

Order Code - 22235521.1.22 **Software Defined Radio**



Features:

- Quickly and easily introduces students to the world of Principles of Modern Communication with both software & real time hardware.
- It is Zero Installable "Simply Power On & Play "
- Includes Complete Linux on Board
- Unleash the Power of GNU Radio

Specifications:

RF Agile Transceiver

Tuning Range: 350 MHz - 3.5 GHz

LO Step Size: 2.4 Hz

• Tunable Channel Bandwidth: 200 KHz - 20 MHZ

• Integrated DACs (Tx): 12 Bit

• Integrated ADCs (Rx): 12 Bit

Variable Output Data Rates: 61.44 MSPS - 65.1 kSPS

Modulation Accuracy (EVM) : ≤-40 dB (typical)

RX Gain Control: 0 to +74.5dB (800 MHz)

Received Signal Strength: 100 dB (+-2 dB)

Internal I/Q Correction and Calibration

Antenna

Frequency Range: 824-894 MHz and 1710- 2170 MHz

Connector Type: SMA

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.

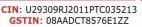


Export Sales: +91-9829132777 India Sales: +91-9588842361



IT-2013, Ramchandrapura Industrial Area, Sitapura Extension, Jaipur-302022, India.

















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FPGA

Logic Cells: 28 k

Block RAM: 2.1 Mb

DSP Slices: 80

SDR Processing System

- Single-core ARM® Cortex[™]-A9 MPCore[™] @ 667 MHZ
- Streams up to 4MSPS with no dropped samples

Embedded Processing System

Quad-core 64-bit @ 1.4GHz

Memory

- DDR3L
- 1066 Mbps (16-bit Interface)
- 512 Mbytes

Serial Flash

- 32 Mbyte
- Quad I/O provides throughput up to 54 Mbps

RAM

- 4 GB LPDDR2 SDRAM
- 2.0 USB Ports: 3 No.
- HDMI Port: 1 No.
- 14" Color Monitor
- Wireless Keyboard
- Wireless Mouse

Experiments:

Analog Communication:

- Amplitude Modulation & Amplitude Demodulation
- Double Side Band with Suppressed Carrier (DSBSC)Modulation & Demodulation
- Single Side Band with Suppressed Carrier (SSBSC)Modulation& Demodulation
- Frequency Modulation & Demodulation
- Pulse Amplitude Modulation & Demodulation

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Digital Communication:

- Sampling and Quantization.
- Amplitude Shift Keying(ASK) Generation. & Detection.
- Frequency Shift Keying(FSK) Generation & Detection.
- Binary Phase Shift Keying (BPSK) Generation & Detection.
- Quadrature Phase Shift Keying(QPSK) Generation & Demodulation
- Differential Phase Shift Keying(DPSK) Generation & Demodulation
- Digital Quadrature Amplitude(DQAM) Modulation & Demodulation
- Bit Error Rate Measurement of DQAM
- Orthogonal Frequency Division Multiplexing (OFDM) Modulation.
- Orthogonal Frequency Division Multiplexing (OFDM) Demodulation.
- Direct Sequence Spread Spectrum(DSSS) Signal Modulation & Demodulation
- Gaussian Minimum Shift Keying(GMSK) Modulation & Demodulation
- Bit Error Rate Measurement of BPSK
- Bit Error Rate Measurement of QPSK
- Bit Error Rate Measurement of 8PSK
- Bit Error Rate Measurement of 16PSK
- Analyzing impact of Pulse Shaping.

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