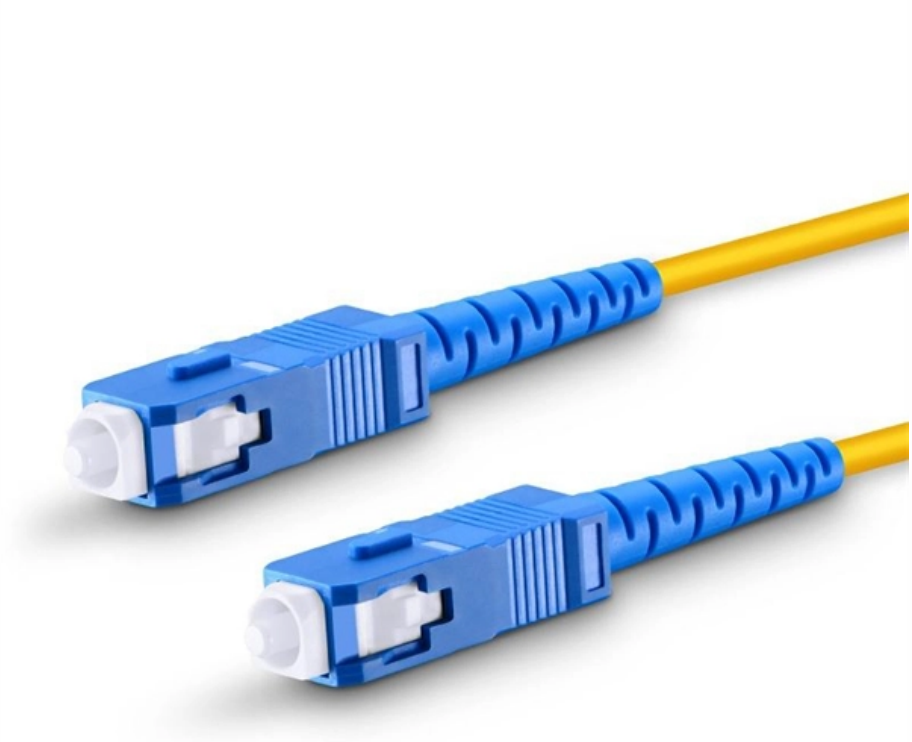
FRINDEL OPTICS

Optical modules TP4 and TP3



Overview

• Physical interface points TP1, TP2, TP3 & TP4 are identified for future reference and further defined below. The above block diagram shows relevant elements and interfaces for a link between two PMAs. This document describes the evaluation criteria and test procedures for optical data links that are developed to read out the detector front-end electronics in ATLAS and CMS for the LHC upgrade, the Super LHC or SLHC. These two SerDes's need to communicate with each other and the TP1 and TP4 demarcation points are defined to enable this.

Optical modules TP4 and TP3

802.3ck Chip-to-Module TP1a/TP4 Compliance Test Measurement Methodology

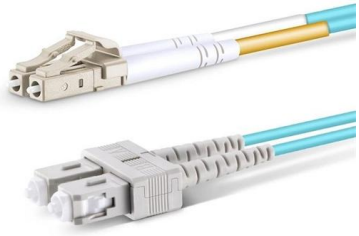
802.3ck Chip-to-Module TP1a/TP4 Compliance Test Measurement Methodology Mike Li, Masashi Shimanouchi, Hsinho Wu, Intel Jane Lim, Cisco Richard Mellitz, Samtec Phil Sun, Credo Mike

Contact Us

Optical data link evaluation criteria and test procedures

Eye diagrams at TP1, TP2, TP3 and TP4 and the eye mask tests at TP1, TP2 and TP3.

Contact Us



Considerations for test fixture specifications

The TP2/TP3 test fixture (also known in the industry as Host Compliance Board) is required for measuring the transmitter specifications at TP2 and the receiver return loss at TP3. The cable

Contact Us

TP2 and TP3 Parameter Measurement Test Readiness

TP2 and TP3 Parameter Measurement Test Readiness Jonathan King, Sudeep Bhoja, Jeff Rahn, Brian Taylor 10th Oct 2005

Contact Us

TP1 and TP4 testing with compliance boards

"It is expected that in many implementations TP1 and TP4 will be common between 1000BASE-SX (Clause 38), 1000BASE-LX (Clause 38), and 1000BASE-CX"

