

Features and Benefits

ANTRONIX®

MGT3000-SE 1 GHz Milenium Series Multi-tap

Antronix multi-taps lead the CATV industry in performance and reliability. The MGT3000-SE series features a plug-in directional coupler allowing flexibility to change signal feed direction without having to re-splice a tap location. The tap value can be changed by simply installing a plug-in of the desired DC value – minimizing inventory expenses. The unmatched flexibility of the MGT3000 multi-taps allow system engineers to adapt existing designs to new requirements expediently and without a complete system redesign. With a bandwidth from 5 MHz to 1 GHz, the MGT3000 full bandwidth multi-tap has the lowest insertion loss on the market and features our patented CamPort® and E-Option signal conditioning plug-in.

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-Option will save you money and time while adapting your system to today's broadband requirements. Like all other Milenium multi-taps, these mate to the Antronix USP baseplate for continuous video, data, telephony, and power during faceplate changes.



- **1 GHz Bandwidth**

Ultra low insertion loss to 1 GHz with the flexibility of a plug-in directional coupler

- **Extended Surge Protection**

6 kV Combination Wave surge withstand on all main line ports. 6 kV Ring Wave surge withstand on all tap 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:

CE – Cable Equalizer

CS – Cable Simulator

RA – Return Path Attenuator

HT – 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**

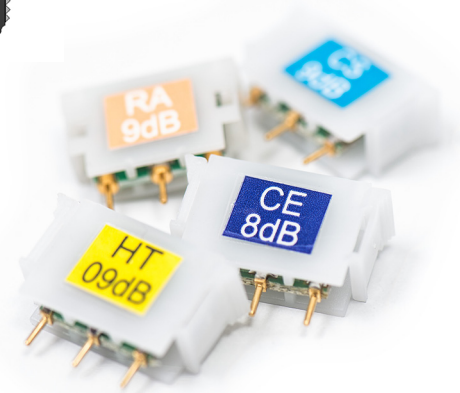
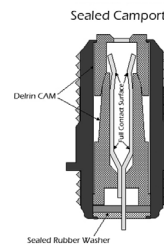
Provided to simplify installation and eliminate costly errors and additional truck rolls.

- **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 MGT3200

Model Tap Value	MGT (dB)	3204	3208	3211	3214	3217	3220	3223	3226	3229	3232
Frequency (MHz)											
Tap Loss Tolerance (dB)	5-9	1.6	0.5	1.2	0.9	0.5	1.1	0.8	1.1	0.9	0.8
	10-549	1.7	0.8	1.5	1.1	0.9	1.0	0.8	1.3	0.5	1.2
	550-749	1.2	0.6	1.5	0.7	0.9	0.8	0.8	1.1	0.9	1.0
	750-1002	2.0	2.0	2.2	2.3	2.1	1.4	1.5	2.0	2.0	3.0
Insertion Loss (dB)	5	—	3.6	1.6	1.0	1.1	0.8	0.4	0.4	0.5	0.5
	10	—	3.5	1.5	0.9	1.0	0.7	0.4	0.4	0.4	0.5
	40	—	3.5	1.4	0.9	0.9	0.7	0.4	0.4	0.4	0.5
	50	—	3.5	1.4	0.9	0.9	0.7	0.4	0.4	0.5	0.5
	100	—	3.6	1.5	1.0	1.0	0.7	0.5	0.5	0.5	0.6
	450	—	4.4	2.2	1.5	1.5	1.2	1.0	1.0	1.3	1.1
	550	—	4.5	2.4	1.8	1.7	1.4	1.1	1.2	1.3	1.4
	750	—	4.4	2.6	2.1	1.8	1.6	1.3	1.4	1.6	1.6
	870	—	4.5	2.8	2.2	1.8	1.6	1.5	1.5	1.6	1.6
1002	—	4.5	3.0	2.6	1.8	1.8	1.7	1.7	1.9	1.8	
Output to Tap Isolation (dB)	5-9	—	17	20	24	30	37	42	45	45	46
	10-14	—	21	26	29	38	35	44	48	52	52
	15-42	—	23	29	29	40	34	40	42	54	53
	43-549	—	22	25	27	31	30	33	37	43	44
	550-749	—	18	23	24	31	29	30	35	45	43
	750-1002	—	15	21	21	26	26	26	30	32	35
Tap to Tap Isolation (dB)	5-9	24	16	19	24	30	35	28	26	28	25
	10-14	26	20	24	29	36	35	29	27	31	27
	15-42	28	23	27	32	35	35	32	30	33	27
	43-549	17	19	22	23	20	21	19	22	24	21
	550-749	18	19	19	24	20	25	19	22	25	21
	750-1002	18	18	18	18	18	18	18	18	18	18
Input/Output Return Loss In (dB)	5-9	17	19	20	19	20	23	26	26	26	26
	10-14	19	19	20	19	20	23	30	30	30	30
	15-42	17	19	21	20	21	24	30	30	31	29
	43-549	16	16	16	16	16	16	16	16	18	18
	550-749	16	17	18	16	18	18	16	17	20	18
	750-1002	14	15	16	16	18	16	16	16	18	18

