**EC SYSTEM ECM-S6-A19Rx**

**6.0 – 6.4 GHz**

**Description**

**EC SYSTEM** Medium-capacity lightweight Integrated 19 dBi Dual-polarization Antenna Point-to-Point Backhaul

**Performance**

- 8 Mbps (up to 8 Mbps net)
- 20 Mbps (up to 20 Mbps net)
- 50 Mbps (up to 50 Mbps net)
- 300 Mbps (up to 180 Mbps net)
- License upgradeable

**Distances**

- up to 5-10 km

**Radio**

- Radio technology: MIMO 2x2 with OFDM 64/128
- Modulation types: BPSK ½ to QAM64 5/6
- Transmit power: up to 23 dBm
- Receiver sensitivity: -67...-97 dBm
- Frequency bands: 6.0-6.4 GHz
- Channel bandwidth: 5/10/20/40 MHz
- 19 dBi dual-pol integrated antenna

**Wired Interfaces**

- 1x Fast Ethernet (10/100 Base-T) RJ-45 connector

**Power Consumption**

- Consumption:
  - Up to 7 Watts
- Power options:
  - 110-240 VAC @ 50/60 Hz
  - +9..56 VDC

**Form Factor and Dimensions**

- Outdoor Unit (ODU):
  - 207 x 207 x 67 mm, 1.0 kg
- Indoor Unit (IDU-CPE): 85 x 76 x 36 mm, 0.15 kg

**Part Number Options**

<table>
<thead>
<tr>
<th>Option</th>
<th>Output Power</th>
<th>Option Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECM-S6-A19R</td>
<td>200</td>
<td>L8M 8 Mbps</td>
</tr>
<tr>
<td></td>
<td>2x200</td>
<td>L20M 20 Mbps</td>
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<tr>
<td></td>
<td></td>
<td>L50M 50 Mbps</td>
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<tr>
<td></td>
<td></td>
<td>300M 180 Mbps</td>
</tr>
</tbody>
</table>

**Part Number Example**

ECM-S6-A19R200-300M
Features

RADIO
- Voice/RTP Aware Superpacketing
  - to minimize jitter and latency for multimedia applications
- DFS
  - intelligent search for a clearest channel and interference avoidance
  - radar detection (depending on regulatory domains)
  - continuous background spectrum monitoring (for instant DFS enabled units only)
  - seamless channel change in case of congestion or radar detection (for Instant DFS enabled units only)
- Automatic Bitrate Control
  - to ensure a 100% stable link irrelevant of changes in external conditions
- Automatic Transmit Power Control
  - to track and keep optimal input signal level to maximize performance for each link and reduce overall interference within a given transmit power and ERP limitations
- Automatic Distance Learning
  - to optimize performance for any link distances from dozens of meters to 100 km and above
- Channel Time Adjustment
  - to improve performance on heavily-loaded links
- Spectrum Analyzer mode
  - interference detection
  - non-invasive spectrum analysis (for Instant DFS enabled units only)
- Channel testing tools
  - channel performance measurement
  - advanced diagnostics

MANAGEMENT FEATURES
- Web-interface
  - basic settings
  - channel diagnostics: spectrum analysis, antenna alignment, channel throughput measurement
  - unit and RF links monitoring
  - maintenance: firmware upgrade, license and configuration import/export
  - tech support diagnostic reports generation
  - command-line access
- Command-line Interface for in-depth configuration and diagnostics accessible via:
  - telnet
  - serial port
  - remote shell
  - SNMPv1 / SNMPv3 support (MIB II, private MIB)
  - Configurable SNMP Traps

NETWORKING
- Ethernet-over-IP tunneling
- ARP protocol support
- MAC/IP filtering
- Full-fledged 2nd layer switch:
  - Transparent transport for any type of Ethernet traffic including MPLS, stacked VLANs, etc.
  - Multiple switching groups
    - Full VLAN support including Q-in-Q (IEEE 802.1q and 802.1ad)
    - STP/STP support
    - IGMP Snooping with Querier mode
    - Trunk groups support
  - RIPv2 / OSPFv2 / static routing
  - Tunneling
    - Ethernet-over-IP, IP-over-IP
  - L2/L3 Firewall
  - NAT traversal (Nat, IPtables)
  - IPsec (IP security)
  - DHCP client/server/relay

QUALITY-OF-SERVICE
With many QoS permutations, QoS implementation works transparently in the network based on IEEE802.1p standard as well as ToS/Diffserv, guaranteeing optimal performance under any load conditions and lowest jitter/delay for priority traffic.

Quality-of-Service features:
- 16 priority queues
- IEEE 802.1p support
- IP TOS / DiffServ support
- Full voice support
- Traffic limiting (absolute, relative, mixed)
- Traffic redirection

STANDARD COMPLIANCE
- Radio
  - EN 301 893 v.1.5.1
  - EN 302 502 v.1.2.1
  - FCC Part 15 Class B
  - EMV
    - EN 301 409-1
    - EN 301 409-17
  - FCC Part 15 Class B
  - Safety
    - EN 60 950-1:2006
  - RoHS
    - Directive 2002/95/EC

SECURITY FEATURES
- Storm / flood protection
- Password protection
- Protocol messages encryption
- Secure command-line access via SSH protocol

ENVIRONMENTAL
- Outdoor Units:
  - -40 to +60C, 100% humidity, condensing
- Indoor Units:
  - 0 to +40C, 95% humidity, non-condensing