

## Milenium Series Multitap

### MGT2000-SE



### Overview

The Antronix Milenium MGT2000-SE series 1 GHz multitaps lead the CATV industry in performance and reliability. The MGT2000-SE series provides low insertion loss and features Antronix's patented CamPort and E-Option signal conditioning plug-in. All Milenium multitaps mate to the Antronix USP baseplate for continuous video, data, telephony and power during faceplate changes\*.

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

The innovative E-Option signal-conditioning multitap 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

### Features & Benefits

- **Extended Surge Protection**
  - IEEE Category B3 6 kV Combination Wave protection on all main line ports
  - IEEE Category A3, 6 kV Ring Wave protection on all tap ports
- **E-Option Drop Signal Conditioning standard**
  - E-Option allows the signal conditioning at the tap to meet any network needs. Plug-in modules include:
    - »CE – Cable Equalizer
    - »CS – Cable Simulator
    - »RA – Return Path Attenuator
    - »HP – High Pass Filter
    - »HT – High Tap Value Filter
- **Patented USP bypass switch**
  - Provides continuous signal and power during faceplate changes
- **CamPort® sealed, auto-seizing F-ports**
  - >2000 grams retention strength
- **Rotational seizure posts**
  - One tap housing for either aerial or pedestal configuration
- **Four stage corrosion protection process**
  - » A 360 Aluminum alloy housing (most corrosive resistant alloy for die casting)
  - » 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
- **Color coded multitap**
  - Provides tap value identification at a glance
- **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 multitap housings.

\*Contact sales for complete compatibility information

## Electrical Specifications - MGT2200-SE

Model	MGT	2204	2208	2211	2214	2217	2220	2223	2226	2229	2232										
Tap Value	(dB)	4	8	11	14	17	20	23	26	29	32										
<b>Frequency (MHz)</b>																					
<b>Tap Loss Tolerance</b>																					
(dB)	5-10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5										
	10-550	1.5	1.0	1.5	1.2	1.2	1.1	1.1	1.4	1.0	1.3										
	550-750	1.0	1.0	1.2	1.2	1.2	1.0	1.1	1.4	1.0	1.3										
	750-1000	1.5	2.0	2.0	2.0	1.8	1.5	1.5	1.5	1.5	2.1										
<b>Insertion Loss</b>																					
		Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg		
Max/Avg	5	-	-	3.6	3.3	1.6	1.5	1.0	0.8	1.0	0.8	0.8	0.6	0.6	0.3	0.5	0.3	0.5	0.3	0.4	0.3
(dB)	10	-	-	3.5	3.3	1.4	1.3	0.9	0.7	0.9	0.7	0.7	0.5	0.6	0.3	0.5	0.3	0.5	0.2	0.4	0.2
	30-50	-	-	3.5	3.3	1.4	1.2	0.9	0.7	0.9	0.7	0.7	0.5	0.6	0.3	0.5	0.3	0.5	0.3	0.4	0.3
	100	-	-	3.6	3.4	1.5	1.3	1.0	0.8	1.0	0.8	0.7	0.6	0.6	0.3	0.6	0.3	0.6	0.3	0.5	0.3
	450	-	-	4.4	3.9	2.2	1.9	1.5	1.2	1.5	1.2	1.2	0.9	1.1	0.7	1.1	0.8	1.0	0.7	1.0	0.7
	550	-	-	4.6	4.0	2.5	1.9	1.7	1.3	1.7	1.3	1.4	1.0	1.2	0.8	1.3	0.8	1.1	0.8	1.2	0.8
	750	-	-	4.5	4.2	2.7	2.2	2.0	1.7	1.9	1.5	1.6	1.3	1.5	1.1	1.5	1.0	1.4	1.1	1.5	1.1
	860	-	-	4.4	4.0	3.0	2.4	2.1	1.9	1.9	1.6	1.6	1.4	1.6	1.1	1.6	1.1	1.5	1.1	1.6	1.1
	1000	-	-	4.1	3.8	3.2	2.6	2.6	2.2	2.2	1.7	1.9	1.5	1.8	1.3	1.8	1.3	1.7	1.3	1.7	1.3
<b>Isolation Tap to Out</b>																					
Minimum	5-15	-	-	18		21		24		27		30		33		36		39		42	
(dB)	15-42	-	-	20		25		25		35		35		35		42		42		42	
	42-750	-	-	20		23		27		33		33		33		36		39		42	
	750-1000	-	-	19		20		20		25		27		28		30		30		33	
<b>Isolation Tap to Tap</b>																					
Minimum	5-15	20		18		20		20		20		20		20		20		20		20	
(dB)	15-42	22		24		27		32		35		35		33		29		33		29	
	42-750	20		20		20		20		20		20		20		20		20		20	
	750-1000	18		18		18		20		20		20		20		20		20		20	
<b>Input Return Loss</b>																					
Minimum	5-15	18		18		18		18		18		18		18		18		18		18	
(dB)	15-42	18		18		18		18		18		18		18		18		18		18	
	42-750	16		18		18		18		18		18		18		18		18		18	
	750-1000	16		16		16		18		18		18		18		18		18		18	
<b>Output Return Loss</b>																					
Minimum	5-15	-		16		18		18		18		18		18		18		18		18	
(dB)	15-42	-		20		22		30		28		29		35		35		35		35	
	42-750	-		17		17		18		18		18		18		18		18		18	
	750-1000	-		17		17		17		18		18		17		18		18		18	
<b>Tap Return Loss</b>																					
Minimum	5-15	18		16		18		18		18		18		18		18		18		18	
(dB)	15-42	23		26		27		30		30		30		30		30		30		30	
	42-750	17		18		18		18		18		18		18		18		18		18	
	750-1000	16		18		18		18		17		18		17		18		18		18	
<b>Hum Mod @ 10 Amps</b>																					
Minimum	5-10	60		60		60		60		60		60		60		60		60		60	
(dB)	10-50	65		65		65		65		65		65		65		65		65		65	
	50-650	70		70		70		70		70		70		70		70		70		70	
	650-750	65		65		65		65		65		65		65		65		65		65	
	750-1000	60		60		60		60		60		60		60		60		60		60	

