IZT specializes in the most advanced digital signal processing and field programmable gate array (FPGA) designs in combination with high frequency and microwave technology. The product portfolio includes equipment for signal generation, receivers for signal monitoring and recording, transmitters for digital broadcast, digital radio systems, and channel simulators. IZT offers powerful platforms and customized solutions for high signal bandwidth and real-time signal processing applications. The product and project business is managed from the principal office located in Erlangen/Germany. IZT distributes its products worldwide together with its international strategic partners. The IZT quality management system is ISO 9001:2008 certified.

Rainer Perthold is co-founder and General Manager of the Innovationszentrum für Telekommunikationstechnik GmbH IZT. Previously, he worked as a research scientist for the Fraunhofer Institute for Integrated Circuits. Mr. Perthold and Fraunhofer Gesellschaft jointly founded IZT in 1997 as a commercial development and manufacturing affiliate. Mr. Perthold studied in Erlangen and London. He has a degree in Electrical Engineering (Dipl.-Ing. Elektrotechnik, 1994) from Erlangen University and holds or shares a number of patents in different fields of communication technology.
RF Receivers and Signal Collection Systems

DIGITAL RECEIVERS
IZT R3000, IZT R3200, IZT R3010, IZT R3410
- Excellent RF performance
- Frequency range 9 kHz – 3 GHz (6 GHz / 18 GHz)
- Real-time bandwidth up to 24 MHz
- Multichannel operation
- Fully remote controllable

MULTICHANNEL RECEIVER SYSTEM
IZT R3600
- Frequency range 9 kHz – 3 GHz / 6 GHz
- Scalable multi-channel receiver system
- Up to 5 channels with 24 MHz instantaneous bandwidth each
- Suitable for direction finding (DF)
- For fixed and mobile systems

DIGITAL WIDEBAND RECEIVER
IZT R4000
- Signal collection & recording system
- Superior signal quality
- Continuous interception of up to 120 MHz bandwidth
- Real-time signal analyzer
- Spectrum Monitoring

RADIO MONITORING SOFTWARE
IZT Signal Suite
- Sensor configuration & synchronization
- Spectrum & spectrogram display
- IP forwarding of vRx sub-bands via TCP/IP
- Automated frequency selective recording
- Signal analysis & demodulation
- Post-processing of recorded signals from file
- SDK

Channel Simulators

SATELLITE LINK EMULATOR
IZT C3040
- Input and output frequency up to 3 GHz
- Instantaneous bandwidth of 100 MHz
- Simulation of uplink, payload and downlink

BROADBAND SATELLITE LINK EMULATOR
IZT C6000
- Bi-directional wideband solutions for up to 600 MHz bandwidth
- Simulation of complete satellite links including payload, uplink and downlink effects
- Simulation of complex mesh networks
- Real-time change of parameter
- Flexible and scalable architecture

OVER THE AIR RESEARCH AND TESTING
IZT OTA
- MIMO communication systems with integrated antennas (LTE terminals / car industry: integrated antenna modules)
- Wave field synthesis (WFS) with high accuracy (navigation systems / replay of measurements from various environments)
- Time variant spatial channel characteristics
- MIMO with up to 12 inputs and 64 outputs

RF Record & Playback

RF RECORDING AND PLAYBACK SYSTEMS
IZT R3301 / IZT S1000
- Excellent RF performance
- Many hours of continuous record & replay
- Phase-coherent diversity testing
- Real-time impairment simulation
- 25 MHz, 60 MHz or 120 MHz real-time bandwidth

RF RECORDING AND PLAYBACK SYSTEMS
IZT R4010 / IZT S1010
- MIMO with up to 12 inputs and 64 outputs

Digital Broadcasting

DIGITAL RADIO MULTIPLEXER SYSTEMS
IZT DAB ContentServer & IZT DRM ContentServer
- Multiplexing for DAB / DAB+ or DRM
- Real-time audio encoding
- Data service management

DAB ARCHIVE
- Real-time monitoring and analysis of DAB ensembles
- Recording of the complete DAB multiplex