

# EC477 Active Steering™ Processor

## Active Steering Controller for High-Performance Wi-Fi Applications



### 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
- Scalability to 802.11ax standard

### FEATURES

#### 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
- Low latency adaptation algorithm
- Supports up to 16 active clients

#### Designed for High-Performance Wi-Fi Devices

- Up to 8x8 MIMO 802.11ac support
- Scalability to support 802.11ax standards

#### Data-Over-Coax (DOC) Interface

- Flexible antenna placement with optimal cost
- Allows any combination of active + passive antennas in system design

#### Small Footprint:

- 24-pin QFN package
- 3.0 x 3.0 mm Package Size

### OVERVIEW

Ethertronics' EC477 combines a high-performance processor with a cost-optimized antenna control interface to deliver the proven “2x” performance and coverage benefits of Wi-Fi Active Steering in a flexible and cost-reduced system offering. The EC477 works in conjunction with the EC624 Active Steering switch to provide greater throughput and longer range for access point, gateway, and client applications.

### APPLICATIONS

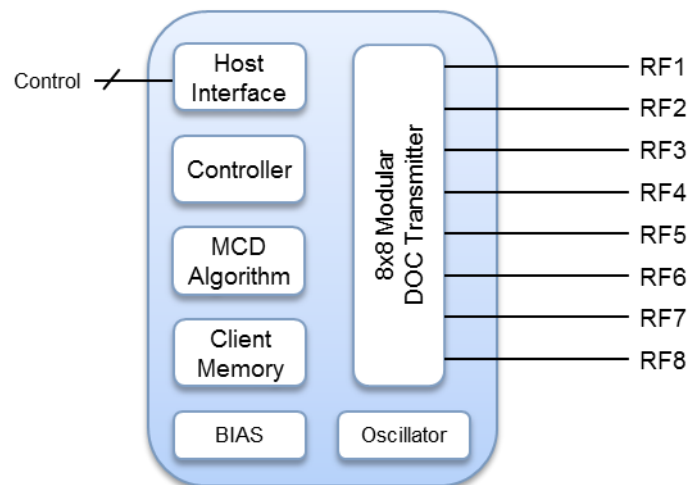
- Access Points
- Set-top Boxes
- Wi-Fi Clients
- Wi-Fi Extenders
- Smart Appliances

### TECHNOLOGY ADVANTAGES

The EC477 works with the system Wi-Fi radio to deliver real-time radio link performance optimization for access point, gateway, and client applications. The EC477 supports the processing and control functionality to enable radio link optimization on a per-antenna / per-client / per-packet basis. 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 EC477 introduces 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.



EC477 Block Diagram