Specifications subject to change without notice

## Electrical Specifications – MGT2400-SE

Model Tap Value	MGT (dB)	2408 8	2411 11	2414 14	2417 17	2420 20	2423 23	2426 26	2429 29	2432 32
<b>Frequency (MHz)</b>										
<b>Tap Loss Tolerance</b>										
(dB)	5-10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	10-550	1.0	1.0	1.5	1.5	1.5	1.2	1.2	1.2	1.5
	550-750	1.0	1.0	1.5	1.5	1.5	1.2	1.2	1.2	1.5
	750-1000	1.5	2.5	2.2	2.5	2.0	1.8	2.0	1.6	1.5

<b>Insertion Loss</b>		Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg
Max/Avg	5	-	-	3.7	3.4	1.6	1.4	1.0	0.8	1.0	0.9	0.7	0.6	0.4	0.3	0.6	0.3
(dB)	10	-	-	3.6	3.3	1.4	1.3	0.9	0.7	1.0	0.8	0.7	0.5	0.4	0.3	0.6	0.3
	30-50	-	-	3.6	3.3	1.4	1.2	0.9	0.7	0.9	0.7	0.7	0.5	0.4	0.3	0.7	0.3
	100	-	-	3.7	3.4	1.5	1.3	1.0	0.8	1.0	0.8	0.8	0.6	0.5	0.3	0.7	0.3
	450	-	-	4.4	3.8	2.2	1.8	1.5	1.2	1.5	1.1	1.3	1.0	1.0	0.7	1.1	0.7
	550	-	-	4.6	4.0	2.5	2.0	1.7	1.3	1.7	1.2	1.5	1.0	1.2	0.8	1.3	0.8
	750	-	-	4.5	4.1	2.7	2.5	2.0	1.7	2.0	1.5	1.7	1.4	1.4	1.1	1.6	1.1
	860	-	-	4.3	3.9	2.8	2.5	2.2	1.8	2.0	1.5	1.7	1.5	1.6	1.2	1.6	1.2
	1000	-	-	4.2	3.7	3.2	2.7	2.6	2.1	2.1	1.6	1.9	1.5	1.7	1.3	1.8	1.4

<b>Isolation Tap to Out</b>											
Minimum	5-15	-	-	21	24	27	30	33	36	39	42
(dB)	15-42	-	-	25	28	30	35	35	40	40	42
	42-750	-	-	23	28	30	35	35	38	39	42
	750-1000	-	-	22	24	24	30	30	35	35	36

