# DOCSIS 3.0 Protocol Analyzer

**TraceSpan™**
Communications

# D-CABLE Xpert™

*Passive Multi-Layer DOCSIS 3.0 Analyzer*

# D-CABLE Xpert™ Overview

**The D-CABLE Xpert multi-layer real-time analyzer is a unique protocol analyzer for DOCSIS 3.0 products. D-CABLE Xpert is a modular innovative tool designed for R&D, laboratory and field application engineers engaged in the development, testing, performance analysis and deployment of DOCSIS standard-compliant solutions. Cutting significant time from DOCSIS development, deployment, debugging, and interoperability testing, D-CABLE Xpert accelerates time to market and return on investment.**

The innovative D-CABLE Xpert analyzer verifies the interoperability of DOCSIS products offered by different vendors, and indicates compliance of any combination of DOCSIS and Cable Modems to the DOCSIS standard. D-CABLE Xpert is a powerful tool for CATV operators / MSOs, equipment manufacturers and chipset developers .

Following the overwhelming industry acceptance and tremendous success of the company's field proven systems, the DSL Xpert, VDSL Xpert and GPON Xpert analyzers, the D-CABLE Xpert defines a class by itself by providing a complete and accurate analysis of DOCSIS product performance, standard compliance and interoperability without using any DOCSIS chipset. With its unique multi-layer probing capability, D-CABLE Xpert provides comprehensive DOCSIS 3.0 PHY and MAC layers analysis from multiple downstream and upstream bonded channels up to 16x4, simultaneously. In addition, the system allows a full view and analysis of the Upper Layers, such as Ethernet, IP (including IPv6) and TCP with the ability to export the data for further analysis. D-CABLE Xpert simultaneously presents downstream and upstream data of multiple bonded channels and the connection between the data transmitted by the CMTS and CMs. A user-friendly software-based analyzer controlled by a PC, D-CABLE Xpert has a feature-rich and intuitive GUI that presents multi-layer information in convenient displays, graphs and tables.

As the only developer of xDSL passive protocol analyzers, TraceSpan gained worldwide recognition as an industry leader whose products are sought after and used by all major Broadband Access Providers, equipment manufacturers and chipset vendors.
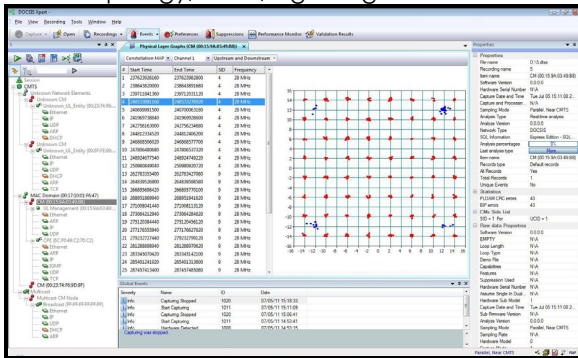
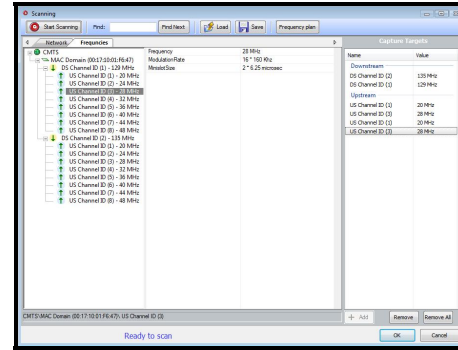## Flexible Configuration Options
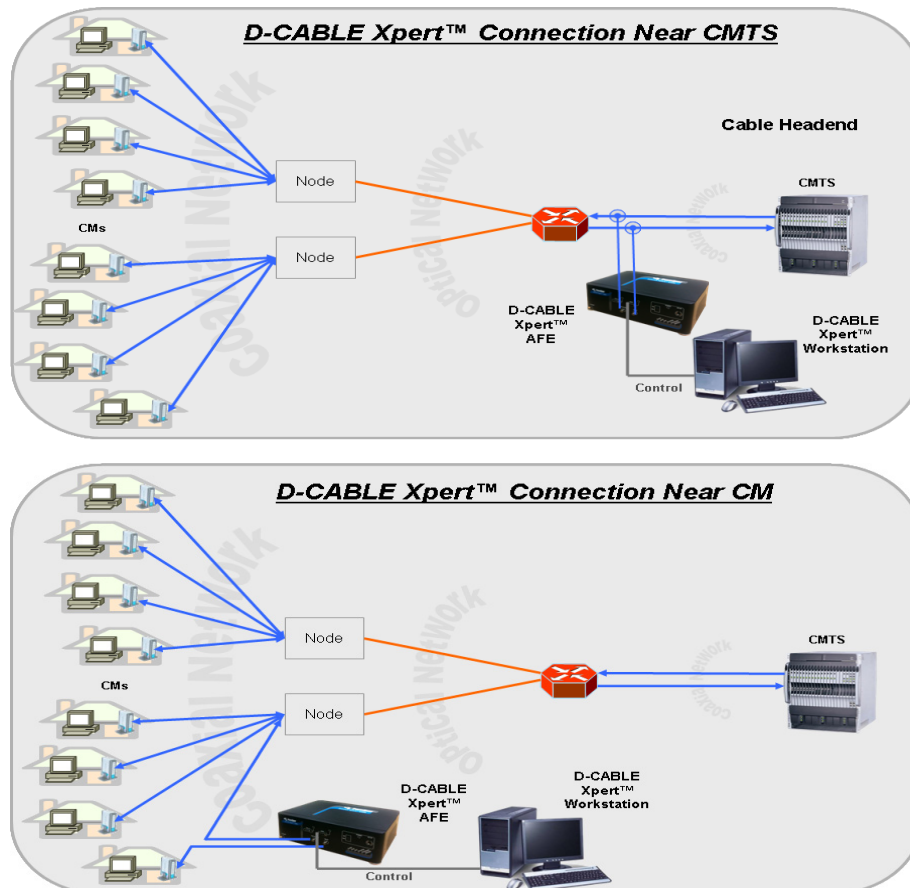
# D-CABLE Xpert™ User-Friendly GUI
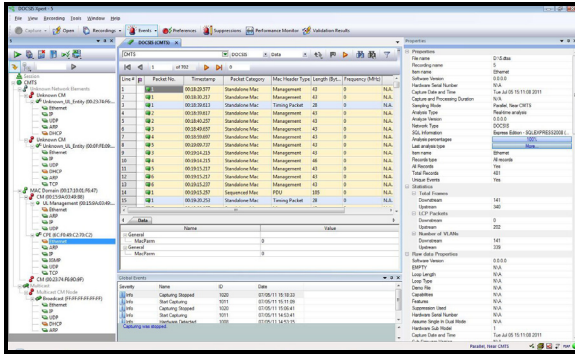


