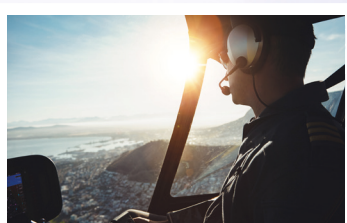
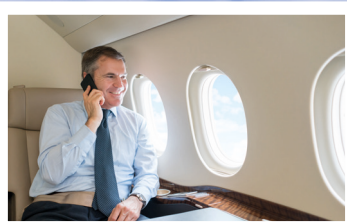
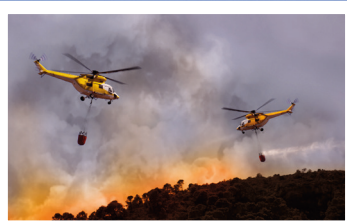


Thuraya Aero

POWERED BY

smp
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PRELIMINARY DATA SHEET



AIRBORNE SATELLITE COMMUNICATION

Thuraya Aero - Specifications

Thuraya Aero is a satellite communication service that enables in-flight connectivity like internet access, voice-calls, text messaging, high-speed data applications such as video and audio conferencing, access to e-mail, instant information such as e-commerce, large file transfer (e.g. surveillance videos), Voice over IP and many more.

The Thuraya Aeronautical Satellite System consists of

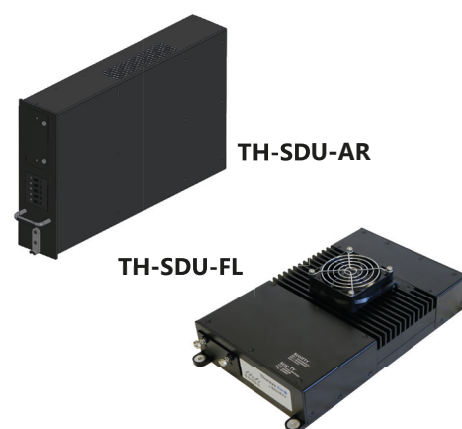
- a Satellite Data Unit
- a High Power / Low Noise Amplifier and
- a High Gain Antenna System

Modem function

Services:	Circuit Switched Voice, IP Data
Streaming:	up to 384 kbps / channel
Standard:	up to 444 kbps / channel
SIM Card:	Dual SIM (Voice SIM, IP SIM)
Channels:	1 / 2 (activation via license key)
Channel bundling:	yes, necessary purchase of license key for an update, <u>no hardware necessary</u>

The **Satellite Data Unit** (TH-SDU-XX) will come in a first version as a "flange mount" component. For small ISR fixed wing platforms and all rotary platforms the flange mount SDU perfectly meets the requirements and qualification specifications for this type of aircraft. As a second version a standard SDU in ARINC 600 format (2 MCU) will be available for aircraft installation with existing avionics equipment installations.

Dimensions	TH-SDU-FL	TH-SDU-AR
Width:	194 mm	58 mm (2 MCU)
Height:	60 mm	194 mm
Length:	326 mm (incl. flanges)	320/345 mm (incl. handle)
Weight:	3.5 kg	3.5 kg



The **High Power / Low Noise Amplifier** (TH-HLD) is interconnecting the SDU with the Thuraya Aero antenna system and is packaged into a single, compact component. For the transmit direction the HLD operates as a High Power Amplifier in order to provide the necessary EIRP to the Thuraya satellite. In receive direction the HLD operates as a very sensitive Low Noise Amplifier in order to amplify the receive signal from the high gain antenna. It forms part of a broadband single channel system and reduces overall box-count, system weight and complexity. The system supports applications such as VPN, e-mail, phone calls and internet browsing.

Dimensions TH-HLD	
Width:	190 mm
Height:	60 mm
Length:	150 mm (200 mm with connectors)
Weight:	2.4 kg



The **High Gain Antenna** system will be based on a dual helix coil system with mechanical antenna steering and no need for a metal aircraft fuselage for a proper antenna pattern. The HGA will come in two mechanical variations, one for fixed wing aircraft with a soft dust cover (TH-HGA-6000) and one for rotary aircraft with a hardened radome (TH-HGA-6500). Alternatively, to the mechanical steered HGA a high gain phased array antenna system (TH-HGA-7XXX) will be available. The phased array antenna has to be defined later in the system development.

