DBD-1200 smart RF amplifier dual active output

- **Dual active output (112 dBµV/52 dBmV) full digital load, up to three output using (splitter or coupler)**
- **DOCSIS 3.1 (1.2 GHz/204 MHz) ready**
- **Forward path gain up to 44 dB and return path gain up to 28 dB**
- **Full electronic smart control and setup via software tools**
- **Modular, field upgradeable, power-efficient design**

DBx Open Access Platform

The Technetix DBx-1200 is a compact modular open access platform which supports both amplifier, node and Remote PHY/MAC-PHY configurations. Its modularity means that the platform can be field upgraded throughout its lifecycle and is not limited purely to higher diplex splits but can evolve with your network. Using CPD Safe™ technology means fewer reported faults, improved customer service and a reduction in truck rolls. The platform has an IP68 rating which enables deployments in challenging outdoor environments. The DBx platform has an unmatched Total Cost of Ownership (TCO) in the industry.

DBD-1200

The Technetix DBD-1200 amplifier is a dual active output amplifier which can be configured for use as a three-output device (by inserting an internal passive splitter or tap module). The base unit of the DBD-1200 has an optional bypass port and can be ordered with local or remote powering. The DBD supports 1x1, 1x2 and 2x2 applications. The exact performance and configuration will depend on the modules that are equipped.

Smart configuration

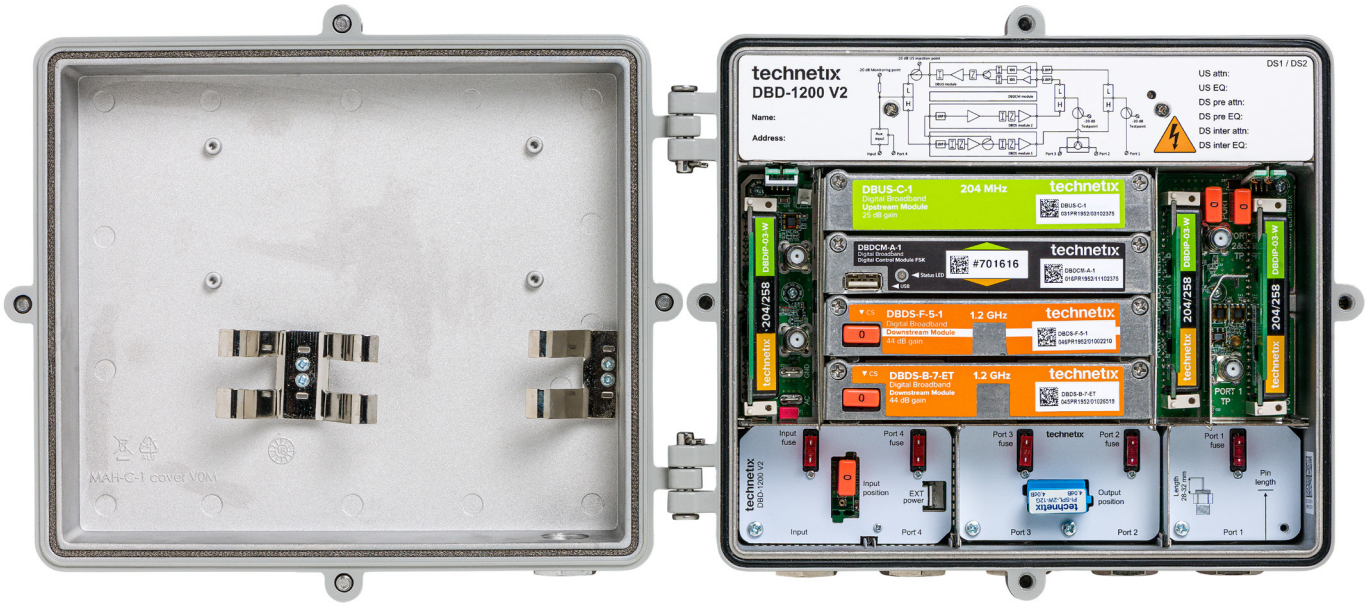
The controller module enables digital control of all settings using a USB port or an optional DOCSIS transponder for remote control and monitoring. An ingress detection switch can be set remotely via an FSK protocol. With integrated agile AGC/ALSC functionally, the network remains stable during temperature changes. Software tools used to set-up and control the platform are BLL (Windows), BLA (Android) and t-box which enables wireless access.

