

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

**Series: CLARITY**

**PART NUMBER: DASUTCWxxxx**

### 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

Issue:1651

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Zeppelinstrasse 15  
Herrenberg, Germany  
Tel: 49 7032 7806 0

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Suzhou New District  
Jiangsu Province, Suzhou 215009 PR China  
Tel: 86 512 6807 9998



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

**Series: CLARITY**

**PART NUMBER: DASUTWCxxx**

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

Antenna and accessory products covered in this documents are following:

Pulse Part Number	Connector Type	Reflector
DASUTWC500NF	N Female	Not Included
DASUTWC500MD	4.1-9.5 Mini-DIN Female	Not Included
DASUTWC5004310	4.3-10 DIN Female	Not Included
DASUTWCR500NF	N Female	Included
DASUTWCR500MD	4.1-9.5 Mini-DIN Female	Included
DASUTWCR5004310	4.3-10 DIN Female	Included

Accessory Part Number	Description
DASUTCCACC1	Reflector only (not antenna)



Reflector: DASUTCCACC1

Description: UltraThin, clear radome antenna for iDAS

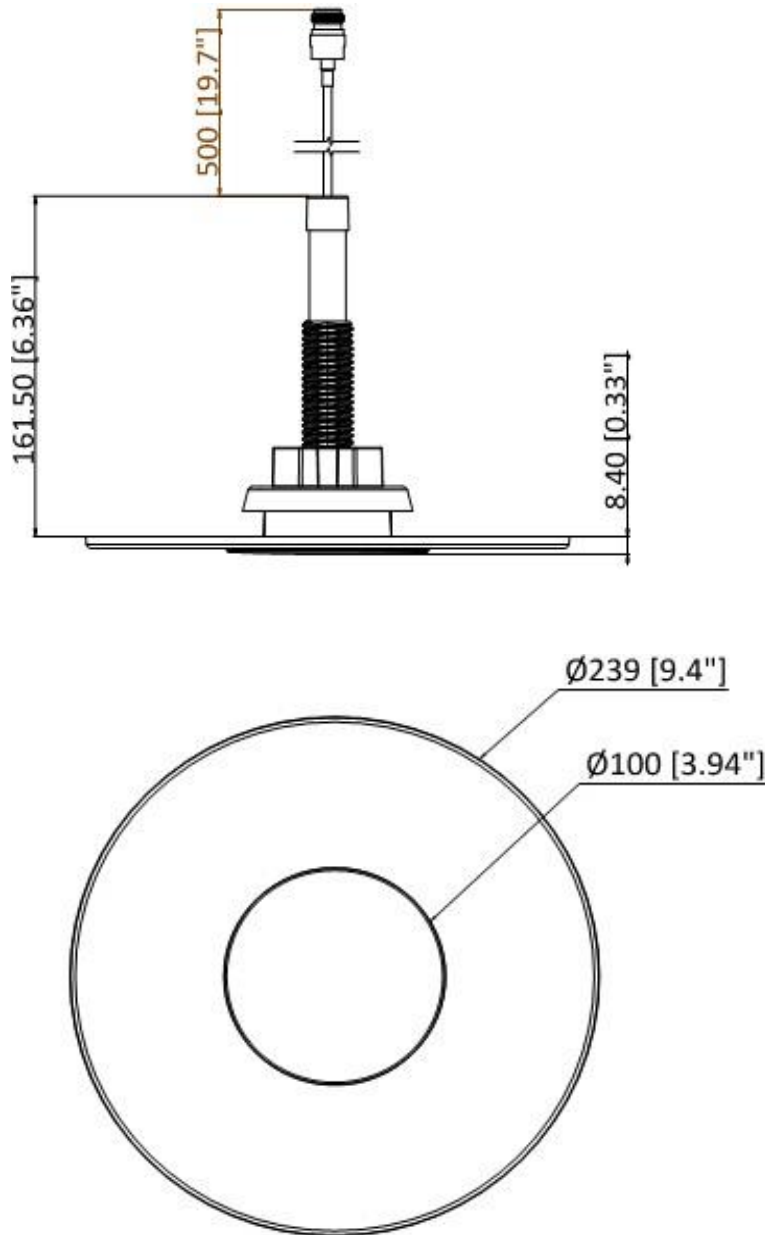
Series: CLARITY

PART NUMBER: DASUTWCxxx

MECHANICAL DRAWING

DASUTWC500NF, DASUTWC500MD and DASUTWC5004310

i.e. antennas **without** reflector DASUTCCACC1



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Description: UltraThin, clear radome antenna for iDAS

Series: CLARITY

PART NUMBER: DASUTWCxxx

**ELECTRICAL SPECIFICATIONS**

**DASUTWC500NF, DASUTWC500MD and DASUTWC5004310**

**i.e. antennas without reflector DASUTCCACC1**

Frequency	608-960 / 1695-2200 / 2300-2700MHz
Nominal Impedance	50Ω
VSWR (698-960MHz)	2:1
VSWR (1695-2700MHz)	2:1
Average Peak Gain (608-960MHz)	4dBi
Average Peak Gain (1695-2200MHz)	6dBi
Average Peak Gain (2300-2700MHz)	6dBi
Efficiency (608-960MHz)	70%
Efficiency (1695-2200MHz)	65%
Efficiency (2300-2700MHz)	60%
Horizontal plane (th=45deg)	Omni
HPBW Vertical plane (608-960MHz)	100° Typ
HPBW Vertical plane (1695-2200MHz)	130° Typ
HPBW Vertical plane (2300-2700MHz)	130° Typ
Maximum power input	40W
PIM at 2x20W	<-155dBc
Connector type	N-female, 4.1-9.5 Mini-DIN female or 4.3-10 DIN female
Cable type	Dia. 0.16" low loss, Low PIM, Plenum Rated
Cable length [Inches/mm]	19.7" / 500mm