Electrical Specifications

Milenium Series Multi-tap MGT3200

Model Tap Value	MGT (dB)	3204	3208	3211	3214	3217	3220	3223	3226	3229	3232
Frequency (MHz)											
Return Loss Out (dB)	5-9	—	17	21	29	27	28	28	28	28	28
	10-14	—	18	23	30	27	28	34	34	34	34
	15-42	—	20	23	28	28	29	35	35	35	35
	43-549	—	18	17	17	19	17	16	17	18	18
	550-749	—	17	17	17	18	18	16	18	18	18
	750-1002	—	16	16	16	16	16	16	16	17	18
Tap Port Return Loss (dB)	5-9	20	15	18	21	22	20	21	21	20	21
	10-14	25	21	23	28	28	25	26	27	27	27
	15-42	25	24	24	32	32	28	28	28	30	30
	43-549	16	17	18	18	18	19	17	18	18	21
	550-749	16	17	18	18	16	17	16	18	20	23
	750-1002	16	16	16	17	16	18	16	18	18	18
Hum Mod @ 12 Amps (dB)	5-10	60	60	60	60	60	60	60	60	60	60
	11-749	70	70	70	70	70	70	70	70	70	70
	750-1002	60	60	60	60	60	60	60	60	60	60
EMI (dB)	5-1200	-105	-105	-105	-105	-105	-105	-105	-105	-105	-105

