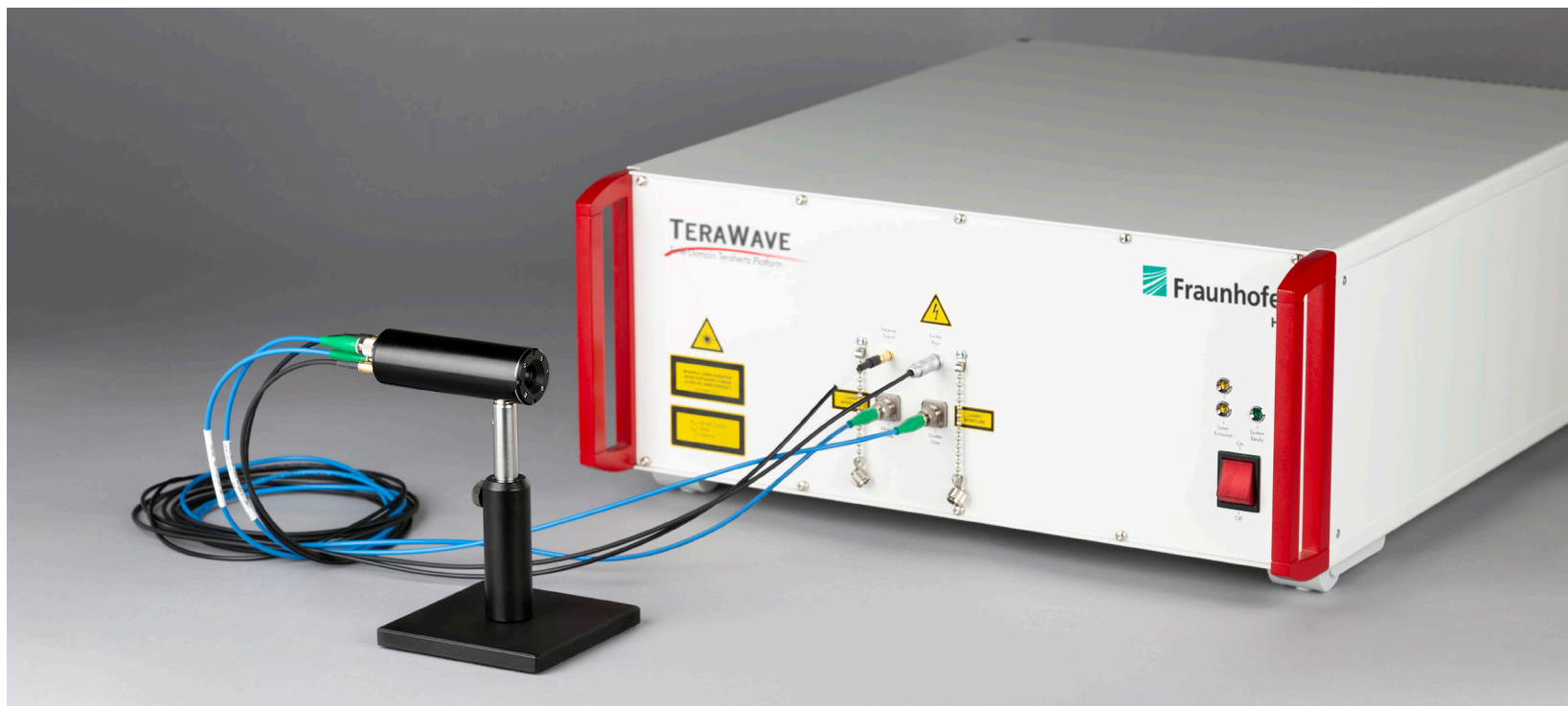


TERAWAVE TIME-DOMAIN SPECTROMETER



AT A GLANCE

All-fiber terahertz spectrometer operating at 1.5 μm optical wavelength

Features

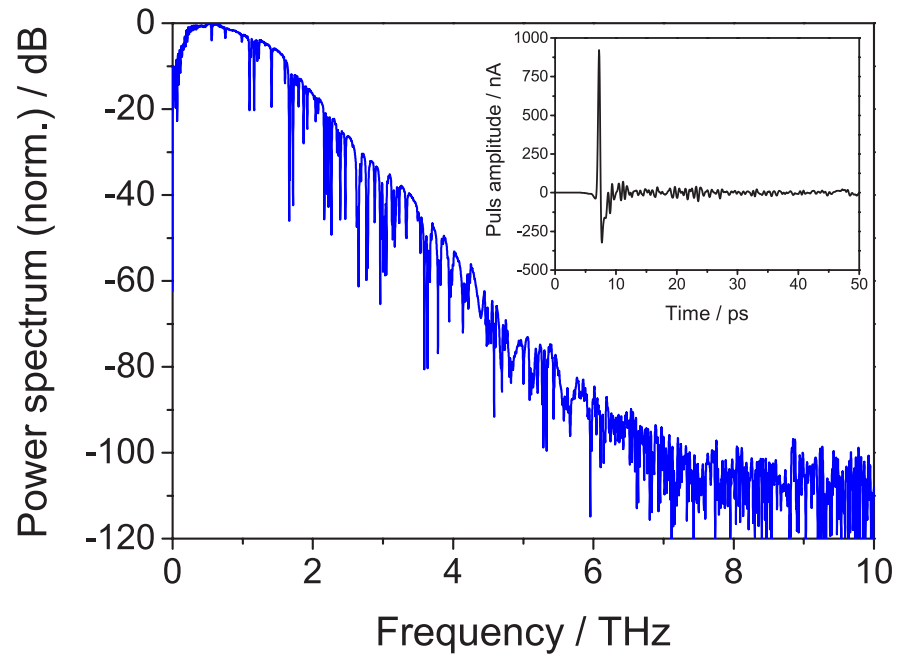
- Turnkey operation
- Fully fiber-coupled
- Custom fiber length
- Realtime data acquisition mode
- High power extension

Applications

- High-bandwidth terahertz spectroscopy
- Industrial process control
- Non-contact coating film thickness measurement

Technical background

Mobile THz systems for field operation: Robust and agile THz systems are the foundation for transferring THz technologies from research facilities to industrial environments. Our Time-Domain Spectrometer (TDS) is based on mature telecom components, all operating at an optical wavelength of 1.5 μm . Utilizing HHI's fiber-coupled emitter and detector modules, our THz system provides a unique combination of high flexibility and high performance. This allows us to adapt our THz system to your THz application.



Frequency spectrum recorded with HHI's THz modules. The inset shows the trace of the electrical THz pulse. The operating conditions are given in the specifications.

Specifications

- Average optical power 2 × 20 mW
- Optical pulse duration 100 fs
- Spectral range 0.1 - 6.5 THz
- Dynamic range (peak) > 95 dB
- Frequency resolution 1 GHz
- Acquisition rate up to 100 traces/s
- Size 48 × 40 × 20 cm³
- Weight 16 kg

Dr. rer. nat. Robert Kohlhaas
Photonic Components

Phone +49 30 31002 407
 robert.kohlhaas@hhi.fraunhofer.de

Fraunhofer Heinrich Hertz Institute
 Einsteinufer 37, 10587 Berlin
 Germany

www.hhi.fraunhofer.de/pc