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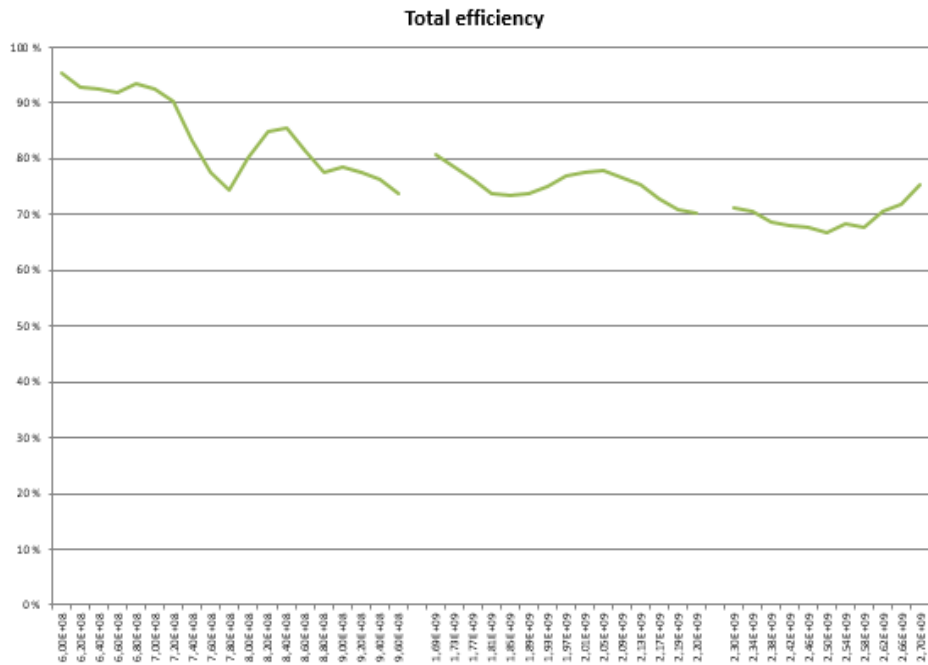
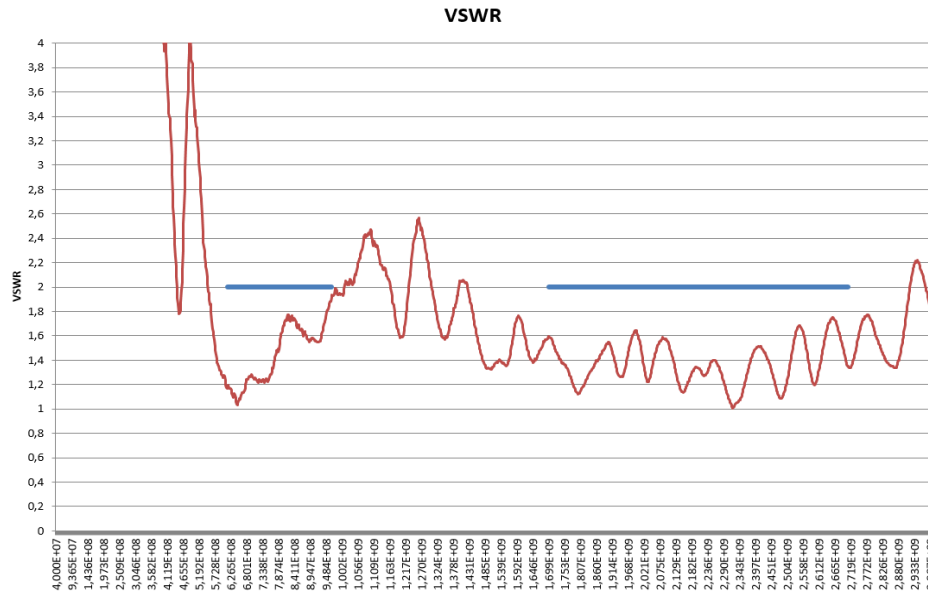
Series: CLARITY

PART NUMBER: DASUTWCxxx

CHARTS

**DASUTWC500NF, DASUTWC500MD and DASUTWC5004310**

i.e. antennas **without** reflector DASUTCCACC1



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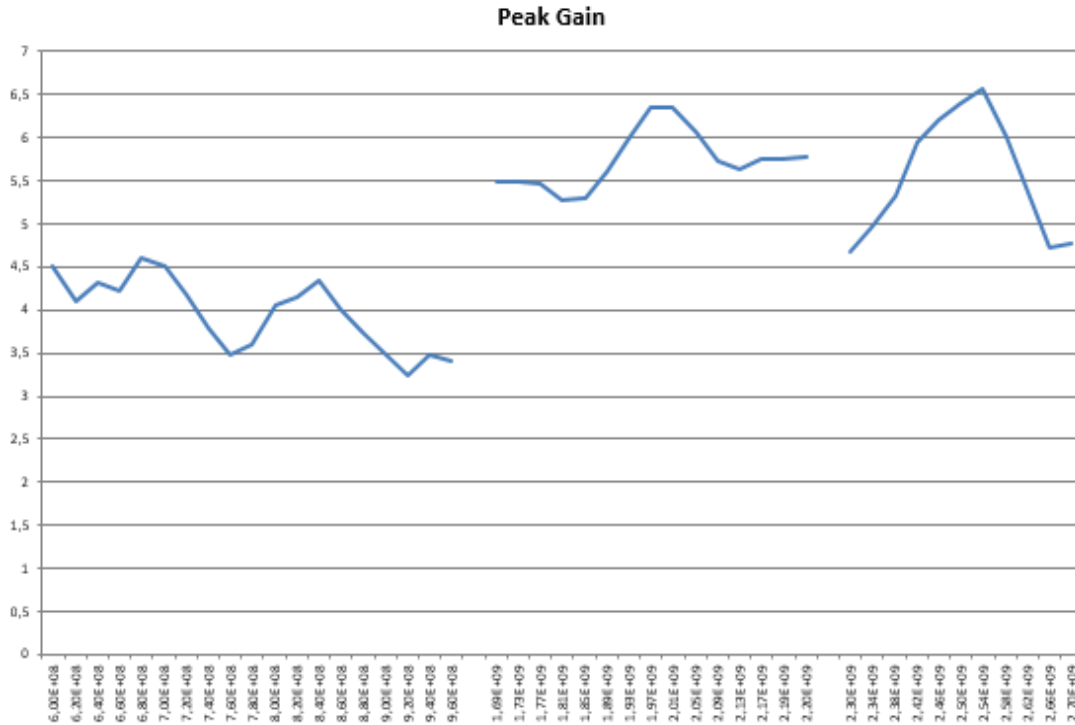
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CHARTS

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



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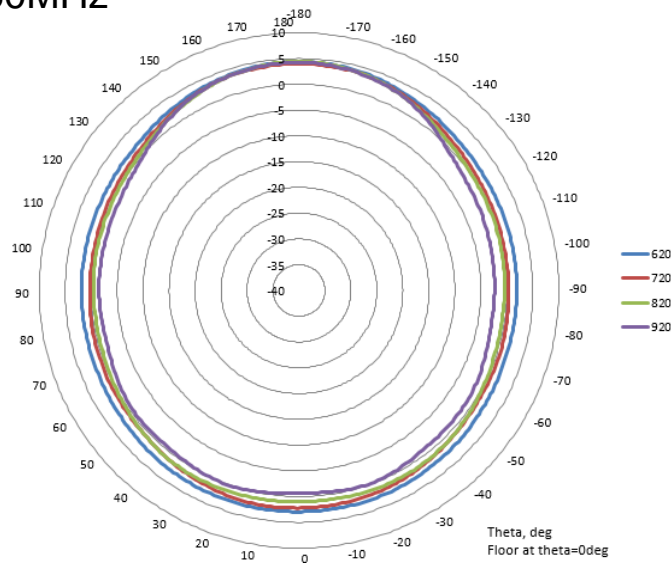
CHARTS

