RFbeam Microwave GmbH

leading supplier of planar radar sensors
K-band measuring equipment and engineering
Who we are

RFbeam Microwave GmbH is situated in St.Gallen, Switzerland. We are your powerful and responsive partner for standard and customer specific Radar products, engineering services and application support. Manufacturing is provided by selected and ISO certified production partners. RFbeam Microwave GmbH is a reliable and creative partner with a worldwide customer base.

What we do

We develop and deliver short range microwave sensors and solutions for industrial and OEM (original equipment manufacturer) customers. RFbeam is also a specialist for antenna design and general microwave circuit engineering. Our products are used in movement and industrial sensors, traffic supervision and analyzer systems, sport measurement equipment and many other applications.

Why use radar

For several years, planar radar technology has enabled the realisation of small, cost effective and robust sensors. Radar is an inherently robust technology that can be used even under harsh environmental conditions. Our radar sensors are used for so called short range radar applications covering distances from centimetres to a few hundred metres.
Indoor Automation
- Automatic light activation
- Air-conditioning active if room is occupied
- Conserve energy
  (never forget to switch off the light)
- Comfort function (no light switch necessary)

Intrusion Alarm
- Detection movement in room
- Measure distance to object
- Detect unwanted opening of windows
- Perimeter protection

Movement Detection
- Activate light on advertising boards
- Attract attention to an object
- Illuminate elevator panel
- Count number of persons

Speed Measurement
- Inform driver of his actual speed
- Measure distances between vehicles
- Classify vehicles
- Enforcement sensors

Vital Sign Monitoring
- Measure heartbeat
- Breathing rate
- Bedside monitoring
- Elderly care
RFbeam also provides engineering services. This includes the design of custom hardware, schematics and PCB-Layout work as well as production of prototypes and larger quantities. Our lab is equipped for measurements up to 110GHz. Do you need a custom antenna design? — Ask our antenna experts! Whether you are looking for standard antennas as Patch or Horn or more complex Vivaldi or Sinuous designs, we can support you with proven solutions. Our hardware and software design experience covers the full range from microcontrollers to FPGA designs and fast signal processing algorithms. The design and fabrication of mechanical housings is also possible. Our design team works with state-of-the-art software.

Customized Products

Do you need a modified version of a RFbeam radar transceiver? — Whether the changes involve the size, the antenna pattern, the frequency or other electrical characteristics of a product, RFbeam is your partner to design a customized version of a Radar transceiver. Such a design includes cost optimization as well as the industrialization, so your product can be produced and tested in small, medium or large quantities. If you are looking for more intelligent Radar transceivers including signal processing, our design team can assist you.
Our primary business is volume sales of radar transceiver units to OEM customers. RFbeam standard products cover many applications in the 24GHz band. This standardized frequency allows the license-free usage of our products. RFbeam also has many starter kits and evaluation-systems, what allows you to quickly learn the possibilities and advantages of radar technology. Our standard products are available through our distributors or directly from RFbeam in Switzerland.

**Parameters**

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These are indicative values only and cannot be guaranteed. Range depends on many parameters like size of object, direction of movement and data processing method.
Selection by application

There is no general rule for sensor selection. Each application has its own requirements. Please contact RFbeam to discuss the optimal solution for your specific needs.

Typical Applications

<table>
<thead>
<tr>
<th>Product Family</th>
<th>Indoor Automation</th>
<th>Intrusion-Alarm</th>
<th>Movement Detector</th>
<th>Speed Measurement</th>
<th>Vital Sign Monitoring</th>
<th>Blind spot detection</th>
<th>Cross section surveillance</th>
<th>Door opening</th>
<th>Street light</th>
<th>Others</th>
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Development tools

**ST100 Starterkit vs ST200 Evaluation Kit vs RSP1/K-LD2/K-LD7 Evaluation Kit**

These kits allow learning radar basics and evaluating radar technology for your specific application. STxxx kits can save a lot of initial time and money in order to get first radar experience. While ST100 and ST200 allow signal analysis in more detail, RSP1, K-LD2 and K-LD7 Evaluation Kits are oriented on practical implementation of movement sensors.

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<td>Important for separating multiple objects, suppressing interferences …</td>
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<tr>
<td>Analog output of recorded Doppler signals</td>
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Further information

Detailed information on all RFbeam products, datasheets and short form descriptions can be found on our website www.rfbeam.ch

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RFbeam reserves the right to change said products and specifications at any time and without notice.

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