

GigaXtend

SGT 1.2GHz Taps Standard Profile 2 and 4 Port Design/Full Profile 8 Port Design



SGT 1.2GHz Taps
(front view)

1.2GHz

The GigaXtend™ SGT 1.2GHz Tap product line is the latest evolution of the HFC network providing full support of the DOCSIS 3.1 standard. DOCSIS 3.1 support will allow MSOs to fully and efficiently utilize their broadband networks to provide the services that their subscribers demand. Support for DOCSIS 3.1 means that the frequency capabilities of the devices is increased to the full 1.218 GHz spectrum as well as full compatibility with the new OFDM requirements. These new capabilities will allow MSOs to increase revenue generation by allowing increased capability across their networks to drive new and improved services to their customer base.

In addition to the new DOCSIS 3.1 capabilities, the GigaXtend™ SGT 1.2GHz Tap product line continues to support IEEE-compliant 6 kV surge protection which provides protection against voltage transients in lightning strike areas and locations with unreliable power networks. In addition, the SGT 1.2GHz Tap products offer the same “make-before-break” capabilities of previous tap products, which allow cable technicians to pull the tap’s faceplate and perform maintenance without interrupting service to subscribers located downstream.

The GigaXtend™ SGT 1.2GHz Tap is the latest addition to the Surge-Gap product line aimed at supporting DOCSIS 3.1 network architectures. GigaXtend™ SGT 1.2GHz Tap are an extended offering of ATX’s multimedia product family: Standard Profile 2 and 4 port products, as well as the Full Profile 8 port product.

Features

- Expanded Frequency Range - Handles DOCSIS 3.1 requirements of 1.218 GHz and OFDM signalling
- Surge Tolerance - Rugged design that allows the taps to continue to operate after surges that would typically damage ordinary products and interrupt service
- Return Loss - Superior return loss performance to lessen reflections for a “cleaner” signal
- Powder coated housing for environmental protection
- Sealed and swaged extended F-ports for greater resistance to moisture ingress
- Nickel plated brass F-ports to help ensure a corrosion-resistant drop interface
- Component covers for additional protection of faceplate circuitry during maintenance
- Versatile housing design that permits aerial, pedestal, or MDU mounting schemes

Specifications

GigaXtend SGT 1.2GHz Tap		
ITEM	MHz	SPECIFICATIONS
Power Passing	-	12 amps
Tap-Tap isolation (Minimum)	5-10	21 dB
	10-85	25 dB
	85-205	27 dB
	205-750	23 dB
	750-1250	20 dB
In-Out Return Loss (Minimum)	5-1000	18 dB
	1000-1250	16 dB
Tap Port Return Loss (Minimum)	5-1000	18 dB
	1000-1250	16 dB
Hum Modulation @ 10 amps (typical)	5-450	70 dBc
	450-750	65 dBc
	750-1250	55 dBc
EMI Shielding (Minimum)*	5-15	85 dB
	15-1250	100 dB

NOTE:

Tested per ANSI/SCTE 48-2 2003

AC/RF Bypass Switch Performance	
ITEM	
System Open Circuit Time	0 ms
Contact Resistance (Max.)	10 mOhms
Through Current Capacity	12 amps
Voltage Capacity	90 VAC
RF Frequency Range	5 to 1250 MHz
Insertion Loss and Return Loss	See Loss Table
Operating Temperature	-40°C to +60°C

AC/RF Bypass Switch Insertion Loss & Return Loss Table						
AC/RF BYPASS	5MHz	500MHz	750MHz	870MHz	1GHz	1.25GHz
Short Circuited Insertion Loss (dB)	0.02 Max	0.6 Max	0.6 Max	0.7 Max	0.7 Max	0.7 Max
	<0.01 Mean	0.4 Mean	0.5 Mean	0.4 Mean	0.5 Mean	0.5 Mean
Short Circuited Return Loss (dB)	45 Min	16 Min	16 Min	18 Min	21 Min	21 Min
	50 Mean	16.5 Mean	16.5 Mean	18.5 Mean	22 Mean	22 Mean

NOTE:

Unless otherwise noted, specifications reflect typical performance and are referenced to 68° F (20° C). Specifications are based upon measurements made in accordance with SCTE and ANSI standards (where applicable), using standard frequency assignments.



