

## Powered by StarV3™

### Advanced Performance

All units feature advanced RF functionality and processor optimization. Our drivers are proprietary and **built for performance**, not simply stock reference drivers used by others.

### Full Spectrum Support

Our Cloaking Mode 5MHz and 10MHz channel spacing and widths deliver up to **4 times the number of useable non-overlapping channels** in each frequency band compared to 'normal' 802.11 systems. Bandwidth delivery exceeds 6meg at even the smallest channel size.

### High Bandwidth

The Cu200 and Cu500 units are capable of delivering **over 30 mbps** of compressible data in standard mode. Uncompressible data throughput exceeds 20 mbps in standard mode, and 30 mbps in turbo mode.

### Unrivaled Feature Set

StarV3 delivers full routing capabilities including RIP, OSPF, and **high performance mesh networking** with OLSR. A full suite of QoS, security and management tools rounds out the StarV3 feature set with an **easy to use interface**.

## Cu200 and Cu500 Series Wireless Advanced Router Client Units

The Cu200 and Cu500 are rugged high performance client units based on the efficient Infineon ADM5120 RISC processor. They deliver cost effective performance in the 2GHz or 4.9/5GHz frequency bands for all your client side deployment needs.



### Product Highlights

- Driven by the industry leading robust StarV3 operating system from StarOS.
- Cloaking Mode enhanced channel widths and spacing delivers maximum network design versatility for large scale mesh and access networks.
- Each unit features a single high power 23dB radio with drivers specifically tuned to fully maximize its performance in all phases of operation.
- An Infineon ADM5120 network processor running at 175MHz provides real power for client side deployments.
- A full range of integrated antennas are available in our rugged cast aluminum outdoor enclosure system to provide dependable performance in the most challenging environments.
- The power system protects the unit against transients and overvoltage events on both the power and Ethernet systems, and accepts a wide 20 - 48vdc input range.
- Push button reboot with restore to factory defaults functionality eliminates the need to return misconfigured and locked units for reprogramming.
- Extended operating temperature exceeding -20C through 70C allows for a wide range of deployment scenarios.



Cu200 and Cu500  
Optional Configurations

- Cu214 - 14dBi 2.4GHz antenna
- Cu219 - 19dBi 2.4GHz antenna
- Cu517 - 17dBi 4.9/5GHz antenna
- Cu523 - 23dBi 4.9/5GHz antenna

Additional frequencies are also available. Contact us with your specific frequency needs.



### Applications

- Metropolitan scale MESH networks
- Traffic management systems
- Public safety access networks
- Video surveillance systems
- Campus networks
- Carrier backbones and extensions
- Corporate security systems
- WISP access networks
- Homeland security networks

- **Your network is secured** with up to 128 bit WEP, WPA1 and WPA2, plus MAC filtering and authentication, and firewall functionality. StarV3 Cloaking Mode makes your network invisible to 'normal' units.
- Star V3 enhancements deliver **reduced latency and jitter** for significantly improved VoIP, video, gaming—and overall improved network performance compared to other systems available today.
- All units are fully 802.11 standards compliant and interoperable in your standards compliant network today; **easily configured** to take full advantage of the powerful StarV3 proprietary feature set in a homogeneous StarV3 network.
- StarV3 **Enhanced Signal Processing** implementations coupled with our unique channel spacing in Cloaking Mode increase signal survivability in polluted (urban) environments. The same signal processing also increases weak link stability making marginal links profitable.
- All customers receive **total service and support** with their configuration and deployment issues. We treat customer networks like they were our own.

## Operational Features

### User Interface

- ⇒ Secure SSH
- ⇒ Telnet client
- ⇒ Command Line, with factory default reset

### Access Layer Density

- ⇒ Up to 250 users per radio; 50 users per radio recommended

### Security

- ⇒ Advanced firewall functionality with familiar Linux syntax or custom parser
- ⇒ StarV3 Cloaking Mode channel spacing
- ⇒ RADIUS client functionality
- ⇒ MAC address filtering and authentication with both local list and radius control
- ⇒ WPA1 and WPA2 with full radius control
- ⇒ TKIP and AES ciphers
- ⇒ 40, 104, and 128 bit WEP
- ⇒ NAT and static NAT support
- ⇒ IPMAP
- ⇒ Remote system logging

### Routing Functionality

- ⇒ Mesh Networking with high performance OLSR—edge node only
- ⇒ DHCP server and client with dynamic leases

### Routing Functionality (cont...)

- ⇒ IEEE 802.11d bridging
- ⇒ Dynamic WDS support for true transparent bridging
- ⇒ High performance learning bridge with optional Spanning Tree Protocol
- ⇒ IEEE 802.1q VLAN
- ⇒ RIPv1 and v2, and OSPFv2 support
- ⇒ NAT and static NAT
- ⇒ Policy (source and purpose based) and static (destination based) routing support
- ⇒ VPN via proprietary distribution system with secure Ethernet over IP tunnels for up to 20 virtual VPN servers per unit
- ⇒ Multiple IP addresses per interface

