

AdrenaLine™ xDSL Conditioner

Powered by



Redefine the Rate and Reach possibilities of DSL over copper with the revolutionary AdrenaLine xDSL Conditioner!

The AdrenaLine xDSL Conditioner is a remarkable leap forward in the evolution of DSL. AdrenaLine is a revolutionary line conditioning product that is easily deployed over legacy copper. It enhances DSLAM performance by significantly improving rate and reach. In both reach-extended and rate-enhanced DSL applications, AdrenaLine offers service providers a cost-effective, quick-to-market solution for capturing greater market share and generating new revenue.

Service providers deploying AdrenaLine on their copper pairs see an immediate gain in the bandwidth of their ADSL, RE-ADSL, ADSL2 and ADSL2+ offering. Providers can use this boost in bandwidth to deliver new high-speed services, or improve the customer's experience with their current subscriptions.



Product Description

The AdrenaLine xDSL Conditioner is a hardened OSP enclosure system employing Phylog, Inc.'s revolutionary TripleStream™ technology. AdrenaLine conditioners are designed to install between the DSLAM and the subscriber. A 30' sheathed cable stub extends from the AdrenaLine case for splicing into existing copper twisted pair cable. AdrenaLine conditioners can be mounted in virtually all OSP applications, including pedestal or pole mounted, placed in grade level boxes, aerial strand mounted, or direct buried.

Designed for rapid deployment, AdrenaLine increases the footprint of DSL capable areas, enabling operators to provide service to more of their hard-to-reach customers.

Deployment of AdrenaLine conditioners requires no changes at the central office, no equipment at the subscriber and no local power. A field technician can install AdrenaLine conditioners into existing copper cables in the same manner as other Telco-approved line conditioners.



AdrenaLine empowers your copper plant to meet the requirements of an ultra-broadband world.

Function & Features

AdrenaLine is an analog device that improves available bandwidth through noise filtering and signal amplification. AdrenaLine tunes its internal circuitry to compensate for distance, wire gauge and other plant variables, and conditions the DSL line in both directions to maximize rate and reach. By placing AdrenaLine between the DSLAM and CPE, minimal power is required, and negligible disturbance is imposed on adjacent pairs.

Two powering options are available. Line Power units use -48VDC from POTS switch over the signal pair. Express Power units use a separate power pair from a -48VDC fuse panel to increase the powering range of AdrenaLine.

Key Features:

- Auto-calibration provides maximum achievable data rates automatically
- No Central Office or CPE changes
- POTS and CLASS™ services compatible
- Low cost of ownership