<b>Isolation Tap to Tap</b>											
Minimum	5-15	20	20	20	20	20	20	20	20	20	20
(dB)	15-42	31	29	30	33	35	35	35	35	35	35
	42-750	20	20	20	20	20	20	20	20	20	20
	750-1000	20	20	20	20	20	20	20	20	20	20

<b>Input Return Loss</b>										
Minimum	5-15	16	18	18	18	18	18	18	18	18
(dB)	15-42	18	18	18	18	18	18	18	18	18
	42-750	16	17	16	17	17	18	18	18	18
	750-1000	16	18	17	17	17	18	18	18	18

<b>Output Return Loss</b>										
Minimum	5-15	-	16	18	18	18	18	18	18	18
(dB)	15-42	-	20	22	30	28	28	35	35	35
	42-750	-	18	17	17	18	18	18	18	18
	750-1000	-	18	17	17	18	18	18	18	16

<b>Tap Return Loss</b>										
Minimum	5-15	18	18	18	18	18	18	18	18	18
(dB)	15-42	30	30	30	30	30	30	30	30	30
	42-750	18	18	18	18	18	18	18	18	18
	750-1000	18	18	18	18	18	18	18	18	18

<b>Hum Mod @ 10 Amps</b>										
Minimum	5-10	60	60	60	60	60	60	60	60	60
(dB)	10-50	65	65	65	65	65	65	65	65	65
	50-650	70	70	70	70	70	70	70	70	70
	650-750	65	65	65	65	65	65	65	65	65
	750-1000	60	60	60	60	60	60	60	60	60

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## Electrical Specifications – MGT2800-SE

Model	MGT	2812	2815	2818	2821	2824	2827	2830	2833
Tap Value (dB)		12	15	18	21	24	27	30	33
<b>Frequency (MHz)</b>									
<b>Tap Loss Tolerance</b>									
(dB)	5 – 10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	10 – 550	1.4	1.2	1.2	1.1	1.2	1.2	1.2	1.3
	550 – 750	1.2	1.2	1.2	1.2	1.2	1.3	1.5	1.5
	750-1000	2.0	2.5	2.2	2.5	2.5	2.0	2.0	2.0

<b>Insertion Loss</b>		Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg		
Max/Avg	5	-	-	3.6	3.4	1.6	1.4	1.0	0.8	1.1	0.9	0.8	0.6	0.5	0.3	0.5	0.3
(dB)	10	-	-	3.5	3.3	1.5	1.3	0.9	0.7	1.0	0.8	0.7	0.5	0.4	0.3	0.5	0.2
	30-50	-	-	3.5	3.3	1.4	1.2	0.9	0.7	0.9	0.7	0.7	0.5	0.4	0.3	0.5	0.3
	100	-	-	3.6	3.4	1.5	1.3	1.0	0.8	1.0	0.8	0.8	0.5	0.5	0.3	0.5	0.3
	450	-	-	4.1	3.8	2.2	1.8	1.6	1.2	1.6	1.1	1.3	0.9	1.1	0.7	1.1	0.7
	550	-	-	4.4	4.0	2.5	2.0	1.8	1.3	1.8	1.2	1.5	1.0	1.3	0.8	1.3	0.8
	750	-	-	4.3	4.1	2.8	2.4	2.1	1.7	2.1	1.4	1.6	1.2	1.5	1.0	1.5	1.0
	860	-	-	4.2	4.0	2.9	2.6	2.3	1.9	2.1	1.5	1.7	1.3	1.6	1.1	1.6	1.1
	1000	-	-	4.3	3.8	3.2	2.7	2.7	2.2	2.2	1.6	1.9	1.4	1.7	1.3	1.7	1.3

<b>Isolation – Tap to Out</b>									
Minimum	5-14	-	24	27	30	33	36	39	42
(dB)	15-42	-	26	30	33	38	38	40	45
	43-750	-	26	30	33	35	36	38	41
	750-1000	-	24	27	29	31	35	35	38

<b>Isolation – Tap to Tap</b>									
Minimum	5-14	20	20	20	20	20	20	20	20
(dB)	15-42	35	33	35	35	35	35	35	35
	43-750	20	20	20	20	20	20	20	20
	750-1000	20	20	20	20	20	20	20	20

