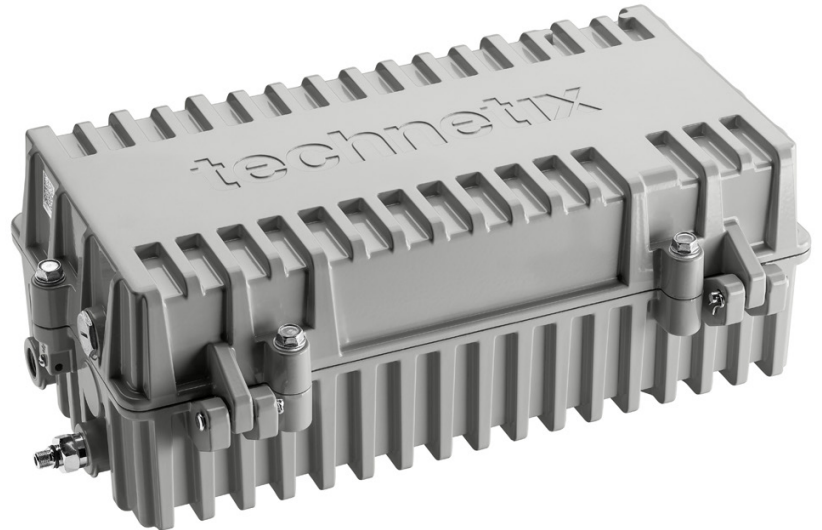


- **Flexibility**
- **Power saving**
- **Plug and play
Remote PHY upgrade**



Overview

The Technetix DBx-1200 access platform is an innovative modular design with a wide range of RF amplifiers, optical nodes and Remote PHY nodes. With over half a million units deployed worldwide, DBx is the world leading access platform in the market today.

Flexibility

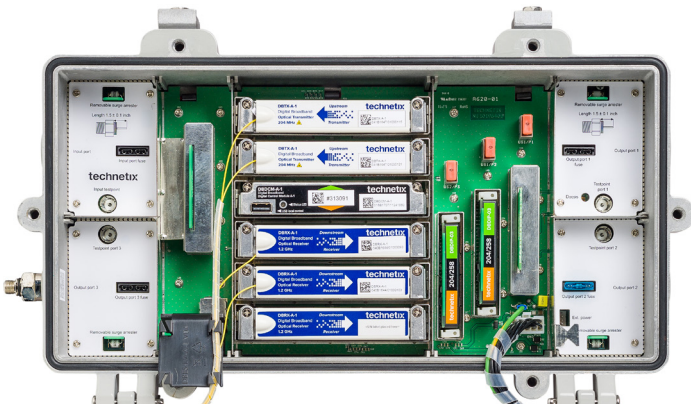
The industrial standard DBx platform comes with a modular configuration, allowing for future retrofits and network upgrades with plug and play components. Improving the longevity and flexibility of HFC networks, operators can decide to change RF and optical modules or upgrade to Remote PHY nodes as network architectures evolve.

Power saving

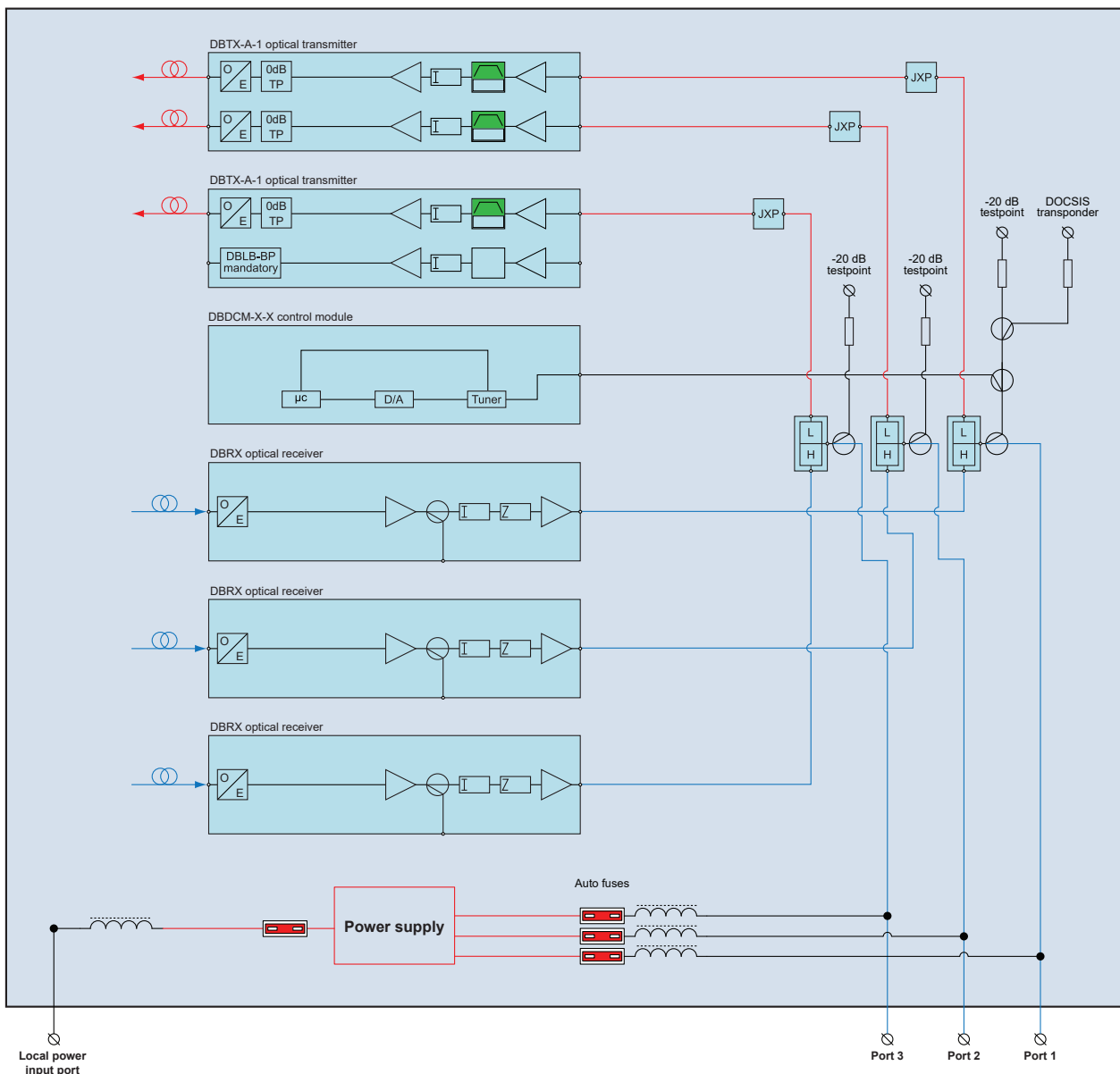
To stay competitive, service providers are increasing bandwidth to improve service performance. The DBx platform allows operators to use the right amplifier modules with the correct gain, use high efficiency PSU in active devices and reduce the current through the hybrids during off-peak times, bringing savings of up to 40% (344 kWh) per year, per amplifier.

