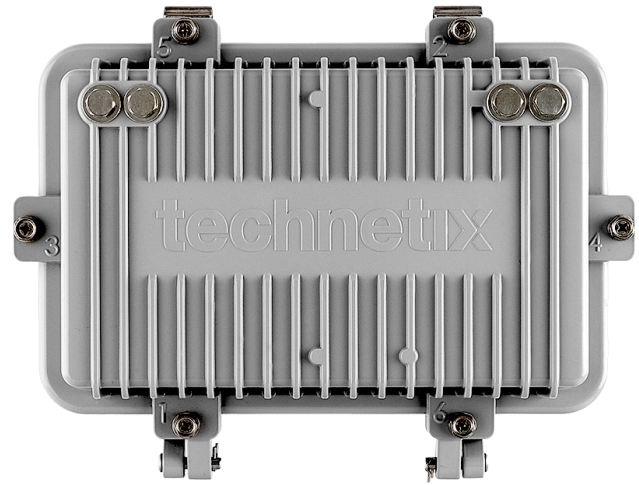


- DOCSIS® 4.0 (1794 MHz/684 MHz) ready
- Full electronic smart control and setup locally and remotely
- Agile AGC/ALSC functionality
- Downstream auto-alignment including short cable scenario with digital switchable cable simulator
- Field pluggable duplex filters for future bandwidth upgrade
- Activating low power mode saves 3 W per active output port, lowering the max. TCP from 70 dBmV to 67 dBmV
- Meets the SCTE 279 2022 standard
- Drop-in, compatible with CCOR®/ARRIS® FM33x housings



DBT Gamechanger platform

The Technetix DBT Gamechanger platform consists of a range of amplifiers and drop-ins and supports DOCSIS 4.0 upgrades. Drop-ins are 100% compatible with the CCOR/ARRIS FM33x housings. The Gamechanger design is unique and based on our state-of-the-art DBx platform, with more than 1 million units in the field. The platform has an IP68 rating which enables deployment in challenging outdoor environments and has an unmatched total cost of ownership in the industry.

DBT-1800-CC1

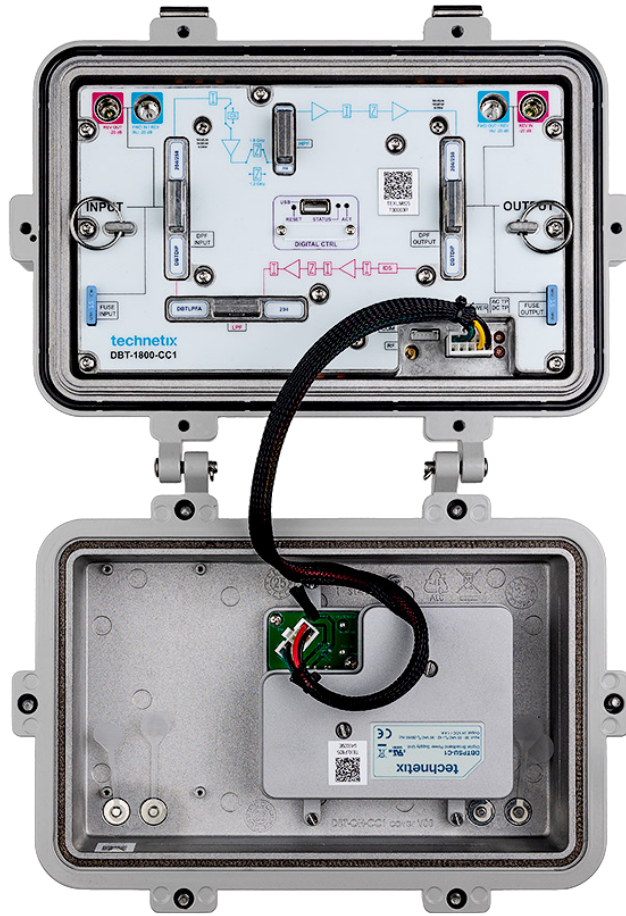
The Technetix DBT-1800-CC1 is a line extender amplifier - 1.8 GHz ready. The CC1 has 46 dB operational gain at 1794 MHz in the downstream and 32 dB operational gain at 684 MHz in the upstream. Pluggable duplex filters enable operators to make an easy upgrade to the amplifier split in the field. The DBT-1800-CC1 supports the following splits: 85/102 MHz, 204/258 MHz, 396/492 MHz, 492/606 MHz and 684/834 MHz. Low input mode is available and can be controlled via software. Fully backwards compatible with old legacy levels.

