

# Hedgehog

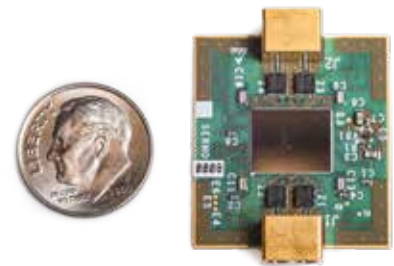
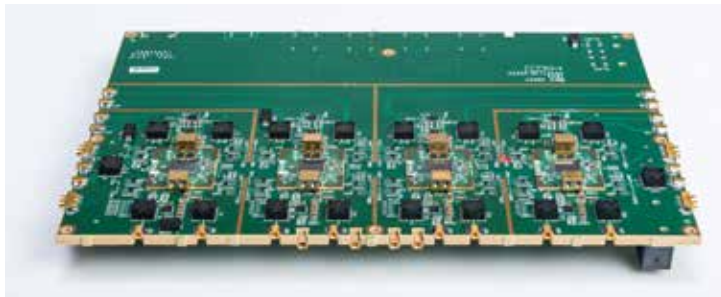
Multifunction, multichannel  
software-defined radio

## Hedgehog multifunction, multichannel SDR

Hedgehog is a software-defined radio (SDR) designed for unprecedented agility, frequency range, and wide instantaneous bandwidth. Its radio frequency (RF) front-end is a collection of general-purpose Microwave Array Technology for Reconfigurable Integrated Circuits transceivers, or MATRICs™ transceivers, that can be reconfigured for integration into a variety of systems. Digitization and processing is provided by the Xilinx radio frequency system on a chip (RFSoc). This first integration of the MATRICs transceiver with an RFSoc delivers unrivaled tuning ability in a low size, weight, and power device. Its extremely agile frequency hopping capabilities provide endless functionality, and unique protection from hacking, jamming, and interception.

## Rapid reconfiguration and **on-the-fly** adaptation

The reconfigurable hardware is less expensive and time consuming to develop than traditional application-specific chips, making it an ideal prototyping device for many different purposes across a multitude of platforms and missions, including communications, radar, electronic warfare, geolocation, and signals intelligence.



### Key features and benefits

Nanosecond switching times enable users to complete multiple functions more rapidly.

Integration of RFSoc gives the ability to digitize signals at up to 2 GHz of instantaneous bandwidth per channel, improving situational awareness.

Low phase noise frequency generators allow tuning from 0-40 GHz giving access to millimeter wave bands.

Two form factors of the board are available with either 4 or 16 channels, permitting greater scalability.

Low size, weight, and power form factor provides greater platform integration and functionality.

Metric	Value
Max # of Rx channels	4-8
Max # of Tx channels	4-8
Min Tx/Rx isolation	40 dB
Output data rate	112 – 224 Gbps
Reference frequency	20 – 200 MHz
Operating frequency range	20 MHz – 40 GHz
Instantaneous bandwidth per channel	2 GHz

Hedgehog module metrics

### For more information contact:

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