Description: Ultra-thin white radome antenna for i-DAS

PART NUMBER: DASUTWCxxx

Features:

- Ultra-Thin
- White radome
- Industry leading -155 dBC at 2 x 20W (2 x 43dBm) PIM rating
- Covers cellular bands and WiFi from 608 through 2700 MHz
- Available with N, Mini-DIN and 4.3-10 female connector
- RoHS Compliant
- Patent Pending design

Applications:

- Ultra-Thin structure of products allow installation in places where Aesthetics is important
- White structure of antenna make this product easily camouflage onto ceiling
- In-building DAS systems requiring best PIM

All dimensions are in mm / inches
Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

This document covers all product variants of the following product family:

Antenna and accessory products covered in this documents are following:

<table>
<thead>
<tr>
<th>Pulse Part Number</th>
<th>Connector Type</th>
<th>Reflector</th>
</tr>
</thead>
<tbody>
<tr>
<td>DASUTWC500NF</td>
<td>N Female</td>
<td>Not Included</td>
</tr>
<tr>
<td>DASUTWC500MD</td>
<td>4.1-9.5 Mini-DIN Female</td>
<td>Not Included</td>
</tr>
<tr>
<td>DASUTWC5004310</td>
<td>4.3-10 DIN Female</td>
<td>Not Included</td>
</tr>
<tr>
<td>DASUTWCR500NF</td>
<td>N Female</td>
<td>Included</td>
</tr>
<tr>
<td>DASUTWCR500MD</td>
<td>4.1-9.5 Mini-DIN Female</td>
<td>Included</td>
</tr>
<tr>
<td>DASUTWCR5004310</td>
<td>4.3-10 DIN Female</td>
<td>Included</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessory Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DASUTCCACC1</td>
<td>Reflector only (not antenna)</td>
</tr>
</tbody>
</table>

Reflector: DASUTCCACC1
Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

MECHANICAL DRAWING

DASUTWC500NF, DASUTWC500MD and DASUTWC5004310
i.e. antennas without reflector DASUTCCACC1
**Description:** UltraThin, clear radome antenna for iDAS  

**Series:** CLARITY  

**PART NUMBER:** DASUTWCxxx

---

### ELECTRICAL SPECIFICATIONS

**DASUTWC500NF, DASUTWC500MD and DASUTWC5004310**  
**i.e. antennas without reflector DASUTCCACC1**

<table>
<thead>
<tr>
<th>Specification</th>
<th>DASUTWC500NF</th>
<th>DASUTWC500MD</th>
<th>DASUTWC5004310</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>608-960 / 1695-2200 / 2300-2700MHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal Impedance</td>
<td>50Ω</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VSWR (698-960MHz)</td>
<td>2:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VSWR (1695-2700MHz)</td>
<td>2:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Peak Gain (608-960MHz)</td>
<td>4dBi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Peak Gain (1695-2200MHz)</td>
<td>6dBi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Peak Gain (2300-2700MHz)</td>
<td>6dBi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficiency (608-960MHz)</td>
<td>70%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficiency (1695-2200MHz)</td>
<td>65%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficiency (2300-2700MHz)</td>
<td>60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horizontal plane (th=45deg)</td>
<td>Omni</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPBW Vertical plane (608-960MHz)</td>
<td>100° Typ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPBW Vertical plane (1695-2200MHz)</td>
<td>130° Typ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPBW Vertical plane (2300-2700MHz)</td>
<td>130° Typ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum power input</td>
<td>40W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PIM at 2x20W</td>
<td>&lt;-155dBc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connector type</td>
<td>N-female,</td>
<td>4.1-9.5 Mini-DIN female or 4.3-10 DIN female</td>
<td></td>
</tr>
<tr>
<td>Cable type</td>
<td>Dia. 0.16” low loss, Low PIM, Plenum Rated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cable length [Inches/mm]</td>
<td>19.7” / 500mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

CHARTS
DASUTWC500NF, DASUTWC500MD and DASUTWC5004310
i.e. antennas without reflector DASUTCCACC1
Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

CHARTS

DASUTWC500NF, DASUTWC500MD and DASUTWC5004310
i.e. antennas without reflector DASUTCCACC1