Specifications

MECHANICAL		
WATER AND DUST INGRESS RATING	IP68	
STANDARD TAP	2-Way/4-Way	
DIMENSIONS	3.6"H x 3.6"W x 3.0"D	
WEIGHT	2-WAY	0.30Kg, 0.66 lb
	4-WAY	0.31Kg, 0.68 lb
FULL PROFILE TAP	2-Way/4-Way/8-Way	
DIMENSIONS	4.25"Hx 5.50"W x 3.0"D in.	
WEIGHT	2-WAY	0.45 Kg, 0.99 lb
	4-WAY	0.46 Kg, 1.01 lb
	8-WAY	0.48 Kg, 1.06 lb
BOLT TORQUE REQUIREMENTS		
CENTER CONDUCTOR SEIZURE	15 lb-in to 20 lb-in (1.7 Nm to 2.3 Nm)	
HOUSING CLOSURE	50 lb-in to 60 lb-in (5.6 Nm to 6.8 Nm)	
PORT PLUGS	50 lb-in to 60 lb-in (5.6 Nm to 6.8 Nm)	
SURGE RESISTANCE		
INPUT/OUTPUT PORTS	6 kV (combination wave)	
TAP PORTS	6 kV (combination wave)	
ENVIRONMENTAL		
OPERATING TEMPERATURE	-40 to 60 C (-40 to 140 F)	
STANDARDS COMPLIANCE		
MECHANICAL	ANSI/SCTE 01 2015 – "F" female port interface specification ANSI/SCTE 91 2015 - 5/8-24 RF & AC female port specification	
EMISSIONS	FCC - Part 76, Subpart K EN 50083-2/A1: 1998	
ENVIRONMENTAL	ASTM G 53 - weathering specification ASTM B 117 - salt spray specification ASTM D 31 - chip resistance specification EN 60529: 1992 (IP test) Bellcore GR-63-CORE - vibration/transportation ANSI/IEEE C62.41 - lightning	
ELECTRICAL SAFETY	UL/CSA 60950-1	

NOTE:

Unless otherwise noted, specifications reflect typical performance and are referenced to 68° F (20° C). Specifications are based upon measurements made in accordance with SCTE and ANSI standards (where applicable), using standard frequency assignments.



Specifications

GigaXtend 2-Way Standard and Full Profile Surge Gap Tap

ATX PART NUMBER		GTSG-TAP-2-04-STD		GTSG-TAP-2-08-STD		GTSG-TAP-2-11-STD		GTSG-TAP-2-14-STD		GTSG-TAP-2-17-STD		GTSG-TAP-2-20-STD		GTSG-TAP-2-23-STD	
		GTSG-TAP-2-04-FP		GTSG-TAP-2-08-FP		GTSG-TAP-2-11-FP		GTSG-TAP-2-14-FP		GTSG-TAP-2-17-FP		GTSG-TAP-2-20-FP		GTSG-TAP-2-23-FP	
NOMINAL TAP VALUE, dB		4		8		11		14		17		20		23	
SPECIFICATION	MHz	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX
Insertion Loss IN-OUT dB	5	-	-	2.6	3.2	1.8	2.0	1.0	1.2	0.8	1.1	0.6	0.8	0.4	0.7
	10	-	-	2.4	3.0	1.4	1.6	0.8	1.0	0.7	0.9	0.5	0.7	0.4	0.6
	40	-	-	2.1	2.5	1.4	1.6	0.7	0.9	0.6	0.8	0.5	0.7	0.3	0.5
	85	-	-	2.1	2.5	1.4	1.6	0.8	1.0	0.6	0.8	0.5	0.7	0.4	0.7
	100	-	-	2.2	2.5	1.4	1.6	0.9	1.1	0.7	0.9	0.5	0.7	0.4	0.7
	200	-	-	2.3	2.6	1.6	1.8	1.0	1.2	0.9	1.1	0.6	0.9	0.6	0.8
	550	-	-	3.5	3.8	2.2	2.5	1.4	1.7	1.2	1.4	1.0	1.3	0.9	1.2
	750	-	-	4.2	4.5	2.7	2.9	1.7	1.9	1.3	1.6	1.1	1.4	1.1	1.3
	870	-	-	4.6	4.8	3.0	3.2	2.0	2.3	1.5	1.8	1.3	1.7	1.2	1.5
	1000	-	-	4.8	5.1	3.3	3.6	2.1	2.6	1.8	2.2	1.5	1.9	1.5	1.8
	1218	-	-	4.9	5.2	4.0	4.2	2.4	3.1	2.1	2.5	1.9	2.3	1.8	2.2
1250	-	-	5.1	5.4	4.0	4.3	2.7	3.2	2.3	2.6	2.1	2.4	2.0	2.3	
SPECIFICATION	MHz	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX
Tap Loss Tolerance ±1.0 dB	5	4.0		8.5		10.7		13.7		16.1		19.5		22.5	
	10	4.0		8.5		11.0		14.0		17.0		20.0		23.0	
	40	4.0		8.5		11.0		14.0		17.0		20.0		23.0	
	85	4.0		8.5		11.0		14.0		17.0		20.0		23.0	
	100	4.0		8.5		11.0		14.0		17.0		20.0		23.0	
	200	4.0		8.5		11.0		14.0		17.0		20.0		23.0	
	550	4.0		8.5		11.0		14.0		17.0		20.0		23.0	
	750	4.0		8.5		11.0		14.0		17.0		20.0		23.0	
	870	4.0		8.5		11.0		14.0		17.0		20.0		23.0	
±1.25 dB @1000-1250MHz	1000	4.0		8.5		11.0		14.2		17.0		20.2		23.2	
	1218	4.0		9.2		11.2		14.4		17.0		20.2		23.4	
	1250	4.1		9.5		11.5		14.5		17.5		20.4		23.5	
SPECIFICATION	MHz			MIN		MIN		MIN		MIN		MIN		MIN	
Isolation, OUT-TAP dB (Min)	5-10	-		18		19		21		23		25		27	
	10-85	-		23		25		26		30		32		34	
	85-204	-		23		25		26		30		32		34	
	204-550			23		25		26		30		32		34	
	550-650			23		25		26		30		32		34	
	650-750	-		21		23		24		28		29		32	
	750-870	-		21		21		23		26		28		30	
	870-1000	-		20		20		21		24		26		27	
	1000-1250	-		20		19		20		22		23		23	