**DASUTWC500NF, DASUTWC500MD and DASUTWC5004310**

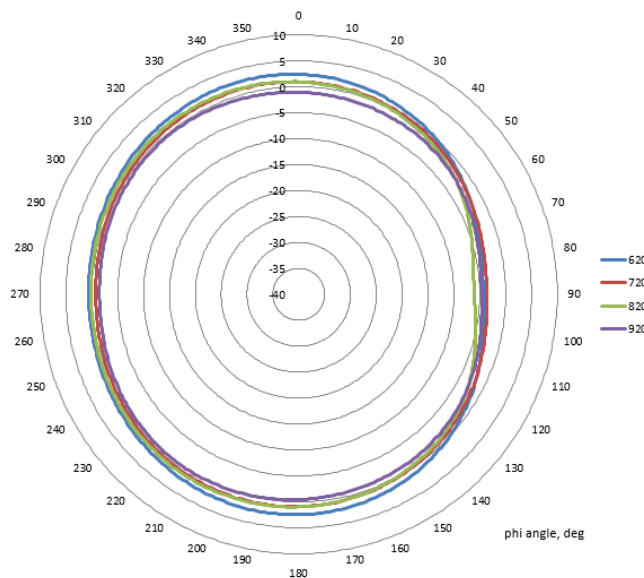
**i.e. antennas without reflector DASUTCCACC1**

Radiation patterns, 608-960MHz

Low band elevation plane



Low band conical azimuth plane @ 45deg elevation



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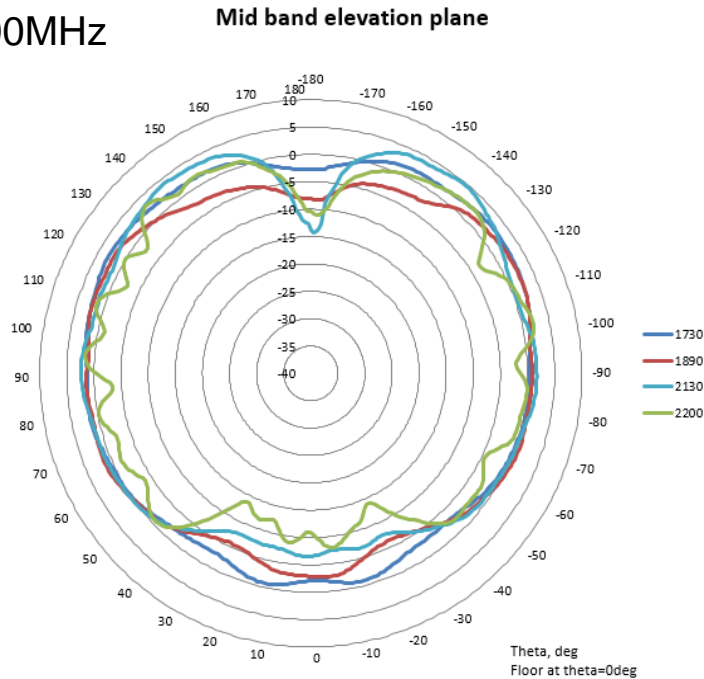
PART NUMBER: DASUTWCxxx

CHARTS

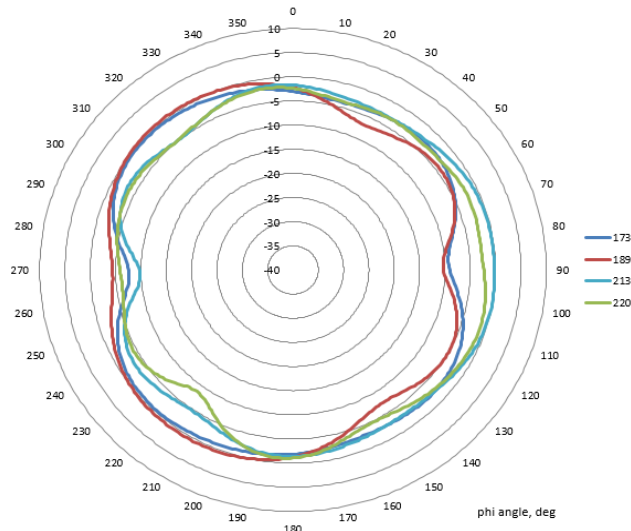
**DASUTWC500NF, DASUTWC500MD and DASUTWC5004310**

**i.e. antennas without reflector DASUTCCACC1**

Radiation patterns, 1695-2200MHz



Mid band conical azimuth plane @ 45deg elevation



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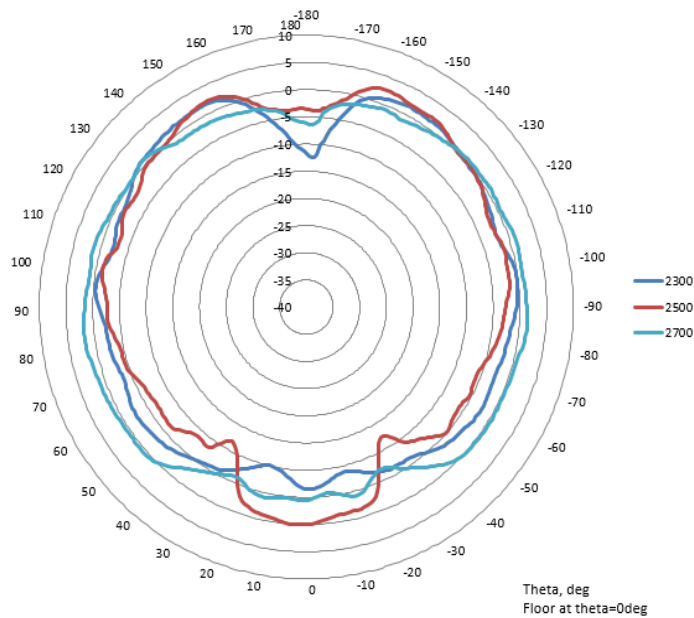
PART NUMBER: DASUTWCxxx

**CHARTS**

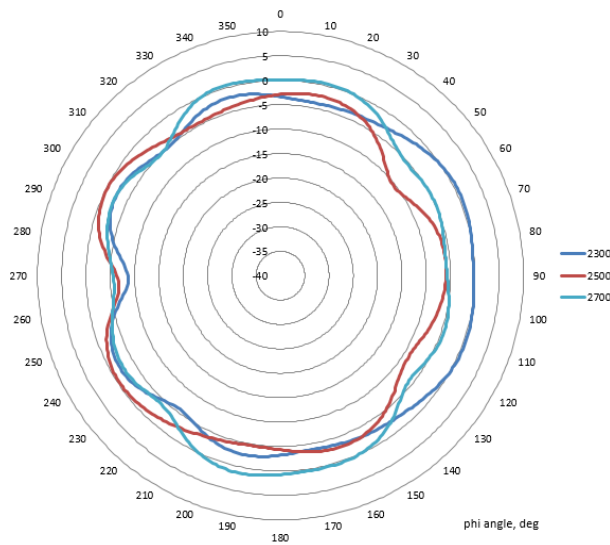
**DASUTWC500NF, DASUTWC500MD and DASUTWC5004310**  
**i.e. antennas without reflector DASUTCCACC1**

