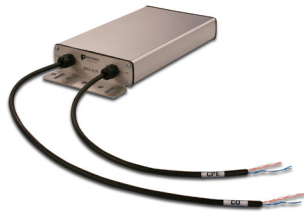


Broadband Reach Extender - Extra Long Reach (BRX-XLR)

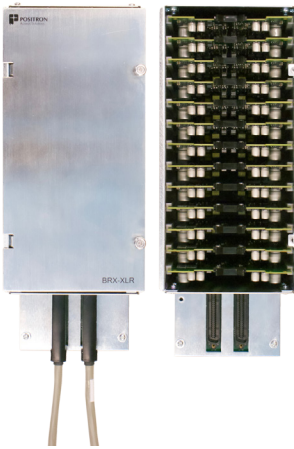


BRX-XLR-2

The Broadband Reach Extender – Extra Long Reach (BRX-XLR) is a fully integrated solution that **extends the reach of deployed ADSL / ADSL2+ DSLAMs or MSANs to deliver 10 Mbps per pairs to subscribers at 14,500 feet (4.4 km)**. It is being used for a multiple of applications and it is particularly well suited in underserved or unserved markets. An increase in the available bandwidth capacity on existing last mile infrastructure results in higher ARPU, lower attrition and increased customer satisfaction.

The BRX-XLR offers “new life” for installed DSLAMs and the ‘last mile’ of copper with an optimal way to deliver higher speed services. Broadband service operators can instantly provide higher bandwidth to subscribers without the heavy expenditures of bringing Fiber to the Home (FTTH).

About the BRX-XLR

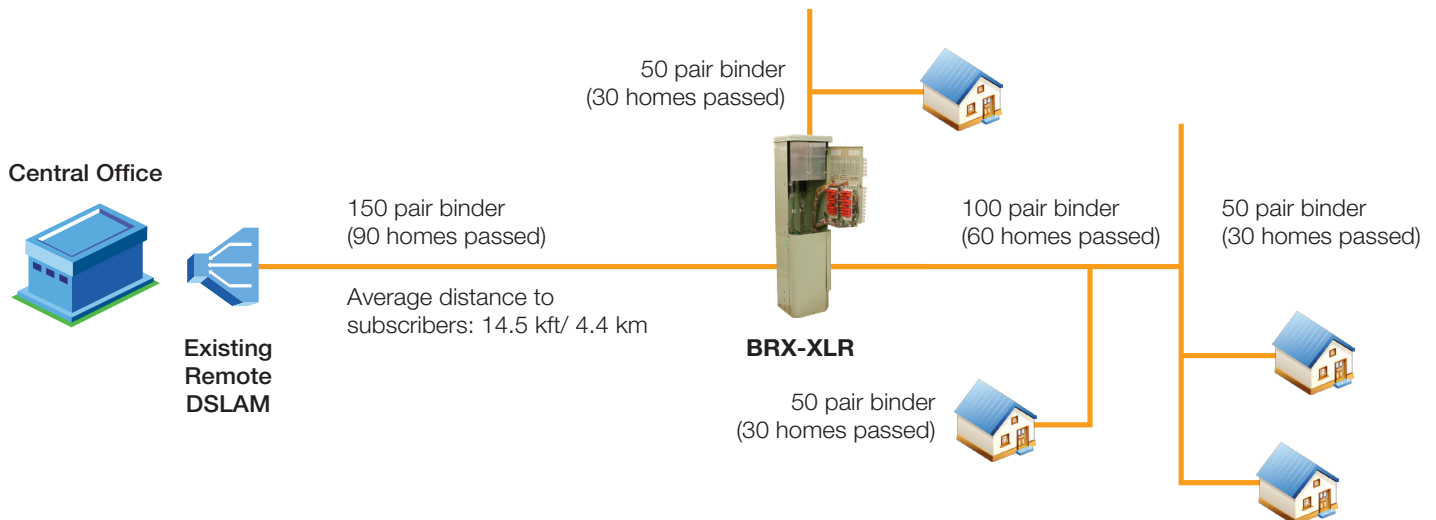


BRX-XLR-CAB-24

The Positron Access Solutions BRX-XLR is a next generation performance and distance (reach) enhancement solution for any ADSL / ADSL2+ loops served by a DSLAM. The BRX-XLR is installed between the DSLAM (typically around 6,000 to 9,000 feet / 2 to 3 km from the DSLAM) and the remote user locations and improves the overall performance by a factor of 200% to 250%. By significantly increasing the effective bandwidth and reach of existing xDSL lines, Operators can deliver true broadband speeds to each of their subscribers, even those located in remote areas or currently located too far from the DSLAM to receive any service. The BRX-XLR is designed to deliver a minimum of 10 Mbps on an ADSL2+ pair at a distance of 14,500 feet (4.4 km).