<b>Return Loss – Input</b>									
Minimum	5-14	16	17	18	18	18	18	18	18
(dB)	15-42	16	18	18	18	18	18	18	18
	43-750	16	17	17	18	18	18	18	18
	750-1000	16	17	17	17	18	18	18	18

<b>Return Loss - Output</b>									
Minimum	5-14	-	16	18	18	18	18	18	18
(dB)	15-42	-	16	23	32	28	29	35	35
	43-750	-	17	18	18	18	18	18	18
	750-1000	-	17	17	18	18	18	18	18

<b>Return Loss - Tap</b>									
Minimum	5-14	18	18	18	18	18	18	18	18
(dB)	15-42	30	30	30	30	30	30	30	30
	43-750	18	18	18	18	18	18	18	18
	750-1000	18	18	18	18	18	18	18	18

<b>Hum Mod @10 Amps</b>									
Minimum	5-10	60	60	60	60	60	60	60	60
(dB)	10-50	65	65	65	65	65	65	65	65
	50-650	70	70	70	70	70	70	70	70
	650-750	65	65	65	65	65	65	65	65
	750-1000	60	60	60	60	60	60	60	60

Specifications subject to change without notice

## ■ ■ ■ General Specifications

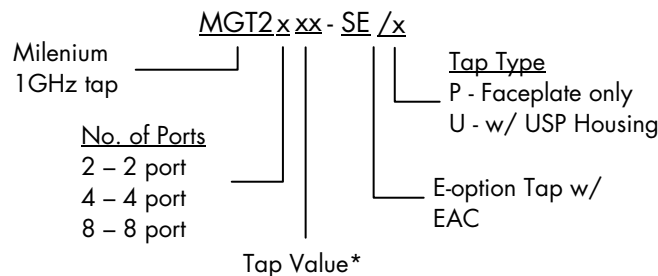
<b>Nominal Impedance</b>	75Ω
<b>F-Connector Type</b>	ANSI/SCTE-01 (formerly SCTE IPS-SP-400) Compliant CamPort <sup>®</sup> F-port
<b>Surge Withstand</b>	6 kV Combination Wave Surge per IEEE C62.41 Category B3 on all main line ports 6 kV Ring Wave Surge per IEEE C62.41 Category A3 on all tap ports
<b>Power Rating</b>	12 Amps continuous, 60 to 90 VAC
<b>RFI</b>	115 dB (min)

## ■ ■ ■ 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

## ■ ■ ■ Ordering Information

### MGT2000-SE Ordering Matrix

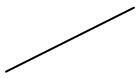
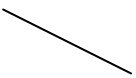

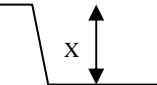



Model Numbers (MGT2abb)*				Color Code	
No. of Ports (a)	2	4	8		
*Tap Value (bb)	04	-	-	Green	
	08	08	-	Black	
	11	11	12	Gold	
	14	14	15	Royal Blue	
	17	17	18	Dark Blue	
	20	20	21	Dark Orange	
	23	23	24	Light Orange	
	26	26	27	Red	
	29	29	30	Purple	
	32	32	33	Hot Pink Red	
	-	35	36	Green	
-	-	39	Black		

Table 1. Tap Value Color Codes

**■ ■ ■ E-Option Plug-in Conditioner Ordering Matrix**

Conditioner Type  $\overbrace{\quad}^{\text{XX}}$  -  $\overbrace{\quad}^{\text{XX}}$  Conditioner Value

Plug in Conditioner	(XX)	Filter Shape	Conditioner Value (-XX)
Cable Equalizer	CE		02, 04, 06, 08, 10, 12, 14 or 16 (dB) (Equalization at 860 MHz)
Cable Simulator	CS		03, 06, 09 or 12 (dB)
Return Path Attenuator	RA		02, 04, 06, 08, 10, 12, 14, 16 or 18 (dB)
High Tap Filter	HT		03, 06, 09, 12 or 15 (dB)
High Pass Filter	HP		52 or 54 (MHz)
Jumper**	JP		-

\*\* Jumper (JP) is shipped with all E-Option taps unless requested

**■ ■ ■ Related Documents**

Description	Document Number
E-Option Application Note	AN-1007

**■ ■ ■ Contact Information**

For technical questions or to contact sales:

Phone: 609.860.0160

Fax: 609.860.1687

Email: [sales@antronix.net](mailto:sales@antronix.net)