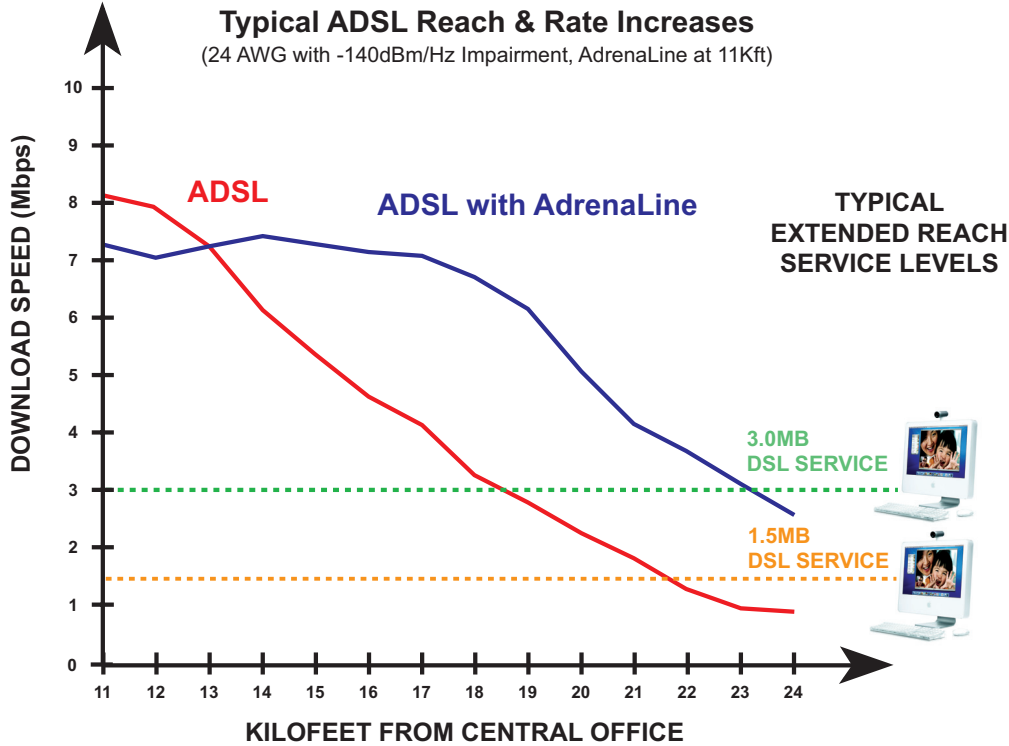


Product Applications

AdrenaLine xDSL Conditioners are designed for boosting the rate and reach of standards-based ADSL, RE-ADSL, ADSL2 and ADSL2+, and may be used in a variety of applications. Examples of typical applications include:

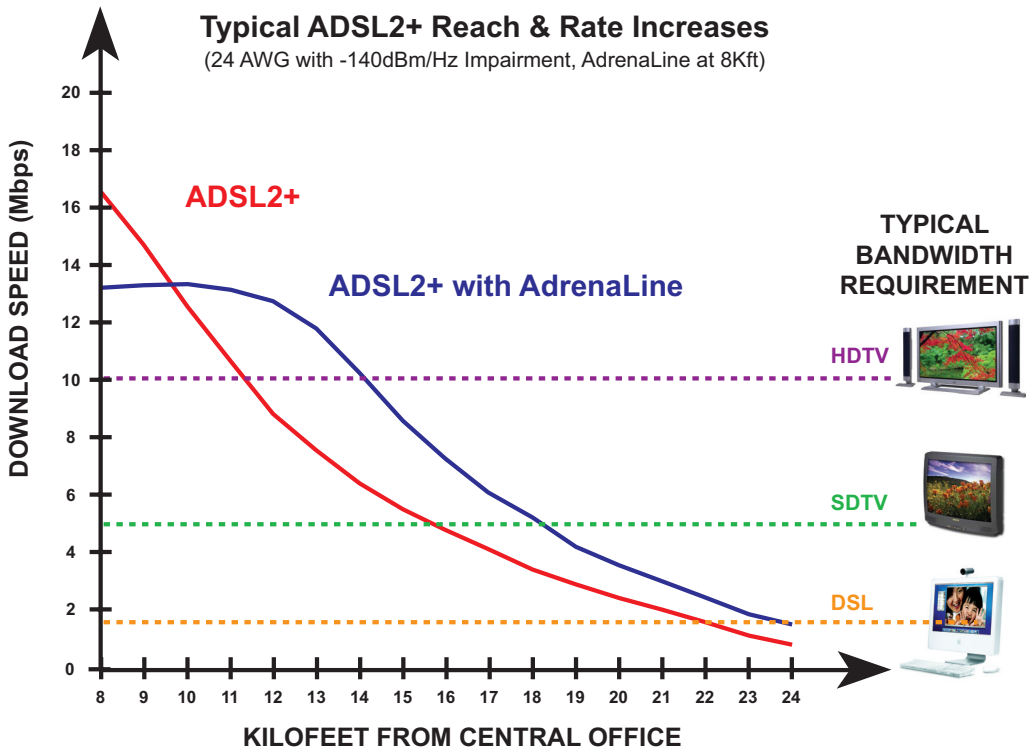
Extended Reach - *Extend DSL to New Markets and Hard to Reach Customers*

AdrenaLine may be deployed to extend the reach of DSL so that unserved customers that are located far from the DSLAM are able to receive high-speed Internet service.

