EC SYSTEM ECM-H5B-CR500
4.9 - 6.0 GHz

Description
EC SYSTEM Connectorised External Antenna High-capacity Base Station

Performance
up to 240 Mbps net throughput

Distances
20 km

Radio
• Transmit power: up to 27 dBm
• Receiver sensitivity: -67..-101 dBm
• Frequency bands: 4.9-6.0 GHz
• Channel bandwidth: 5/10/20/40 MHz
• 2 x N-type (Female) connectors
• Instant DFS support (optional)

Wired Interfaces
• Gigabit Ethernet port (10/100/1000 Base-T) RJ-45 connector
• Serial port (RS-232)

Power Consumption
Up to 12 Watts
• 110-240 VAC @ 50/60 Hz
• 48 VDC

Form Factor and Dimensions
• Outdoor Unit (ODU):
  240 x 240 x 51 mm, 2.3 kg
• Indoor Unit (IDU-BS): 124 x 72 x 38 mm, 0.3 kg

Part Number Options
ECM-H5B-CR

<table>
<thead>
<tr>
<th>Instant DFS (yes/no)</th>
<th>Output Power</th>
<th>Option</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>H5BD</td>
<td>2x500</td>
<td>L80M</td>
<td>80 Mbps</td>
</tr>
<tr>
<td>H5B</td>
<td></td>
<td>300M</td>
<td>300 Mbps</td>
</tr>
</tbody>
</table>

Part Number Example
ECM-H5B-CR500-300M
Features

RADIO
- Voice/RTF Aware Superpacketing
  - to minimize jitter and latency for multimedia applications
- DFS
  - intelligent search for a cleanest channel
  - interframe avoidance
- Continous background spectrum monitoring
  - for instant DFS enabled units only
- seamless channel change in case of congestion or radio 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:
  - secure shell (SSH)
  - 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-routed 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 (multipool, H.323- aware)
- DHCP, client/server/relay

QUALITY-OF-SERVICE
With many QoS permutations, QoS implementation works transparently in the network based on IEEE 802.1p 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, IP clouds)
  - Automatic over-the-air firmware upgrade

STANDARD COMPLIANCE
- Radio
  - EN 301 893 v1.3.1
  - 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 to +60C, 100% humidity, condensing

- Indoor Units:
  - 8 to +40C, 95% humidity, non-condensing