NOTE:

Unless otherwise noted, specifications reflect typical performance and are referenced to 68° F (20° C). Specifications are based upon measurements made in accordance with SCTE and ANSI standards (where applicable), using standard frequency assignments.



Specifications

GigaXtend 4-Way Standard and Full Profile Surge Gap Tap

ATX PART NUMBER		GTSG-TAP-4-08-STD		GTSG-TAP-4-11-STD		GTSG-TAP-4-14-STD		GTSG-TAP-4-17-STD		GTSG-TAP-4-20-STD		GTSG-TAP-4-23-STD	
		GTSG-TAP-4-08-FP		GTSG-TAP-4-11-FP		GTSG-TAP-4-14-FP		GTSG-TAP-4-17-FP		GTSG-TAP-4-20-FP		GTSG-TAP-4-23-FP	
NOMINAL TAP VALUE, dB		8		11		14		17		20		23	
SPECIFICATION	MHz	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX
Insertion Loss IN-OUT dB	5	-	-	2.7	3.2	1.8	2.1	1.0	1.4	0.6	0.8	0.6	0.8
	10	-	-	2.2	2.5	1.2	1.5	0.8	1.2	0.5	0.7	0.5	0.7
	40	-	-	2.2	2.5	1.2	1.5	0.8	1.2	0.5	0.7	0.5	0.7
	85	-	-	2.3	2.6	1.4	1.6	0.8	1.2	0.6	0.8	0.5	0.7
	100	-	-	2.3	2.6	1.4	1.7	0.8	1.2	0.6	0.8	0.6	0.8
	200	-	-	2.5	2.8	1.5	1.8	1.0	1.3	0.7	0.9	0.7	0.9
	550	-	-	3.5	3.8	2.2	2.5	1.4	1.8	1.1	1.4	1.1	1.3
	750	-	-	4.3	4.5	2.6	2.9	1.7	2.1	1.3	1.6	1.2	1.5
	870	-	-	4.7	4.8	3.0	3.2	1.9	2.3	1.5	1.8	1.4	1.6
	1000	-	-	4.9	5.1	3.4	3.6	2.3	2.7	1.8	2.1	1.6	1.9
	1218	-	-	5.0	5.3	3.9	4.1	2.7	3.1	2.2	2.5	2.0	2.3
1250	-	-	5.0	5.4	4.0	4.2	2.9	3.2	2.4	2.6	2.1	2.4	
SPECIFICATION	MHz	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX
Tap Loss Tolerance ±1.0 dB	5	7.5		12.0		13.8		16.5		19.5		22.4	
	10	7.5		12.0		14.0		17.0		20.0		23.0	
	40	7.5		12.0		14.0		17.0		20.0		23.0	
	85	7.5		12.0		14.0		17.0		20.0		23.0	
	100	7.5		12.0		14.0		17.0		20.0		23.0	
	200	7.5		12.0		14.0		17.0		20.0		23.0	
	550	7.5		12.0		14.0		17.0		20.0		23.0	
	750	7.5		12.0		14.0		17.0		20.0		23.2	
	870	7.5		12.0		14.0		17.0		20.0		23.2	
±1.25 dB @1000-1250MHz	1000	7.8		12.3		14.1		17.0		19.8		22.9	
	1218	8.2		12.6		14.5		17.1		20.0		22.9	
	1250	8.5		13.0		14.8		17.3		20.2		22.9	
SPECIFICATION	MHz			MIN		MIN		MIN		MIN		MIN	
Isolation, OUT-TAP dB (Min)	5-10	-		20		21		23		25		27	
	10-85	-		25		28		30		29		33	
	85-204	-		25		28		30		29		33	
	204-550			25		28		30		29		33	
	550-650	-		23		28		30		29		33	
	650-750	-		23		26		28		27		31	
	750-870	-		21		24		25		25		27	
	870-1000	-		20		22		23		23		25	
1000-1250	-		20		20		21		21		23		