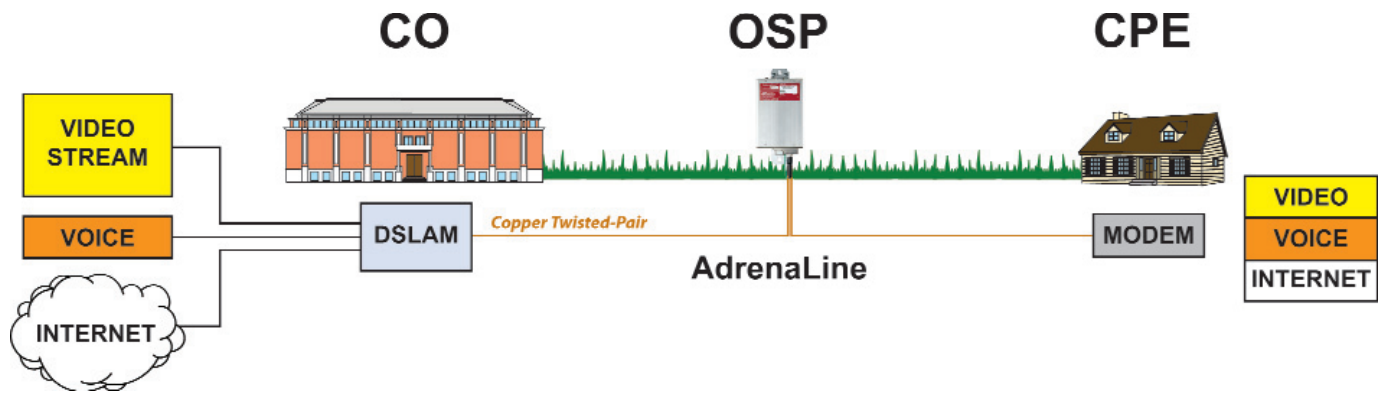


Enhanced Rate - *Increase Bandwidth to Existing Customers and Offer Tiered Services*

AdrenaLine may be deployed to boost the data rates to existing existing customers so that providers can sell tiered services as well as potential triple play services.



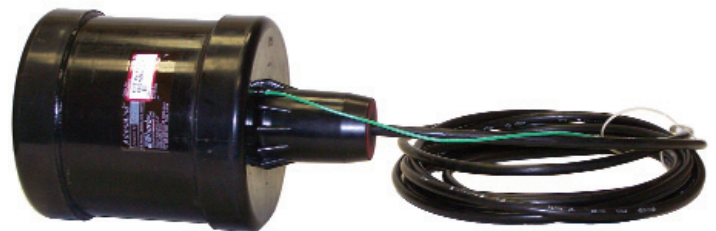
Network Placement



To determine the optimal placement of AdrenaLine in a network's outside plant, it is necessary to consult the AdrenaLine Placement Configurator. It may be downloaded at: <http://www.charlesindustries.com/main/adrenalinetool.html>.

AdrenaLine Multi-Line Units

AdrenaLine Multi-Line units condition multiple loops from a single housing. The low profile multi-line units may be direct buried, pole, or manhole mounted and offer customers a lower installed cost than single line units when provisioning several loops or entire DSL distribution areas. 5-Line (Express Power) or 6-Line (Line Power) environmentally hardened sealed housing provide outstanding protection and flexibility in placement. Multi-Line units are factory stubbed with a sheathed 30' cable stub and a 10' ground wire. The stub is designed to connect at the splice point whether it is pedestal, strand or direct buried.



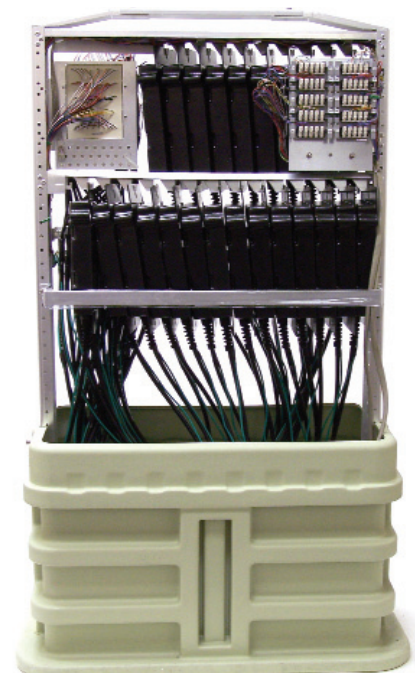
AdrenaLine Distribution Interface (Multi-Line Applications)

The AdrenaLine Distribution Interface (ADI) accommodates up to twenty-five (25) single line units, sold separately, for multiple line deployments of AdrenaLine.