Plug-and-play upgrade

Remote PHY (R-PHY) technology enables the up- and downstream relocation of traditional headend elements, generating 10 Gbps of data on a remote location to operators seeking to extend the capacity of their coax networks. R-PHY is ready for deployment in existing DBx infrastructure or directly enabled in DBx R-PHY nodes and amplifiers.



Block diagram RF configuration



Optical node platform specifications

Device configuration used:

Control module: DBDCM-A-1

Upstream module: DBTX-A-1

Downstream module(s): DBRX-A-1

Diplex filters: DBDIP-04

Forward path	DBE-1200S	Value
Pass band (dependent on diplex filter)	54-1218	MHz
Active outputs	3	
Available outputs (with splitter)	3	
Frequency response 54-1218 MHz ¹	±0.75	dB
Gain ¹⁰	43	dB
Gain tolerance	0.5	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
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	dB
Output test-points	-20 ±1	dB

Reverse path	DBE-1200S	Value
Pass band (dependent on diplex filter)	5-204	MHz
Frequency response 5-204 MHz	±0.5	dB
Return loss ³	16	dB
Laser type ¹	DFB/CWDM	dB
Optical isolator	>30	
Wavelength	1310/1550/CWDM	
Optical output power	3	dB
Gain control (electronic 0.5 dB steps)	0-20	dB
OMI test point on laser plug-in board ³	0	dB
OMI test point accuracy	±0.3	
NPR 5-65 MHz	>40 dB: 24 dB dynamic range	
NPR 5-65 MHz	>50 dB: 9 dB dynamic range	
NPR 5-204 MHz	>40 dB: 22 dB dynamic range	
NPR 5-204 MHz	>50 dB: 7 dB dynamic range	
Ingress detection switches	0/6/40(off)	dB

Optical node platform specifications (continued)

General specifications	DBE-1200S
Hum modulation ⁵	-65 dBc at 7.5 A
Class of enclosure	IP68 IEC 60529 2.1 am 1 - 2 metres 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-Male
Operating voltage ⁷	35-90 VAC Square wave
Power consumption ⁴	44 W
AC bypass and capacity & input	15 A
Operating temperature range	-40 to +65°C
Housing dimensions (metric)	265 x 430 x 150 mm
Coaxial connections	PG11 or 5/8"
Housing finish	Painted conductive chromate finish
Impedance	75 Ω
Equipment approval	CE/RoHS/FCC

Remarks:

- Optical AGC accuracy ± 2 dB - Used in conjunction with electrical AGC ± 0.5 dB
- When using hybrid RF/Optical configurations typical increase of ± 0.5 dB
- @40 MHz, deduct 1.5 dB per octave (never worse than 12 dB)
- 120x 8 MHz channel, 256 QAM, F1= 266 MHz, F120 = 1218 MHz - @9 dB tilt
- When selecting 204/258 diplex filters with end frequency @ 1.2 GHz
- 80 dBuV for 10% OMI' - test-point is 0 dB - ask your sales representative for full OMI table
- Max value up to 1 GHz. From 1 GHz to 1.2 GHz max value -60 dB
- DBPSU-05 100-240 VAC also available upon request
- Typical, without DOCSIS transponder @50 VAC low power mode