

# MULTI-TERABIT TEST SOLUTION

## AT A GLANCE

- Multi-Terabit testing capability for multi-format, flexi-grid and flexi-rate optical transport systems up to 54 Tb/s
- Highly scalable modular design adaptable for customer specific requirements
- Up to 272 Gb/s per carrier (in case of 16-QAM)
- Up to 200 DWDM carriers
- Narrow line width lasers in a 19" high density laser rack
- Up to 16 synchronized electrical data streams
- 16 MBit waveform memory
- Easy to use GUI-based control
- Turn-key custom systems



34 GSa/s  
ARBITRARY WAVEFORM  
GENERATOR



OPTICAL  
MULTI-FORMAT  
TRANSMITTER



CoBrite<sup>MX</sup>  
Highly Scalable  
Multi Carrier  
Laser Platform



PMUX  
Polarization  
Maintaining  
Multiplexer

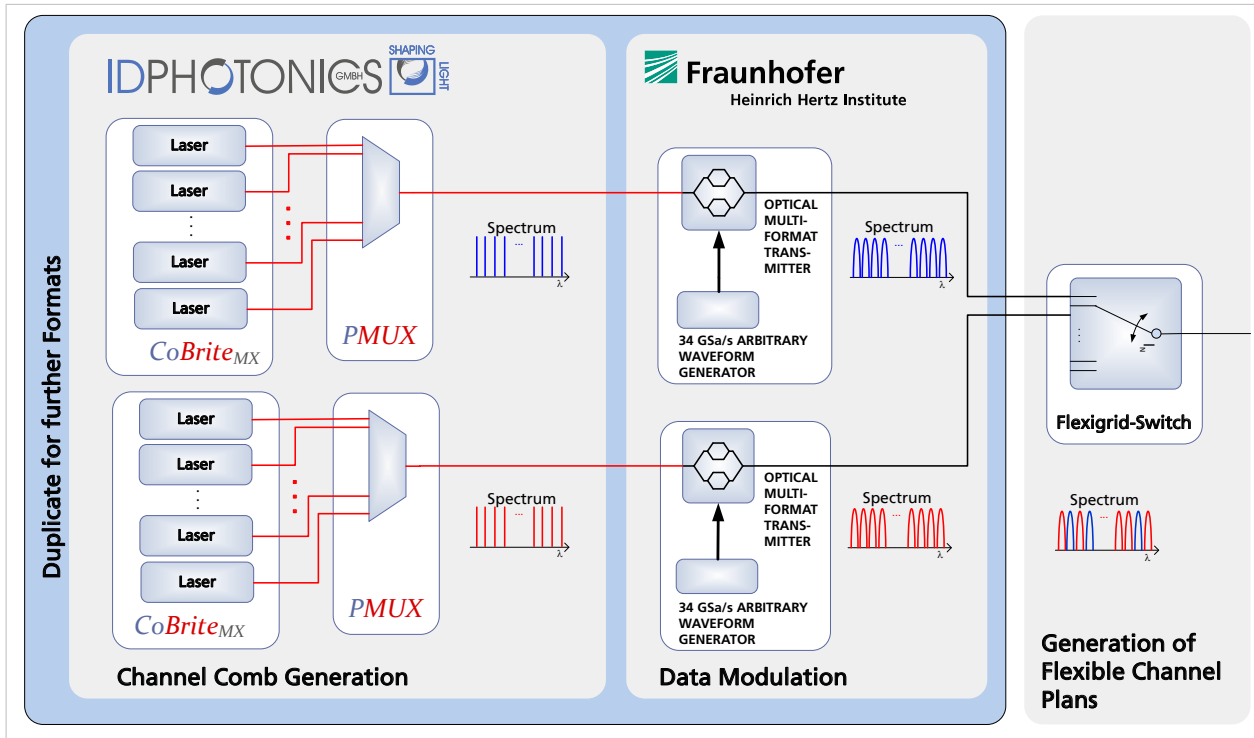
## Solution Building Blocks

- CoBrite<sup>MX</sup> Highly scalable multi carrier laser platform
- PMUX Polarization maintaining multiplexer
- OPTICAL MULTI-FORMAT TRANSMITTER with software-based predistortion
- 34 GSa/s ARBITRARY WAVEFORM GENERATOR
- Graphical user interface (GUI)
- Digital signal processing (DSP) library

Powered by



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Application example:  
Generation of flexible channel plans with multiple modulation formats

## Key Specifications

### CoBrite<sub>MX</sub>

Spectral line width	100 kHz
Carrier frequencies C-band / L-band	191.2 - 196.25 THz / 186.3 - 191.15 THz
Output power	up to +16 dBm
Frequency accuracy	-1.5 to +1.5 GHz
Side mode suppression ratio	up to 55 dB

### PMUX

Insertion loss	< 6 dB
Uniformity across band	< 1.5 dB
3dB bandwidth in channel	0.6 nm
Channel configuration	customer specified
Polarization extinction ratio	20 dB typical

### OPTICAL MULTI-FORMAT TRANSMITTER

Number of RF input channels	up to 4
Modulation formats	OOK, DPSK, QPSK, 16-QAM, etc.
Bitrate	up to 272 Gb/s (in case of 16-QAM)
Software	digital signal processing library

### 34 Gsa/s ARBITRARY WAVEFORM GENERATOR

Sampling rate	up to 34 Gsa/s
Number of synch. channels	up to 16
Memory	16 Mbit per channel
Bandwidth / Resolution	typ. 18 GHz / 6 bit

## The Fraunhofer HHI

One of the prime research and development foci of the Fraunhofer Heinrich Hertz Institute lies in photonic networks, components and systems and their application in fields such as digital media.

## Contact

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