ethertronics

PRODUCT BRIEF

# EC624 Active Steering™ Switch

## Active Antenna Switch for High-Performance Wi-Fi Applications


## OVERVIEW

Ethertronics' EC624 Active Antenna Switch enables the "2x" performance and efficiency gains of Active Steering on a per-antenna basis. The EC624 works in conjunction with the EC477 Active Steering Processor to deliver the benefits of Wi-Fi Active Steering in a BOM efficient-solution and enables optimal antenna placement within the device for access point, gateway and client applications.

## APPLICATIONS

- Access Points
- Set-top Boxes
- Wi-Fi Clients
- Wi-Fi Extenders
- Smart Appliances

## KEY BENEFITS

- **Higher throughput, longer range, and broader signal coverage**
- **More reliable connections and reduction of Wi-Fi "dead spots"**
- **Flexible antenna placement and seamless design integration**
- **Reduced system cost**

## FEATURES

**High Performance RF Tuning Switch**
- High Linearity Shuntless SP4T

**Active Steering Technology**
- Real-time optimization of Wi-Fi radio link performance
- Up to 3dB improvement in radio link signal gain
- Per-antenna / per-client / per-packet optimization

**Designed for High-Performance Wi-Fi Devices**
- Up to 8x8 MIMO support with EC477 Active Steering Processor

**Data-Over-Coax (DOC) Interface**
- Flexible antenna placement with optimal cost
- Allows any combination of active + passive antennas in system deign

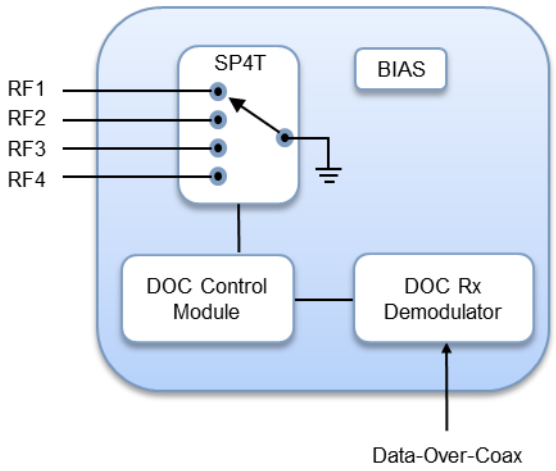
**Small Footprint:**
- 16-pin QFN package
- 2.0 x 2.0 mm Package Size

## TECHNOLOGY ADVANTAGES

The EC624 acts as a slave device to the EC477 Active Steering Processor to deliver real-time Wi-Fi radio link optimization for access point, gateway, and client applications. The EC624 performs the switching function to steer the Active Steering Antenna radiation pattern in order to maximize Wi-Fi radio link gain and performance. Ethertronics patented Active Steering technology enables up to 3 dB radio link signal gain on a per-antenna basis to maximize throughput and coverage, and is additive to performance gains realized via Wi-Fi MIMO and beamforming techniques. In addition, Ethertronics Active Steering Technology provides solution scalability to support next-generation 802.11ax applications.

## DESIGN ADVANTAGES

The EC624 supports Ethertronics' Data-Over-Coax (DOC) interface, which allows Active Steering signaling on the same physical cable as the primary RF feed without impacting the main Wi-Fi radio signal. The DOC interface eliminates the need for custom connectors and cables, which reduces the system bill of materials, enables easier placement of off-PCB antennas, and provides seamless integration of any combination of Active and passive antennas into device designs.




**EC624 Block Diagram**

*Preliminary information subject to change