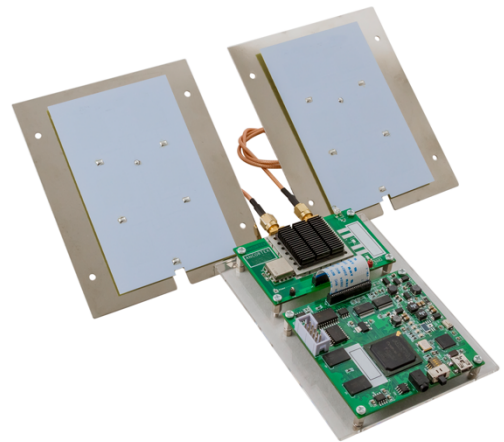


SDR-KIT 620B Module

SDR-KIT 620B offers the ability to integrate 6.2GHz C-band software-defined transmitter-receiver systems with the processor module SDR-PM 402 for various applications.

The SDR Evaluation Kit includes:

- One SDR-RF 620B module
- One SDR-PM 402 processor module
- One copy of SDR-GUI graphical user interface software
- One AC/DC power adapter (5V, 3.0A)
- One mini USB retractable cable
- One pair of RF cables
- One pair of the transmitting and receiving antennas



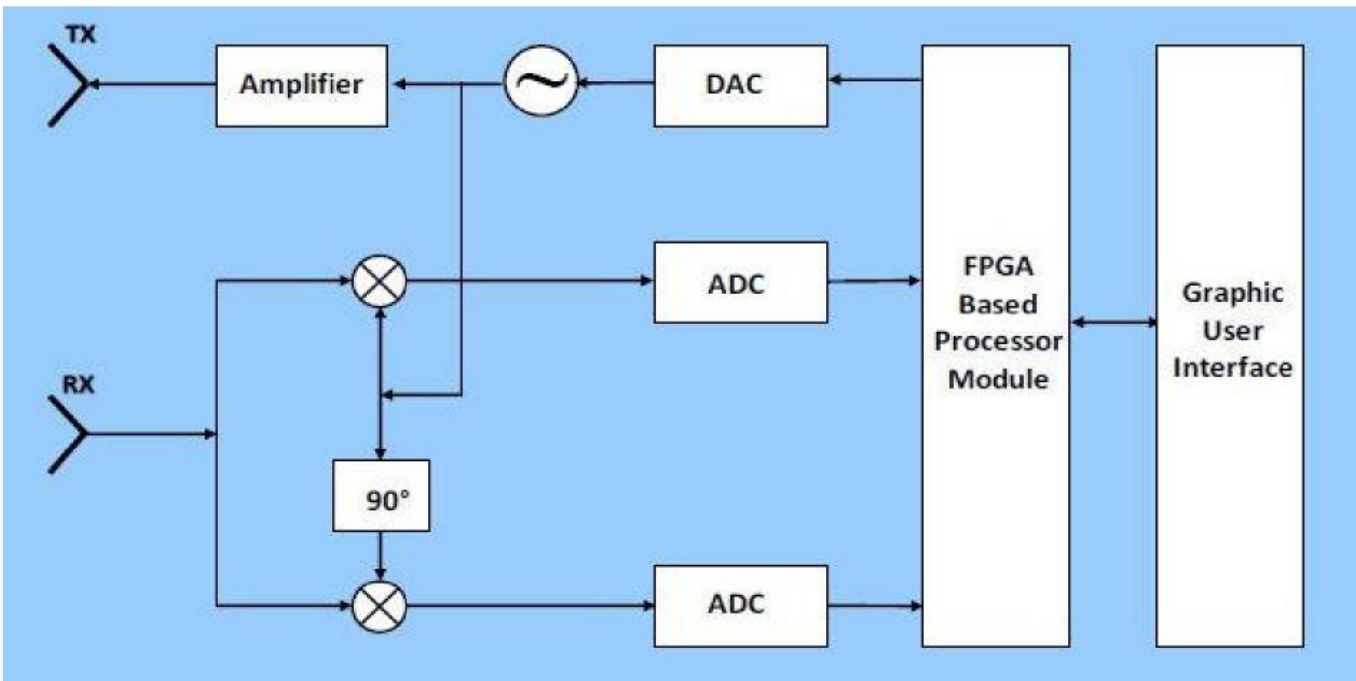
The SDR processor module (SDR-PM 402) is compatible with this SDR-RF 620B module. The graphic user interface software SDR-GUI is for activating this RF module, selecting operation parameters, and collecting data.