Peak Gain
Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

CHARTS

DASUTWC500NF, DASUTWC500MD and DASUTWC5004310
i.e. antennas without reflector DASUTCCACC1

Radiation patterns, 608-960MHz

Issue:1651

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Series: CLARITY

Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

CHARTS

DASUTWC500NF, DASUTWC500MD and DASUTWC5004310

i.e. antennas without reflector DASUTCCACC1

Radiation patterns, 1695-2200MHz

Mid band elevation plane

Mid band conical azimuth plane @ 45deg elevation
Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

CHARTS

DASUTWC500NF, DASUTWC500MD and DASUTWC5004310
i.e. antennas without reflector DASUTCCACC1

Radiation patterns, 2300-2700MHz
Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

MECHANICAL DRAWING

DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310
i.e. antennas with reflector DASUTCCACC1
**Series: CLARITY**

**Description:** UltraThin, clear radome antenna for iDAS

**PART NUMBER:** DASUTWCxxx

---

**ELECTRICAL SPECIFICATIONS**

**DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310**

i.e. antennas with reflector DASUTCCACC1

<table>
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<tr>
<th>Specification</th>
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<tr>
<td><strong>Average Peak Gain (608-960MHz)</strong></td>
<td>7dBi</td>
</tr>
<tr>
<td><strong>Average Peak Gain (1695-2200MHz)</strong></td>
<td>7dBi</td>
</tr>
<tr>
<td><strong>Average Peak Gain (2300-2700MHz)</strong></td>
<td>5dBi</td>
</tr>
<tr>
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</tr>
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</tr>
<tr>
<td><strong>HPBW Vertical plane (608-960MHz)</strong></td>
<td>90° Typ</td>
</tr>
<tr>
<td><strong>HPBW Vertical plane (1695-2200MHz)</strong></td>
<td>25° Typ</td>
</tr>
<tr>
<td><strong>HPBW Vertical plane (2300-2700MHz)</strong></td>
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</tr>
<tr>
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<td>Plenum Rated</td>
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</tbody>
</table>
Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

CHARTS

DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310
i.e. antennas with reflector DASUTCCACC1

VSWR

Total efficiency

Issue:1651

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Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

CHARTS

DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310
i.e. antennas with reflector DASUTCCACC1
Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

CHARTS

DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310
i.e. antennas with reflector DASUTCCACC1

Radiation patterns, 608-960MHz
Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

CHARTS

DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310
i.e. antennas with reflector DASUTCCACC1

Radiation patterns, 1695-2200MHz

---

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Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

CHARTS

DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310
i.e. antennas with reflector DASUTCCACC1

Radiation patterns, 2300-2700MHz
### Description:
UltraThin, clear radome antenna for iDAS

**PART NUMBER:** DASUTWCxxx

### Series: CLARITY

#### PACKAGING

<table>
<thead>
<tr>
<th>Pulse Part Number</th>
<th>Reflector</th>
<th>Carton</th>
<th>Pallet</th>
</tr>
</thead>
<tbody>
<tr>
<td>DASUTWC500NF</td>
<td>Not Included</td>
<td>7 Antennas packed in a carton</td>
<td>18 cartons (126 antennas) stack on 1 pallet by air</td>
</tr>
<tr>
<td>DASUTWC500MD</td>
<td>Not Included</td>
<td>1 label on each box with quantity, part number, date code.</td>
<td>24 cartons (168 antennas) stack on 1 pallet by sea</td>
</tr>
<tr>
<td>DASUTWC5004310</td>
<td>Not Included</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Support Cardboard:**

**By Air**
- H = 1.3m < 1.5m
- 1 pallet = 18 Cartons
- 126 Antennas

**By Sea**
- H = 1.6m < 1.8m
- 1 pallet = 24 Cartons
- 168 Antennas
**Description:** UltraThin, clear radome antenna for iDAS

