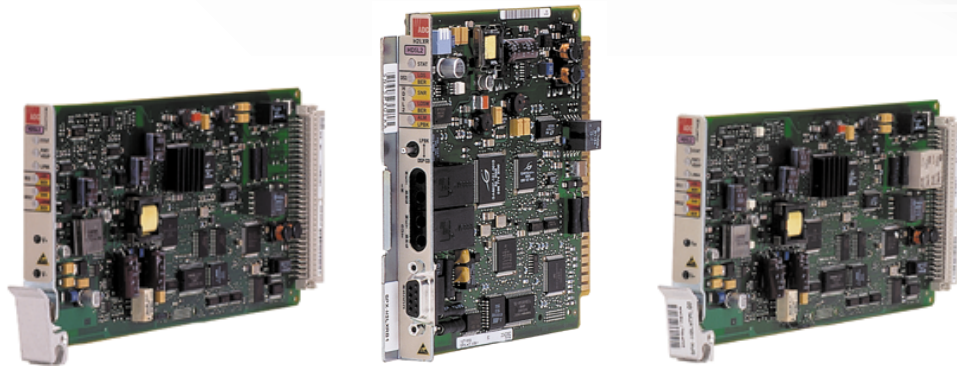


Soneplex® HDSL2

DS-1 Service Modules



ADC's HDSL2 Central Office (H2LXC) and HDSL2 Remote (H2LXR) modules are designed for the Soneplex system. Soneplex offers the highest quality, lowest cost T1 delivery solutions to business customers today. The H2LXC and H2LXR operate together to provide full-duplex DS1 transport over a single unconditioned, non-loaded copper pair up to 12,000 feet.

ADC's Soneplex system is the lowest total cost solution for carriers to grow their T1-based business services. Focused on providing flexible, end-to-end solutions, the Soneplex system saves carriers money on T1-based services over fiber or copper, using HDSL, HDSL2, HDSL4 and traditional T1 repeater or optical DS2 technology, in a single platform. From operations, maintenance, provisioning and high-speed backbone connections to central office space and cabling, the Soneplex system is designed to take costs out of today's T1 delivery approach, adding profit to your bottom line.

Features:

- Transport of a 1.544 Mbps payload signal is supported over full CSA loop lengths
- Modules are spectrally compatible with other copper-based services
- DS1 service is transported over one pair instead of two, significantly extending the life of copper plant
- Central Office module span powers the Remote module and meets all GR-1089 requirements for safety
- Remote module is a space-saving 200-mechanics design
- Remote provisioning, alarm collection, sectionalization and loopback testing are supported from either end of the loop



Overview

HDSL2 is the premier local loop transmission technology for providing symmetrical service to business customers. Significant copper savings are realized by providing high-speed service over a single pair that previously required two pairs. Unlike other single-pair technologies on the market today, HDSL2 supports full carrier serving area (CSA) loop lengths and may be safely deployed in the same binder group with other copper services without the risk of quality degradation due to crosstalk.

Description

Soneplex HDSL2 Central Office and Remote Module

The Soneplex H2LXC operates with the H2LXR to transport 1.544 Mbps of data a full 12,000 feet over a single copper pair. The H2LXC monitors, collects, and reports DS1 and HDSL2 performance information to the Shelf Controller Unit (SCU) which directly interfaces with an operation support system (OSS) for enhanced network management, circuit visibility, and system control.

With HDSL2, extending the life of the copper plant and reducing the requirements of burying new cable provide immediate benefits for service providers. Carriers can meet the demand of double-digit T1 service line growth by maximizing facility resources and becoming more efficient in service deployment.