Dimensions	TH-HGA-6000	TH-HGA-6500 (with Mounting Plate)
Diameter:	256 mm	256 mm
Height:	247 mm	258 mm
Weight:	1.9 kg	3.8 kg



TH-HGA-6000



TH-HGA-6500

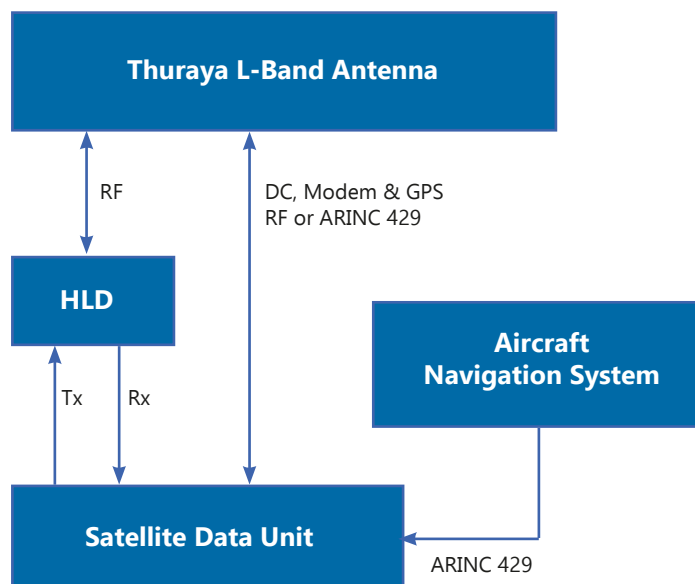


symbolic picture

TH-HGA-7XXX

Advantages compared to existing systems

- lowest cost of ownership
- significant operational cost savings
- worldwide first modem available with built in video transmission capability
- easy conversion of existing L-band system
- negligible reinstallation costs
- calculable airtime costs
- only license purchase necessary to convert single channel into dual channel system
- only license purchase necessary to allow real time HD video transmission
- weather independent
- no congestion problems
- easy antenna pointing
- stable and reliable network



Application fields



AIR SURVEILLANCE



SEARCH AND RESCUE



FIRE FIGHTING
FIRE PREVENTION



FISHERY AND
POLLUTION
MONITORING



VIP
OFFICE IN THE SKY



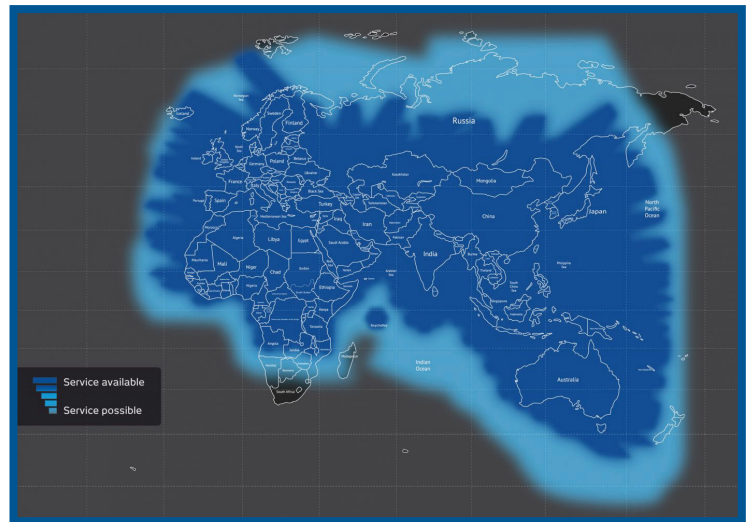
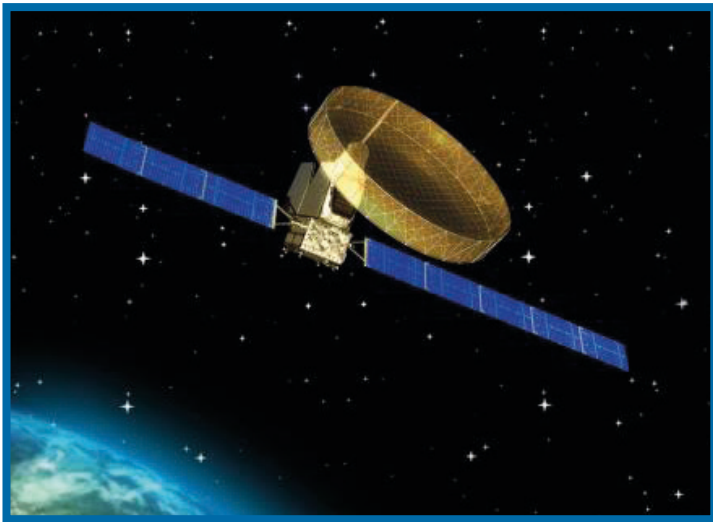
SPECIAL OPERATIONS



BORDER PATROL

Who we are

Thuraya Telecommunications Company is one of the world's leading mobile satellite services (MSS) operators. It owns and operates two geo-stationary (GEO) satellites. The Thuraya network covers two thirds of the globe and 161 countries. Its customers come from a variety of sectors, including government and NGOs, maritime, energy and media.



smp aviation has been chosen as general contractor and exclusive partner by Thuraya to create and launch its innovative aero products. smp aviation specializes in providing security and security related solutions to organizations such as armed forces, police, civil protection, coast guard, search & rescue and many other agencies. smp aviation has delivered services both to governmental organizations and non-governmental clients for more than two decades. The dedicated smp aviation team of experts has extensive experience in military and paramilitary project management and works in cooperative partnerships across sales, marketing, logistics, after sales support and services.

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