

# 60 GHz cnWave V5000

## Distribution Node

### QUICK LOOK:

- Supports 57 to 66 GHz
- Dual-sector with 280° coverage
- Up to 7.2 Gbps (1.8 Gbps DL and 1.8 Gbps UL per sector). Channel bonding typically doubles capacity
- TDMA/TDD channel access and Network Synchronization
- 802.11ay technology with Terragraph certification



### DESIGNED FOR HIGH-SPEED AND HIGH-DENSITY DEPLOYMENTS

Cambium Networks' 60 GHz cnWave solution provides easy, fast and cost-effective wireless gigabit connectivity for edge access and/or high-capacity backhaul for edge access solutions at a significantly lower TCO than fiber infrastructure. Service providers and enterprises now have access to gigabit for business and residential connectivity, backhaul for Wi-Fi access or LTE/5G small cell. Certified for Facebook Terragraph, cnWave solutions are highly efficient at handling high-density deployments in cities and suburban areas.

V5000 is featured with two sectors covering up to 280 degrees with beamforming. A single V5000 can connect up to four other distribution nodes or up to 30 client nodes. V5000 can be used for PTP and PMP configurations.



### CLOUD AND ON-PREMISES MANAGEMENT

60 GHz cnWave operates with Cambium Networks' cnMaestro management system. cnMaestro™ is a cloud-based or on-premises software platform for secure, end-to-end network control. cnMaestro wireless network manager simplifies device management by offering full network visibility and zero-touch provisioning. View and perform a full suite of wireless network management functions in real time. Optimize system availability, maximize throughput and meet emerging needs of business and residential customers.

## 60 GHz cnWave V5000 Distribution Node

| Client Node Model                     |        |          |
|---------------------------------------|--------|----------|
|                                       | V1000  | V3000    |
| <b>Maximum Throughput in DL or UL</b> | 1 Gbps | 3.8 Gbps |
| <b>Maximum EIRP</b>                   | 38 dBm | 60.5 dBm |

### Specifications

#### Spectrum

|                          |                              |
|--------------------------|------------------------------|
| <b>Frequency Range</b>   | 57 to 66 GHz in a single SKU |
| <b>Channel Width</b>     | 2.16 GHz, 4.32 GHz*          |
| <b>Carrier Bonding*</b>  | Up to 2 adjacent channels    |
| <b>Mode of Operation</b> | PMP or PTP                   |

#### Interface

|                           |  |
|---------------------------|--|
| <b>Channel Access</b>     | TDMA/TDD   |
| <b>Ethernet Interface</b> | 1 x 100/1000/10G BaseT with PoE In,<br>1 x 100/1000 BaseT with 802.3at PoE Out,<br>1 x SFP+ 1G and 10G |

#### Networking

|                            |   |
|----------------------------|---|
| <b>Protocols Supported</b> | IPv4, IPv6, Layer2 Bridge, Layer3 IPv6 Routing, Open/R mesh |
| <b>Network Management</b>  | cnMaestro, HTTP, HTTPS, SNMP v2c & v3                       |
| <b>MTU</b>                 | 4,000 bytes   |
| <b>VLAN*</b>               | 802.1ad (QinQ), 802.1Q with 802.1p priority                 |
| <b>QoS*</b>                | 4 Level QoS, DSCP and VLAN Tag                              |

#### Security

|                          |                        |
|--------------------------|------------------------|
| <b>Encryption</b>        | 128-bit AES            |
| <b>Firmware Security</b> | Signed Firmware Images |

\* Available in future release

#### Performance

|  |                                 |
|--|---------------------------------|
| <b>Modulation &amp; Coding Schemes</b> | MCS-0 (BPSK) to MCS-12 (16-QAM) |
| <b>Latency</b>                         | < 1 ms                          |
| <b>Maximum EIRP</b>                    | 38 dBm                          |

#### Antenna

|                               |                                     |
|-------------------------------|-------------------------------------|
| <b>Gain</b>                   | 22.5 dBi                            |
| <b>Type</b>                   | Integrated                          |
| <b>Beamforming Scan Range</b> | +/- 140° azimuth, +/- 20° elevation |
| <b>Beam Width</b>             | 12°                                 |