NOTE:

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Specifications

GigaXtend 8-Way Full Profile Surge Gap Tap

ATX PART NUMBER		GTSG-TAP-8-11-FP		GTSG-TAP-8-14-FP		GTSG-TAP-8-17-FP		GTSG-TAP-8-20-FP		GTSG-TAP-8-23-FP	
NOMINAL TAP VALUE, dB		11		14		17		20		23	
SPECIFICATION	MHz	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX
Insertion Loss IN-OUT dB	5	-	-	2.9	3.5	1.9	2.4	1.0	1.2	0.9	1.0
	10	-	-	2.7	3.1	1.4	1.8	0.8	1.0	0.7	0.9
	40	-	-	2.7	3.1	1.4	1.7	0.8	1.0	0.6	0.8
	85	-	-	2.7	3.1	1.4	1.7	0.8	1.0	0.7	0.9
	100	-	-	2.7	3.1	1.4	1.7	0.8	1.0	0.7	0.9
	200	-	-	2.9	3.2	1.6	1.8	1.0	1.2	0.8	1.0
	550	-	-	3.9	4.4	2.3	2.6	1.5	1.8	1.4	1.7
	750	-	-	4.5	4.9	2.7	2.9	1.8	2.1	1.6	1.9
	870	-	-	4.9	5.2	3.0	3.2	2.1	2.4	1.8	2.0
	1000	-	-	5.2	5.6	3.4	3.6	2.4	2.8	2.0	2.3
	1218	-	-	5.7	5.9	3.9	4.1	2.9	3.3	2.7	2.8
	1250	-	-	5.7	6.0	4.0	4.2	3.2	3.4	2.8	2.9
SPECIFICATION	MHz	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX
Tap Loss (dB) Tolerance ±1.0 dB	5	11.0		15.0		18.0		20.0		22.5	
	10	11.0		15.0		18.0		20.5		23.0	
	40	11.0		15.0		18.0		20.5		23.0	
	85	11.0		15.0		18.0		20.5		23.0	
	100	11.0		15.0		18.0		20.5		23.0	
	200	11.0		15.0		18.0		20.5		23.0	
	550	11.0		15.0		18.0		20.5		23.0	
	750	11.0		15.0		18.0		20.1		22.8	
	870	11.5		15.0		18.0		20.1		22.7	
±1.25 dB @1000-1250MHz	1000	11.5		15.4		18.0		20.1		22.7	
	1218	12.3		15.8		18.3		20.8		23.3	
	1250	12.5		16.0		18.5		21.0		23.5	
SPECIFICATION	MHz			MIN		MIN		MIN		MIN	
Isolation, OUT-TAP dB (Min)	5-10	-		22		24		25		26	
	10-85	-		27		28		28		31	
	85-204	-		27		28		28		31	
	204-550	-		27		28		28		31	
	550-650	-		27		28		28		31	
	650-750	-		27		28		28		31	
	750-870	-		24		25		25		27	
	870-1000	-		23		23		23		27	
	1000-1250	-		22		23		23		23	

NOTE:

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Ordering Information

Part Number	Description
GigaXtend SGT Compatible 1.2GHz Standard Taps (order in multiples of 20)	
GTSG-TAP-2-04-STD	GigaXtend SGT Standard Tap, 1.2GHz, 2-way, 4 dB (Mult=20)
GTSG-TAP-2-08-STD	GigaXtend SGT Standard Tap, 1.2GHz, 2-way, 8 dB (Mult=20)
GTSG-TAP-2-11-STD	GigaXtend SGT Standard Tap, 1.2GHz, 2-way, 11 dB (Mult=20)
GTSG-TAP-2-14-STD	GigaXtend SGT Standard Tap, 1.2GHz, 2-way, 14 dB (Mult=20)
GTSG-TAP-2-17-STD	GigaXtend SGT Standard Tap, 1.2GHz, 2-way, 17 dB (Mult=20)
GTSG-TAP-2-20-STD	GigaXtend SGT Standard Tap, 1.2GHz, 2-way, 20 dB (Mult=20)
GTSG-TAP-2-23-STD	GigaXtend SGT Standard Tap, 1.2GHz, 2-way, 23 dB (Mult=20)
GTSG-TAP-4-08-STD	GigaXtend SGT Standard Tap, 1.2GHz, 4-way, 8 dB (Mult=20)
GTSG-TAP-4-11-STD	GigaXtend SGT Standard Tap, 1.2GHz, 4-way, 11 dB (Mult=20)
GTSG-TAP-4-14-STD	GigaXtend SGT Standard Tap, 1.2GHz, 4-way, 14 dB (Mult=20)
GTSG-TAP-4-17-STD	GigaXtend SGT Standard Tap, 1.2GHz, 4-way, 17 dB (Mult=20)
GTSG-TAP-4-20-STD	GigaXtend SGT Standard Tap, 1.2GHz, 4-way, 20 dB (Mult=20)
GTSG-TAP-4-23-STD	GigaXtend SGT Standard Tap, 1.2GHz, 4-way, 23 dB (Mult=20)
GigaXtend SGT Compatible 1.2GHz Standard Tap Faceplates (order in multiples of 10)	
GTSG-TAP-2-04-SFP	GigaXtend SGT Standard Faceplate 1.2GHz, 2-way, 4 dB (Mult=10)
GTSG-TAP-2-08-SFP	GigaXtend SGT Standard Faceplate 1.2GHz, 2-way, 8 dB (Mult=10)
GTSG-TAP-2-11-SFP	GigaXtend SGT Standard Faceplate 1.2GHz, 2-way, 11 dB (Mult=10)
GTSG-TAP-2-14-SFP	GigaXtend SGT Standard Faceplate 1.2GHz, 2-way, 14 dB (Mult=10)
GTSG-TAP-2-17-SFP	GigaXtend SGT Standard Faceplate 1.2GHz, 2-way, 17 dB (Mult=10)
GTSG-TAP-2-20-SFP	GigaXtend SGT Standard Faceplate 1.2GHz, 2-way, 20 dB (Mult=10)
GTSG-TAP-2-23-SFP	GigaXtend SGT Standard Faceplate 1.2GHz, 2-way, 23 dB (Mult=10)
GigaXtend SGT Compatible 1.2GHz Full Profile Taps (order in multiples of 10)	
GTSG-TAP-2-04-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 2-way, 4 dB (Mult=10)
GTSG-TAP-2-08-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 2-way, 8 dB (Mult=10)
GTSG-TAP-2-11-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 2-way, 11 dB (Mult=10)
GTSG-TAP-2-14-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 2-way, 14 dB (Mult=10)
GTSG-TAP-2-17-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 2-way, 17 dB (Mult=10)
GTSG-TAP-2-20-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 2-way, 20 dB (Mult=10)
GTSG-TAP-2-23-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 2-way, 23 dB (Mult=10)
GTSG-TAP-4-08-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 4-way, 8 dB (Mult=10)
GTSG-TAP-4-11-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 4-way, 11 dB (Mult=10)
GTSG-TAP-4-14-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 4-way, 14 dB (Mult=10)
GTSG-TAP-4-17-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 4-way, 17 dB (Mult=10)
GTSG-TAP-4-20-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 4-way, 20 dB (Mult=10)
GTSG-TAP-4-23-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 4-way, 23 dB (Mult=10)
GTSG-TAP-8-11-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 8-way, 11 dB (Mult=10)
GTSG-TAP-8-14-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 8-way, 14 dB (Mult=10)
GTSG-TAP-8-17-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 8-way, 17 dB (Mult=10)
GTSG-TAP-8-20-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 8-way, 20 dB (Mult=10)
GTSG-TAP-8-23-FP	GigaXtend SGT Full Profile Tap, 1.2GHz 8-way, 23 dB (Mult=10)

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