100% Transparent Support for Pair Bonding

The BRX-XLR has been proven in the field as fully transparent to pair-bonding applications. From simpler data-only application where two (2) pairs are bonded to deliver 10 Mbps beyond 20,000 feet/ 6.6 km to more demanding application such as delivering over 25 Mbps at 10,000 feet (3.3 km) to an IPTV service with 3 HD channels and bandwidth to spare for email and social networking.



More than Signal Amplification

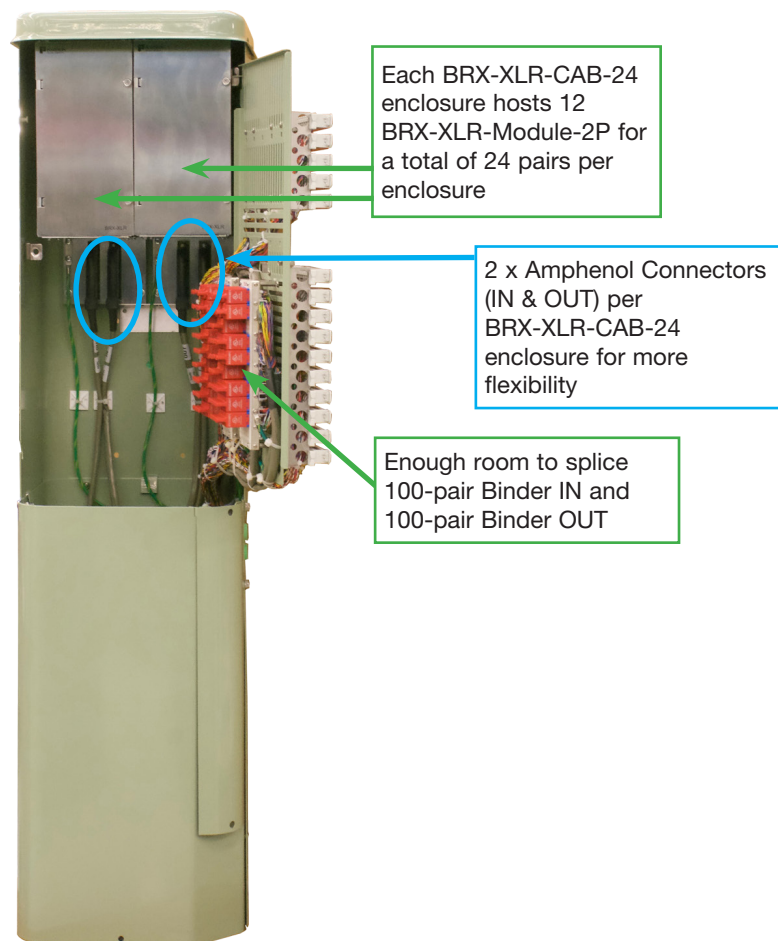
In addition to delivering a significant increase in performance, field testing has shown that the BRX-XLR will help mitigate some of the common problems impacting the performance of ADSL and ADSL2+ in the Outside Plant (OSP). As it amplifies the xDSL signal, the BRX-XLR significantly improves the signal-to-noise ratio (SNR) to the subscriber modem. Thanks to this improved SNR, the BRX-XLR helps mitigate the impact of bridge taps, especially those resulting from inadequate in-house wiring.

Assorted Form Factor and Flexible Mounting Options

The BRX-XLR is designed to fit seamlessly into splicing cabinets already in use in the copper outside plant (OSP). It is also available in a weather resistant enclosure (IP-65) that can be easily mounted on a pole or on the outside of an existing cabinet. The product is offered in various form factors including a self-contained 1-pair and 2-pair enclosures and flexible 24 or 48 pair enclosures for higher-density areas.

Pedestal Integration

The BRX-XLR-24 enclosure is easily mounted inside most splicing pedestal models found in the outside plant (OSP). The BRX-XLR can be factory installed in a pedestal such as the popular Emerson CAD-12 to serve up to 48 copper pairs in a customer service area (CSA) with enough room to handle a 100-pair binder from the Central Office (CO or Exchange) and a 100-pair binder toward the subscribers.



