

The leading developer and manufacturer  
of RF electronics technologies.

# Defence Electronics



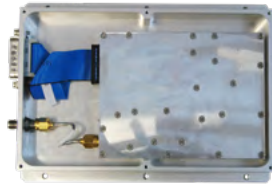
Synthesizers and front-ends  
Radar transponders  
ECM equipment  
RF selectors  
Amplifiers and  
drivers up to 200 watts  
Application-specific RF and  
Microwave solutions  
Wide-band downconverters



# Sub-Systems and Components

## Synthesizers

Low-noise and fast-hopping synthesizer modules for fixed, mobile and man portable radar systems.



- D-, F-, H-, I- and X-band
- Master oscillator
- Very low phase noise
- Fast hopping frequency synthesizers

## Amplifiers

A wide range of amplifier types for radar systems, including high-power pulse amplifiers, pre-amplifiers for L-band and RF distribution amplifiers for phased array antennas.



- GaN-amplifiers
- Driver amplifiers
- Pulsed amplifiers
- RF-power distribution amplifiers

## Radar Converter

Used for radar up/down converting.



- IF-Band to X-Band (L-Band to Ka-Band)
- Dual Conversion
- Frequency agile
- Ultra Low phase noise and spurious performance
- High gain stability
- Optional Tx or Rx Cal modes

## PLOs and Oscillators

PLOs most commonly used as low-noise, high-frequency reference sources for scientific synthesizer applications.



- Frequency ranges from 125 MHz to 26.5 GHz
- Internal and external reference
- High power output, up to > +20 dBm
- Low power consumption

## Transponders

Radar transponders for target practice.



- C- and X-band
- Flexible coding
- Target exercises

## Selectors

Monitoring and function control for radar systems. Functions are RF amplification, calibration, network selection, isolation measurement and RF absorption.



- X-band
- Fast switching (TX-path to switching RX-path)
- RF absorption of input signal (silent mode)
- Frequency downconversion

## Signal Generators

Signal generators with extremely low phase noise and high stability.



- Frequency ranges up to 55 GHz
- Very low phase noise
- Variable power level
- Power level up to +20 dBm (<2.8 GHz) and up to +15 dBm (>4.0 GHz)
- Pulse modulation option (10 MHz to 2.8 GHz)

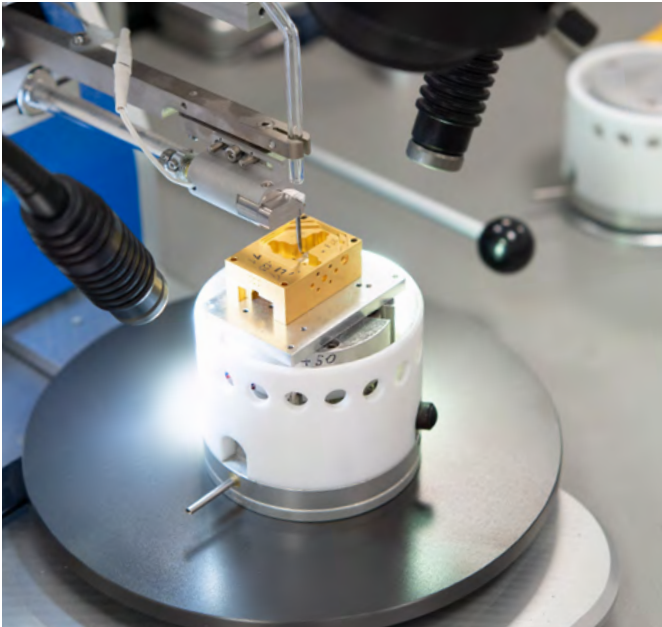
## Wideband Downconverter

Downconverter with wide-band frequency range and integrated low phase noise synthesizer.



- Frequency ranges up to 55 GHz
- Instantaneous BW >1 GHz
- Optional through and calibration paths
- Modular and rack-mount version available
- DO-160G qualified





## Agile, in-house Engineering solutions

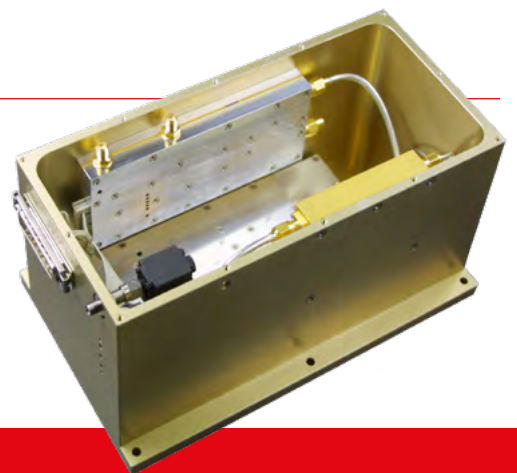
- Replacement of obsolete equipment
- Form-Fit-Function Replacements
- Build-to-Print
- On-Demand Engineering
- ITAR-free technology
- Extended Workbench

### Our engineering capabilities include:

System design, including electronics, modules and software architectures.

- Software
- FPGA design / verification
- DSP Design
- Analog (RF) and digital hardware development

### Key customers:



### What makes us different:

- Combination of ultra-low phase noise & short switching times of synthesizers
- Sophisticated high-end product design
- Best-in-class spectral purity
- Advanced 'state of the art' technologies
- High German quality & outstanding reliability
- European export control regulations



Headquarter Holzkirchen, Germany

## Advantage for our customers

Agile and flexible solutions for your engineering challenges - from effective product design, via system integration, shorter time-to-market to a superior quality assurance/control.

- 35 years of experience & competence in RF design and digital signal processing
- MIL compliant customized product design
- R&D investments in cutting-edge technology
- Specialized in custom made products
- Engineering and manufacturing under one roof
- German made reliability & quality
- EN ISO 9001:2015 certified
- Continuous R&D investments in cutting-edge technology

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