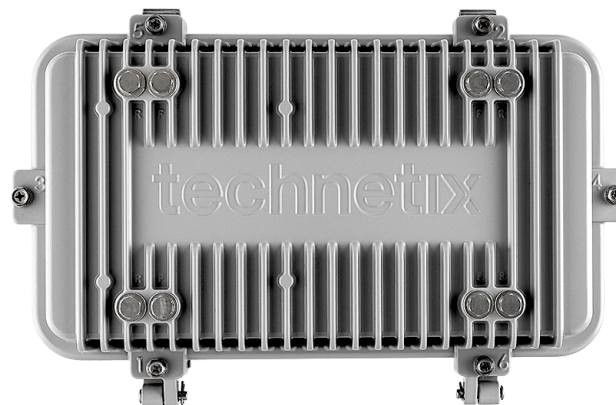


- DOCSIS® 4.0 (1794 MHz/684 MHz) ready
- Full electronic smart control and setup locally and remotely
- Agile AGC/ALSC functionality
- Downstream auto-alignment including short cable scenario with digital switchable cable simulator
- Field pluggable diplex filters for future bandwidth upgrade
- Activating 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® FM9xx 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 FM9xx 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.

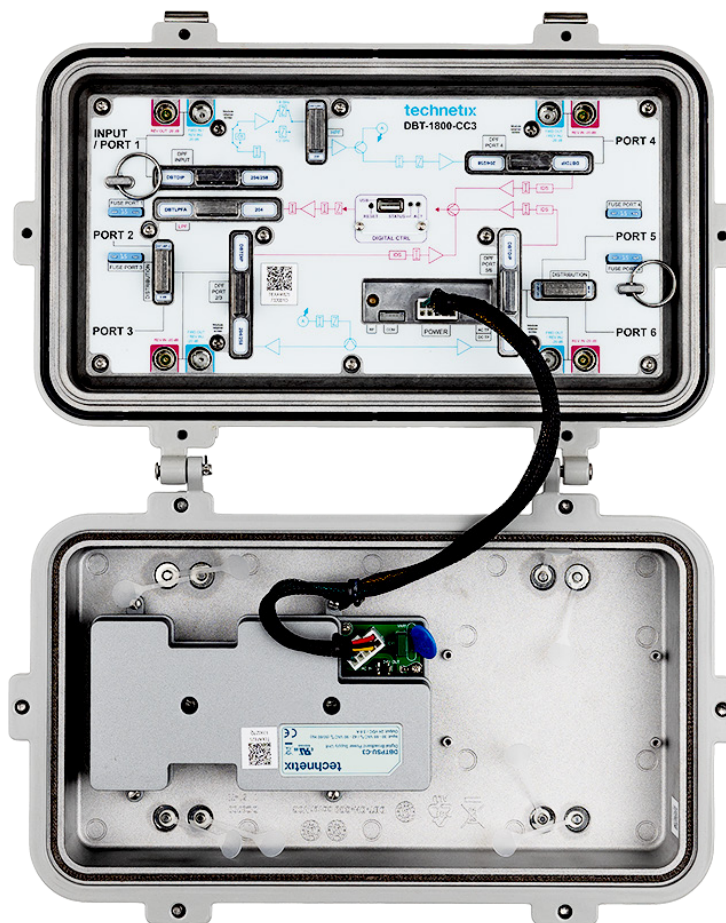
## DBT-1800-CC3

The Technetix DBT-1800-CC3 is a trunk amplifier (five ports) - it is DOCSIS 4.0 ready. The CC3 has 49 dB operational gain at 1794 MHz in the downstream and 32 dB operational gain at 684 MHz in the upstream. Pluggable diplex filters enable operators to make an easy upgrade to the amplifier split in the field. The DBT-1800-CC3 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.

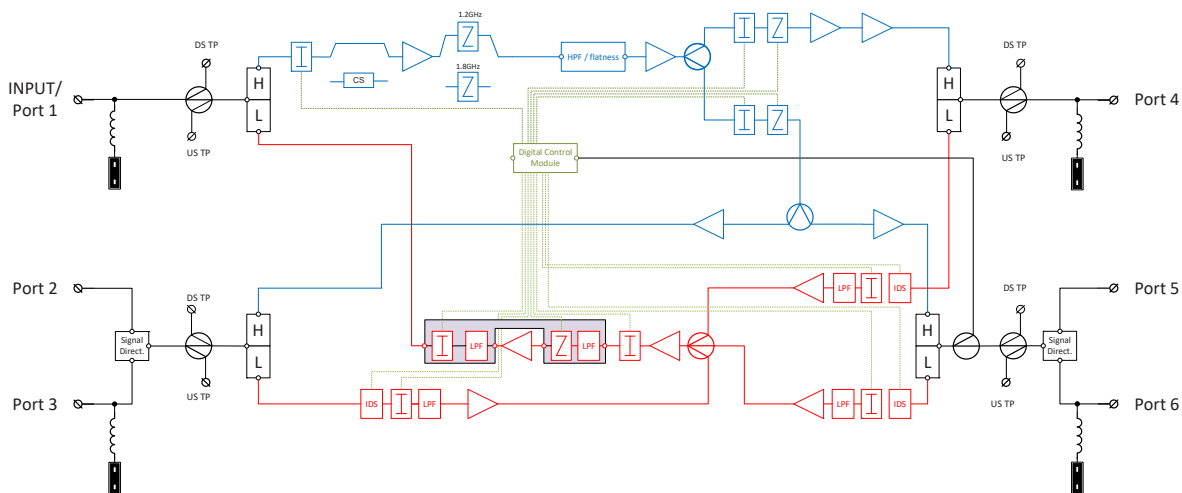
## Smart configuration

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)



