

Hardware and Software Solutions made in Germany

RF Technology



- RF Signal Generators
- RF Receivers & Signal Collection Systems
- Radio Direction Finders
- RF Record, Playback & Analysis
- Channel Emulators
- Digital Broadcasting



RF Signal Generators

IZT S1000/IZT S1010

Multi-Channel Signal Generators

- One device – 31 Virtual Signal Generators of highest RF quality
- Two RF outputs for phase-synchronous diversity and MIMO testing
- For I/Q data, Sirius, XM, HD Radio, AM, FM
- Modulators for Digital Radio and TV Standards
- GNSS Constellation Simulator
- Automated testing for development and production
- Versatile real-time impairment simulation
- 50 MSamples/sec real-time streaming



FIGURE 1: IZT S1000 / IZT S1010 SIGNAL GENERATORS

IZT S5000



Real-time RF Environment Simulation System

- Test and validation of COMINT and DF systems
- Operator training
- Simulating time variant, complex and realistic RF signals
- Multiple and accurately synchronized RF test signals

FIGURE 2: IZT S5000

IZT T1000

Compact Broadcast Modulator

- Modulator platform for DAB and DAB+
- Playback of ETI/EDI files for factory testing
- User-friendly intuitive web GUI
- IZT DAB Content Server can be integrated
- Optional integrated GNSS receiver for synchronization



FIGURE 3: IZT T1000

RF Receivers & Signal Collection Systems

IZT R3000/IZT R3200, IZT R3301/IZT R3302, IZT R3410/IZT R3411

Receivers

- Excellent RF performance
- Frequency range 9 kHz – 3 GHz (6 GHz/18 GHz)
- Real-time bandwidth up to 25 MHz
- Multichannel operation
- Fully remote controllable
- Radio monitoring of broadcast stations
- ITU-R spectrum monitoring measurements
- Jammer location finding
- Spectrum allocation analysis
- Search, intercept and emitter location
- Threat recognition
- Offline processing and technical analysis



FIGURE 4: IZT R3410

IZT R4000, IZT R4010



FIGURE 5: IZT R4010

Digital Wideband Receivers

- Signal collection and recording system
- Superior signal quality
- Continuous interception of up to 120 MHz bandwidth
- Real-time signal analyzer
- Spectrum Monitoring

IZT R5010

Digital Wideband Receivers

- Highest signal quality in the frequency range up to 18 GHz
- Up to 120 MHz instantaneous bandwidth
- Six independent digital downconverters
- Up to 64 narrow-band DDCs
- Real-time spectrum calculation
- Large internal buffer memory



FIGURE 6: IZT R5010

Radio Direction Finders

IZT R3600

Multichannel Receiver System

- 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



FIGURE 7: IZT R3600

IZT R5506/IZT R5509

Radio Direction Finder

- Complete RDF solutions
- Platform for individual software
- Compact IZT R5506 with 20 MHz – 6 GHz
- High-precision IZT R5509 with 100 MHz – 500 MHz



FIGURE 8: IZT R5509 BUILT IN ANTENNA



FIGURE 9: IZT R5506 HARDWARE

RF Record, Playback & Analysis

IZT REPLAY

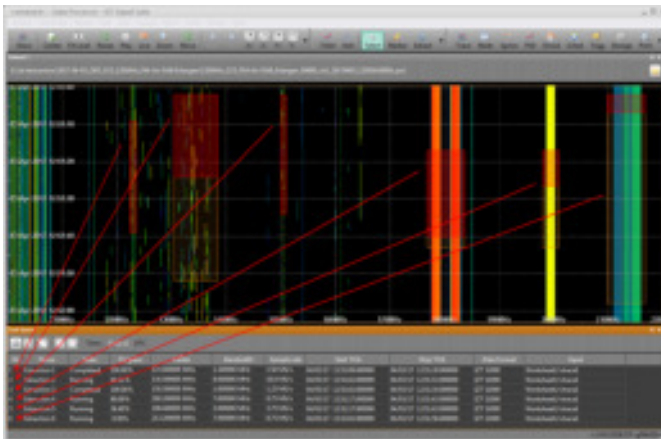
RF Recording and Playback Systems

- Real RF environment reproduction
- Multi-channel diversity
- Powerful signal extraction
- Real-time impairment simulation
- Repeatable lab tests
- Reduced costs for field-testing
- Automotive applications
- 25 MHz, 60 MHz or 120 MHz real-time bandwidth



