
<b>High Pass Filter</b>	HP		54 (MHz)
<b>Jumper**</b>	JP		—

\*\* Jumper (JP) is shipped with all E-Option taps unless requested. Patent no 6,570,465 B2

### Related Documents

Description	Document Number
E-Option Application Note	AN-1007

**XXX - YY**