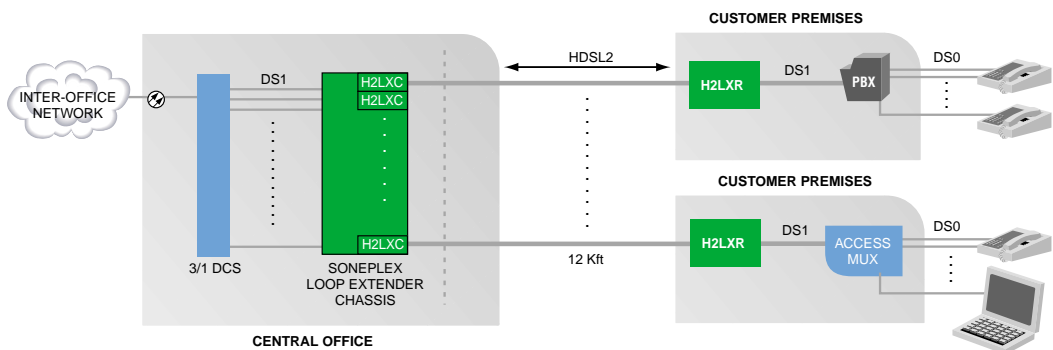
Soneplex HDSL2 Central Office Protection Module and Remote Protection Module

The protection CO module (version C1P) and protection remote unit (version C1P) provides 1+1 facility protection switching. Loop one is initially the working pair, loop two is the protect pair. Sealing current is provided on the protect pair to maintain its integrity. Switching is initiated by manual, forced or automatic actions. Automatic action can be provisioned by selectable combinations of BER and LOSW (Loss of Sync Word).

Soneplex HDSL2 CO Metallic Loop Qualification (MLQ)

ADC in partnership with Harris also provides both ILECs and CLEC the ability to perform automated metallic loop testing. The HDSL2 MLQ central office module provides test relay's that allow test equipment to perform loop qualification prior to circuit turn-up, allowing the operator to determine the quality of the loop before sending someone out to the field for HDSL2 circuit turn-up.

Applications



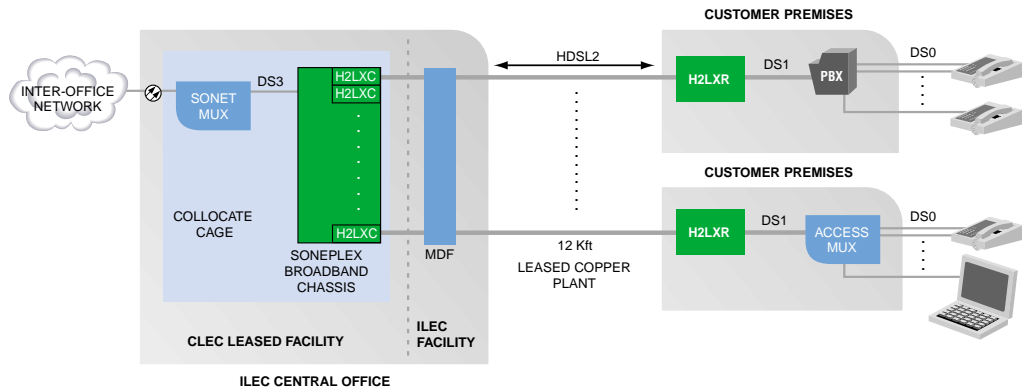
HDSL2 Served From ILEC Facility



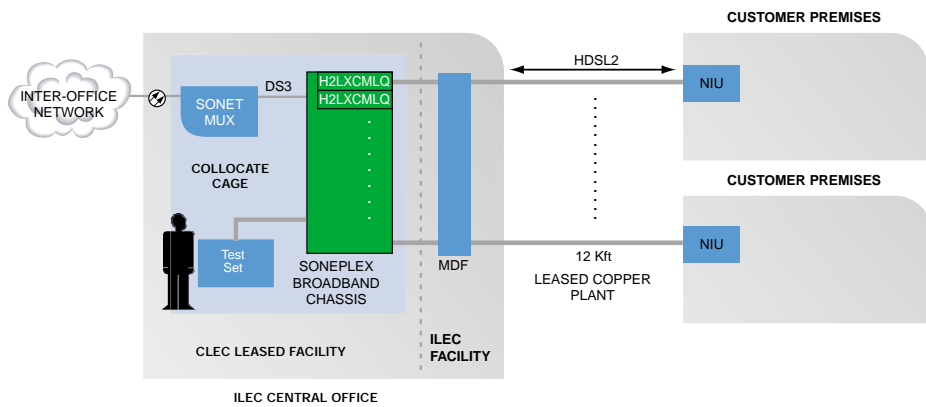
Applications

Soneplex HDSL2 Modules

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HDSL2 Served From Collocate Cage Within ILEC Central Office