**Information View**
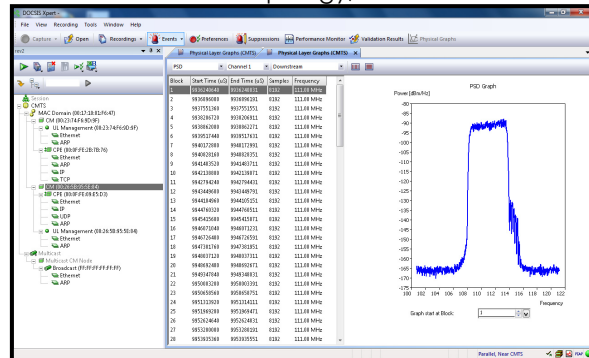Topology, Data, Signaling and Events



**Scanning View**
Network Topology, attributes



**Physical Layer Analysis View**
Constellation Map



**Physical Layer Analysis View**
Power Spectral Density

## Main Applications

- Complete testing of DOCSIS 3.0 versions (Support for North America and Euro-DOCSIS)
- Comprehensive Performance and Compliance Analyzer
- Extensive Data Capturing Solution
- Real-Time multi channels and Multi-Layer Probing
- Independent Testing Tool - No DOCSIS chipset

- Physical Layer Analysis Graphs such as Power Spectral Density and constellation Map graphs
- Command Line Interface for Full Automatic Testing
- Unbiased Decision Making Tool for Managers
- User-friendly intuitive GUI
- Quick Return On Investment

## Features and Benefits

| Features | Benefits |
|----------|----------|
| Verification | Provides standard-compliance and performance-compliance verification |
| DOCSIS Analysis | Offers analysis for the current DOCSIS standard and future standard amendments |
| Simultaneous Data Extraction | Simultaneously displays upstream and downstream data and the link between the CMTS and cable modems based on multi bonded channels. |
| Alerts | Provides warnings regarding incompleteness of measurements or incompatibility within the DOCSIS Standards and upper layers |
| Comprehensive Reporting | Displays range of graphs, tables and reports relating to performance and errors. The Report Wizard allows automatic generation of exportable reports |
| Automatic Testing | Includes Command Line Interface (CLI), allowing integration with existing automated testing environment |
| Multi-layer Probing (Sniffing) | Tracks and displays events through the Physical and the Upper Layers, including signal, bit-pattern, sequence length, message structure and timing |
| Independent Testing | Detects and verifies problems without the need to rely on any DOCSIS chipset |

## Specifications

| | |
|---|---|
| DOCSIS Versions | North America DOCSIS and EuroDOCSIS 3.0, 2.0, 1.1 and 1.0 using TDMA, A-TDMA and S-CDMA modes. |
| Dimensions (Optical Front End) | Height: 121mm (4.76 in.)<br>Width: 360mm (14.2 in.)<br>Depth: 265mm (10.43 in.) |
| Weight | 4kg (8.8 lb.) |
| Power Requirements | Input Voltage:<br>100 to 240 VAC, 50/60 Hz<br>Power: 100W |
| Dynamic Range | -15dBmv to +62dBmv |
| Safety Standard | CE |
| Certifications | FCC part 15 |
| Operating Environment | Temperature: 0°- 40°C (32°-104°F)<br>Humidity: 10% to 90% non-condensing |

## Contact Information

E-mail: info@tracespan.com
Web: www.tracespan.com