

Features

- 2.4 GHz ISM Band
- Output Waveforms: Single Tone, Frequency Ramp, Sawtooth
- · Audio Received Signal
- Onboard speaker and signal indicator
- Onboard custom tunable filter

Applications

Classroom Learning Tool

Demonstration

- Operating Modes: CW, FMCW, Doppler
 Command Control via USB or Bluetooth
- Powered through USB connection
- Powered through USB connection
- Kit comes with radar board, antennas, and cables, mounting plate, tripod, and USB battery pack.
 - Research & Development

Description

The PEM1102-KIT radar demonstration kit operates across the International 2.4 GHz ISM band (2.25 to 2.5 GHz). Output signals can be transmitted via single tone, frequency ramp, or sawtooth patterns. The received signal is downconverted to audio frequencies that can be monitored via an onboard speaker and received signal strength indicator. Also included is an onboard prototype filter for custom filtering options. Model PEM1102-KIT is controlled either through the onboard USB port or a Bluetooth connection, and supports GUI command control for Windows. The kit comes complete for field demonstration and instruction purposes with a radar circuit board, antennas, cables, mounting plate, tripod, and USB battery pack. A downloadable operators manual is available on the Pasternack website.

Performance by Frequency

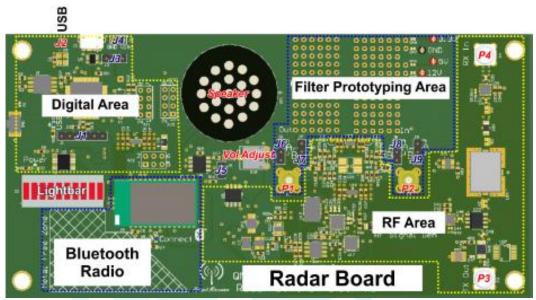
Description	Min.	Тур.	Max.	Units
Frequency Range	2.4		2.5	GHz
Output Power Sweeping CW Mode			1 0.125	Watt
Operating Voltage		5		Volts
Operating Current			0.5	Amps
ADC		16		Bits
ADC Sampling Frequency		20		kHz
Bluetooth Version		2.1 + EDR		

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 2.4 GHz to 2.5 GHz ISM Band Radar Demonstration Kit, USB or Bluetooth Control, GUI, Includes Radar Board, Antennas, Cables, and Accessories



Radar Development Kit Technical Data Sheet

PEM11002-KIT



The PEM11000-KIT Radar board, as viewed from above

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Radar Development Kit Technical Data Sheet

PEM11002-KIT

Typical Performance Data PEM11000 Control GUI SN:5006 Radar Setup Data Collection Help Raw Data Doppler Raw Vs. Time Fre 4 🕨 Spectrum Range Reset Zoom Raw Data Start Frequency: 2,4 GHz Set Stop Frequecy: 2.5 GHz 2.4 16 Set Ramp Time: ms 1.6 Sweep Type 2 way sweep Continuol 2 way sweep, Single 🔘 1 way sweep, Single 🔘 Continuous Wave 0.8 Amplitude (V) Start Sweep Stop Sweep 0 # of Samples to Collect: 1024 Collect and Plot -0.8 Data Save Location: -1.6 Save Name: data.txt Save Data Load Data -2.4 Start Continuous Capture 0 0.008 0.016 0.024 0.032 0.04 0.048 Time (s) 2 Pulse Clutter Cancellation 10 Capture Average Zoom Options: 🗹 x-axis 🔽 y-axis 🛛 NOTE: at least one axis must be che 1 device(s) found

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Radar Development Kit Technical Data Sheet

69 PEM11000 Control GUI - 0 -×-SN:5001 Radar Setup Data Collection Help Raw Data Spectrum Range Doppler Raw Vs. Time Frequency/Range/Velocity Vs Time Reset Axes Range Plot GHz Start Frequency: 2.4 Set Stop Frequecy: 2.5 GHz -32 16 ms Ramp Time: Set Sweep Type 🔮 2 way sweep Continuor 💮 2 way sweep, Single 🗇 1 way sweep, Single 👘 Continuous Wave Start Sweep Stop Sweep # of Samples to Collect: 1024 (Lap Collect and Plot Counter Save Location: Data Save Name: data.txt 40 Save Data Load Data Start Continuous Capture -72 2 Pulse Clutter Cancellatio 10 Capture Average .9/ Zoom Options: V x-axis V y-axis NOTE: at least one axis must be checked in order to zoon 1 device(s) found () PEM11000 Control GUI - 0 -X SN:5001 Radar Setup Data Collection Help Raw Data Spectrum Range Doppler Raw Vs. Time Frequency/Range/Velocity Vs Time Reset Axes **Beat Frequency Spectrum Plot** Start Frequency: 2.4 GHz Set GHz Stop Frequecy: 2.5 16 Set Ramp Time: ms -15 Sweep Type 2 way sweep Continuor ② 2 way sweep, Single 1 way sweep, Single Continuous Wave Start Sweep Stop Sweep # of Samples to Collect: 1024 Collect and Plot Save Location: Data ... Save Name: data.bd Save Data Load Data Start Continuous Capture 2 Pulse Clutter Cancellation 10 Capture Average 103 -120 450 Frequency (Hz) Zoom Options: 📝 x-axis 📝 y-axis NOTE: at least one axis must be checked in order to zoon

1 device(s) found

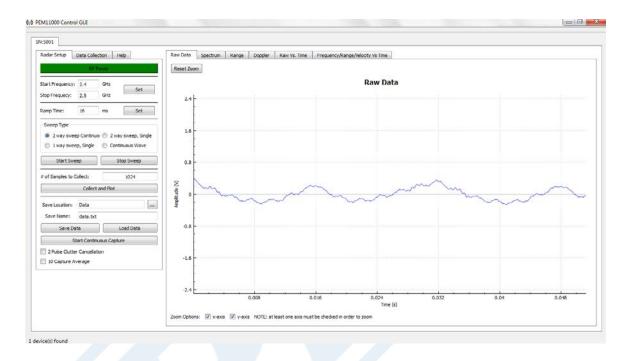
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PEM11002-KIT



Radar Development Kit Technical Data Sheet

PEM11002-KIT



2.4 GHz to 2.5 GHz ISM Band Radar Demonstration Kit, USB or Bluetooth Control, GUI, Includes Radar Board, Antennas, Cables, and Accessories from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

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URL: https://www.pasternack.com/2.5-ghz-radar-development-system-accessories-pem11002-kit-p.aspx

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PEM11002-KIT CAD Drawing

2.4 GHz to 2.5 GHz ISM Band Radar Demonstration Kit, USB or Bluetooth Control, GUI, Includes Radar Board, Antennas, Cables, and Accessories

