

GigaXtend

Extended Spectrum Couplers and Power Inserters



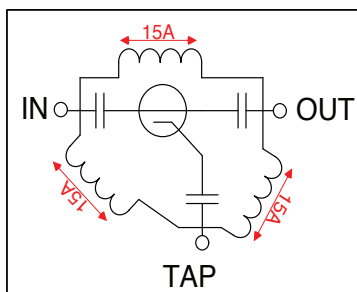
XSC-2-959
(front view)

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.

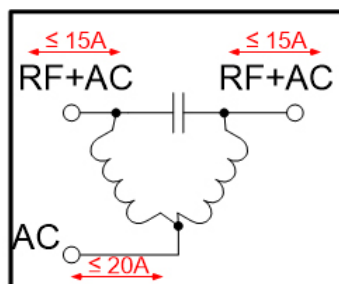
GigaXtend technology is essential to MSOs looking to minimize costs associated with N+0 deployments, eliminate amplifier re-spacing or reduce the need for additional amplifiers during bandwidth upgrades, or simply want to extend the spectrum of the HFC network beyond 2GHz. A further benefit of GigaXtend 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

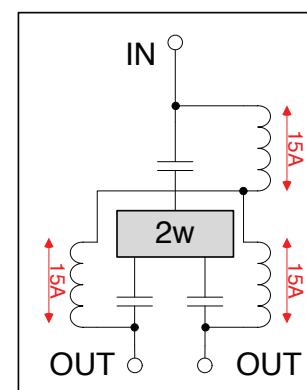
- Industry-leading loss and bandwidth extends reach and power of any outside plant, especially fiber deep Node+0 deployments and may upgrade plant bandwidth without amplifier re-spacing
- Base supports future faceplate upgrade of >3GHz
- >15A continuous AC power passing on all coupler/splitter ports 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 (ships with AC shunts installed only)
- 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	4.9	4.4	4.6	6.1	6.8	1.9	2.4	1.2	1.6	1.0	1.6	0.4	0.9
	10	4	4.6	4.4	4.6	6.1	6.8	1.9	2.4	1.2	1.6	1.0	1.6	0.4	0.7
	200	4.2	4.4	4.5	4.8	6.3	6.9	2.0	2.5	1.4	1.7	1.2	1.7	0.5	0.8
	750	4.7	5.1	4.9	5.3	6.7	7.2	2.3	2.9	1.8	2.1	1.7	2.1	0.6	0.9
	860	4.9	5.2	5.0	5.4	6.8	7.3	2.3	3.0	1.9	2.2	1.8	2.2	0.7	0.9
	1002	5	5.4	5.1	5.5	6.9	7.4	2.4	3.1	2.0	2.3	1.9	2.3	0.7	1.0
	1250	5.2	5.7	5.2	5.8	7.1	7.5	2.5	3.2	2.2	2.5	2.2	2.5	0.8	1.0
	1825	5.8	6.4	5.6	6.3	8.1	8.9	3.6	4.1	2.7	2.9	2.7	2.9	0.9	1.2
	2050	6.0	6.7	5.8	6.5	8.5	9.5	4.0	4.5	2.9	3.1	2.9	3.1	1.0	1.35
Tap Loss (2)	5	-	-	8	8.5	-	-	8.0	9.5	12.5	13.0	16.2	17.0	-	-
	10	-	-	8	8.5	-	-	8.0	9.5	12.5	13.0	16.2	17.0	-	-
	200	-	-	8.4	8.9	-	-	8.2	9.6	12.5	13.0	16.4	17.2	-	-
	750	-	-	9.4	9.9	-	-	8.7	10.0	12.5	13.2	16.8	17.6	-	-
	860	-	-	9.6	10.2	-	-	8.8	10.0	12.5	13.2	16.9	17.7	-	-
	1002	-	-	9.8	10.4	-	-	9.0	10.1	12.5	13.2	17.0	17.8	-	-
	1250	-	-	10.3	10.9	-	-	9.2	10.3	12.5	13.3	17.2	18.0	-	-
	1825	-	-	11.3	12.0	-	-	9.8	10.7	12.5	13.4	17.6	18.4	-	-
	2050	-	-	11.8	12.5	-	-	10.0	10.8	12.5	13.5	17.8	18.6	-	-
PARAMETER	FREQUENCY		MIN		MIN		MIN		MIN		MIN		MIN		MIN
Isolation, Tap to Out (4)	5-10	-	18	-	18	-	18	-	16	-	27	-	25	-	60
	10-100	-	22	-	20	-	18	-	21	-	27	-	25	-	60
	100-750	-	25	-	22	-	20	-	21	-	27	-	25	-	60
	750-1250	-	20	-	20	-	18	-	20	-	22	-	23	-	60
	1250-1800	-	20	-	18	-	18	-	20	-	20	-	17	-	38
	1800-2050	-	20	-	18	-	18	-	20	-	20	-	17	-	35
Return Loss	5-10	-	12	-	12	-	12	-	12	-	12	-	12	-	15
	10-50	-	14	-	14	-	16	-	16	-	16	-	16	-	16
	50-1250	-	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, for power inserter it is AC-IN to any RF/AC port