**PART NUMBER:** DASUTWCxxx

### PACKAGING

<table>
<thead>
<tr>
<th>Pulse Part Number</th>
<th>Reflector</th>
<th>Carton</th>
<th>Pallet</th>
</tr>
</thead>
<tbody>
<tr>
<td>DASUTWC500NF</td>
<td>Included</td>
<td>7 Antennas and 7 DASUTCCACC1 packed in a master carton 1 label on each box with quantity, part number, date code.</td>
<td>6 cartons (42 Antennas and 42 DASUTCCACC1) stack on 1 pallet by air 8 cartons (56 Antennas and 56 DASUTCCACC1) stack on 1 pallet by sea</td>
</tr>
<tr>
<td>DASUTWC500MD</td>
<td>Included</td>
<td>7 Antennas and 7 DASUTCCACC1 packed in a master carton 1 label on each box with quantity, part number, date code.</td>
<td>6 cartons (42 Antennas and 42 DASUTCCACC1) stack on 1 pallet by air 8 cartons (56 Antennas and 56 DASUTCCACC1) stack on 1 pallet by sea</td>
</tr>
<tr>
<td>DASUTWC5004310</td>
<td>Included</td>
<td>7 Antennas and 7 DASUTCCACC1 packed in a master carton 1 label on each box with quantity, part number, date code.</td>
<td>6 cartons (42 Antennas and 42 DASUTCCACC1) stack on 1 pallet by air 8 cartons (56 Antennas and 56 DASUTCCACC1) stack on 1 pallet by sea</td>
</tr>
</tbody>
</table>

**By Air**
- H=1.37m <1.5m
- 1 pallet = 6 Cartons
- 42 Antennas + 42 DASUTCCACC1

**By Sea**
- H=1.77m <1.8m
- 1 pallet = 8 Cartons
- 56 Antennas + 56 DASUTCCACC1

---

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**Description:** UltraThin, clear radome antenna for iDAS

**PART NUMBER:** DASUTWCxxx

### PACKAGING

<table>
<thead>
<tr>
<th>Accessory Part Number</th>
<th>Carton</th>
<th>Pallet</th>
</tr>
</thead>
<tbody>
<tr>
<td>DASUTCCACC1</td>
<td>16 Reflectors (DASUTCCACC1) packed in a carton 1 label on each box with quantity, part number, date code.</td>
<td>4 cartons (64 DASUTCCACC1) stack on 1 pallet by air 6 cartons (96 DASUTCCACC1) stack on 1 pallet by sea</td>
</tr>
</tbody>
</table>

**DASUTCCACC1**
- **Size:** Ø411.8mm
- **Weight:** 0.35Kg

**By Air**
- **H:** 1.2m < 1.5m
- 1 pallet = 4 Cartons = 64 DASUTCCACC1

**By Sea**
- **H:** 1.65m < 1.8m
- 1 pallet = 6 Cartons = 96 DASUTCCACC1

---

**Issue:** 1651

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Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

ASSEMBLY

Installation
1. Drill or cut a hole 2.5-2.75 inches (64-70 mm) diameter at the center of the ceiling tile or at the desired location. Slide the antenna cable/connector assembly through the hole. Slide the Collar and Nut onto the cable. Turn the Nut, tightening the antenna against the ceiling tile. See Figure 1.

Note: Fiberboard ceiling tile is soft; tighten the nut just enough to hold the antenna firmly in place.
If using the reflector, thread the reflector onto the Antenna Stem before attaching the connectors. See Figure 2.
Description: UltraThin, clear radome antenna for iDAS

PART NUMBER: DASUTWCxxx

ASSEMBLY

If using the reflector, thread the reflector onto the Antenna Stem before attaching the connectors. See Figure 2.

Figure 2

Additional Notes:

Some customers may choose to take into consideration the antenna propagation orientation during their planning process. The Horizontal rotation alignment mark (Phi=0 deg), along with data from iBwave file will support this.

For Optimum Performance, Metal ceiling rails need to be a minimum 200mm from the - antenna center as the antenna requires 400mm x 400mm space free of any metal.

- N Female: Maximum Torque 6.2-9.74 in-lbs (0.7-1.1Nm)
- Mini-DIN: Maximum torque 12-16 ft Lbs (17-22Nm)
- 4.3-10 DIN: Maximum torque 45-70 in-lbs (5-8Nm)