Radiation patterns, 2300-2700MHz

High band elevation plane



High band conical azimuth plane @ 45deg elevation



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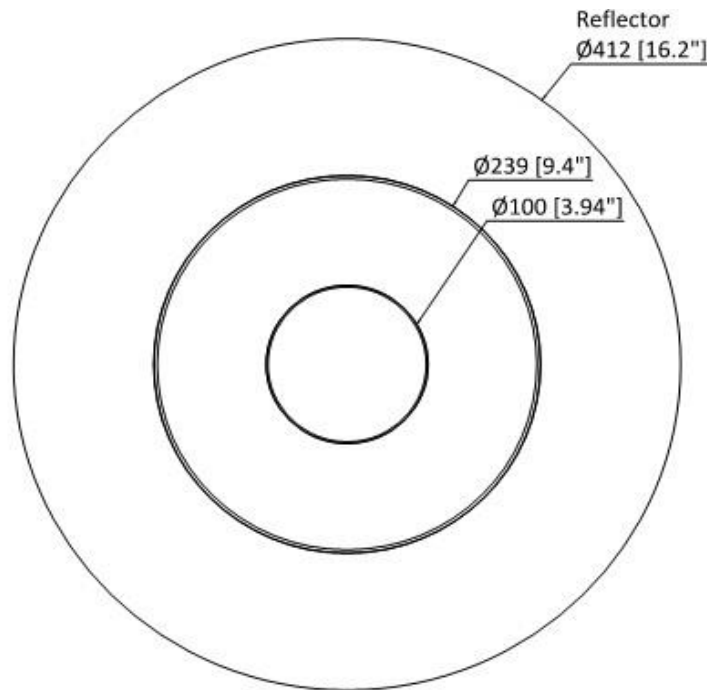
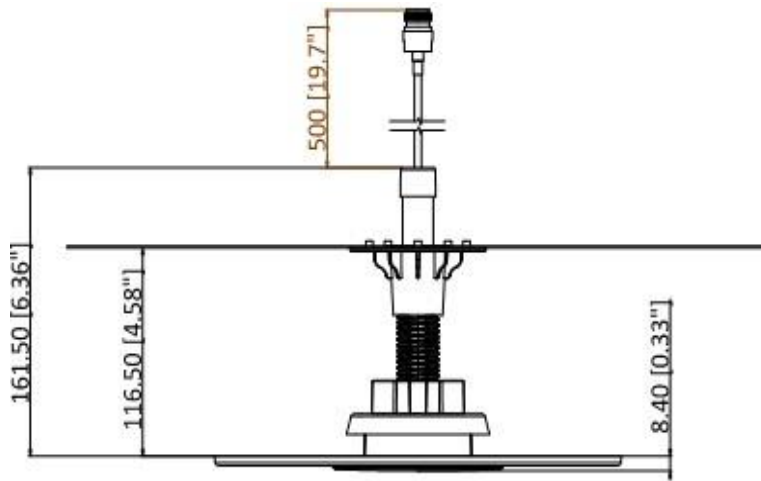
Series: CLARITY

PART NUMBER: DASUTWCxxx

MECHANICAL DRAWING

DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310

i.e. antennas with reflector DASUTCCACC1



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**DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310**

**i.e. antennas with reflector DASUTCCACC1**

Frequency	608-960 / 1695-2200 / 2300-2700MHz
Nominal Impedance	50Ω
VSWR (698-960MHz)	2:1
VSWR (1695-2700MHz)	2:1
Average Peak Gain (608-960MHz)	7dBi
Average Peak Gain (1695-2200MHz)	7dBi
Average Peak Gain (2300-2700MHz)	5dBi
Efficiency (608-960MHz)	70%
Efficiency (1695-2200MHz)	65%
Efficiency (2300-2700MHz)	60%
Horizontal plane (th=45deg)	Omni
HPBW Vertical plane (608-960MHz)	90° Typ
HPBW Vertical plane (1695-2200MHz)	25° Typ
HPBW Vertical plane (2300-2700MHz)	25° Typ
Maximum power input	40W
PIM at 2x20W	<-155dBc
Connector type	N-female, 4.1-9.5 Mini-DIN female or 4.3-10 DIN female
Cable type	Dia. 0.16" low loss, Low PIM, Plenum Rated
Cable length [Inches/mm]	19.7" / 500mm

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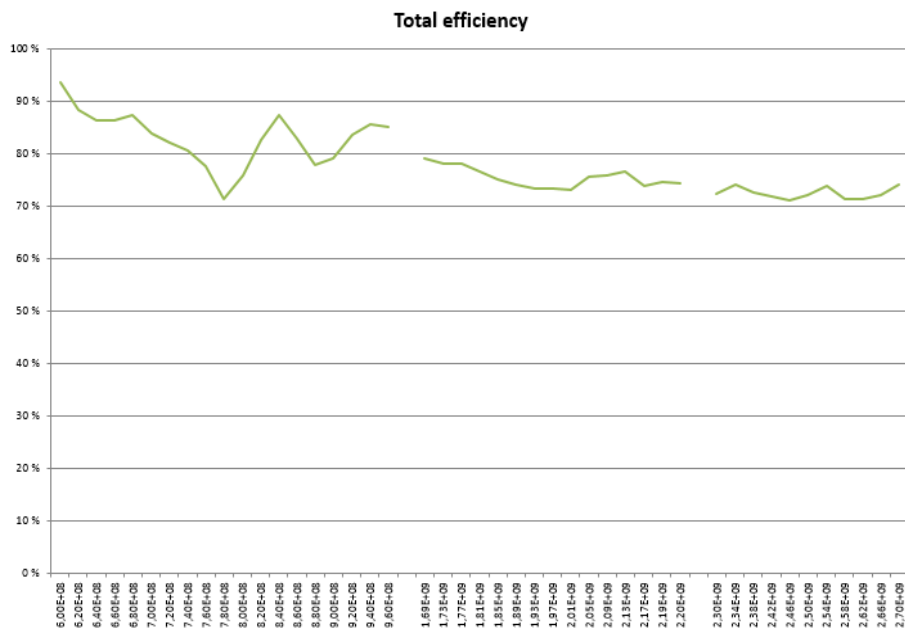
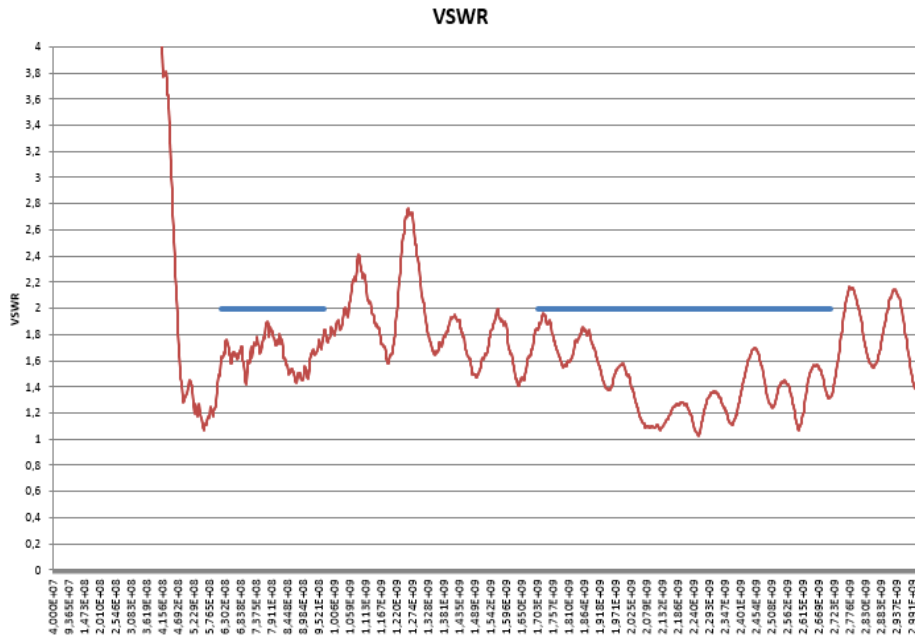
Series: CLARITY