HDSL2 Metallic Loop Qualification

H2LXC (CO and CO Protection Modules)

- Weight:** .56 lbs. (.025 kg)
- Operating Temperature:** -40°F to 149°F (-40°C to 65°C)
- Operating Humidity:** 5% to 95%, non-condensing
- DS1 Line Rate/Code:** 1.544 Mbps ±200 bps / AMI or B8ZS
- DS1 Frame Formats:** SF, ESF, SLC96 and unframed
- HDSL2 Loop Rate:** 1.552 Mbps full duplex transmission over one loop
- HDSL2 Loop Coding:** Overlapped PAM Transmission with Interlocking Spectra (OPTIS), ANSI Standard
- HDSL2 Loop Characteristics:** Single non-loaded copper pair, up to 12 kft on 24 AWG or 9 kft on 26 AWG including bridge taps and mixed gauge cable
- Loop Power:** -130 VDC
- System Compatibility:** 28 modules in the Soneplex Loop Extender or Broadband chassis
- Protection Switching:** 1+1 using two loops (Loop 1 working, Loop 2 protect); manual, forced, automatic(BER or LOSW option) activation; 10 mA protect pair sealing current

H2LXR (Remote and Remote Protection Modules)

Weight:	.48 lbs. (.22 kg)
Operating Temperature:	-40°F to 149°F (-40°C to 65°C)
Operating Humidity:	5% to 95% (non-condensing)
DS1 Line Rate/Code:	1.544 Mbps \pm 200 bps / AMI or B8ZS
DS1 Frame Formats:	SF, ESF, SLC96 and unframed
HDSL2 Loop Rate:	1.552 Mbps full duplex transmission over one loop
HDSL2 Loop Coding:	Overlapped PAM Transmission with Interlocking Spectra (OPTIS), ANSI Standard
HDSL2 Loop Characteristics:	Single non-loaded copper pair, up to 12 kft on 24 AWG or 9 kft on 26 AWG including bridge taps and mixed gauge cable
Loop Power:	-130 VDC

H2LXC-MLQ

Weight:	.56 lbs. (.25 kg)
Operating Temperature:	-40°F to 149°F (-40°C to 65°C)
Operating Humidity:	5% to 95%, non-condensing
DS1 Line Rate/Code:	1.544 Mbps \pm 200 bps / AMI or B8ZS
DS1 Frame Formats:	SF, ESF, SLC96 and unframed
HDSL2 Loop Rate:	1.552 Mbps full duplex transmission over one loop
HDSL2 Loop Coding:	Overlapped PAM Transmission with Interlocking Spectra (OPTIS), ANSI Standard
HDSL2 Loop Characteristics:	Single non-loaded copper pair, up to 12 kft on 24 AWG or 9 kft on 26 AWG including bridge taps and mixed gauge cable
Loop Power:	-130 VDC
System Compatibility:	28 modules in the Broadband MLQ chassis SPX - FRM0A4-MLQ

Ordering Information

Description	Catalog Number
Soneplex HDSL2 Central Office Module	SPX-H2LX-CC1
Soneplex HDSL2 Central Office Protection Module	SPX-H2LX-CC1P
Soneplex HDSL2 Remote Module	SPX-H2LX-RC1
Soneplex HDSL2 Remote Protection Module	SPX-H2LX-RC1P
Soneplex HDSL2 Central Office Metallic Loop Qualification (MLQ) Module	SPX-H2LXC-MLQ2



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