Electrical Specifications

Milenium Series Multi-tap MGT3400

Model Tap Value	MGT (dB)	3408	3411	3414	3417	3420	3423	3426	3429	3432
Frequency (MHz)										
Tap Loss Tolerance (dB)	5-9	1.1	0.8	1.6	0.9	0.8	0.7	0.5	0.8	1.4
	10-549	1.0	0.8	1.9	1.5	1.4	0.8	0.9	1.0	1.4
	550-749	0.9	1.2	2.0	1.4	1.6	1.0	1.0	1.0	1.3
	750-1002	1.6	2.6	2.9	3.1	2.2	2.0	2.0	2.0	2.2
Insertion Loss (dB)	5	—	3.6	1.7	1.0	1.2	0.8	0.5	0.5	0.5
	10	—	3.5	1.5	0.9	1.0	0.7	0.4	0.4	0.4
	40	—	3.5	1.5	0.9	1.0	0.7	0.4	0.4	0.4
	50	—	3.5	1.5	0.9	1.0	0.7	0.4	0.4	0.4
	100	—	3.7	1.5	0.9	1.1	0.8	0.5	0.5	0.5
	450	—	4.3	2.2	1.5	1.6	1.4	1.1	1.1	1.1
	550	—	4.3	2.5	1.7	1.8	1.6	1.3	1.3	1.3
	750	—	4.3	2.8	2.0	2.1	1.8	1.5	1.5	1.5
	870	—	4.3	2.8	2.2	2.1	1.8	1.6	1.6	1.6
1002	—	4.4	3.1	2.7	2.3	2.0	1.8	1.8	1.8	
Output to Tap Isolation (dB)	5-9	—	19	23	28	34	41	46	48	50
	10-14	—	25	29	34	42	39	50	52	54
	15-42	—	28	32	37	44	38	46	50	52
	43-549	—	25	28	32	37	33	33	38	40
	550-749	—	23	26	27	34	29	31	36	38
	750-1002	—	20	24	25	28	28	29	35	36
Tap to Tap Isolation (dB)	5-9	32	20	23	26	29	32	36	37	38
	10-14	34	25	28	31	35	34	41	39	40
	15-42	36	28	30	34	35	34	39	40	40
	43-549	23	25	23	24	23	23	23	25	25
	550-749	21	21	20	21	21	21	21	23	23
	750-1002	20	20	20	20	20	20	21	22	22
Input/Output Return Loss In (dB)	5-9	16	18	19	21	19	21	26	27	27
	10-14	16	18	18	21	20	22	29	30	30
	15-42	16	18	18	21	20	22	31	31	31
	43-549	15	17	16	17	16	16	16	18	18
	550-749	15	16	17	18	19	18	18	18	18
	750-1002	14	16	16	16	18	16	17	18	18

Electrical Specifications

Milenium Series Multi-tap MGT3400

Model Tap Value	MGT (dB)	3408	3411	3414	3417	3420	3423	3426	3429	3432
Frequency (MHz)										
Return Loss Out (dB)	5-9	—	16	19	29	27	23	28	28	28
	10-14	—	19	20	31	27	25	33	33	33
	15-42	—	20	22	30	28	28	33	33	33
	43-549	—	18	16	17	18	17	16	18	18
	550-749	—	19	17	17	20	18	18	18	18
	750-1002	—	16	16	16	18	16	17	18	18
Tap Port Return Loss (dB)	5-9	22	18	20	21	22	20	22	23	22
	10-14	29	26	25	27	28	25	29	29	27
	15-42	30	29	28	30	30	28	30	30	30
	43-549	18	18	18	18	18	17	18	18	18
	550-749	18	17	18	18	18	17	18	18	18
	750-1002	18	17	18	18	18	17	18	18	18
Hum Mod @ 12 Amps (dB)	5-10	60	60	60	60	60	60	60	60	60
	11-749	70	70	70	70	70	70	70	70	70
	750-1002	60	60	60	60	60	60	60	60	60
EMI (dB)	5-1200	-105	-105	-105	-105	-105	-105	-105	-105	-105

