Software-Defined Radio SOM

- Production-ready System-On-Module
- Small footprint, low-power
- AD9361 RF Agile Transceiver™
- Xilinx Zynq®-7000 All Programmable SoC
- Embedded Linux on dual ARM9
Massive Integration in a Handheld System-On-Module (SOM)

Traditional SDR Evaluation Platform
Software and Hardware Development with a Production-ready Module
Enabling Multi-protocol, Agile Applications

- Portable agile wireless communications
- P25 Public Safety Radio
- Point-to-point communication
- Femtocell & picocell base stations
- Portable Instrumentation
PicoZed™ SDR Z7035 / AD9361 SOM
PicoZed SDR Z7035/AD9361 Features

- USB PHY
- QSPI Flash
- 400 user pins
- DDR3L
- Ethernet PHY
- Micro SD Card
- ADI Power
- RF Connectors

Dimensions:
- 62mm x 100mm
Prototype with the PicoZed SDR Main Carrier

* representation

Avnet Camera Modules not included
New Zynq Z7035

- Dual ARM® Cortex™-A9 MPCore™ up to 1GHz
- 275K Programmable Logic Cells, 2MB Block RAM, 900 DSP Slices (1,334GMACs)
- Standard ARM peripherals or create your own in Programmable Logic
- Multi-gigabit serial transceivers for PCIe CPRI, OBSAI
PicoZed SDR – RF Technology
Analog Devices AD9361 RF Agile Transceiver™

AD9361: 2 Rx + 2 Tx
- RF 70MHz to 6.0GHz
- RF input/output paths
- RF PLL/LO
- Clock generation
- ADC/DAC
- Digital filters
- Digital interface
- Enable state machine
- RX Gain (AGC)
- TX Attenuation
- Aux DAC/ADC and GPOs
- Analog and Digital Correction/Calibration
PicoZed SDR Z7035/AD9361 – Module Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Band</td>
<td>70MHz to 6.0GHz</td>
</tr>
<tr>
<td>Channel BW</td>
<td>&lt;200kHz to 56MHz</td>
</tr>
<tr>
<td>RF connections</td>
<td>4 TX + 4RX + 2 TX Monitor</td>
</tr>
<tr>
<td>Operating Temp</td>
<td>−40°C to +85°C</td>
</tr>
<tr>
<td>Power consumption</td>
<td>5W (typical)</td>
</tr>
</tbody>
</table>

- Powered from carrier via SOM bottom-side connectors
  - Main module supply: 5.0V
  - IO Supplies: 1.2V – 3.3V

- Supports 2x2 MIMO radio, <1 sample sync on both ADC and DAC
Simulink LTE Demonstration / Over-the-Air-Testing

- MathWorks LTE System ToolBox
- Play / Record / Analyze
Partnership of World Leaders

Accelerating time to market

RF, analog, and mixed-signal integrated circuits

All Programmable FPGAs, SoCs and 3D ICs.

Technical Computing and Model-Based Design