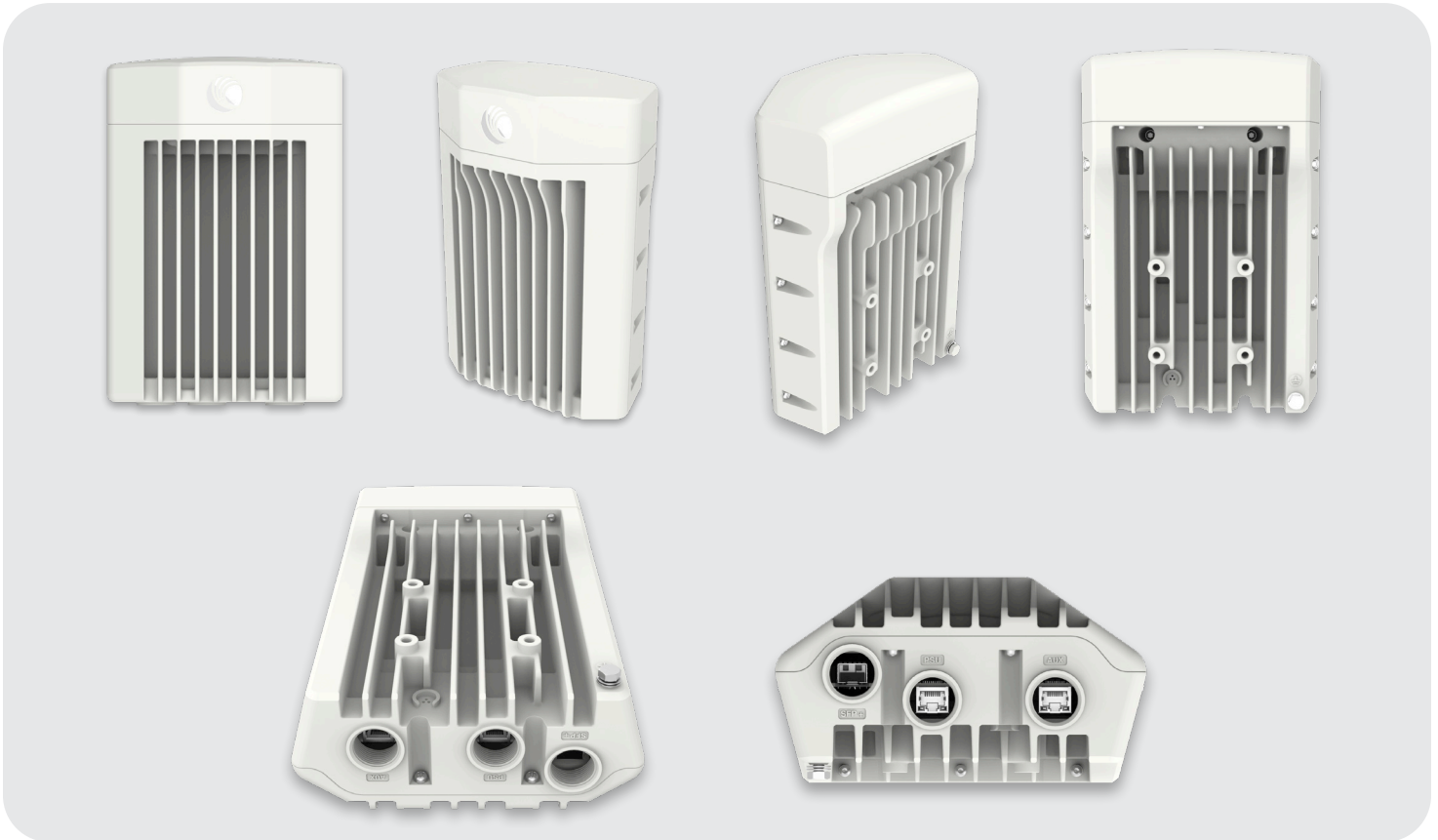
#### Powering

|                          |  |
|--------------------------|--|
| <b>Type</b>              | Passive PoE (42-57 V)  |
| <b>Power Consumption</b> | 65 W with AUX PoE Out in use,<br>35 W without AUX PoE Out in use |

#### Physical

|                                  |   |
|----------------------------------|---|
| <b>Environmental</b>             | IP66/67   |
| <b>Temperature</b>               | -40°C to 60°C (-40°F to 140°F)                          |
| <b>Mean Time Between Failure</b> | > 40 years  |
| <b>Weight</b>                    | < 4 kg (8.8 lbs)  |
| <b>Dimensions</b><br>H x W x D   | 280 mm x 185 mm x 102 mm<br>(11.0 in x 7.3 in x 4.0 in) |
| <b>Wind Survival</b>             | 200 km/h (124 mi/h)                                     |

## 60 GHz cnWave V3000 Client Node



### Ordering Information

|                     |  |
|---------------------|--|
| <b>C600500A004A</b> | 60 GHz cnWave V5000 Distribution Node                            |
| <b>C600500A005A</b> | 60 GHz cnWave V5000 Distribution Node - Israel Only              |
| <b>C000000L136A</b> | Universal Wall Mount Bracket                                     |
| <b>C000000L137A</b> | Universal Pole Mount Bracket for 1 inch to 3 inch diameter poles |

**NOTE:** Power Supply Unit must be ordered separately.

### ABOUT CAMBIUM NETWORKS

Cambium Networks empowers millions of people with wireless connectivity worldwide. Its wireless portfolio is used by commercial and government network operators as well as broadband service providers to connect people, places and things. With a single network architecture spanning fixed wireless and Wi-Fi, Cambium Networks enables operators to achieve maximum performance with minimal spectrum. End-to-end cloud management transforms networks into dynamic environments that evolve to meet changing needs with minimal physical human intervention. Cambium Networks empowers a growing ecosystem of partners who design and deliver gigabit wireless solutions that just work.