Specifications

GigaXtend Line Passives

POWER		
POWER PASSING CONTINUOUS	50-60Hz 60-90VAC	20A Max for Power Inserter AC-IN port, otherwise 15A Max for every 5/8" port
HUM MODULATION (dBc)	15-2050 MHz	-60dBc @ 10A
	15-2050 MHz	-55dBc @ 15A
ENVIRONMENTAL & PHYSICAL		
SHIELDING EFFECTIVENESS	5-1002 MHz	≥ 120dB
	1003-1218 MHz	≥ 110dB
	1219-2050 MHz	≥ 100dB
WATERPROOF RATING	15 PSI, IP68	
OPERATION TEMPERATURE	-40°C to +60°C	
HUMIDITY	5-95% non-condensing	
EMISSION	FCC 15 subpart B ICES-003 CISPR 32 CISPR 35	
ENVIRONMENTAL	ASTM G 154 – Weathering	
	ASTM B 117 – salt spray	
	ASTM D 3359 – Chip Resist	
DIMENSIONS	148mm L * 127mm W * 69.6 mm H / 5.83" L * 5" W * 2.74" H	
WEIGHT	0.68 Kg / 1.5lbs	
SURGE RESISTANCE	6kV Combination Wave per IEEE C62.41 Category B3 on all ports	

Ordering Information

Part Number	Description
XST-22-*	2 Port Multi-Tap, 5-2050MHz, 15A thru, *= 05T,08,11,14,17,20,23,26,29 dB
XST-24-*	4 Port Multi-Tap, 5-2050MHz, 15A thru, *=08T,11,14,17,20,23,26,29 dB
XST-28-*	8 Port Multi-Tap, 5-2050MHz, 15A thru, *=14T,17,20,23,26,29 dB
XST-22D-*	2 Port Multi-Tap, 5-2050MHz, 15A thru, with Drop Power, *= 08,11,14,17,20,23,26,29 dB
XST-24D-*	4 Port Multi-Tap, 5-2050MHz, 15A thru, with Drop Power, *= 11,14,17,20,23,26,29 dB
XST-28D-*	8 Port Multi-Tap, 5-2050MHz, 15A thru, with Drop Power, *= 17,20,23,26,29 dB
XST-24U-*	4 Port Multi-Tap, 5-2050MHz, 15A thru, w/o Plug-in, *= 08T,11 dB
XST-28U-*	8 Port Multi-Tap, 5-2050MHz, 15A thru, w/o Plug-in, *= 11T,14 dB
XSI-2-20	Power Inserter, 5-2050MHz, 20A
XSC-2-*	Wideband coupler 5-2050MHz, 15A thru, *=04, 08, 12, 16 dB coupler value 3 way splitters (balanced,unbalanced) *=777, 959
XSA-CE-1800-*	Accessories, 1.8GHz Cable Equalizers, *=02,04,..20 dB
XSA-CE-1218-*	Accessories, 1.2GHz Cable Equalizers, *=02,04,..22 dB
XSA-CS-2050-*	Accessories, 2.05GHz Cable Simulators, *=02,04,06,08,10,12,15 dB
XSA-RA-42-2050-*	Accessories, 42MHz Return Attenuators with 54-2050MHz Passband, *=03,06,..21 dB
XSA-RA-85-2050-*	Accessories, 85MHz Return Attenuators with 102-2050MHz Passband, *=03,06,..21 dB
XSA-FUSE-15A	Accessories, 15A plug-in fuse for GigaXtend (not needed for taps)
XSA-TCG-10	Accessory: cutting guide for KS adapters, 10pc kit
XSA-KSP-10	Accessory: spare watertight plug for 5/8-24 port, 10pc kit
XSA-FUSE-SHUNT-10	Accessory: spare shunt signal director for fuse position (bus bar), 10pc kit
XSA-SHUNT-10	Accessory: spare 0dB RF shunt for plug in position, 10pc kit
XSA-TERMF-100	Accessory: 2GHz 75ohm RF Terminators (F-male), 100pc kit

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