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70 GHz COHERENT RECEIVER FRONTEND

AT A GLANCE

- 70 GHz receiver in a 19"-chassis with optical extender heads
- Coherent detection of high-speed optical QPSK and m-QAM signals

Features

- Coherent optical receiver with up to 70 GHz bandwidth in a 19''-chassis
- Four optical extender heads for direct connection to high-bandwidth oscilloscopes
- Simultaneous detection of I/Q and both polarizations
- Optical inputs for local oscillator and data signal
- C+L-band operating wavelength range

Applications

- Test and measurement
- Development of multi-terabit transmission systems and components
- Coherent detection of high-speed data signals with various modulation formats (QPSK, m-QAM)
- Coherent receiver frontend for single-mode optical data transmission
- O/E converter for detection of arbitrary optical waveforms
- High-resolution optical spectrum measurements

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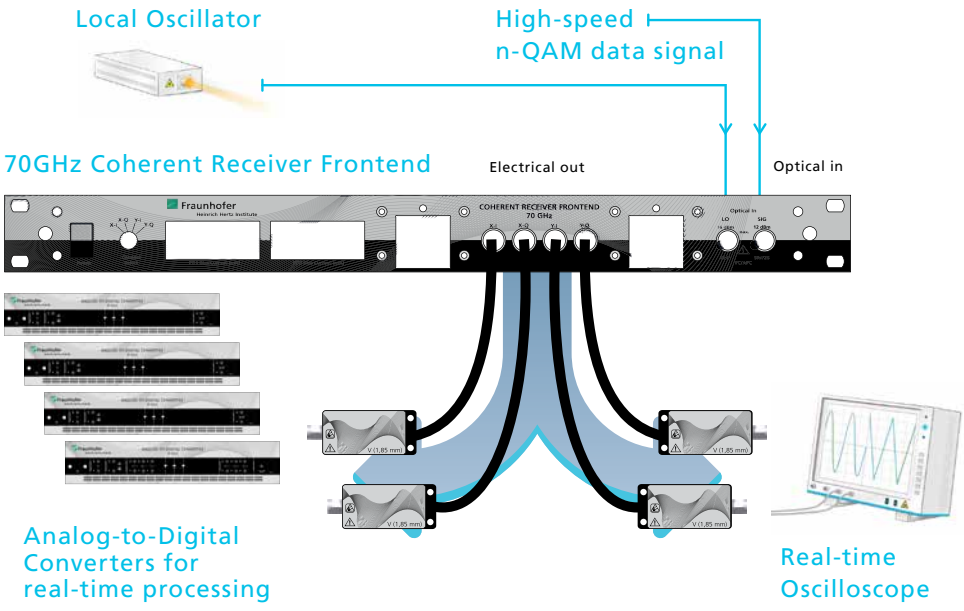
Preliminary Specifications

Operating wavelength range (nm)	1520 - 1620 (C+L-band)
3dB cut-off frequency (GHz)	typical 70
Skew (ps) intra-channel inter-channel	 typical 2 typical 10
Optical input power (dBm) LO Signal	 max +16 dBm max +12 dBm
Length of extender cable	customizable up to 2 m
Optical connectors	FC/LC/E2000-APC
HF-connectors	male/female V ®
Dimensions (mm)	19'', 1 RU height (490 x 460 x 45)



Principal setup of the 70 GHz coherent receiver frontend

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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