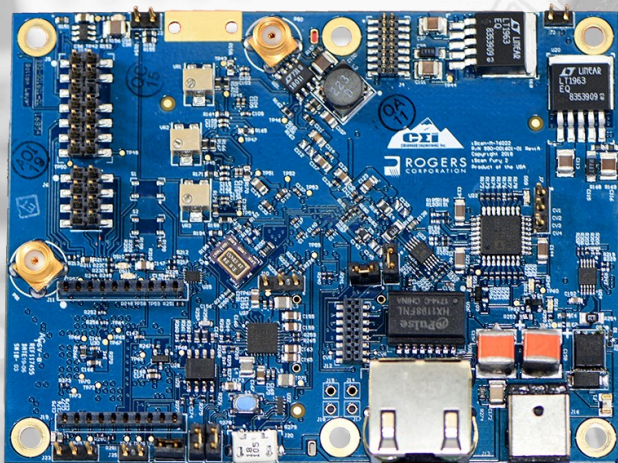
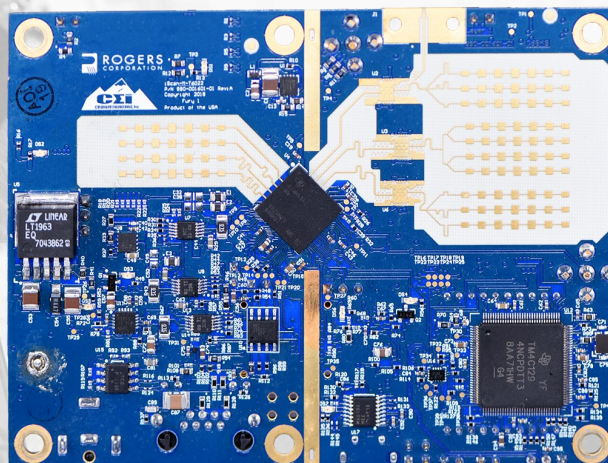


# FURY

## 60 GHz Switchable Beam Radar



(Top)



(Bottom)

### OVERVIEW

CEI's Radar Series brings high frequency radar technology to small form factor platforms. The Fury Radar Series was designed for land, sea, and air environments where Size, Weight and Power (SWaP) are critical. Equipped with extensive capability, such as steerable beams and digital beamforming, these radar systems can provide superior performance for tasks such as range, velocity, RCS measurements, target tracking, collision avoidance, occupancy sensing, and much more. With 24, 60 and 77 GHz options to choose from, CEI's radars are excellent platforms for your next radar application.

### PRODUCT DESCRIPTION

Fury is a new generation Texas Instruments (TI) based System on Chip (SoC) module designed to help take your next 60 GHz radar design to market quickly. Equipped with TI's IWR6843 SoC (sporting an ARM Cortex M4 32-bit processor core with a C674x DSP accelerator), Fury has plenty of processing power to support a plethora of advanced Digital Signal Processing (DSP) algorithms for your radar. The built-in patch antennas include three transmit and four receive antennas, with three polarization configurations to choose from, making it suitable for MIMO radar applications. Let Fury be the gateway to your next 60 GHz radar design!

### FEATURES

- TI IWR6843 SoC
- TM4C1294NCPDT Microcontroller
- 3x TX, 4x RX Antennas
- 40 MHz TCXO
- USB 2.0
- 10/100 Mbps Ethernet
- Azimuth (Az) FOV: 120°, Elevation (El) FOV: 50°
- Az Angular Resolution: 33°
- with 1 TX; 14.5° with 2x MIMO
- El Angular Resolution: 50°
- Max Detection Distance: Car = 300m; Human = 65m
- Digi Xbee Socket with interchangeable options: Wi-Fi, Cellular: LTE-Cat 1, LTE-M, 3G, Bluetooth & More!
- SPI, UART, JTAG, CAN,

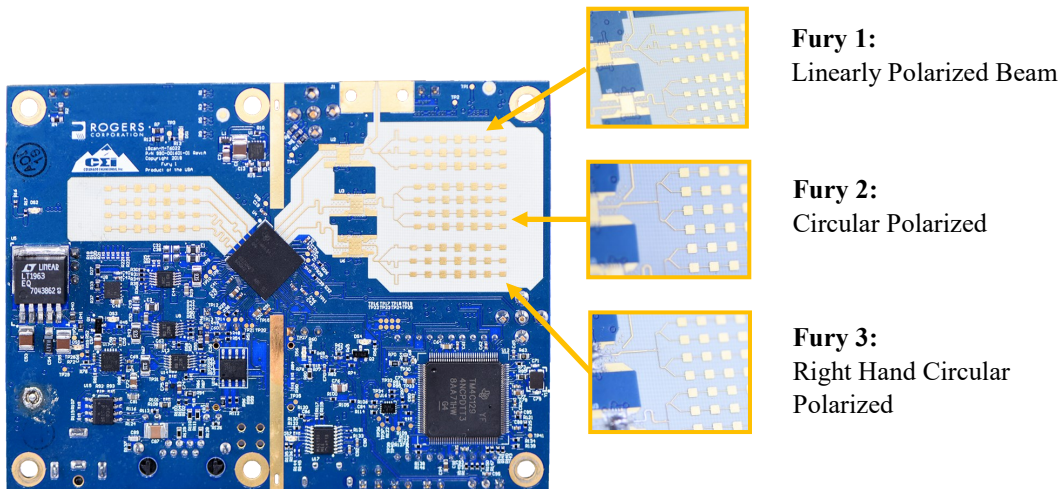
- Ethernet, I2C, LVDS
- Sensors: Temperature, Humidity, Barometric Pressure, Light, IMU/ Accelerometer, Sniff, Magnetic, & Microphone
- Power: 5V/2A

### APPLICATIONS

- Internet of Things (IoT)
- Smart Home/City
- Room Occupancy
- Biometrics
- Gestures
- Security



## ANTENNA VARIATIONS



Description	Rx	Tx
Fury 1: Linearly Polarized Beam	Boresight	TX1 Left Steer - Az: 40°, El: 5° TX2 Bore: Az: 20°, El: 5° TX3 Right Steer: Az: 40°, El
Fury 2: Circular Polarized	Left Hand Polarized	Left Hand Polarized
Fury 3: Right Hand Circular Polarized	Left Hand Polarized	Right Hand Polarized

## BLOCK DIAGRAM

