

# GigaXtend

## Extended Spectrum Couplers and Power Inserters



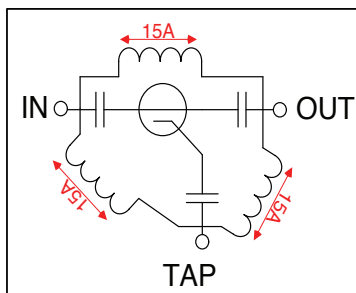
**XSC-2-959**  
(front view)

The GigaXtend™ family of Taps and Line Passives injects immediate cost and performance benefits into existing HFC networks, as well as positions cable operators to seamlessly extend the bandwidth capabilities of their HFC networks to 2GHz and beyond.

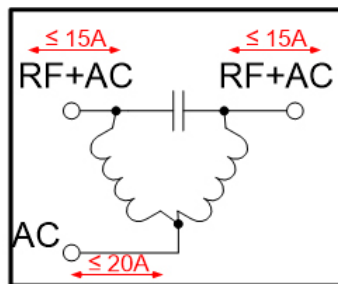
GigaXtend technology is essential to MSOs looking to minimize costs associated with N+0 deployments, eliminate amplifier re-spacing or reduce the need for additional amplifiers during bandwidth upgrades, or simply want to extend the spectrum of the HFC network beyond 2GHz. A further benefit of GigaXtend is future support for RF performance beyond 3GHz through a simple faceplate upgrade. GigaXtend is compatible with any delivery technology, including Frequency Division Duplexed (FDD), Full Duplex DOCSIS (FDX), as well as Extended Spectrum DOCSIS (ESD).

### Features

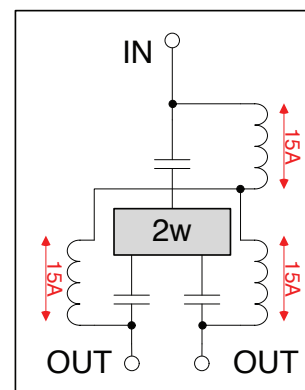
- Industry-leading loss and bandwidth extends reach and power of any outside plant, especially fiber deep Node+0 deployments and may upgrade plant bandwidth without amplifier respacing
- Base supports future faceplate upgrade of >3GHz
- >15A continuous AC power passing on all coupler/splitter ports and 20A on power inserter ports
- 90-degree, screw-less 5/8-24 entry port, increasing reliability and installation speed
- All AC passing circuits have removable fuses for directivity of power
- Environmentally hardened, powder-coated, chip-resistant aluminum housing for extreme outdoor conditions
- Waterproof and RFI gaskets in faceplate. New material with any faceplate upgrade



Couplers (8,12,16 dB)



Power Inserter (20A)



Splitters (2w, 3w, 3w un.)

**NOTE:**

Simplified schematics. All AC passing coils shown also have removable fuses to configure power directionality to ports

# Specifications

## GigaXtend Line Passives

ATX PART NUMBER		XSC-2-04		XSC-2-959		XSC-2-777		XSC-2-08		XSC-2-12		XSC-2-16		XSI-2-20	
MODEL		2w Spl		Unb. 3w Spl		Bal. 3w Spl		8dB Coupler		12dB Coupler		16dB Coupler		Power Inserter	
PARAMETER	FREQUENCY	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX
Insertion Loss (1)	5	4	4.2	4.4	4.6	6.1	6.8	2.2	2.6	1.4	1.6	1.4	1.6	0.4	0.7
	10	4	4.2	4.4	4.6	6.1	6.8	2.2	2.6	1.4	1.6	1.4	1.6	0.4	0.7
	200	4.2	4.4	4.5	4.8	6.3	6.9	2.3	2.7	1.5	1.7	1.5	1.7	0.5	0.8
	750	4.7	5.1	4.9	5.3	6.7	7.2	2.7	3.1	1.8	2.1	1.8	2.1	0.6	0.9
	860	4.9	5.2	5.0	5.4	6.8	7.3	2.8	3.2	1.9	2.1	1.9	2.1	0.7	0.9
	1002	5	5.4	5.1	5.5	6.9	7.4	2.9	3.3	1.9	2.2	1.9	2.2	0.7	1.0
	1250	5.2	5.7	5.2	5.8	7.1	7.5	3	3.5	2.1	2.4	2.1	2.4	0.8	1.0
	1825	5.8	6.4	5.6	6.3	7.6	7.9	3.4	3.9	2.4	2.8	2.4	2.8	0.9	1.2
2050	6.0	6.7	5.8	6.5	7.7	8.0	3.6	4.1	2.5	2.9	2.5	2.9	1.0	1.2	
Tap Loss (2)	5	-	-	8	8.5	-	-	9	9.5	12	12.5	16.2	17	-	-
	10	-	-	8	8.5	-	-	9	9.5	12	12.5	16.2	17	-	-
	200	-	-	8.4	8.9	-	-	9	9.6	12	12.5	16.2	17	-	-
	750	-	-	9.4	9.9	-	-	9.2	9.8	12	12.5	16.2	17	-	-
	860	-	-	9.6	10.2	-	-	9.2	9.9	12	12.5	16.2	17	-	-
	1002	-	-	9.8	10.4	-	-	9.2	9.9	12	12.5	16.2	17	-	-
	1250	-	-	10.3	10.9	-	-	9.3	10	12	12.5	16.2	17	-	-
	1825	-	-	11.3	12.0	-	-	9.4	10.3	12	12.5	16.2	17	-	-
2050	-	-	11.8	12.5	-	-	9.5	10.4	12	12.5	16.2	17	-	-	
PARAMETER	FREQUENCY		MIN		MIN		MIN		MIN		MIN		MIN		MIN
Isolation, Tap to Out (4)	5-10	-	18	-	20	-	18	-	20	-	27	-	25	-	-
	10-200	-	26	-	20	-	18	-	21	-	27	-	25	-	-
	200-750	-	26	-	23	-	20	-	21	-	27	-	25	-	-
	750-1250	-	20	-	20	-	18	-	20	-	25	-	25	-	-
	1250-2050	-	20	-	18	-	18	-	20	-	20	-	17	-	-
Return Loss	5-10	-	15	-	15	-	15	-	15	-	15	-	15	-	15
	10-1250		16		16		16		16		16		16		16
	1250-2050	-	15	-	15	-	15	-	15	-	15	-	15	-	15