Smart configuration

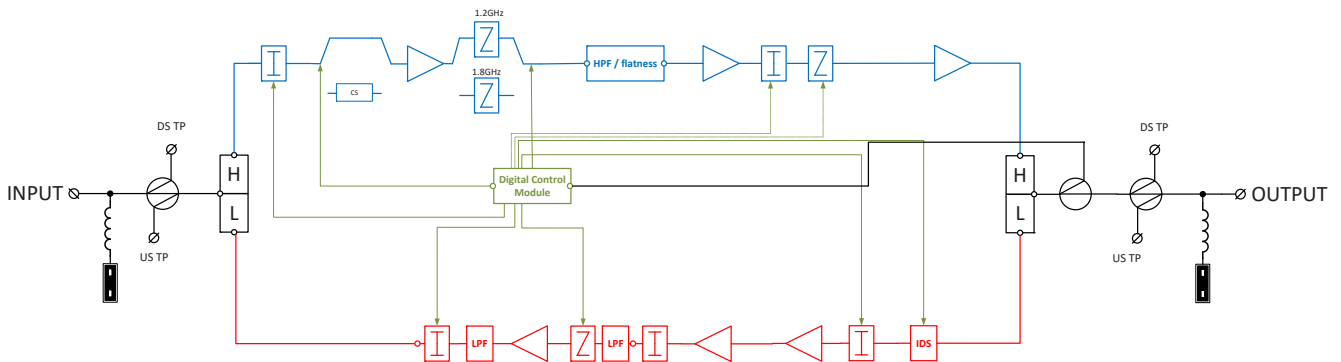
The DBT platform is fully supported by Technetix unified software tools. The controller module enables digital control of all settings using a USB port control and monitoring. An ingress detection switch can be set locally or remotely via transponder. With an integrated dynamic AGC/ALSC functionality which keeps the network stable during extreme temperature changes. Software tools used to setup and control the platform are:

- FAST - Field Assistant Set-up Tool
- NeuronX network management (future)

DBT access solution
DBT-1800-CC1 line extender amplifier



Block diagram RF configuration



DBT-1800-CC1 device and performance specifications

Parameter	Forward path	Reverse path	Units	Notes
Passband	102-1218 258-1794	8-684	MHz	1
Frequency response	±0.75	±0.5 (up to 204 MHz) ±0.75 (204-684 MHz)	dB	2
Operational gain	46 (at 1794 MHz)	25 (at 85 MHz) 27 (at 204 MHz) 32 (at 684 MHz)	dB	3, 4
TCP	70		dBmV	5
Return loss	Please refer to note 6	Please refer to note 6	dB	6
Noise figure	10	9	dB	7
Attenuator control (electronic, 0.5 dB step) pre-stage	0-20	0-15	dB	
EQ control (electronic, 0.5 dB step) pre-stage	0-20		dB	
Attenuator control (electronic, 0.5 dB step) interstage	0-20	0-15	dB	
EQ control (electronic, 0.5 dB step) interstage	0-15	0-15	dB	
Test points / Injection points	-20 ±1	-20 ±1	dB	8
NPR (204 MHz) NPR (684 MHz)		>55 dB with 10 dB dynamic range >55 dB with 5 dB dynamic range	dB	9
Group delay (min.)	10 to 13.2		60	ns
	13.2 to 16.4		22	ns
	16.4 to 19.6		12	ns
	184.8 to 191.2		6	ns
	191.2 to 197.6		10	ns
	197.6 to 204.0		20	ns
	259 to 262	10		ns
	265 to 268	8		ns
	271 to 274	7		ns
277 to 280	5		ns	

General specifications

Parameter	DBT-1800-CC1		Units	Notes
Hum modulation	-65 dBc at 12 A, -60 dBc at 15 A			
Class of enclosure	IP68			
ESD	ANSI/SCTE 186	4 kV EN 61000-4-2:2008		
Surge protection	ANSI/SCTE 81; C62.41 CAT C3	6 kV IEEE C62.41 CAT C3		
EMC	FCC CFR 47 part 15:2013	EN 50083-2:2012		
Safety	ANSI/UL-60950-1	EN 60728-11:2011		
Test points	F-male			
Coaxial connections	5/8"			
Housing finish	Painted conductive chromate finish			
Impedance	75		Ω	
Equipment approval	CE/RoHS/FCC			

Mechanical and environmental specifications

Parameter	DBT-1800-CC1	Units	Notes
Operating voltage	32-65 VAC sine wave, 42-90 VAC quasi-square wave		
AC bypass and capacity & input	15	A	
Operating temperature range	-40°C to +65°C (-40°F to +149°F)	°C/°F	
Drop-in dimensions	9.8" x 5.79" x 2.24" (249.0 x 147.0 x 57.0 mm)	inch/mm	
Housing dimensions	12.44" x 9.25" x 4.57" (316.0 x 235.0 x 116.0 mm)	inch/mm	
Weight	11.9 lb (5.4 kg)	lb/kg	

