



## HDR Fixed – ARINC

Enhancing Fixed-wing Communications



## Components

### TH-ARINC SDU

Robust satellite data unit designed for fixed-wing aircraft

### TH-HGA 6000

High Gain Antenna control for steady in-flight communication

### TH-HPA

Amplifying transmit RF signals to enable aircraft-satellite communication

### TH-DLNA

Enabling duplex satellite communication while providing a low noise amplifier

## THE AERO SYSTEM

**TH-ARINC SDU** is a standard SDU in ARINC 600 format (2MCU) for fixed-wing aircraft. It will be the second SDU version made available and will come with a VIP Turbo Aero for aircraft installation with existing avionics equipment installations. Unlike its flange mount counterpart, SDU-ARINC does not offer effective sand and dust sustainability. In later releases, TH-SDU-ARINC will deliver added capabilities for embedded data encryption and 2-channel TH-SDU-AR with an additional slot for 2nd VIP Turbo Aero.

TH-ARINC SDU guarantees vibration and shock durability (DO-160G - Cat. S (M,L,B) and channels external forced airflow (vertical) through the ARINC unit.



**TH-HGA-6000** antenna consists of a soft dust cover for use under a radome, mechanical antenna steering based on a dual Helix coil system and an L-band RF interface, for connection with an ARINC 741 compliant DLNA or HLD unit.

This version of the Cobham High Gain Antenna (HGA) system is designed for fixed-wing aircrafts like transport airplanes or business jets. TH-HGA-6000 is used under a radome in the tailfin or the fuselage of small airplanes. As the antenna does not require a metal surface mounting-base, it is ideal for use on modern 'carbon fiber' aircraft bodies.

The antenna system comes with an embedded beam steering unit, allowing antenna control directly through an ARINC 429 interface. Alternatively, the antenna also offers a coaxial interface for control through an external beam steering unit.

## INSTALLING AERO

TH-HPA is a linear, temperature regulated, RF (Radio Frequency) power amplifier. It amplifies the transmit RF signal generated by the SDU to correct the power level in order to make communication with the satellite possible. The amplified signal is then sent to the antenna via DLNA. Secondary functions of the HPA include providing +28 VDC power to the antenna via the SDU and monitoring the DLNA BITE. The HPA utilizes forced air cooling and is equipped with an ARINC 600 port.

Length: 344 mm,

Width: 61 mm,

Height: 194 mm,

Weight: 4.0 kg

**TH-DLNA** is a three-port device that is installed as part of a full-duplex satellite communication system. Its main purpose is to combine signals received from the High Gain Antenna and split transmit signals from the SDU. The DLNA also provides a low noise Amplifier to amplify the signals received from the satellite. Further significant function of the device is that it blankets system generated disruptive noise, harmonics and inter-modulation signals to ensure impact free inter-operation with other systems. The device is equipped with an ARINC 781 port.

Length: 281 mm,

Width: 187 mm,

Height: 48 mm,

Weight: 2.6 kg