

# Lab to fab. Fab to live.

Take 800G and 1.6T solutions from design to market

## BA-4000-L2 – L1 BER tester and L2 traffic analyzer

The BA-4000-L2 is a combined layer 1 BER tester and Ethernet (L2) traffic analyzer for **800G DR4/FR4/LR4 and 1.6T optical engines**. It addresses the comprehensive testing requirements of 1.6T optical engines (100G electrical, 200G optical per lane), 800G transceivers (200G per lane), as well as DCO transceivers. The solution includes FEC testing (including FEC statistics), burst error detection and BER calculated from host to end for the industry's most reliable measure of error when testing optical transceivers, including LPO devices.



### L2 framed traffic analysis

Delivers a real system view for L1 devices under test (DUT) from L2 framed traffic

### Detection of burst errors

Looks beyond the average level of bit error rate

### Powerful equalizer and channel simulator

Includes CTLE, 32 taps FFE and DFE. Ideal for LPO transceivers

### Link training

Provides adjustable Tx and FFE weight to enable link training

### Real-time FEC analysis

Testing of pre/post FEC BER, symbol error distribution and FEC margin

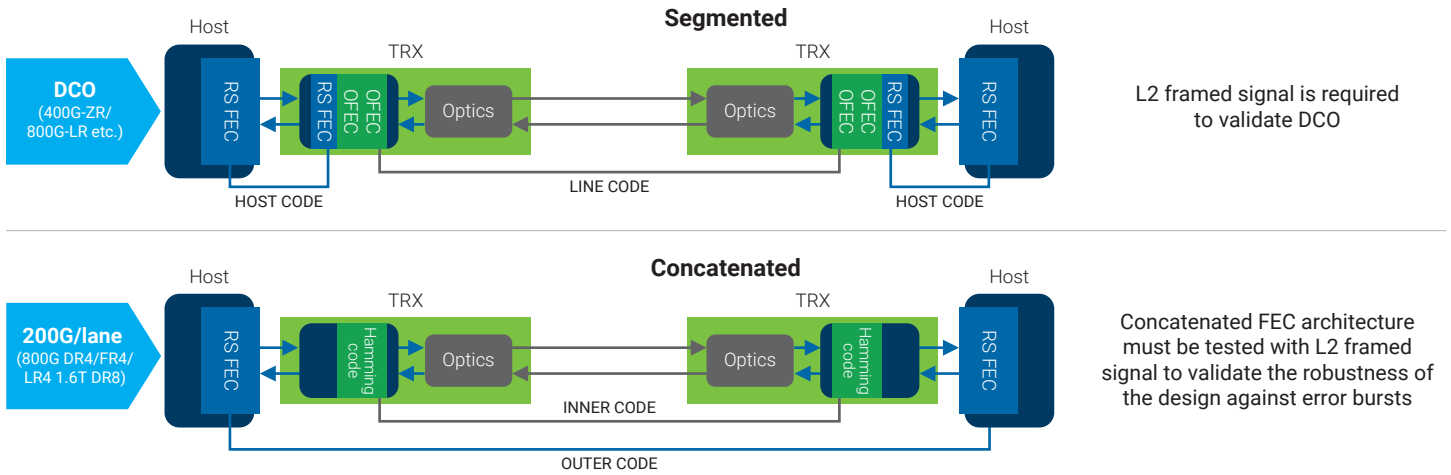
### True FLR

Real behavior of frame loss ratio (FLR)

**EXFO**

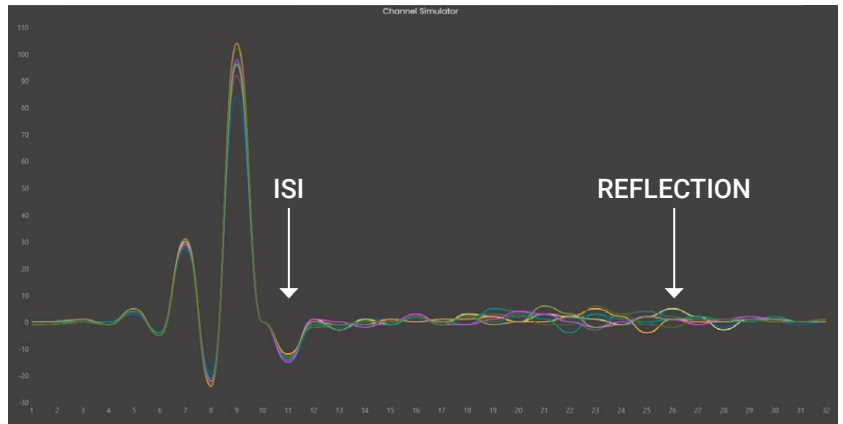
## Segmented FEC (DCO) and concatenated FEC (200G/lanes) architectures require L2 framed traffic

In the latest generation of optics and transceivers, the **forward error correction (FEC) encoding and decoding function is moving from the host side to within the optical transceiver**. With this evolution in functionality, **transceivers are no longer agnostic electrical-to-optical converters and therefore FEC testing is required for applicable transceivers**. The BA-4000-L2 delivers a layer 2 framed signal to validate DCO and 200G per lane optical transceivers.



## Powerful equalizer and channel simulator is ideal for LPO testing

With LPO transceivers, no DSP is present to precondition or equalize the electrical signal, as is done in retimed optics. Therefore, **any change in signal integrity on the host side is reflected onto the optical side and the more times the signal is handed off, the more potential for introduction of bit errors**. Traditional transceiver testing techniques cannot pick up this signal degradation so new, more powerful testing techniques are required. The BA-4000-L2 detects the presence of reflection, intersymbol interference (ISI) and FEC tail instability which are key performance indicators, capturing the presence of errors.



EXFO's  
BA-4000-L2

Includes up to  
32 taps FFE+DFE

Detects ISI and  
optimizes

Detects far-end  
reflection

Get more information or request a quote:  
[iSales.global@EXFO.com](mailto:iSales.global@EXFO.com)

