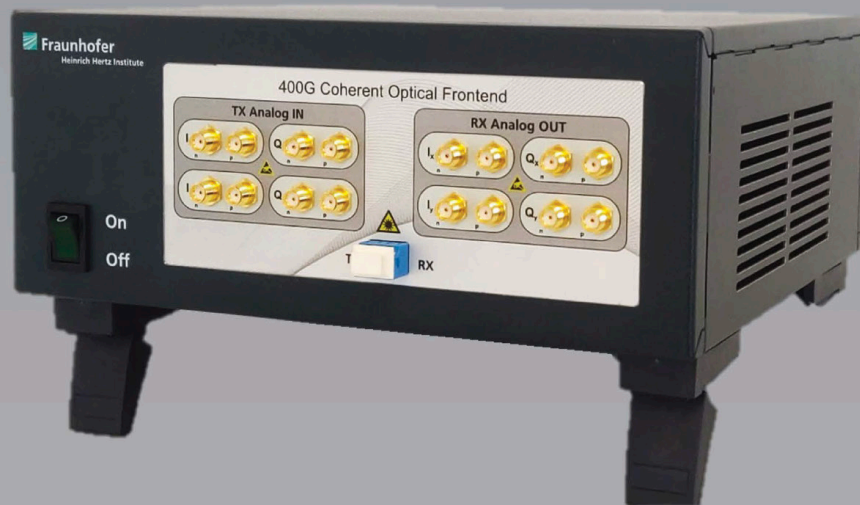


400G COHERENT OPTICAL TRANSCEIVER FRONTEND



AT A GLANCE

- Compact transceiver frontend for up to 69 Gb/s operation
- Transmitter includes linear driver amplifiers and DP-IQ modulator
- Receiver includes polarization-diverse 90° hybrid, balanced photodiodes and linear TIAs

Features

- Compact stand-alone coherent optical transceiver frontend
- Based on a coherent Tx and Rx Optical Sub-Assembly (TOSA)
- Tx and LO laser integrated
- Graphical user interface (GUI) for direct user control
- GbE connection for external remote control
- Multiple transceivers available in a single chassis

Applications

- High-speed optical QAM signal generation and detection
- Test of coherent optical transmission systems
- Test of multi-core / multi-mode systems
- Optical front-end for High-Speed DSP Platform allowing real-time DSP prototyping

Target Specifications

Specification	Value
Wavelength range (nm)	1528.77 to 1566.72
Tx output power (dBm)	0
Symbol rate (Gbaud)	28 to 69
Modulation formats (typical)	QPSK, 8QAM, 16QAM
Internal local oscillator laser	Yes (shared for Tx/Rx), fully tuneable
Laser intrinsic linewidth (kHz)	< 300

Application Examples

RECEIVER SIDE

TRANSMITTER SIDE



Robert Emmerich
Photonic Networks and Systems

Phone +49 30 31002-512 | -414
 info-pn@hhi.fraunhofer.de

Fraunhofer Heinrich Hertz Institute
 Einsteinufer 37, 10587 Berlin
 Germany

www.hhi.fraunhofer.de/pn

Application examples:

- Offline system using arbitrary waveform generator and oscilloscope
- Real-time system using DAC and ADC plugin cards from High-Speed DSP Platform



IT - ISO 9001-2008