



Fraunhofer

IIS

FRAUNHOFER INSTITUTE FOR
INTEGRATED CIRCUITS IIS

**DIGITAL TRANSCEIVER FOR
GIGABIT WIRELESS FRONT-
AND BACKHAULING**



ENHANCING CAPACITY: UP TO 10 GBITS PER SECOND

Providing connectivity anywhere and anytime with an ever-increasing demand for data capacity is one of the big challenges for future 5G networks, driven by major trends towards network densification and centralized processing.

In order to meet the demand for high data rates, Fraunhofer IIS has developed a universal digital transceiver solution for wideband fixed radio systems which can be used in mm-wave gigabit wireless front- and backhaul links (e.g., in E-band).

Features of the digital transceiver design:

- Wideband digital transceiver architecture (2 GHz bandwidth)
- RF impairment compensation and synchronization
- Wideband high spectral efficiency demodulation/modulation
- High-throughput FEC
- High data rate links (10 Gb Ethernet)
- Deployable for mm-wave gigabit wireless front- and backhaul

Fraunhofer IIS – experience and expertise:

- System analysis and design
- High-speed digital design and implementation
- Real-time rapid prototyping on high-speed digital platforms (FPGA)

Fraunhofer Institute for Integrated Circuits IIS

Director
Prof. Dr.-Ing. Albert Heuberger

Am Wolfsmantel 33
91058 Erlangen, Germany
www.iis.fraunhofer.de

For further information please contact:
Bernhard Niemann
Phone +49 9131 776-6301
Fax +49 9131 776-6399
communicationsystems@iis.fraunhofer.de