PART NUMBER: DASUTWCxxx

CHARTS

**DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310**

i.e. antennas **with** reflector DASUTCCACC1



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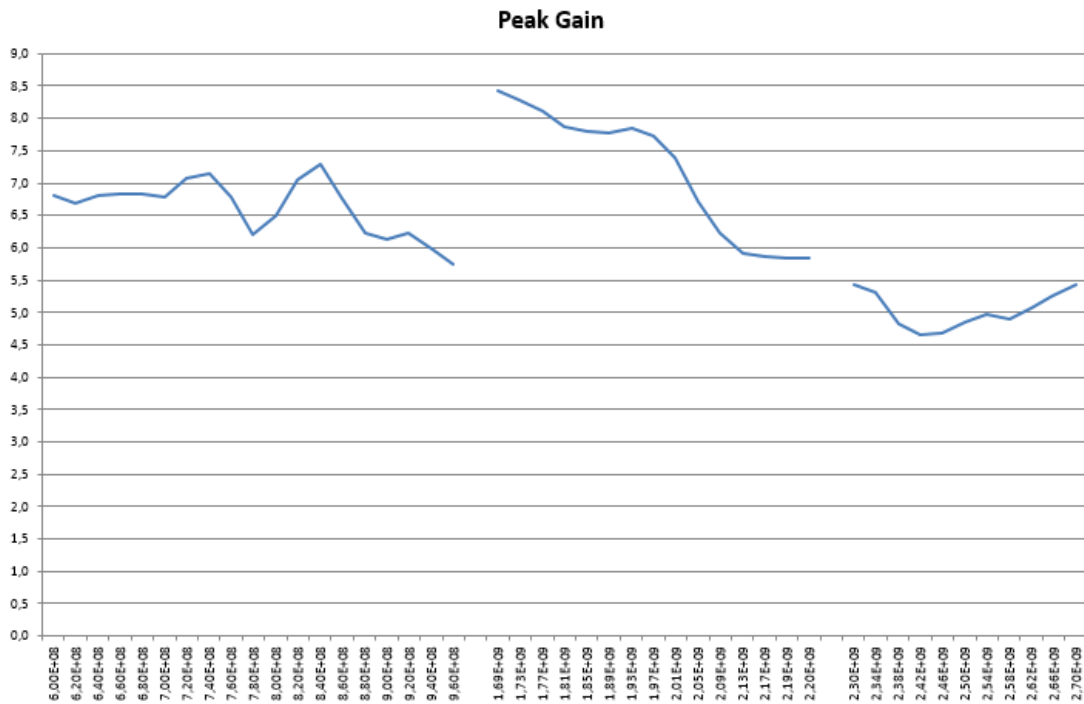
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CHARTS

**DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310**  
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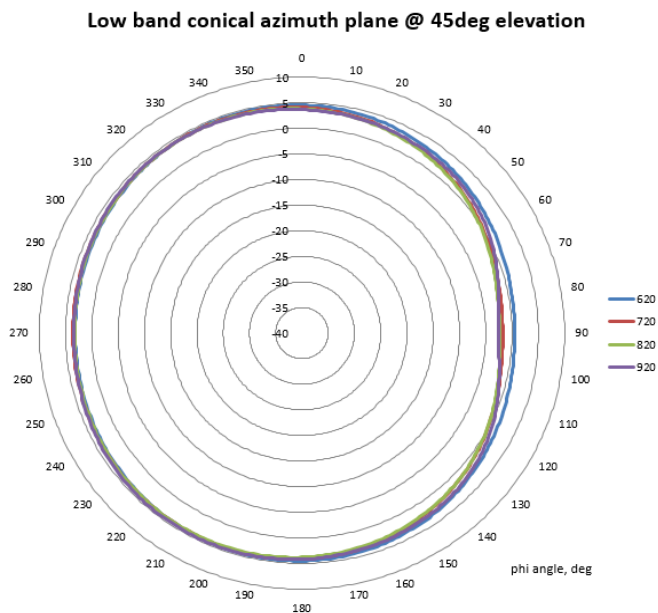
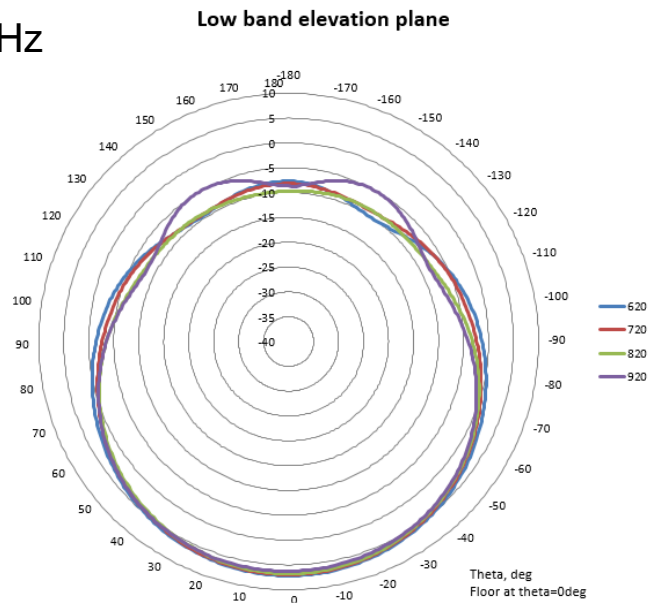
PART NUMBER: DASUTWCxxx

CHARTS

**DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310**

**i.e. antennas with reflector DASUTCCACC1**

Radiation patterns, 608-960MHz



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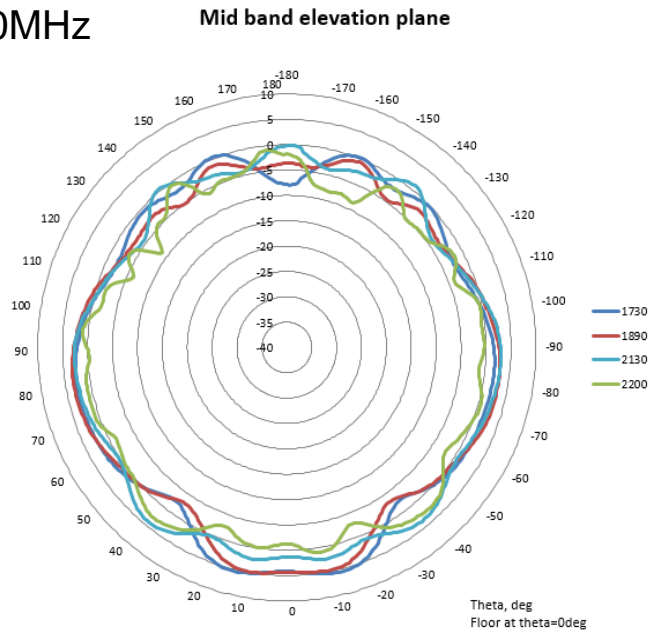
PART NUMBER: DASUTWCxxx