Green solution

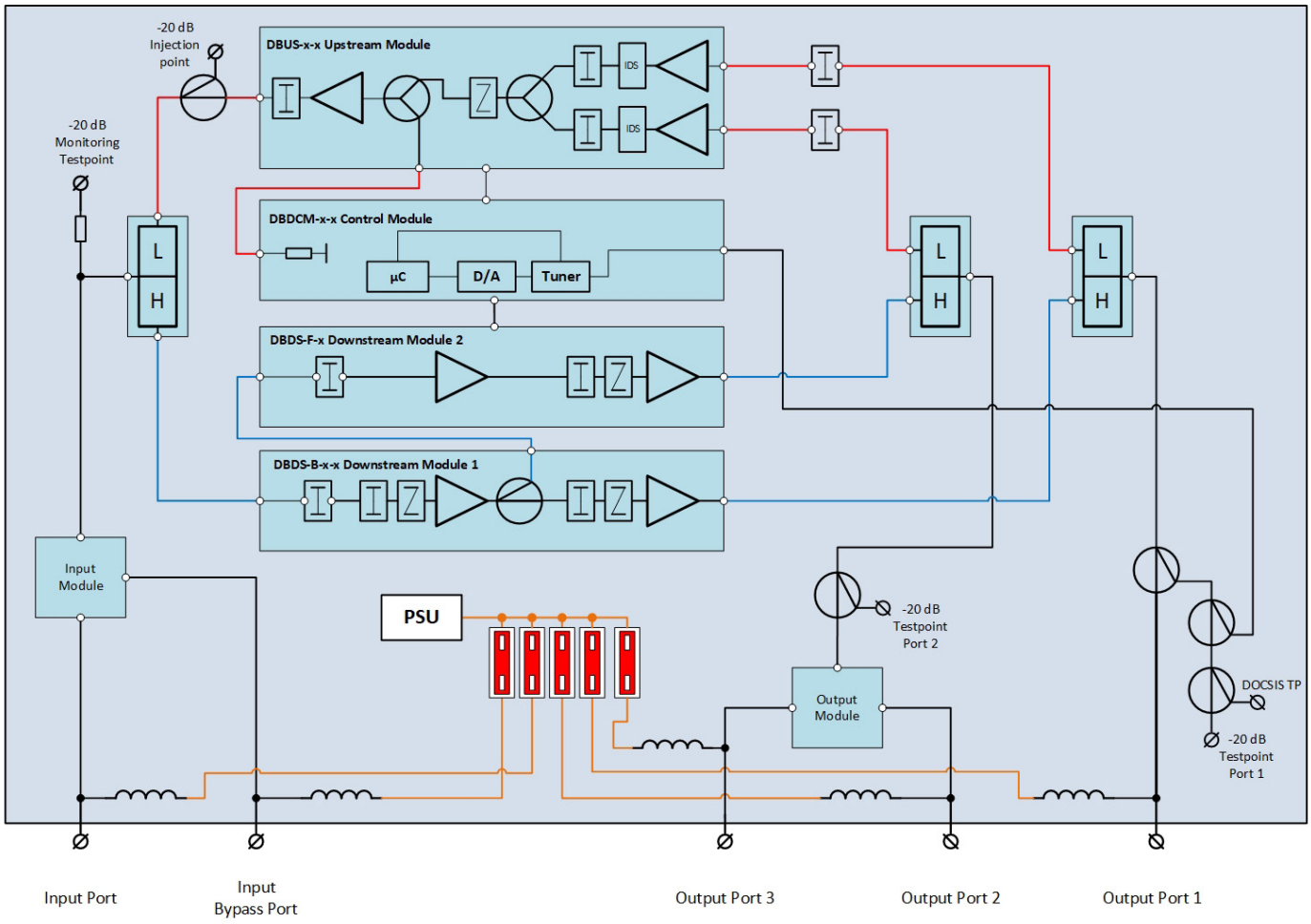
The DBx family uses highly efficient power supplies to reduce power consumption while maintaining high reliability figures. Due to the modular approach newer technology can be introduced to the platform which further reduces power consumption. Our modules have a configurable low power mode for less demanding applications. As the platform can grow with your needs and modules are compatible across the platform, there is less waste when using the DBx portfolio.

Technetix Group Limited
e: sales@technetix.com **w:** technetix.com
07/2024 - EN/V10

DBD-1200 smart RF amplifier dual active output



Block diagram RF configuration



DBD-1200 smart RF amplifier dual active output

technetix

DBD device and performance specifications

Forward path	DBD-1200	Value
Pass band (dependent on diplex filter)	54-1218	MHz
Active outputs	2	
Available outputs (with splitter)	3	
Frequency response 54-1218 MHz [1]	±0.75	dB
Gain [9]	44	dB
Return loss [2]	18	dB
Noise figure (with zero dB attenuation) [3] [6]	9	dB
Operating output level IEC60728-3-1 [11]	112	dBµV (dBmV)
Gain control (electronic) pre-stage [9]	0-20	dB
EQ control (electronic) pre-stage [9]	0-17	dB
Gain control (electronic) inter-stage [9]	0-15	dB
EQ control (electronic) inter-stage [9]	0-12.5	dB
Input monitoring point [8]	-20 ±1.5	dB
Output test-points	-20 ±1	dB

Reverse path	DBD-1200	Value
Pass band (dependent on diplex filter)	5-204	MHz
Gain	25	dB
Return loss [2]	16	dB
Frequency response 5-204 MHz	±0.5	dB
NPR 5-65 MHz	>50 dB: 24 dB dynamic range	
NPR 5-204 MHz	>50 dB: 21 dB dynamic range	
Ingress detection switches	0/6/40(off)	dB
Gain control (electronic)	0-20	dB
EQ control (electronic)	0-15	dB

