

Austin Labs Testing And Training



CXL Protocol

4 Day Course Outline

CXL Introduction

Three Protocols and Device Types

CXL Versions

CXL Architecture

CXL.io - the Configuration and
Management Protocol

What to Expect

Never pay extra to look at trace captures

Insight into the standard based on our real
world testing experience

Instruction from experts with over 20 years
of experience in storage and networking

**Investigate the inner workings of the CXL protocol, the newest protocol to
redefine datacenters.**

Get detailed answers to your questions:

- What are the different communication layers in CXL?
- Why do these layers differ for each protocol?
- How do I get in to CXL mode as a PCIe device?
- How does encryption work on the CXL link?

Learn these things and more in Austin Labs comprehensive CXL 2.0 Protocol training. Based on the latest CXL specifications as well as real world test findings from Austin Labs Testing Services, our CXL protocol training covers the protocol, as well as a guided walk-through of best practices for analyzer configuration and installation.

Our classes are designed for engineering-minded individuals such as test engineers, design engineers, technical/product field support, and storage/system administrators who address low-level protocol issues.

**Lab time included in every class.
Outlines are fully customizable for private classes!**

1-800-909-7211
teledynelecroy.com

For more information
please contact:
Austin_Labs_Training@Teledyne.com

Austin Labs is a leading provider of testing and training services. We focus on server, storage, and networking interfaces and protocols. Our engineers and trainers are experts in SCSI, RAID, iSCSI, SATA, SAS, FC, FCoE, PCIe, NVMe, USB, and networking protocols.

Our engineers helped develop some of the industry's key technologies and continue to have a vigorous passion for improving products and sharing their knowledge. This experience and enthusiasm translates into the highest quality testing and training services possible.

CXL Introduction

An introduction to CXL as a protocol as well as the specifications and organization that govern it. Also deals with the marketing aspects that drive PCIe in the current product landscape by addressing the following questions:

- What is CXL?
- Why is it needed?
- Who is part of the governing organization for CXL?
- What are the relevant specifications for CXL and where can they be found?

Three Protocols and Device Types

A brief introduction to the three protocols and how layering differs among them. Then a discussion of the technology differentiators within the three different device types. The following topics are discussed:

- Debugging CXL links
- Alternate Protocol negotiation with PCIe
- The design differences between Type 1, 2 and 3 devices
- The basics of the three protocols
- Benefits of CXL 2.0

CXL Versions

A discussion of the current version of the CXL spec (2.0), along with a brief overview of 3.0. Covered topics will include the feature differences between the versions and the thought process behind new version delivery.

- Initial design philosophy of CXL
- Version 1.0 to 1.1 update changes
- Version 2.0 Features

CXL Architecture

An in-depth discussion of the architecture of CXL. Subjects here will include:

- Use Models
- Version-specific feature sets
- Version compatibility
- Security
- Cache biasing

CXL.io - the Configuration and Management Protocol

A deep dive into the CXL.io protocol. Protocol design and interactions with the PCIe stack are covered, plus examination of CXL traces as well.

CXL.mem - the Memory Interface Protocol

An in-depth lesson in the design of the memory protocol and its use on different device classes. Discussion of each transfer type and the implications of each device type.

CXL.cache - the Cache Interface Protocol

An in-depth lesson concerning the cache protocol and its use cases. Discussion of transfer types and the implications of cache biasing for each device type.

CXL Analyzer Operation and Configuration

A guided walk-through of the best practices for analyzer configuration and insertion into the test environment.

- How to setup for capture
- What to capture
- How to effectively trigger for capture

Austin Labs Testing Services

We test customers' products quickly and thoroughly in an enterprise environment to ensure that products will survive the rigorous demands of mission-critical applications. Customers come to us for our fast turnaround, superior analysis, excellent results, competitive prices, and, of course, 100% confidentiality. We work hand-in-hand with our customers' engineers to provide solutions, not just information. We provide not only the results of our tests, but also the debug, analysis, and regression testing that is needed to ensure that the products we test perform as expected—not for our customers, but for your customers.

teledynelecroy.com/protocolanalyzer/austin-labs