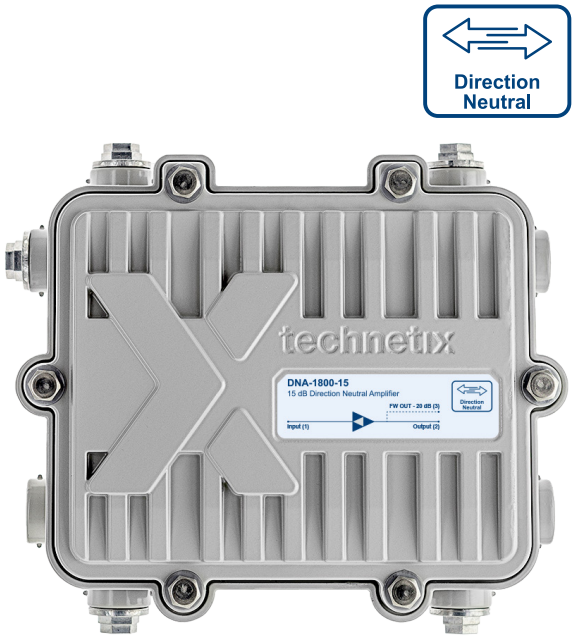
DNx access solution

1.8 GHz Direction Neutral Booster Amplifier DNA-1800-15

- **No diplex filter inside**
- **Supports all DOCSIS® frequencies up to DOCSIS 4.0**
- **Downstream 54-1800 MHz and upstream 12-684 MHz**
- **Downstream gain 15 dB at 1.8 GHz**
- **Upstream gain 8 dB at 684 MHz**
- **No upgrades needed for future frequency split changes**
- **External access to downstream test point -20 dB**
- **Lower operating temperature results in an extended lifespan, lowering operating costs with decreased maintenance and repairs**



Overview

Technetix' DNA-1800-15 booster amplifier is an easy to deploy solution for bridging the extra coaxial cable losses at higher frequencies. With the key advantage of having no diplex filters, this booster will be an install and forget product, which can fully operate all splits and channel plans supported in DOCSIS 4.0.

When upgrading networks to work on higher frequencies, operators may find that re-spacing trunk amplifiers and line extenders is not feasable. Therefore, a low-gain solution is needed to reach the next amplifier with proper input levels in case of a long cable span.

The booster is designed to provide unity gain in combination with 126 meters (413 ft.) of P3-500 coaxial cable. Provides 15 dB gain at 1.8 GHz.

e: sales@technetix.com **w:** technetix.com

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DNA-1800-15

technetix

DNA-1800-15 device and performance specifications

Parameter			Specifications				Units	Notes
			Min.	Typ.	Max.	Details		
Frequency range		10-1794 MHz					MHz	1
Impedance				75			Ω	
Gain	DS gain	54 MHz		1.8			dB	
		1794 MHz		15.0			dB	
	US gain	12 MHz		1.0			dB	
		684 MHz		8.8			dB	
Gain with 15 dB cable		12-1794 MHz	0.5	0	-0.75		dB	2
Insertion loss	Test point	54-1794 MHz	19	20	21		dB	
Return loss	All ports	12-862 MHz	13.0				dB	
		862-1700 MHz	14.0				dB	
		1700-1794 MHz	12.0				dB	
Noise figure	DS	54 MHz		18.0			dB	
		1794 MHz		16.0			dB	
	US	12 MHz		20.0			dB	
		684 MHz		14.0			dB	
Input range channel power	DS	258-1218 MHz	6.0	12~26	29.0	Full QAM channel load	dBmV	3
	US	12-204 MHz	6.0	12~26	30.0	Full QAM channel load	dBmV	3
Input range channel power	DS	258-1800 MHz	6.0	10~20	23.0	Full QAM channel load	dBmV	3
	US	12-684 MHz	6.0	12~22	26.0	Full QAM channel load	dBmV	3
AC bypass capacity and input					15		A	
Surge protection	All ports				6	IEEE C62.41 CAT C3	kV	
HUM modulation			-60			Measured at 10 A	dBc	
			-55			Measured at 15 A	dBc	
Connectors	In/out					KS 5/8-female		
Enclosure IP rating						IP68		

Notes

1	10-12 MHz reduced performance, US gain of 1 dB and return loss of >10 dB.
2	Aligned for flatness with 126 meter (413 ft.) P3 500 cable.
3	Typical value is the optimal input level per 6 MHz channel for best performance.

Power consumption specifications

Parameter	DNA-1800-15											Units
Square wave 40-90 V, all values in RMS	42	45	50	55	60	65	70	75	80	85	90	Voltage (V)
	0.18	0.17	0.15	0.13	0.12	0.11	0.11	0.10	0.09	0.09	0.08	Current (A)
	7.5	7.5	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.5	7.5	Power (W)

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Mechanical and environmental specifications

Parameter		Specifications				Units	Notes
		Min.	Typ.	Max.	Details		
Power consumption			7.5		42-90 VAC quasi-square wave	W	
Temperature	**Operating**	-40°C to +65°C (-40°F to +149°F)				°C/°F	
	Storage	-40°C to +85°C (-40°F to +185°F)				°C/°F	
	Spec		+25°C (+77°F)			°C/°F	
Dimensions (H x W x D)		6.3"H x 7.1"W x 3.3"D (16.0H x 18.0W x 8.3D cm)				in/cm	
Weight			2.0 lb (0.9 kg)			lb/kg	

Order information

Item code	Model code	Description
19014585	DNA-1800-15	DIRECTION NEUTRAL AMPLIFIER 15 dB 1800 MHz

Technetix Group Limited

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