Contact Us

Improving TDECQ Test Definition

Crosstalk optical source is active and applied at TP3 that passes to TP4 during TDECQ mission mode testing. Optical Module TP1 TP2 PRBS31Q

Contact Us

Multilane MM Optics: Considerations for 802.3ba

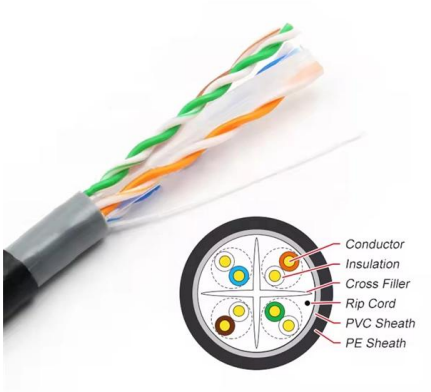
Two physical interfaces, TP1 on the left and TP4 on the right, are shown between the PMD and PMA elements. Here the PMA may be a host ASIC and the PMD may be a fiber optics module. P802.3ba

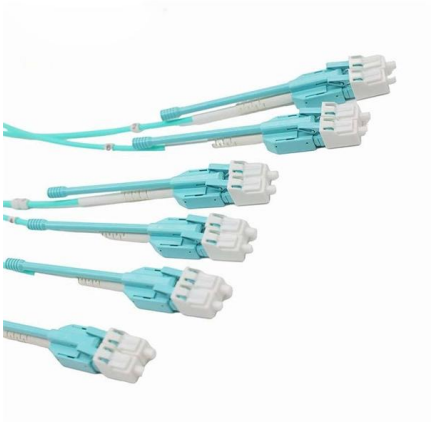
Contact Us

100G SR4 Link Model Update, TDP, Tx Eye Mask & SRS

Record OMA at TP3 Max TDP = OMA - Ref Rx S. Now that the sensitivity, S, of the Ref Rx has been established, the Ref Tx and reference channel is replaced by the worst case Tx operating with the

Contact Us





Microsoft PowerPoint

TP3 is the optical input of the Rx part of the module. TP4 is the differential electrical output of the Rx part of the module. In practice, one does not need two modules to evaluate the Rx part. One can simply

Contact Us

Test Fixture Considerations

802.3cy-TP1-TP4 Link Segment TP1 toTP4 Test points for all link segment measurements. The link segment test fixture, or its equivalent, is required for measuring the link segment specifications in

Contact Us

Optical Transceivers: Evaluation of Commercial Optical

o It helps us to understand the behavior of a receiver with different optical power levels, but it is not the main setup to evaluate the performance of

Contact Us

C2M TP1a/TP4 Methodology

More than one set of module TX FIR settings may be needed to support different host traces. For example, two sets of TX FIR optimized for short and long reference channels respectively.

Contact Us

Optical data link evaluation criteria and test procedures

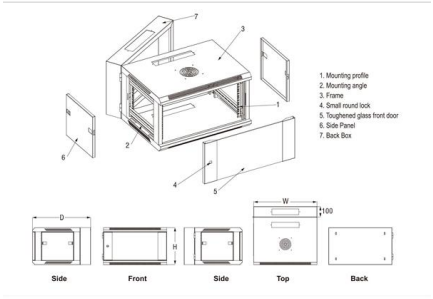
TP3 is at the input to the PIN diode, usually tested at the end of the fiber with the full length in the application. Both TP2 and TP3 are optical signals of the serial bit stream. TP4 is the electrical signal

Contact Us

TP1 and TP4 testing with compliance boards

TP1, TP2, TP3, TP4 in Clause 38 (Gigabit Ethernet) is well known TP1, electrical: host output, module input TP2, module optical output Actually, 2 m after the MDI TP3: module optical input TP4,

Contact Us



400G-FR4-LPO

The module output electrical specifications at TP4 shall be met with any optical input signal that is compliant to this optical specification for stressed input sensitivity (section 9.10, 100G

Contact Us

LPO MSA Specification

The module output electrical specifications at TP4 shall be met with any optical input signal that is compliant to this optical specification for stressed input sensitivity (section 9.10) and input sensitivity

Contact Us

Link Diagnostics in LPO Applications

Link Diagnostics in LPO Applications Abstract: Network equipment comprised of Linear Pluggable Optics (LPO) modules and host ASICs provides a full suite of capabilities for link monitoring and

Contact Us

Compliance points for XLAUI/CAUI with connector

Including sensitivity, eye diagrams and similar with nonlinear electrical-optical converters (PMDs, optical modules) Microwave style de-embedding is not feasible