**NOTE:**

1. Defined as In to Out in most cases. For 959, unbalanced 3way splitter, it is In to low loss port
2. Defined as In to Tap (coupled port) in most cases. For 959, unbalanced 3w splitter, it is in to high loss ports.
3. All losses in dB
4. For splitters, this is output-output isolation, for couplers it is output-tap isolation

## Specifications

### GigaXtend Line Passives

POWER		
<b>POWER PASSING CONTINUOUS</b>	50-60Hz 60-90VAC	20A Max for Power Inserter AC-IN port, otherwise 15A Max for every 5/8" port
<b>HUM MODULATION (dBc)</b>	5-2050 MHz	65dBc @ 10A
	5-2050 MHz	60dBc @ 15A
ENVIRONMENTAL & PHYSICAL		
<b>SHIELDING EFFECTIVENESS</b>	5-1002 MHz	>90dB
	1002-2050 MHz	>80dB
<b>WATERPROOF RATING</b>	15 PSI, IP68	
<b>OPERATION TEMPERATURE</b>	-40°C to +60°C	
<b>HUMIDITY</b>	5-95% non-condensing	
<b>EMISSION</b>	FCC PART 76, SUBPART K	
<b>ENVIRONMENTAL</b>	ASTM G 53 – Weathering	
	ASTM B 117 – salt spray	
	ASTM D 31 – Chip resistance	
<b>DIMENSIONS</b>	148mm L * 127mm W * 69.6 mm H / 5.83" L * 5" W * 2.74" H	
<b>WEIGHT</b>	0.68 Kg / 1.5lbs	
<b>SURGE RESISTANCE</b>	6kV Combination Wave per IEEE C62.41 Category B3 on all ports	

## Ordering Information

Part Number	Description
<b>XST-22-*</b>	2 Port Multi-Tap, 5-2050MHz, 15A thru, *=05,08,11,14,17,20,23,26,29 dB
<b>XST-24-*</b>	4 Port Multi-Tap, 5-2050MHz, 15A thru, *=08,11,14,17,20,23,26,29 dB
<b>XST-28-*</b>	8 Port Multi-Tap, 5-2050MHz, 15A thru, *=11,14,17,20,23,26,29 dB
<b>XST-22-*R</b>	2 Port Reversed Multi-Tap, 5-2050MHz, 15A thru, *=05,08,11,14,17,20,23,26,29 dB
<b>XST-24-*R</b>	4 Port Reversed Multi-Tap, 5-2050MHz, 15A thru, *=08,11,14,17,20,23,26,29 dB
<b>XST-28-*R</b>	8 Port Reversed Multi-Tap, 5-2050MHz, 15A thru, *=11,14,17,20,23,26,29 dB
<b>XSI-2-20</b>	Power Inserter, 5-2050MHz, 20A
<b>XSC-2-*</b>	Wideband coupler 5-2050MHz, 15A thru, *=04, 08, 12, 16 dB coupler value
	3 way splitters (balanced,unbalanced) *=777, 959
<b>XSA-CE-2050-*</b>	Accessories, 2.05GHz Cable Equalizers, *=02,04,..22 dB
<b>XSA-CE-1218-*</b>	Accessories, 1.2GHz Cable Equalizers, *=02,04,..22 dB
<b>XSA-CS-2050-*</b>	Accessories, 2.05GHz Cable Simulators, *=03,06,..21 dB
<b>XSA-RA-42-2050-*</b>	Accessories, 42MHz Return Attenuators with 54-2050MHz Passband, *=03,06,..21 dB
<b>XSA-RA-85-2050-*</b>	Accessories, 85MHz Return Attenuators with 102-2050MHz Passband, *=03,06,..21 dB
<b>XSA-FUSE-15A</b>	Accessories, 15A plug infuse for GigaXtend

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