Power consumption specifications

Parameter	DBT-1800-CC1 High power mode											Units	
	40	45	50	55	60	65	70	75	80	85	90		
Square wave 40-90 V, all values in RMS													Voltage (V)
	0.96	0.85	0.76	0.68	0.62	0.57	0.52	0.49	0.45	0.43	0.40		Current (A)
	27.2	27.1	26.9	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.9	27.0	

Notes

1	85/102 MHz split is only supported in 1.2 GHz mode.
2	Measured at room temperature with attenuators and equalizers on 0, using best fit line method according to SCTE 144.
3	Operational gain over full temperature range, measured with attenuators and equalizers on 0.
4	Downstream tilt is 6 dB from 258 MHz to 1794 MHz. Operational gain is approximately 44 at 1218 MHz and 40 at 258 MHz.
5	Measured at +25°C (+77°F), full channel loading from 258-1794 MHz.
6	According to SCTE 279 -2022.
7	±1 dB measured at +25°C (+77°F). Upstream is measured at maximum gain.
8	Downstream input test point +/- 1.5 dB.
9	Measured with 28 dB operational gain.

Unless indicated differently, our specifications are measured at +25°C (+77°F).

Order information

Item code	Model code	Description
85/102 split		
19016074	DBT18CC1V2M102C00A	DBT-1800 LINE EXTENDER MODULE ONLY MID SPLIT
19016077	DBT18CC1V2F102C00A	DBT-1800 LINE EXTENDER FULL STATION MID SPLIT
19016080	DBT18CC1V2K102C00A	DBT-1800 LINE EXTENDER UPGRADE KIT MID SPLIT
204/258 split		
19015730	DBT18CC1V2M258C00A	DBT-1800 LINE EXTENDER MODULE ONLY HIGH SPLIT
19015733	DBT18CC1V2F258C00A	DBT-1800 LINE EXTENDER FULL STATION HIGH SPLIT
19015736	DBT18CC1V2K258C00A	DBT-1800 LINE EXTENDER UPGRADE KIT HIGH SPLIT
19015829	DBT18CC1V2FT258C00A	DBT-1800 LINE EXTENDER FULL STATION HIGH SPLIT NXT-01
19015832	DBT18CC1V2KT258C00A	DBT-1800 LINE EXTENDER UPGRADE KIT HIGH SPLIT NXT-01
396/492 split		
19016381	DBT18CC1V2M492C00A	DBT-1800 LINE EXTENDER MODULE ONLY 396/492
19016384	DBT18CC1V2F492C00A	DBT-1800 LINE EXTENDER FULL STATION 396/492
19016387	DBT18CC1V2K492C00A	DBT-1800 LINE EXTENDER UPGRADE KIT 396/492
19016473	DBT18CC1V2FT492C00A	DBT-1800 LINE EXTENDER FULL STATION 396/492 NXT-01
19016476	DBT18CC1V2KT492C00A	DBT-1800 LINE EXTENDER UPGRADE KIT 396/492 NXT-01

Accessories

Item code	Model code	Description
19015027	DBT-OH-CC1	DBT OUTER HOUSING FOR DBT CC1 MODULE
19013940	DBTPSU-C1	DBT PSU+CABLE LINE EXTENDER (C1/CC1/BLE)
19014274	DBTDIP85-102	DBT DIPLEX FILTER 85/102 MHz
19014237	DBTDIP204-258	DBT DIPLEX FILTER 204/258 MHz
19014861	DBTDIP396-492	DBT DIPLEX FILTER 396/492 MHz
19014945	DBTHPF10218	DBT-1800 HIGH PASS FILTER BOARD 102 MHz
19014944	DBTHPF25818	DBT-1800 HIGH PASS FILTER BOARD 258 MHz
19015401	DBTHPF49218L	DBT-1800 HIGH PASS FILTER BOARD 492 MHz LINEAR
19015403	DBTLPF8518A	DBT-1800 LOW PASS FILTER BOARD 85 MHz
19015281	DBTLPF20418A	DBT-1800 LOW PASS FILTER BOARD 204 MHz
19015404	DBTLPF39618A	DBT-1800 LOW PASS FILTER BOARD 396 MHz
19015835	NXT-01	NEURONX BI-DIRECTIONAL FSK MODULE INCL CABLES
19015601	15A-FUSE-DBT	15 A CAR FUSE BLUE STANDARD IN DBT RANGE
19008321	USB(3M) ATOA	USB 2.0 LEAD A MALE TO A MALE - LENGTH = 3M
19016051	USBAF-USBCM-OTG	USB-A-F / USB-C-M OTG ADAPTER