CHARTS

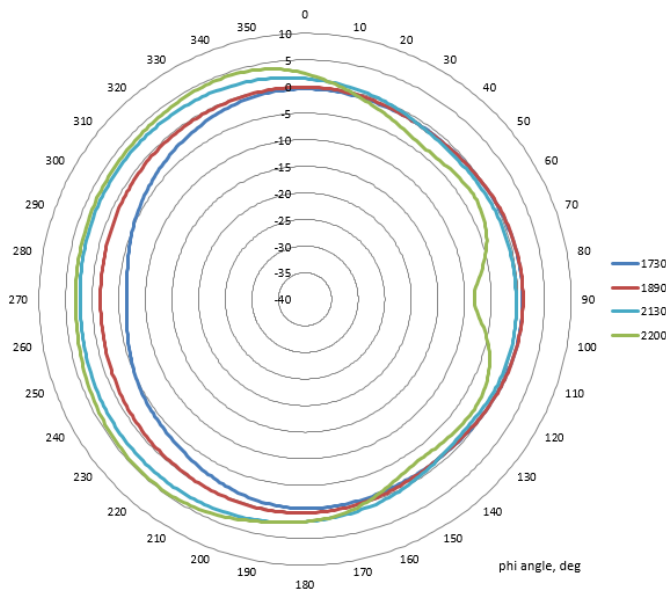
DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310

i.e. antennas with reflector DASUTCCACC1

Radiation patterns, 1695-2200MHz



Mid band conical azimuth plane @ 45deg elevation



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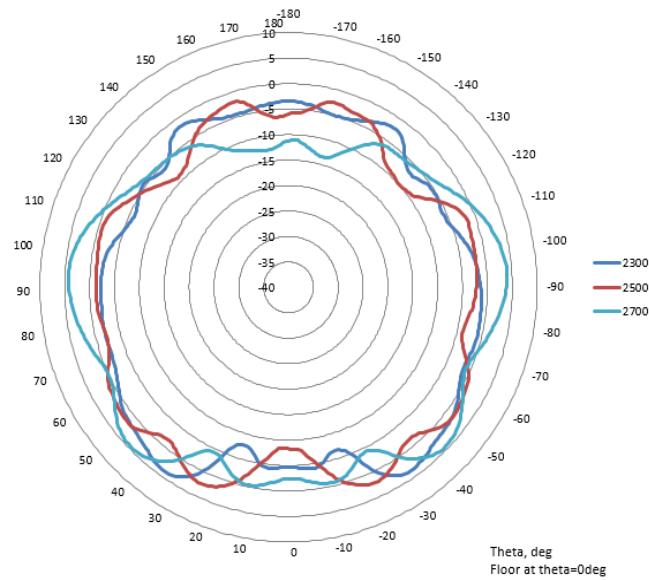
CHARTS

**DASUTWCR500NF, DASUTWCR500MD and DASUTWCR5004310**

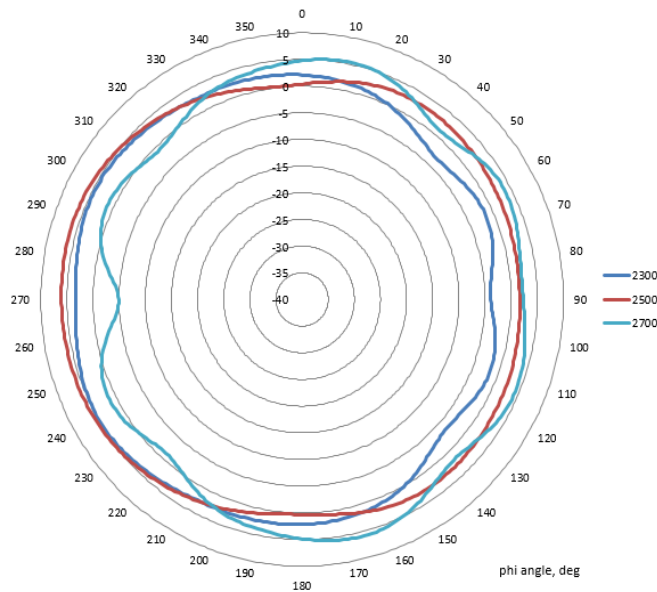
**i.e. antennas with reflector DASUTCCACC1**

Radiation patterns, 2300-2700MHz

High band elevation plane



High band conical azimuth plane @ 45deg elevation



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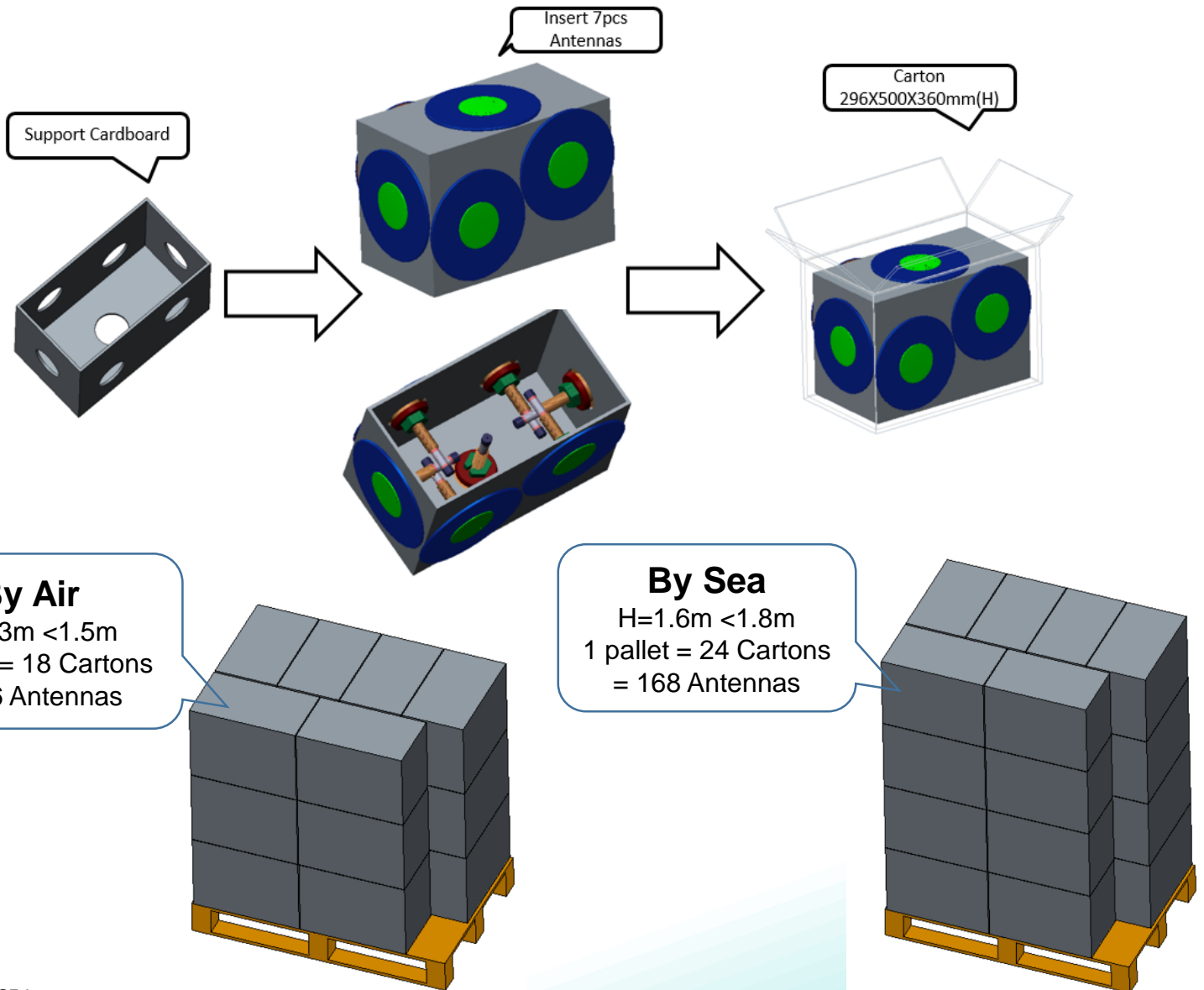
Description: UltraThin, clear radome antenna for iDAS

