# PRODUCT DATASHEET

**EC SYSTEM ECM-P6-A24R500-500M**

**EC SYSTEM** Profi high-capacity Integrated 24 dBi Dual-polarization Antenna

**Point-to-Point backhaul**

## Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Up to 480 Mbps</th>
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<tbody>
<tr>
<td>Distances</td>
<td>30+ km</td>
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## Radio

- Radio technology: MIMO 2x2 (Cyclic single carrier)
- Modulation types: from QPSK to QAM256, as well as QAM1024
- Transmit power: up to 27 dBm (average, per Tx chain) @ QPSK to QAM256. Up to 24 dBm @ QAM1024
- Receiver sensitivity: -94 dBm @ 10 MHz, QPSK
- Frequency bands: 6.0-6.4 GHz
- Channel bandwidth: 10, 20, 40 MHz

## Wired Interfaces

- 2x 10/100/1000 Base-T copper ports, RJ-45
- SFP port

## Power Consumption

- Consumption: up to 30 Watts
- Power options:
  - 90-240 VAC~ @ 50/60 Hz
  - 43...56 VDC

## Form Factor and Dimensions

305 x 305 x 66 mm, 2.2 kg

## Part Number Options

ECM-P6-A24R500-500M
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 irrelevent 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 with 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 / SNMPv2 support
  - (MB II, private WB)
- Configurable SNMP Traps

NETWORKING
- Ethernet-over-IP tunneling
- ARP protocol support
- MAC3P filtering
- Full-flaged 2nd layer switch
- Transparent transport for any type of Ethernet traffic including MPLS, stacked VLAN, etc.
- Multiple switching groups
- Full VLAN support including Q-in-Q (IEEE 802.1q and 802.1ad)
- STP/GSTP support
- IGMP Snooping with Querrier mode
- Trunk groups support
- RIPv2 / OSPFv2 static routing
- Tunneling
  - Ethernet-over-IP, L2-L3 Firewall
- NAT/multicast, 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 bad 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

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 v1.5.1
  - EN 302 562 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