RFOS

Embedded Wireless Communications Solution

from Venture Technologies, Inc.

RFOS is a proven hardware and software platform for building custom wireless devices.

Field-tested hardware and software building blocks allow Venture Technologies to quickly create wireless solutions that are customized to the unique needs of your application.

RFOS reduces product cost and parts count when compared to an off-the-shelf radio module, because the RFOS libraries and your application can run together on the same microcontroller.

Whether it's long range, long battery life, or a unique network topology, Venture's RFOS will get your product to market quickly, and will suit your product's unique requirements better than a supposed "one size fits all" solution.

Key RFOS Facts

- For Texas Instruments ChipCon wireless CC1101 / CC1110F32 / CC2510
- For Texas Instruments MSP430 microprocessors MSP430F2272 / MSP430F1611IPM
- Range up to 1 mile
- Uses unlicensed ISM bands (400MHz, 900MHz, 2.4GHz options available)
- Several network topologies to choose from:
  - Star
  - Mesh
  - Point-to-point
  - Broadcast
- Many optional power saving techniques available
- Several device pairing options available

Texas Instruments Elite Design House

VENTURE Venture Technologies, Inc.

RFOS Specifications and Options

Frequency Bands	400MHz, 900MHz, 2.4GHz ISM bands
Data Rate	Up to 250Kbits/second
Range	Up to 1 mile
Agility	Single Frequency Frequency Hopping Spread Spectrum Direct Sequence Spread Spectrum
Topologies	Star Mesh Point-to-Point Broadcast
Battery Life	Up to 5 years

Exact specifications depend on RFOS options chosen and specifics of the application.

Why Choose RFOS?

Since the requirements for every product are unique, forcing an industry-standard solution such as Zigbee® or Bluetooth® into a product often results in a compromise in device performance, an increase in cost, or both. This is a classic case of trying to fit a square peg into a round hole.

A wireless solution built with RFOS from Venture allows performance to be optimized according to the specific needs of the application. This flexibility has allowed RFOS to be successfully applied to systems with thousands of nodes, devices which operate on a single set of batteries for several years, and to products with extremely aggressive cost goals.

Built with RFOS

Successful Products Designed by Venture Technologies

Healthcare

Monitors compliance with hospital hand washing policies, with a wireless network of up to one thousand soap dispensers relaying usage data to a remote server through gateway devices.

Consumer

Allows dogs to be unleashed while keeping them under control, by allowing a trainer to correct behavior using a handheld remote at a range of up to 1/2 mile.

Retail

Displays promotional messages sent wirelessly from an in-store transmitter to hundreds of shopping cart handles within 1/2 mile, and delivers up to 5 years of battery life.

Industrial

Allows scheduling of fuel deliveries by measuring liquid level in storage tanks, and relaying level data wirelessly through a gateway device to a remote server.

In addition to wireless expertise, Venture Technologies has extensive experience developing all types of electronic products.

We are a product development and engineering services company that can serve as your one-stop shop for your electronic, software, and mechanical engineering design needs.

With over 25 years of experience in the business, Venture has a proven track record of meeting difficult technical challenges and tight schedules. Whether you need to take a product from concept to manufacturing, or simply augment your staff to complement your in-house capabilities, Venture can help.

VENTURE

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