FIGURE 10: IZT REPLAY

IZT SIGNAL SUITE



Software for Signal Analysis

- Automated signal detection
- Analysis and decoding of signals
- Modulation Recognition
- Powerful I/Q post-processing
- Spectrum monitoring and interferer capture

FIGURE 11: DATA PROCESSOR

Channel Emulators

IZT C3040

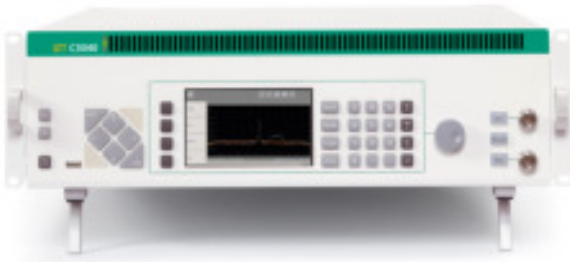


FIGURE 12: IZT R3040

Satellite Link Emulator

- Input and output frequency up to 3 GHz
- Instantaneous bandwidth of 100 MHz
- Simulation of uplink, payload and downlink

IZT C5040, IZT C6000

Broadband Satellite Link Emulator

- 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



FIGURE 13: IZT C6000

IZT C7000



FIGURE 14: IZT OTA

Over the Air Research and Testing - OTA

- Signal distribution via IP and optical LAN
- 4G and 5G User Equipment Testing
- MANET Testing
- GNSS Testing
- Wireless cable Testing in non-anechoic and anechoic environments
- Real-Time streaming of channel parameters
- Multi-Frequency Operation
- Up to 80 MHz instantaneous bandwidth
- Extreme low RF to RF latency
- Fully coherent and phase-stable
- Highest signal quality in the frequency range up to 6 GHz
- Scalable number of channels

Digital Broadcasting

IZT DAB/DRM CONTENTSERVER

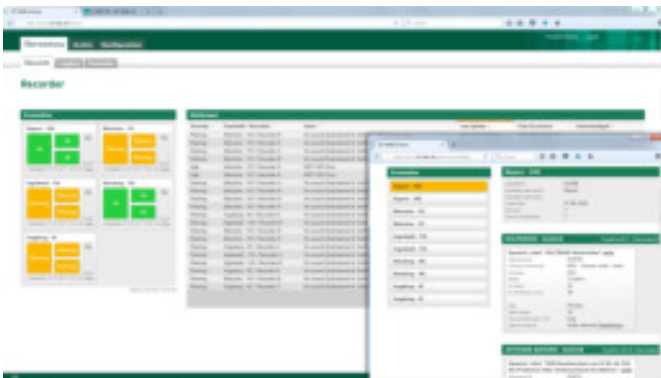


Digital Radio Multiplexer System

- Multiplexing for DAB / DAB+ or DRM
- Real-time audio encoding
- Data service management

FIGURE 15: IZT DAB CS

IZT DAB ARCHIVE



EDI/ETI Monitoring and Logging System

- Real-time monitoring of DAB ensembles
- Analysis of audio and data content
- Logging of the complete DAB multiplex
- Long-term archiving and indexing of all content
- Search and export functionality

FIGURE 16: IZT DAB ARCHIVE

Hardware and Software Solutions made in Germany

RF Technology

About IZT The Innovationszentrum fuer Telekommunikationstechnik GmbH 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 9001:2015 certified.

All data provided in this document is non-binding. This data serves informational purposes only and is especially not guaranteed in any way. Depending upon the subsequent specific individual projects, the relevant data may be subject to changes and will be assessed and determined individually for each project. This will depend on the particular characteristics of each individual project, especially specific site and operational conditions.

INNOVATIONSZENTRUM FÜR TELEKOMMUNIKATIONSTECHNIK GMBH IZT · AM WEICHSELGARTEN 5 · 91058 ERLANGEN, GERMANY
GENERAL MANAGER: RAINER PERTHOLD · TEL: +49 (0)9131 9162-0 · FAX: -190 · SALES@IZT-LABS.DE · WWW.IZT-LABS.DE



Innovationszentrum
Telekommunikationstechnik