Series: CLARITY

PART NUMBER: DASUTWCxxx

PACKAGING

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



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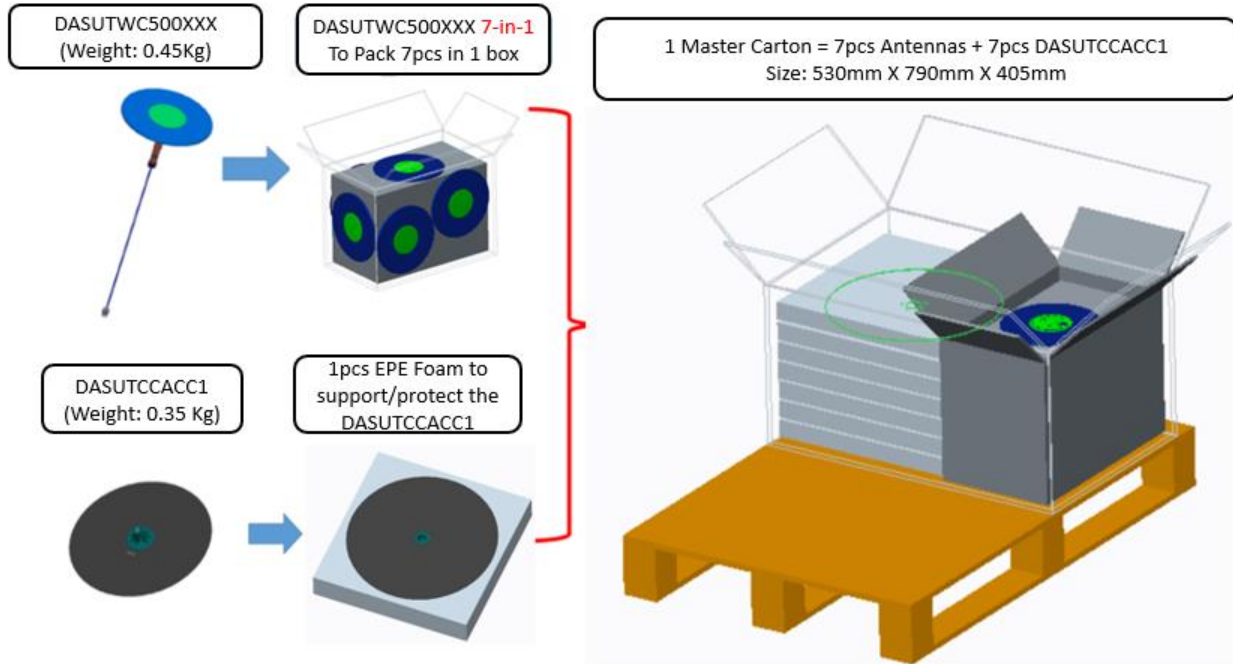
Description: UltraThin, clear radome antenna for iDAS

Series: CLARITY

PART NUMBER: DASUTCWcxxx

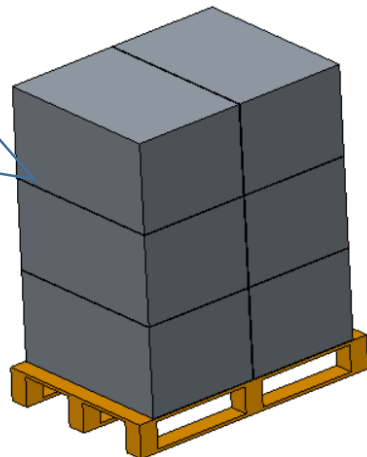
PACKAGING

Pulse Part Number	Reflector	Carton	Pallet
DASUTCWCR500NF	Included	7 Antennas and 7 DASUTCCACC1 packed in a master carton 1 label on each box with quantity, part number, date code.	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
DASUTCWCR500MD	Included		
DASUTCWCR5004310	Included		



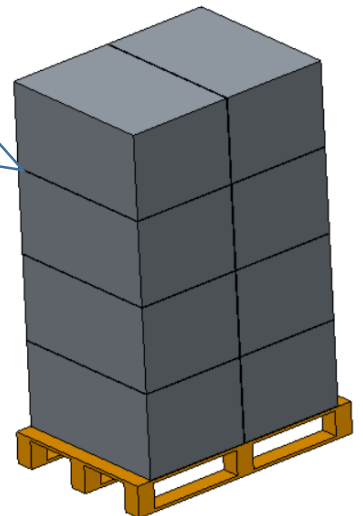
**By Air**

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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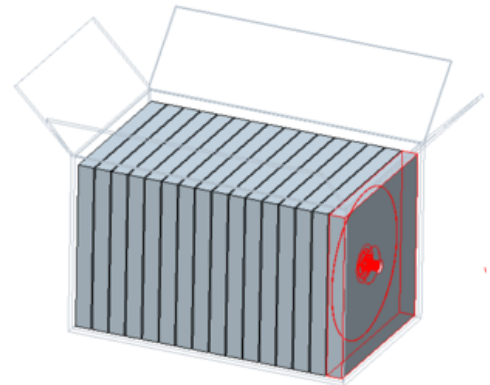
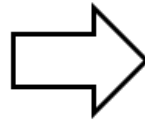
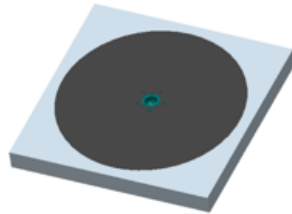
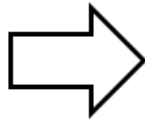
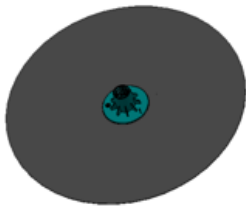
PACKAGING

