**Description**

EC SYSTEM High-capacity Reduced Form Factor Integrated 19 dBi Antenna Subscriber Terminal

**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 5-7 km

**Radio**

- Transmit power: up to 23 dBm
- Receiver sensitivity: -67...-97 dBm
- Frequency bands: 3.4 - 3.7 GHz
- Channel bandwidth: 3.5/5/7/10/14/15/20/28/30/40 MHz
- 19 dBi dual-pol integrated antenna

**Wired Interfaces**

- 2x Fast Ethernet (10/100 Base-T) RJ-45 connector, PoE output

**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>Part Number Options</th>
<th>ECM-S3T-A19R200</th>
<th>Option Output Power 2x200</th>
<th>Option</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>L8M</td>
<td>8 Mbps</td>
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<tr>
<td></td>
<td>L20M</td>
<td>20 Mbps</td>
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<td></td>
<td>L300M</td>
<td>300 Mbps</td>
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</tbody>
</table>

**Part Number Example**

ECM-S3T-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 domain)
- 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 EIRP 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:
  - secure shell (SSH)
  - telnet
  - serial port
  - remote shell
  - SNMPv1 / SNMPv2 support (MB 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/VTP support
  - IGMP Snooping with Querier mode
  - Trunk groups support
  - RIPv2 / OSPFv2 /static routing
  - Tunneling
    - Ethernet-over-IP, IP-over-IP
    - L2/L3 Firewall
    - NAT(multipool, H.323-aware)
  - 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/delays 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

MAC
- Dynamic adaptive Polling
  - Centralized marker grant mode
  - Dynamically takes into account channel activity
  - Permanent channel testing
- Pseudo-radio Interface
  - unique Wireless feature to join Wireless networks via 3rd party equipment (Wired Ethernet segments, IPclouds)
- Automatic over-the-air firmware upgrade

STANDARD COMPLIANCE
- Radio
  - EN 301 893 v1.5.1
  - EN 302 502 v1.2.1
  - FCC part 15.247
- EMC
  - EN 301 489-1
  - EN 301 489-17
  - 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...+60°C, 100% humidity, condensing
- Indoor Unit:
  - 0...+40°C, 95% humidity, non-condensing