### Quality of Service

- ⇒ Full layer 2 and layer 3 traffic prioritization
- ⇒ Group, subnet, user, and protocol-based bandwidth shaping and prioritization with bandwidth fallback and parent class sharing
- ⇒ Simple asymmetrical/symmetrical bandwidth shaping option
- ⇒ Packet Aggregation for improved VoIP jitter and gaming latency



# Wireless Networking Solutions. Ours Works.™

## Technical Specifications

### Radio Operation

- ⇒ Each radio independently controlled
- ⇒ Full operating frequency range of supported radios
  - 2312 - 2737 MHz
  - 4900 - 6120 MHz
- ⇒ Channel spacing
  - 40 MHz turbo
  - 20 MHz
  - 10 MHz
  - 5 MHz
- ⇒ Custom Frequency Scan Lists
- ⇒ Radio disable functionality

### Wireless

- ⇒ Standards
    - IEEE 802.11a/b/g
    - IEEE 802.11d
    - IEEE 802.11e
    - IEEE 802.11h
    - IEEE 802.11i
  - ⇒ Enhanced StarV3 Mode
  - ⇒ Sensitivity
    - 2.4GHz = -92 dBm @ 1Mbps; -70 dBm @ 54Mbps
    - 5GHz = -90dBm @ 6Mbps; -70 dBm @ 54Mbps
  - ⇒ Connection Rates
    - 108, 96, 72, 54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, 1 Mbps
  - ⇒ Advanced Features
    - Extended range with advanced digital signal processing
    - Weak signal processing and enhancement
    - Advanced Rate Control for Error Correction support
    - Adaptive Radio (AR/ANI) support
    - Enhanced receive sensitivity
    - Advanced RF filtering and blocking for enhanced channel spacing
    - Best path sequencing for advanced multipath resistance
    - Enhanced bursting
    - Enhanced compression and fast frames
    - Dynamic frequency selection (DFS) - DFS2 in final testing
    - Transmit power control (TPC and aTPC)
  - ⇒ Performance
    - 802.11a/b/g standard 20MHz Channel
      - 20 Mbps uncompressible data standard mode
      - 30 Mbps uncompressible data turbo mode
      - 30 Mbps compressible data standard mode
    - StarV3 Cloaking Mode
      - 5MHz channel spacing - over 6 Mbps uncompressible data
      - 10MHz channel spacing - over 13 Mbps uncompressible data
- Maximum Link Distance 230km

### Processor

- ⇒ ADM5120 RISC network processor operating at 175MHz

### Management

- ⇒ Remote firmware upgrade with full configuration preservation
- ⇒ Access unit, client, and network management displays and tools
- ⇒ Diagnostic tools including ping and throughput testing
- ⇒ Beacon real-time traffic monitor
- ⇒ SNMP support
- ⇒ SNMP Statistics

### Power System

- ⇒ Autosensing 120/240 VAC, 50/60Hz
- ⇒ 20 - 48 VDC input range; 24VDC typical
- ⇒ World power system enabled
- ⇒ Solar systems available in turn-key configurations

### Power Protection Systems

- ⇒ Transient and overvoltage protection

### Environmental

- ⇒ Extended operating temperature: -20 to +70 C
- ⇒ Humidity: 5% to 95% non-condensing

### Physical

- ⇒ 4.4 pounds
- ⇒ 10.23" x 9.88" x 5.62" (260mm x 251mm x 143mm) - Cu214/517

### Warranty

- ⇒ One year limited manufacturer defect warranty for all parts and labor

### Current Branch

- Atheros Adaptive Radio
- Atheros Dynamic Turbo
- Atheros Auto channel selection support
- 802.11e QoS w/bursting and aggregation
- 802.11h (DFS v1 and DFSv2 for FCC3, ETSI, and MKK4)
- Dynamic WDS with full SuperAG and 802.11e support
- 802.11i

### Certification



CE Marking  
Available



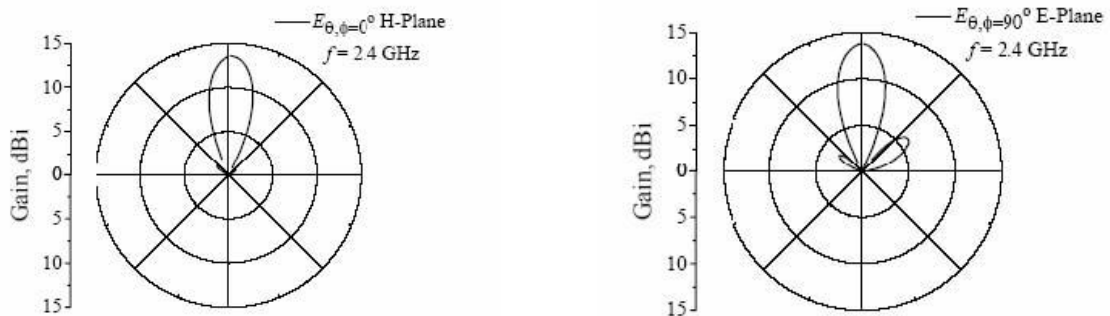
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### 2.4GHz Antenna Patterns



### 5GHz Antenna Patterns