**Block diagram RF configuration**



### DBT-1800-CC3 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	49 (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	0-15	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	
NPR (204 MHz) NPR (684 MHz)		>55 dB with 10 dB dynamic range >55 dB with 5 dB dynamic range	dB	8
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-CC3		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-CC3	Units	Notes
Operating voltage	30-65 VAC sine wave, 42-90 VAC quasi-square wave		
AC bypass and capacity & input	15	A	9
Operating temperature range	-40°C to +65°C (-40°F to +149°F)	°C/°F	
Drop-in dimensions	13.43" x 6.83" x 2.32" (341.0 x 174.0 x 59.0 mm)	inch/mm	
Housing dimensions	16.02" x 10.55" x 5.24" (407.0 x 268.0 x 133.0 mm)	inch/mm	
Weight	17.2 lb (7.8 kg)	lb/kg	

## Power consumption specifications

Parameter	DBT-1800-CC3 AC voltage - frequency 47-63 Hz											Units
	40	45	50	55	60	65	70	75	80	85	90	
Square wave 40-90 V, all values in RMS												Voltage (V)
	1.96	1.73	1.55	1.4	1.28	1.17	1.09	1.01	0.95	0.89	0.84	Current (A)
	61.8	61.4	61.2	61.1	61	60.9	60.9	61	61	61.1	61.2	Power (W)

## 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 | Operation gain over full temperature range, on port 4 and 3 & 6 using jumper plug-in, measured with attenuators and equalizers on 0.
- 4 | Downstream tilt is 5 dB from 258 MHz to 1794 MHz. Operational Gain is approximately 47 at 1218 MHz and 44 at 258 MHz.
- 5 | Measured at +25°C (+77°F), full channel loading from 258-1794 MHz, excluding directional coupler or splitter.
- 6 | According to SCTE 279 2022.
- 7 | ±1 dB measured at +25°C (+77°F) without back-off settings at maximum gain.
- 8 | Measured with 28 dB operational gain.
- 9 | Port 1, 3, 4, 6 are power passing ports. Port 2 and 5 are not power passing.

Unless indicated differently, our specifications are based on a standard performance of +25°C (+77°F).

## Order information

Item code	Model code	Description
<b>85/102 split</b>		
19016076	DBT18CC3V2M102C22A	DBT-1800 TRUNK MODULE ONLY MID SPLIT
19016079	DBT18CC3V2F102C22A	DBT-1800 TRUNK FULL STATION MID SPLIT
19016082	DBT18CC3V2K102C22A	DBT-1800 TRUNK UPGRADE KIT MID SPLIT
<b>204/258 split</b>		
19015732	DBT18CC3V2M258C22A	DBT-1800 TRUNK MODULE ONLY HIGH SPLIT
19015735	DBT18CC3V2F258C22A	DBT-1800 TRUNK FULL STATION HIGH SPLIT
19015738	DBT18CC3V2K258C22A	DBT-1800 TRUNK UPGRADE KIT HIGH SPLIT
19015831	DBT18CC3V2FT258C22A	DBT-1800 TRUNK FULL STATION HIGH SPLIT INCL. NXT-01
19015834	DBT18CC3V2KT258C22A	DBT-1800 TRUNK UPGRADE KIT HIGH SPLIT INCL. NXT-01
<b>396/492 split</b>		
19016383	DBT18CC3V2M492C22A	DBT-1800 TRUNK MODULE ONLY 396/492
19016386	DBT18CC3V2F492C22A	DBT-1800 TRUNK FULL STATION 396/492
19016389	DBT18CC3V2K492C22A	DBT-1800 TRUNK UPGRADE KIT 396/492
19016475	DBT18CC3V2FT492C22A	DBT-1800 TRUNK FULL STATION 396/492 NXT-01
19016478	DBT18CC3V2KT492C22A	DBT-1800 TRUNK UPGRADE KIT 396/492 NXT-01

## Accessories

Item code	Model code	Description
19015025	DBT-OH-CC3	DBT OUTER HOUSING FOR DBT CC2 AND CC3 MODULE
19013939	DBTPSU-C3	DBT PSU+CABLE BRIDGER AND TRUNK (C2/C3/CC2/CC3/MBB)
19015160	DBT18DC8-1	DBT-1800 PLUG-IN DC 8 dB PORT 2 OR 5
19015161	DBT18DC8-2	DBT-1800 PLUG-IN DC 8 dB PORT 3 OR 6
19015162	DBT18DC12-1	DBT-1800 PLUG-IN DC 12 dB PORT 2 OR 5
19015163	DBT18DC12-2	DBT-1800 PLUG-IN DC 12 dB PORT 3 OR 6
19015157	DBT18JMP-1	DBT-1800 JUMPER ACTIVATES PORT 2 OR 5
19015158	DBT18JMP-2	DBT-1800 JUMPER ACTIVATES PORT 3 OR 6
19015159	DBT18SPL	DBT-1800 PLUG-IN SPLITTER
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

**Accessories**

Item code	Model code	Description
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