KoalaWin

KoalaWin - Ku Hybrid
ESA COTP & Fixed Terminal Datasheet

Figure 1. COTP

Figure 2. Fixed

- Versatile satcom terminals with affordability

General Description:

Starwin KoalaWin Ku Hybrid COTP & Fixed ESA Terminal is an innovative satcom terminal developed with Starwin cutting edge phased array and mechatronics technology, providing various COTP (communication on the pause) or Fixed applications and widely used in rural area.

Combining the advantages of mechanical steering and electronic phased array technology, Starwin KoalaWin Ku Hybrid COTP &Fixed ESA Terminal can be quickly deployed; Fast capture the satellite with high accuracy and agility, and establish stable and reliable satellite communication links consistently even in the harshest environments. The COTP version is widely applied to Emergency recover, disaster relief, Oil & Gas, mining, travel etc.

China Starwin Science & Technology Co., Ltd.
Tel: +8629-88664381, E-mail: sales@starwincom.com, http://www.starwincom.com

Unique Features:

- Unique Design: With mechanic and electronic steering combined system, wider EL scan angle with low loss from EIRP and G/T in normal direction;
- High Integration: all in one, fully 2D phased array, ACU, satellite Modem, Up & Down converter are all integrated in one outdoor unit;
- Proven technology of beam forming to track and switch among multi orbit networks of GEO, LEO and MEO;
- Convenience: With ultra-portability without complex installation, cabling, connection and commission processing on site;
- Flexible and Scalable: Manifold application for mobile broadband connectivity under GEO, MEO and LEO.

Specifications:

<table>
<tr><th colspan="6">Ku Band Hybrid ESA Terminal</th></tr>
<tr><th colspan="6">Overall Specifications of Terminal</th></tr>
<tr><td rowspan="2">Model</td><td>COTP</td><td>HSA43095PUF</td><td rowspan="2">Static Capture Time of First Boot</td><td colspan="2" rowspan="2">≤ 2min</td></tr>
<tr><td>Fixed</td><td>HSA43095FUF</td></tr>
<tr><td colspan="2">Name</td><td>KoalaWin</td></tr>
<tr><td colspan="2">Type</td><td>Ku band Hybrid ESA COTP and Fixed Terminal</td><td>Mechanical Steering Type</td><td colspan="2">Auto</td></tr>
<tr><td colspan="2">Tx</td><td>13.75 ~ 14.5 GHz</td><td rowspan="2">Recapture Time After Loss</td><td colspan="2">< 15sec (Duration of occlusion ≤5min)</td></tr>
<tr><td colspan="2">Rx</td><td>10.7 ~ 12.75 GHz</td><td colspan="2"><25sec (Duration of occlusion >5min)</td></tr>
<tr><td colspan="2">Tracking Accuracy</td><td>≤ 0.2°</td><td>Applicable Satellite Type</td><td colspan="2">HTS GEO, MEO and LEO</td></tr>
<tr><td colspan="2">Rx LO.</td><td>9.75/10.6 GHz</td><td>Tx LO.</td><td colspan="2">12.8 GHz</td></tr>
<tr><td colspan="2">Scan Mode</td><td>Hybrid Steering (2D Electronic Steering + 2D Mechanical Steering)</td><td>Beam Switching Time</td><td colspan="2">≤ 3ms</td></tr>
<tr><th colspan="6">IF Specifications</th></tr>
<tr><td colspan="3">Input Power (Modem Output)</td><td colspan="3">-35 ~ 0dBm</td></tr>
<tr><td colspan="3">IF Input (Modem Output)</td><td colspan="3">0.95 GHz ~ 1.7 GHz</td></tr>
<tr><td colspan="3">IF Output (Modem Input)</td><td colspan="3">0.95 GHz~2.15 GHz</td></tr>
<tr><td colspan="2">Internal Modem</td><td>Customized</td><td>External Modem</td><td colspan="2">Customized</td></tr>
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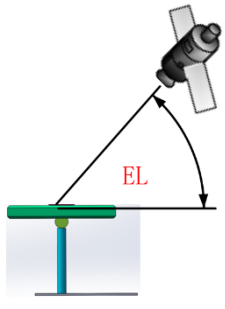
<table>
<tr><th colspan="5">RF Specifications</th></tr>
<tr><td colspan="2">EIRP</td><td>≥ 43dBW@ Normal</td><td>G/T</td><td>≥ 9.5dB/K@ Normal</td></tr>
<tr><td colspan="2">Polarization</td><td>Full polarization, automatic switching</td><td>Azimuth Range</td><td>Unlimited</td></tr>
<tr><td colspan="2">X-Pol Isolation</td><td>>30dB@90°</td><td>Hybrid Elevation Steering Range
 
</td><td>0°~ 180°
(90° means the antenna is horizontal)</td></tr>
<tr><th colspan="5">Interface</th></tr>
<tr><td colspan="2">Power Interface</td><td>Waterproof Quick Plug</td><td>Network Interface</td><td>Waterproof Quick Plug</td></tr>
<tr><td colspan="2">IF Interface (Tx)</td><td>SMA</td><td>IF Interface (Rx)</td><td>SMA</td></tr>
<tr><th colspan="5">Physical Dimensions and Electrical Specifications</th></tr>
<tr><td rowspan="2">Outline Dimension</td><td>COTP</td><td>609×559×180mm</td><td rowspan="2">Power Input (With Adapter)</td><td rowspan="2">AC 90 ~ 264V/50Hz</td></tr>
<tr><td>Fixed</td><td>609×559×130mm</td></tr>
<tr><td rowspan="2">Weight</td><td>COTP</td><td>≤ 18 kg</td><td rowspan="2">Power Input (Without Adapter)</td><td rowspan="2">DC 28V±5%</td></tr>
<tr><td>Fixed</td><td>≤ 17 kg</td></tr>
<tr><td colspan="2">Power Consumption</td><td colspan="3">≤ 300 W</td></tr>
<tr><th colspan="5">Environmental Specifications</th></tr>
<tr><td rowspan="2">Wind Speed</td><td>COTP</td><td>The terminal works normally when the wind speed is in the range of 17.2-20.7m/s (61.92-74.52Km/h) (33.5-40.3 mph)</td><td rowspan="2">Ingress Protection</td><td rowspan="2">IP66</td></tr>
<tr><td>Fixed</td><td>The terminal works normally when the wind speed is in the range of 24.5-28.4m/s (88.2-102.24Km/h) (47.5-55.3 mph)</td></tr>
<tr><td colspan="2">Operation Temperature</td><td>-25°C ~ +55°C (Standard)
-40 °C ~ +70 °C (Customizable)</td><td>Storage Temperature</td><td>-40 °C to +85 °C</td></tr>
<tr><td colspan="2">Humidity</td><td colspan="3">5 ~ 95%</td></tr>
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