Contact Us

Optical Transceivers: Evaluation of Commercial Optical

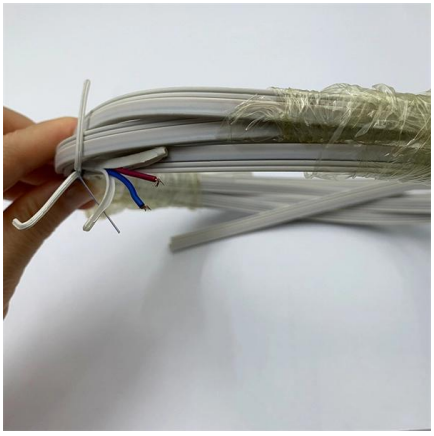
o TP1 is the differential electrical input of the Tx part of the module. o TP2 is the optical output of the Tx part of the module. o TP3 is the optical input of

Contact Us

Architectural Implications of Retimed, Limiting, and Linear Int

The direct attach concept requires definition of TP1 and TP4 in the IEEE as there may not be a TP2 or TP3 present in the link! A combined optical and copper cable AdHoc is desirable to avoid creating

Contact Us



Proposed characteristics for 40GBASE-SR4 & 100GBASE-SR10 TP1 & TP4

TP1, TP2, TP3 and TP4 are traditional labels for interfaces of a fiber optic link. Here the PMAs may be host ICs and the PMDs, fiber optic modules. P802.3ba should fully specify the signals at TP2 and

Contact Us

Linear Drive Pluggable Optics

OIF defines the TP1 and TP4 interface, IEEE defines the optical TP2 and TP3 interface standards. TP2 and TP3 are currently defined for DSP based solutions and not optimized for linear transmission.

Contact Us

Optical data link evaluation criteria and test procedures

TP3 is at the inp ut to the PIN diode, usually tested at the end of the fiber with the full length in the application. Both TP2 and TP3 are optical signals of the serial bit stream. TP4 is the electrical signal

Contact Us

C2M Methodology and Limits at TP1a, TP4, and TP5

Module output measurements TP4 measured directly TP5 measured with addition of addition of CR (C0, C1) caps + ~244 mm trace Module TX FIR is set for a nominal setting such that both TP4 and TP5

Contact Us

802.3ba copper cable assembly baseline proposal

Cable Assembly Characteristics TP1/TP4 The twinaxial copper cable assembly consists of shielded signal pairs utilized for differential signaling at 25 Gb/s per differential signal pair.

Contact Us

Test Specification for 800 Gbit/s PAM4 Optical Module at 100 Gbit/s

Connect TP2 and TP3 of the optical module with a short optical fiber. The tested signal at TP4 is transmitted to the oscilloscope and the reference CRU with a microwave pike-off.

Contact Us

40GBASE-SR4 & 100GBASE-SR10 PMD Service Interface Update

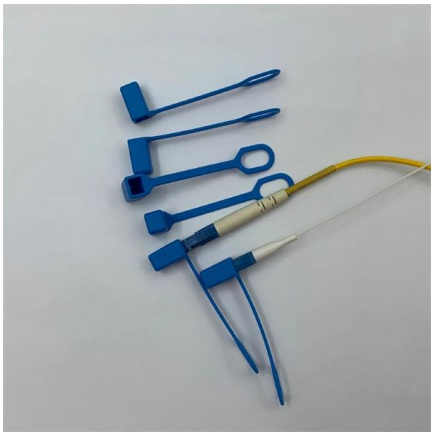
TP1 TP2 TP3 TP4 TP1 Optical Module TP2 MDI Fiber Cable Plant MDI Optical Module TP3 4 lane PMD Service Interface PMA (4:4) FEC (Optional)

Contact Us

Compliance points for XLAUI/CAUI with connector

Background 1/2 TP1, TP2, TP3, TP4 in Clause 38 (Gigabit Ethernet) is well known TP1, electrical: host output, module input TP2, module optical output Actually, 2 m after the MDI TP3: module optical

Contact Us



100G SR4 Link Model Update & TDP

For cases, as shown above in Figure 1, where retimers are embedded in the optical module, the PMD service interface is not exposed. TP1 and TP4 remain as points on the PMD service interface and,

Contact Us

Contact Us

For datasheets, pricing, or custom fiber access solutions, please visit: https://frindel.es