General specifications	DBD-1200
Hum modulation [4]	-65 dBc at 7.5 A
Class of enclosure	IP68 IEC 60529 2.1 am 1-2 meters underwater
ESD	4 kV EN 61000-4-2:2008
Surge protection	6 kV IEEE C62.41 CAT C3
EMC	EN 50083-2:2012
Safety	EN 60728-11:2011
Test points	F-Female
Operating voltage	30-65 VAC sine wave, 35-90 VAC square wave
Power consumption [3]	30 W
AC bypass and capacity & input	10 A
Operating temperature range	-40ºC to +65ºC (-40ºF to +149ºF)
Housing dimensions	215 x 260 x 92 mm (8.5” x 10.2” x 3.6”)
Coaxial connections	PG11 or 5/8″
Housing finish	Painted conductive chromate finish
Impedance	75 Ω
Equipment approval	CE/RoHS/FCC

DBD-1200 smart RF amplifier dual active output

Ordering information

Category	Item code	Type	Description
Upstream RF modules	19008429	DBUS-C-1	Main module: 204 MHz upstream amplifier 25 dB gain and IDS
	19013960	DBUS-C-2	Main module: 204 MHz upstream amplifier 28 dB gain and IDS
Downstream RF modules	19009835	DBDS-B-7-1	Main: 1.2 GHz downstream amplifier 44 dB - I2 C - 52 dBmV output
	19010488	DBDS-B-7-ET	Main: 1.2 GHz downstream amplifier 44 dB - I2 C - 52 dBmV output with extended tilt
	19009834	DBDS-F-5-1	Bridge: 1.2 GHz downstream amplifier 44 dB - I2 C
Digital control and monitoring	19005026	DBDCM-A-1	Control module: AGC/ALSC, FSK, USB-A
	19005027	DBDCM-B-2	Control module: AGC/ALSC, DOCSIS transponder compatible, USB-A
	19005029	DBDDM-A-1	DOCSIS 3.0 transponder, requires DBDCM-B-2
	19010542	DBDDM-B-1	EuroDOCSIS 3.0 transponder, requires DBDCM-B-2
Diplex filters	19005033	DBDIP-01	65/85 MHz diplexer
	19005034	DBDIP-02	85/105 MHz diplexer
	19007125	DBDIP-03	204/258 MHz diplexer
	19006341	DBDIP-04	42/54 MHz diplexer
	19010377	DBDIP-05	85/102 MHz diplexer
	19012966	DBDIP-05-5	85/102 MHz diplexer with 5 dB insertion loss in Downstream
Plug-ins	19005718	PI-SPL-2W-12G	Splitter 2-way, 3.5/3.5 dB, 1.2 GHz (input/output location)
	19005719	PI-DC-08-12GO	Directional coupler, 8 dB, 1.2 GHz (output location)
	19005720	PI-DC-12-12GO	Directional coupler, 12 dB, 1.2 GHz (output location)
	19009173	PI-DC-08-12GI	Directional coupler, 8 dB, 1.2 GHz (input location)
	19009174	PI-DC-12-12GI	Directional coupler, 12 dB, 1.2 GHz (input location)
Standard configuration	19012538	DBD2CONF4VF2	DBD2-1200, 204/258 MHz, 65 V, CM-A-1, B-7-ET, C-1, SPL

Remarks:

1. Aligned with 20 dB coax, add ±0.5 dB (typical) for port 2,3,4 on DBD products.
2. @40 MHz, deduct 1.5 dB per octave (never worse than 12 dB).
3. From 1006 to 1218 MHz up to 9 dB in bridger modules.
4. Typical, without DOCSIS transponder @50 VAC - low power mode.
5. Max value up to 1 GHz. From 1 GHz to 1.2 GHz max value -60 dB.
6. DBE-1200S NF is one dB higher due to bi-directional test point.
7. DBPSU-05 100-240 VAC also available upon request.
8. Measured with 22 dB ATT JXP in DS 1 module.
9. When selecting 204/258 diplex filters with end frequency @1.2 GHz, extended tilt modules available offering 5 dB additional tilt.
10. DBDS-B-7 modules have 44 dB gain, DBDS-B-5 modules have 38 dB gain.
11. 120 x 8 MHz channel, 256QAM, F1= 266 MHz, F120 = 1218 MHz with 9 dB tilt.

Technetix Group Limited **e:** sales@technetix.com **w:** technetix.com

07/2024 - EN/V10

© Copyright 2024 Technetix Group Limited. All rights reserved.
This document is for information only. Features and specifications are subject to change without notice. Technetix, the Technetix logo, Technetix Ingress Safe® and certain other marks and logos are trade marks or registered trade marks of Technetix Group Limited in the UK and certain other countries. Other brand and company names are trade marks of their respective owners. Technetix protects its technology and designs by registering patents, trade marks and designs in Europe and certain other countries.