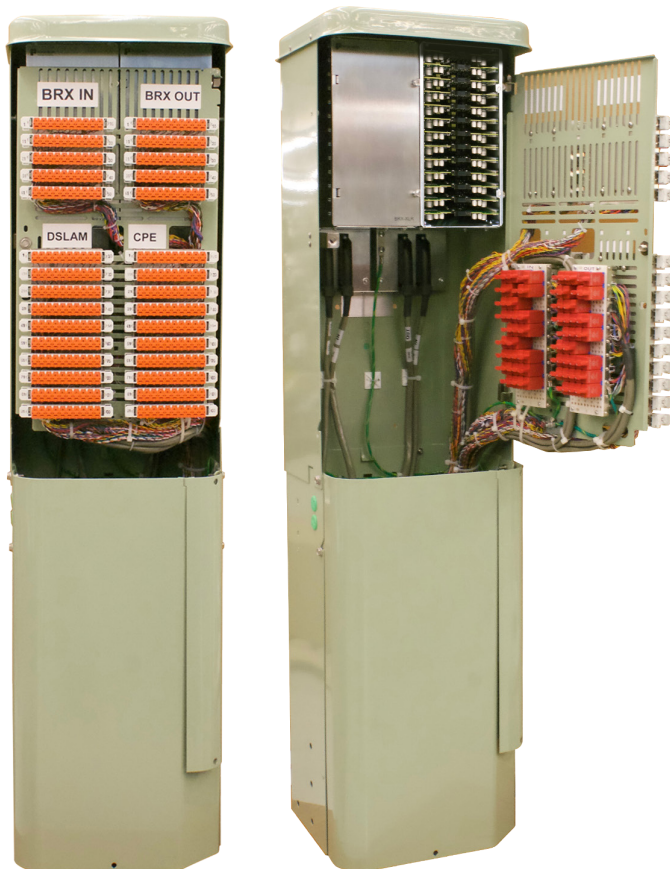
The Emerson CAD-12 is factory installed with 5-pin protection modules for each copper pair into and out of the BRX-XLR-CAB-24 enclosures for lightning protection. It is also equipped with gel-filled 100-pair splice modules (3M part# 2810F100-HCO/48-GBM) from the CO and toward the subscribers terminated with 3M MS2 connectors. The factory installed unit further comes equipped with 50-pair gel-filled splicing modules (3M part# 2810F48-HCO/48-GBM) to facilitate the connectivity of the pairs in and out of the BRX-XLR-CAB-24 enclosure.

Module Specifications / Features

Feature	Description
xDSL Standards	ITU G.992.5 ADSL2+ Annex A ITU G.992.3 ADSL2 Annex A ITU G.992.1 ADSL Annex A
Reach Improvement	Extends up to 100% ADSL/ ADSL2/ ADSL2+ broadband coverage
Rate Improvement	Improve effective bandwidth up to 250% for ADSL/ ADSL2/ ADSL2+ loops
PSD Mask Compliance	Compliant with ANSI T1.413 and ETSI TS 101 830-1
Signal to Noise Ratio	Improves the Signal to Noise Ratio (SNR)
Power Draw	Maximum power drawn is 100 mw per pair from the 48V sealing current from the CO or DSLAM/ MSAN
Enclosure	Flexible shelf design allows more subscribers to be added in the future
Over-current Protection	8/20 µsec, 10 kA (1 operation) 10/700 µsec, 6 kV, 300A (50 operations)
Regulatory Compliance	Tested to IP65, UL/CSA and FCC part 15 Class A
	WEEE and ROHS compliant
Operating Temperature	-40 to +65 °C
Relative Humidity	5% to 95%, non-condensing
Dimensions	BRX-XLR-2P (module): 8" x 5" (20 cm x 12.5 cm)
	BRX-XLR-1: 9.25" x 5.5" x 1.5" (23.5 cm x 14 cm x 3.8 cm)
	BRX-XLR-2: 9.25" x 5.5" x 1.5" (23.5 cm x 14 cm x 3.8 cm)
	BRX-XLR-CAB-24: 14.775" x 9.05" x 5.33" (37.5 cm x 23 cm x 13.6 cm)
Installation Location	Installed adjacent to a splice point or cross connect cabinet in the outside plant (OSP) No equipment needed in the Central Office / Exchange
Auto-Provisioning	Automatic gain control with no software or hardware configuration, self-adjusts based on loop length and line conditions to CPE device
Number of Ports per Module	Each BRX-XLR module incorporates two (2) independent copper pairs, 100% transparent to pair bonding (if used)

Ordering Part Numbers and Description

Part Number	Description
BRX-XLR-Module-2P	BRX-XLR Two-pair Module (for use with BRX-XLR enclosure)
BRX-XLR-Module-2P-PROT	BRX-XLR Two-pair Module with Protection (for use with BRX-XLR enclosure)
BRX-XLR-1	BRX-XLR One-pair Module with gas tubes enclosed in IP-65 Enclosure
BRX-XLR-2	BRX-XLR Two-pair Module with gas tubes enclosed in IP-65 Enclosure
BRX-XLR-CAB-24	BRX-XLR Enclosure hosting 24 pairs (no BRX-XLR-Module-2P)
BRX-XLR-24-EXT-PROT	BRX-XLR Enclosure factory installed with 12 BRX-XLR-Module-2P
BRX-XLR-24-PROT	BRX-XLR Enclosure factory installed with 12 BRX-XLR-Module-2P with lighting protection on the BRX-XLR-2 Modules
BRX-XLR-24-PED	BRX-XLR Enclosure factory installed in Pedestal with 12 BRX-XLR-Module-2P
BRX-XLR-48-PED	BRX-XLR Enclosure factory installed in Pedestal with 24 BRX-XLR-Module-2P
OPT-5PIN-PROT	5-Pin Protection Module
BRX-XLR-PED-ONLY	Pedestal only for 24 pairs



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