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

DASUTCCACC1  
(Size: Ø411.8mm  
Weight: 0.35Kg)

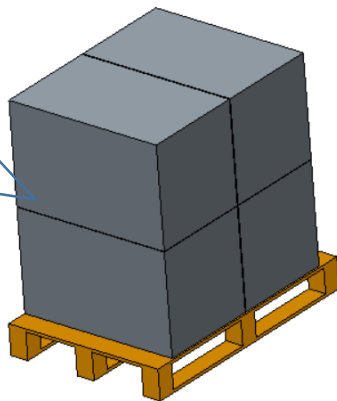
1pcs EPE Foam (075-4843.001)  
to support/protect this reflector

1pcs Carton (079-00424.001)  
790X490X500mm  
to 16pcs DASUTCCACC1



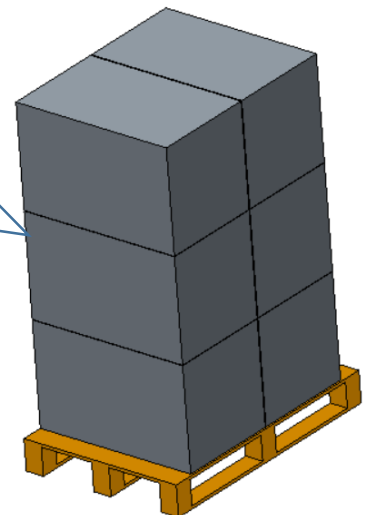
**By Air**

H=1.2m < 1.5m  
1 pallet = 4 Cartons  
= 64 DASUTCCACC1



**By Sea**

H=1.65m < 1.8m  
1 pallet = 6 Cartons  
= 96 DASUTCCACC1



Description: UltraThin, clear radome antenna for iDAS

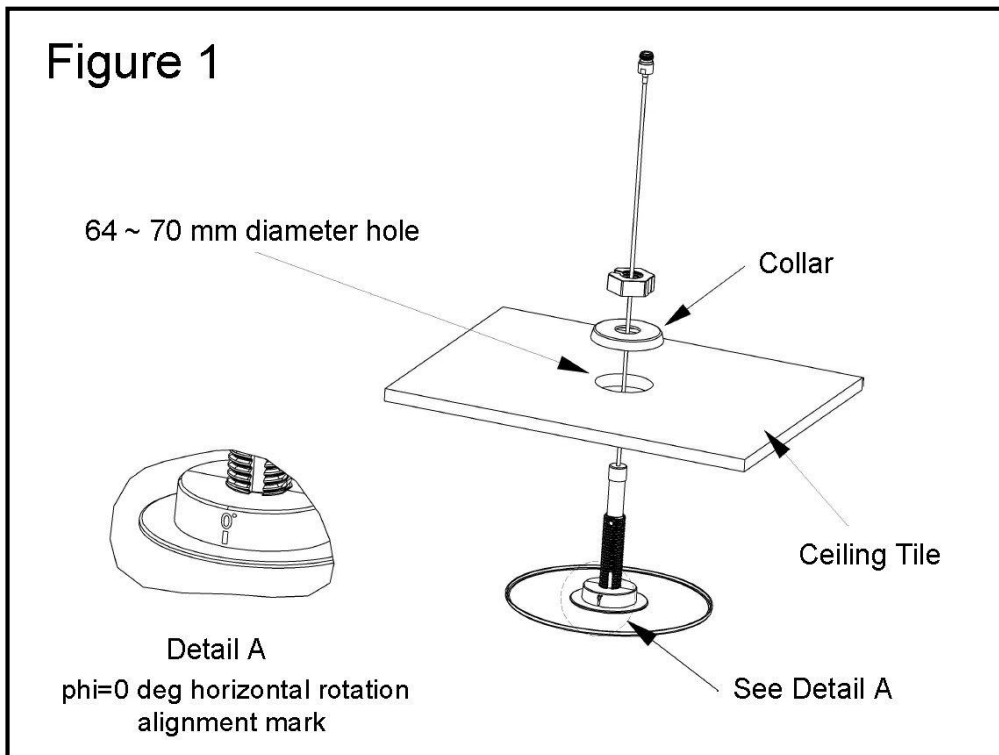
Series: CLARITY

PART NUMBER: DASUTCxxx

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



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.

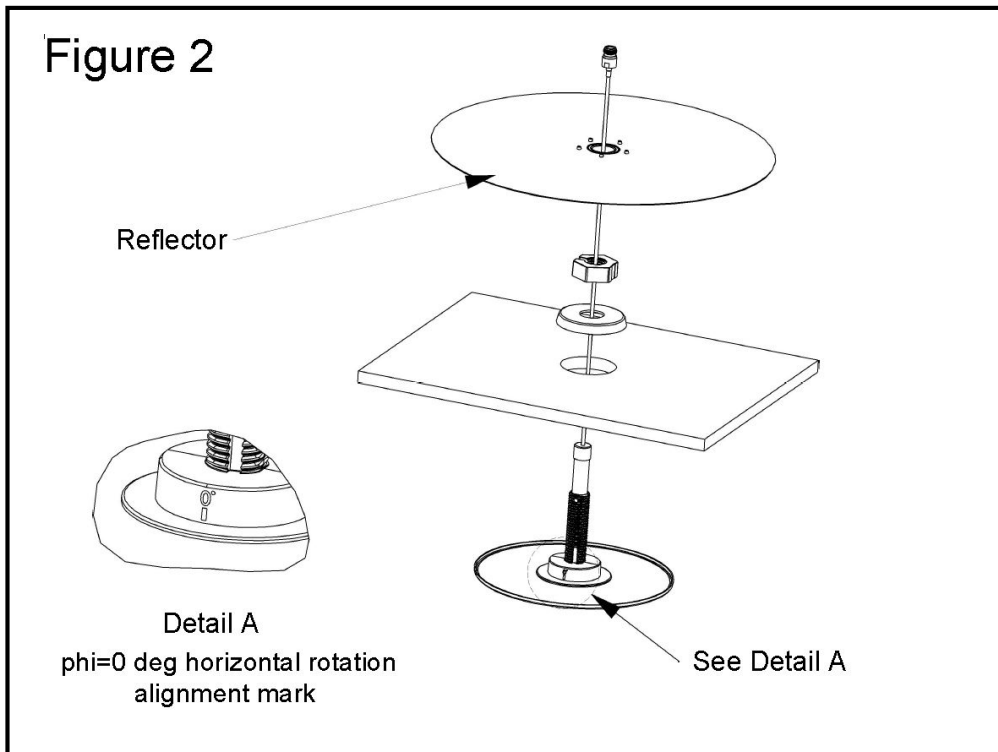
**Description: UltraThin, clear radome antenna for iDAS**

**Series: CLARITY**

**PART NUMBER: DASUTCxxx**

## ASSEMBLY

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