

# AltoPlex D423

## 3-Port 60GHz Outdoor Wireless Network Distribution Node/Client

The D423 is a 60GHz radio with integrated 128-element beamforming antenna that provides best-in-class link resiliency and full capacity range in a compact form factor. It supports PtMP and can be configured as either a distribution node or client for maximum flexibility. The D423 also features 3 built-in gigabit RJ-45 Ethernet ports, two of which support PoE output for additional devices.

The D423 is carrier-grade, manufactured in the USA and features IP67 weather-sealing for reliable operation outdoors and in harsh environments.



### High Capacity

Up to 2Gbps aggregate.

### Low Latency

Sub 1ms latency.

### Adaptive Beamforming

128-element, phased array, beamforming antenna with 90° azimuth and 40° elevation scanning for maximum link resiliency and ranges up to 1312ft (400m) MCS-9.

### Gigabit Ethernet with PoE

- 1 gigabit RJ-45 PoE input
- 2 gigabit RJ-45 PoE outputs for connecting cameras, Wi-Fi APs, or collocated Altowav radios.

### Wi-Fi Management and GPS Location

Connect locally using the Wi-Fi network interface to manage the radio directly. Easily locate the radio using the integrated GPS receiver.

### Dense Network Ready

60GHz spectrum with beamforming and TDMA for extremely reliable dense networks.

### Security

AES 128 encryption with automatic secure key distribution.

### Carrier-Grade

IP67 rated enclosure and built in USA for reliable, long-term operation in the field.

### Simple and Rapid Installation

Altowav's antennas auto-align for easy installs, and our Open API and native layer 2 architecture enable easy integration into operators' existing networks.

# Specifications

## SYSTEM

|                                      |                                                                                                 |
|--------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Configuration</b>                 | Point-to-Point and Point-to-Multipoint Distribution Node or Client                              |
| <b>Frequencies</b>                   | 57 - 66GHz                                                                                      |
| <b>Channel Bandwidths</b>            | 4 non-overlapping 2.16GHz channels                                                              |
| <b>Channel Access</b>                | TDMA/TDD                                                                                        |
| <b>Modulation and Coding Schemes</b> | 12 levels, adaptive—MCS-0 (BPSK) to MCS-12 (16QAM)                                              |
| <b>Antenna</b>                       | Integrated 128-element beamforming antenna with wide scanning range: 90° azimuth, 40° elevation |
| <b>Maximum EIRP</b>                  | 40dBm                                                                                           |
| <b>Range</b>                         | Up to 1312ft (400m) MCS-9                                                                       |
| <b>Capacity</b>                      | Up to 2Gbps aggregate                                                                           |
| <b>Ethernet Frame Type</b>           | Transparent bridging of all Ethernet types including VLAN and VLAN stacking                     |
| <b>Latency</b>                       | < 1ms                                                                                           |
| <b>L2 switching</b>                  | Complete Layer 2 switching, including VLAN support                                              |
| <b>Security</b>                      | AES 128                                                                                         |
| <b>PtMP Remote Support</b>           | Up to 15 client units +1 distribution node connection                                           |
| <b>Wi-Fi Management Interface</b>    | 2.4GHz IEEE 802.11b/g/n wireless management interface (not a data access point)                 |
| <b>Location</b>                      | Integrated GPS receiver to locate individual radios                                             |

## CONNECTIVITY

|                          |                                                                             |
|--------------------------|-----------------------------------------------------------------------------|
| <b>Ethernet</b>          | 3 x 1GbE RJ45                                                               |
| <b>Voltage</b>           | 56VDC                                                                       |
| <b>PoE Input</b>         | 802.3bt, Type 4, 90W                                                        |
| <b>PoE Output</b>        | 2 x Active, 802.3bt, Type 3, 75W total with up to 60W Max for a single port |
| <b>Power Consumption</b> | 12W maximum (not including PoE output)                                      |

## MANAGEMENT

|                   |                                                   |
|-------------------|---------------------------------------------------|
| <b>Management</b> | Web GUI, CLI, REST API and AltoCommand (optional) |
|-------------------|---------------------------------------------------|

## MECHANICAL

|                               |                                                                                                                                           |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dimensions (H x W x D)</b> | 6.88" x 6.88" x 1.62"<br>(174.75 x 174.75 x 41.15mm)                                                                                      |
| <b>Weight</b>                 | 1.59 lbs (720 grams)                                                                                                                      |
| <b>Operating Temperature</b>  | -40° to +131°F (-40° to +55°C)<br>-22°F (-30°C) cold start                                                                                |
| <b>Casing</b>                 | Die-cast powder-coated aluminum chassis with PC-ABS radome                                                                                |
| <b>Ingress Protection</b>     | IP67                                                                                                                                      |
| <b>Regulatory</b>             | FCC, ISSED, CE (pending)                                                                                                                  |
| <b>ESD</b>                    | IEC EN 61000-4-2                                                                                                                          |
| <b>EMC</b>                    | IEC EN 61000-4-3                                                                                                                          |
| <b>Mounting</b>               | Integrated wall and pole mount supporting .5" band clamps. Additional mounting accessories supporting elevation adjustment are available. |

## MODEL NUMBER

|                     |                                                     |
|---------------------|-----------------------------------------------------|
| <b>AW3-D423-C-W</b> | D423 3-Port 60GHz Network Distribution/Client Radio |
|---------------------|-----------------------------------------------------|

## DISTRIBUTION NODE/CLIENT MODEL NUMBERS

|                      |                                                            |
|----------------------|------------------------------------------------------------|
| <b>AW3-D621-C-W</b>  | D621 60GHz Network Distribution/High-Capacity Client Radio |
| <b>AW3-C420-C-PW</b> | C420 60GHz Extended Range Client Radio                     |
| <b>AW3-C410-C-PW</b> | C410 60GHz Standard Range Client Radio                     |

## ACCESSORIES

|                           |                                                                                                    |
|---------------------------|----------------------------------------------------------------------------------------------------|
| <b>AX-P-IN-BT-5G-US</b>   | Indoor 802.3bt (90W) 5GbE PoE injector with 0.8m US power cord                                     |
| <b>AX-AW3-MT-WALL</b>     | Wall standoff bracket that enables azimuth adjustment                                              |
| <b>AX-AW3-EXT-MOUNT</b>   | Extended range pole mounting kit for AltoPlex radios, enabling up to +60/-45° elevation adjustment |
| <b>AX-PSW-OD-4AT-4C25</b> | Outdoor 4 port PoE 2.5GbE switch                                                                   |
| <b>AX-PSW-OD-MOUNT</b>    | Pole mount bracket for Outdoor PoE switch                                                          |