The graphical user interface SDR-GUI is used to control the configuration of the SDR Evaluation Kit via a USB 2.0 cable. Digital samples of control voltage are generated by the FPGA firmware, and then converted to analog control voltage which directly feeds the voltage controlled oscillator (VCO). The output of the mixer in the receive chain is digitized and streamed to host computer for real-time processing.

FEATURES

- FMCW/FSK/CW waveforms
- Reconfigurable
- Wide bandwidth up to 400MHz (6.0GHz-6.4GHz)
- Output power >18dBm
- Low phase noise
- Low noise figure over receiver channel
- Low power consumption
- **Suppression of cooling fan interference**
- On-board automatic correction of VCO nonlinearity
- Compactness and flexibility

SDR-KIT 620B Block Diagram



SDR-RF 620B Module Specifications

| Parameter | Unit | Value |
|-----------------------------|------|---------------------|
| Waveform | | CW/FMCW/FSK |
| Center Frequency | GHz | 6.2 |
| FM Swept Bandwidth* | MHz | 100, 150, 300, 400 |
| FSK Frequency Step | MHz | 6 |
| Sweep Time | ms | 0.5, 1, 4, 10 |
| Number of Samples per Sweep | | 128, 256, 512, 1024 |
| Power Output | dBm | 19 |
| Antenna Gain | dBi | 10 |

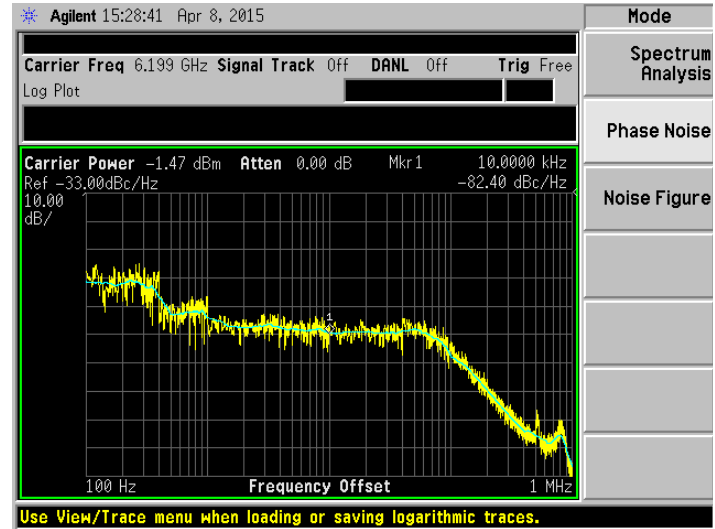
*Expandable up to 800MHz

SDR-KIT 620B Sample Applications

- Through-wall imaging
- Vital sign detection
- Motion detection
- Environmental monitoring
- Anti-collision
- Security sensors
- Level meter

SPECIFICATION

| Parameter | Min. | Typ. | Max. | Unit |
|---------------------------------|----------------------------------|------|------|-------|
| Frequency Range | 6.0 | | 6.4 | GHz |
| Expandable Frequency Range | 5.6 | | 6.4 | GHz |
| Tune Voltage | 0 | | 5 | V |
| Tuning Sensitivity @RF Port | | 0.13 | | GHz/V |
| Power Output | 18 | 19 | 20 | dBm |
| SSB Phase Noise @10KHz offset | | -82 | | dBc |
| SSB Phase Noise @1MHz offset | | -130 | | dBc |
| Conversion Gain Over Rx Channel | 26 | 28 | 30 | dB |
| Noise Figure over Rx channel | 3.2 | 3.4 | 3.6 | dB |
| Maximum input power | | 10 | | dBm |
| OIP3 | | 35 | | dBm |
| IIP3 | | -5 | | dBm |
| IIP _{1dB} | | -11 | | dBm |
| Supply voltage | 4.75 | 5 | 5.25 | V |
| Supply current | 650 | 670 | 700 | mA |
| Operating temperature | -40 | | 85 | C° |
| Storage temperature | -65 | | 150 | C° |
| RF Dimensions | L=79mm W=56mm H=13mm Weight=53g | | | |
| PM Dimensions | L=79mm W=76mm H=13mm Weight=184g | | | |



To Purchase:

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