Electrical Specifications

Milenium Series Multi-tap MGT3800

Model Tap Value	MGT (dB)	3812	3815	3818	3821	3824	3827	3830	3833
Frequency (MHz)									
Tap Loss Tolerance (dB)	5-9	0.4	0.6	1.0	0.6	0.8	1.2	0.9	1.1
	10-549	1.0	1.0	1.5	1.2	1.4	1.0	0.6	1.2
	550-749	0.7	1.1	1.5	1.2	1.3	1.5	0.8	2.0
	750-1002	1.6	2.9	3.0	3.0	2.3	2.2	3.0	3.7
Insertion Loss (dB)	5	—	3.6	1.6	1.0	1.1	0.8	0.5	0.5
	10	—	3.5	1.5	0.9	1.0	0.7	0.4	0.4
	40	—	3.5	1.4	0.9	0.9	0.7	0.4	0.4
	50	—	3.5	1.4	0.9	1.0	0.7	0.4	0.4
	100	—	3.6	1.5	1.0	1.0	0.8	0.5	0.5
	450	—	4.1	2.2	1.6	1.6	1.3	1.1	1.1
	550	—	4.4	2.5	1.8	1.8	1.5	1.3	1.3
	750	—	4.3	2.8	2.1	2.1	1.6	1.5	1.5
	870	—	4.4	2.9	2.3	2.1	1.7	1.7	1.7
1002	—	4.6	3.2	2.7	2.2	1.9	1.9	1.9	
Output to Tap Isolation (dB)	5-9	—	23	26	31	37	45	48	50
	10-14	—	28	31	38	45	42	52	54
	15-42	—	31	35	41	47	41	50	52
	43-549	—	28	30	34	37	37	39	40
	550-749	—	25	30	29	33	35	35	38
	750-1002	—	22	27	26	29	31	33	35
Tap to Tap Isolation (dB)	5-9	32	24	26	26	30	31	32	32
	10-14	34	28	29	30	34	35	36	36
	15-42	34	30	31	32	36	36	38	38
	43-549	28	26	26	26	26	26	28	28
	550-749	25	23	23	23	23	23	25	25
	750-1002	24	22	22	22	22	22	24	24
Input/Output Return Loss In (dB)	5-9	16	17	19	20	19	22	26	26
	10-14	16	17	19	21	20	22	28	28
	15-42	16	17	19	21	20	23	29	29
	43-549	15	16	16	16	16	17	18	18
	550-749	16	17	18	18	18	18	18	18
	750-1002	15	15	15	17	17	17	18	18

Electrical Specifications

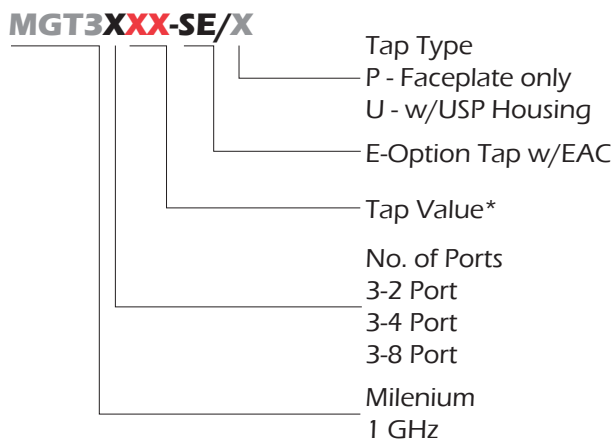
Milenium Series Multi-tap MGT3800

Model Tap Value	MGT (dB)	3812	3815	3818	3821	3824	3827	3830	3833
Frequency (MHz)									
Return Loss Out (dB)	5-9	—	17	20	29	26	27	28	28
	10-14	—	19	22	31	26	27	34	34
	15-42	—	20	23	31	28	28	35	35
	43-549	—	18	17	19	18	20	18	18
	550-749	—	18	17	17	20	19	18	18
	750-1002	—	16	16	16	18	17	18	18
Tap Port Return Loss (dB)	5-9	22	22	21	22	21	22	22	22
	10-14	29	28	26	28	27	27	28	28
	15-42	31	28	30	30	30	30	32	32
	43-549	17	17	17	18	17	17	18	18
	550-749	17	17	17	18	17	17	18	18
	750-1002	18	16	17	18	17	17	18	18
Hum Mod @ 12 Amps (dB)	5-10	60	60	60	60	60	60	60	60
	11-749	70	70	70	70	70	70	70	70
	750-1002	60	60	60	60	60	60	60	60
EMI (dB)	5-1200	-105	-105	-105	-105	-105	-105	-105	-105

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 Main Line Ports 6 kV Ring Wave Surge per IEEE C62.41 Category A3 on all Tap 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


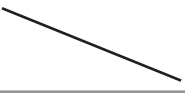

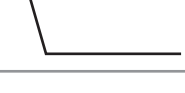

Ordering Information



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	(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)
Jumper**	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

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