The non-metallic ADI offers superior strength, outstanding environmental protection and ease of installation. It is available in both non-flame retardant and flame retardant models. Internally, the ADI features a two-tier rail system for mounting up to ten (10) AdrenaLine units on the top rail and up to fifteen (15) units on the lower rail. The ADI is available with terminal blocks for terminating AdrenaLine units and OSP cables in an orderly fashion.

Termination of AdrenaLine cable stubs and outside plant cables may be performed in the field on tool-less IDC terminal blocks specifically designed for carrying high-speed data. Connections between the blocks are factory pre-wired thus further reducing installation time of AdrenaLine units in the field. Grounding and bonding attachment points are incorporated in the rail system. Selected pairs or entire neighborhoods can be quickly provisioned for AdrenaLine with the ADI.

A blockless version of the ADI is also available, allowing for straight splicing between the AdrenaLine stubs and OSP cables.



Product Specifications (Single Line Units)

Stub Type:	Gel filled
Stub Length:	30 foot
Operating Voltage:	-48VDC
Power Consumption:	250mW
Lightning Protection:	Primary & Secondary
Operating Temperature:	-40°F to 150°F (-40°C to 65°C)
Compliances:	Designed to meet SR-3580 NEBS Level 3 Criteria (including GR-1089-CORE and GR-63-CORE) and UL60950
Dimensions:	10.75" H x 6.5" W x 2.25" D
Weight:	3 lbs.

Ordering Information

Part Number	Description	DSL Support
AdrenaLine Single Line Units		
CTA-01E	Single Line, Unloaded Loops, Express Power	ADSL, RE-ADSL, ADSL2, ADSL2+
CRE-01E	Single Line, Loaded Loops, Express Power	ADSL, RE-ADSL, ADSL2, ADSL2+
CTA-01L	Single Line, Unloaded Loops, Line Power	ADSL, RE-ADSL, ADSL2, ADSL2+
CRE-01L-S	Single Line, Loaded Loops, Line Power	ADSL, RE-ADSL, ADSL2, ADSL2+
AdrenaLine Multi-Line Units		
CTA-05E	5 Line, Unloaded Loops, Express Power	ADSL, RE-ADSL, ADSL2, ADSL2+
CTA-06L	6 Line, Unloaded Loops, Line Power	ADSL, RE-ADSL, ADSL2, ADSL2+
CRE-06L	6 Line, Loaded Loops, Line Power	ADSL, RE-ADSL, ADSL2, ADSL2+

Notes: Use CTA products on unloaded loops for Rate Increase.
Use CRE products on loaded loops for Reach Extension.

AdrenaLine Distribution Interfaces

CMPH-750ENH	ADI for Express Power AdrenaLine Units, Non-Flame Retardant, with Hasp Lock
CMPH-750LNH	ADI for Line Power AdrenaLine Units, Non-Flame Retardant, with Hasp Lock
CMPH-750EFH	ADI for Express Power AdrenaLine Units, Flame Retardant, with Hasp Lock
CMPH-750LFH	ADI for Line Power AdrenaLine Units, Flame Retardant, with Hasp Lock

Order AdrenaLine Units separately to populate as needed. ADI are available in many additional configurations and with mounting stake options, please call for details.

Use Smart Coil™ with AdrenaLine for Superior Extended-Reach DSL Performance!

Smart Coil provides the line conditioning benefit of a common load coil for POTS traffic while being transparent to ADSL. With the installation of Smart Coil, a loop that was providing either POTS or ADSL exclusively can handle both services on a single copper pair. With Smart Coil installed in place of common load coils on the copper pair, signal equalization is maintained throughout the voice band spectrum, while the ADSL signal is maintained at levels nearly identical to that of an unloaded pair. Smart Coil are available in single coils, Kwik Kases, and sealed environmental cases. **Please visit www.charlesindustries.com or call (847) 806-6300 for further details.**

SMART COIL



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Charles Industries, Ltd. Voice: (847) 806-6300
Telecommunications Group FAX: (847) 806-6231
5600 Apollo Drive E-mail: mktserv@charlesindustries.com
Rolling Meadows, IL 60008



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TripleStream™ technology US patent #7110528 and other patents pending.

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