

**Technical Note** 

## **ASWipLL 5.8**

Wireless IP-Based Local Loop System

# Third-Party External Antennas for use in FCC Markets (5.8 GHz)

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## **Contents**

| 1. | Introduction                     | 1 |
|----|----------------------------------|---|
|    |                                  |   |
| _  | Futamed Antonna Charlingtians    |   |
| Z. | External Antennas Specifications | 1 |

#### 1. Introduction

This document provides technical specifications of third-party external antennas for ASWipLL 5.8 operating in the 5.8 GHz band.

### 2. External Antennas Specifications

| Antenna P/N<br>Type                      | MT-<br>484027/<br>NV | MT-<br>484027/<br>NH | MT-<br>484034/NH | MT-<br>484034/NV | MT-<br>484026/NV    | MT-<br>484033/NH |
|--|----------------------|----------------------|------------------|------------------|---------------------|------------------|
| Electrical:                              |                      |                      | Preliminary      |                  |                     |                  |
| Frequency band (GHz)                     | 5.15-5.875           | 5.15-5.875           | 5.15-5.875       | 5.15-5.875       | 5.15-5.875          | 5.15-5.875       |
| Gain (dBi)                               | 14                   | 14                   | 15               | 15               | 16                  | 16.5             |
| Polarity                                 | Vertical             | Horizontal           | Horizontal       | Vertical         | Vertical            | Horizontal       |
| Port to Port isolation (dB min.)         |                      |                      |                  |                  |                     |                  |
| AZ/EL BW (degree)                        | 86/10                | 90/10                | 120/6            | 120/6            | 60/10               | 60/11            |
| ETSI                                     | CS3                  | CS2                  | CS3              | CS3              | CS3                 | CS3              |
| Sidelobe Level (dB max.)                 | -30@-<br>/+135Deg    | -28@-<br>/+135Deg    | CS3              | CS3              | -30@-/+90<br>Deg    | -25@-/+90<br>Deg |
| Cross<br>Polarization<br>Level (dB max.) | -25                  | -25                  | CS3              | CS3              | -24                 | -23              |
| Front to Back<br>Ratio (dB max.)         | -30                  | -30                  | CS3              | CS3              | -30                 | -30              |
| VSWR 50 Ohm                              | 1.7:1                | 1.7:1                | 1.7:1            | 1.7:1            | 1.7:1               | 1.7:1            |
| Maximum Input<br>Power                   | 6                    | 6                    | 6                | 6                | 6                   | 6                |
| Additional<br>Features                   | Cosecant<br>Sqrd     | Cosecant<br>Sqrd     | Low cost         | Low cost         | Cosecant<br>Sqrd    | Low cost         |
|  | 1st Null >-<br>15dB  | 3rd Null<br>>-16dB   |                  |                  | 1st Null >-<br>15dB |                  |
| Mechanical:                              |                      |                      |                  |                  |                     |                  |
| Size (mm)                                | 436x250x1            | 436x250x<br>10       | 550x200x60       | 550x250x17       | 436x250x10          | 350x150x30       |
| Weight (kg<br>max.)                      | 2.2                  | 2.2                  | 2                | 1.5              | 2.2                 | 1.5              |
| Connector                                | N-Type<br>Female     | N-Type<br>Female     | N-Type<br>Female | N-Type<br>Female | N-Type<br>Female    | N-Type<br>Female |
| Mounting kit                             | MT-<br>120019        | MT-<br>120019        | MT-120019        | MT-120019        | MT-120019           | MT-120019        |

| Antenna<br>P/N                              | MT-<br>484033/NV | MT-<br>484032/NV  | MT-<br>485005/VHN    | MT-<br>485001    | MT-<br>485028/N       | MT-<br>485002           |
|---|------------------|-------------------|----------------------|------------------|-----------------------|-------------------------|
| Туре  |                  |                   |                      |                  |                       |                         |
| Electrical:                                 |                  |                   |                      |                  |                       |                         |
| Frequency band (GHz)                        | 5.15-5.875       | 5.15-5.875        | 5.25-5.875           | 5.15-5.875       | 5.15-5.875            | 5.15-5.875              |
| Gain (dBi)                                  | 16.5 -/+0.5      | 17                | 18                   | 19               | 22                    | 23                      |
| Polarity                                    | Vertical         | Vertical          | Dual V+H             | Linear V/H       | Linear V/H            | Linear V/H              |
| Port to Port<br>isolation (dB<br>min.)      |                  |                   | 30                   |                  |                       |                         |
| AZ/EL BW (degree)                           | 60/11            | 90/7              | 17/17                | 18/18            | 9/9                   | 9/9                     |
| ETSI  | CS3              | CS3               | TS3                  |                  | TS3                   | TS3                     |
| Sidelobe<br>Level (dB<br>max.)              | -25@-/+90<br>Deg | -25@-<br>/+135Deg | -12                  | -12              | TS3                   | TS3                     |
| Cross<br>Polarization<br>Level (dB<br>max.) | -28              | -20               | -20                  | -23              | TS3                   | -28                     |
| Front to<br>Back Ratio<br>(dB max.)         | -35              | -30               | -30                  | -35              | -35                   | -32                     |
| VSWR 50<br>Ohm                              | 1.7:1            | 1.7:1             | 1.7:1                | 1.7:1            | 1.7:1                 | 1.7:1                   |
| Maximum<br>Input Power<br>(Watt)            | 6                | 6                 | 6                    | 6                | 6                     | 6                       |
| Additional<br>Features                      | Low cost         | Low cost          | Dual pol.            | Broadband        | Broadband<br>Low cost | Broadband<br>High Grade |
| Mechanical:                                 |                  |                   |                      |                  |                       |                         |
| Size (mm)                                   | 350x150x30       | 530x260x11        | 190x190x30           | 190x190x30       | 305x305x15            | 305x305x15              |
| Weight (kg<br>max.)                         | 1.5              | 2.5               | 0.7                  | 0.7              | 1.5                   | 1.5                     |
| Connector                                   | N-Type<br>Female | N-Type<br>Female  | 2 x N-Type<br>Female | N-Type<br>Female | N-Type<br>Female      | N-Type<br>Female        |
| Mounting kit                                | MT-120019        | MT-120019         | MT-120018/A          | MT-<br>120018/A  | MT-120018             | MT-120018               |