

## Case studies

The Thuraya-4 Next Generation Satellite will deliver higher capabilities and flexibility while increasing capacity and coverage across Europe, Africa, Central Asia and the Middle East, enabling next generation mobility solutions for all customer segments, including defence, government and enterprise.

# Pioneering

next generation mobile  
telecommunications system



GEO satellite based on the high power, all electric Airbus Eurostar Neo platform that offers an optimal combination of flexibility, efficiency and capability

Incorporates a large 12-metre L-band unfurlable reflector and latest-generation of digital signal processor developed by Airbus

Capable of full payload flexibility, including coverage, frequency and power allocation

Payload capacity supports ~3x the number of users compared to previous generation Thuraya satellites

Launch mass

**~5 tonnes**

Spacecraft power

**>12kW**

Data rate capability

**>1Mbps**



## Satellite Technology. Critical Communications. Human Progress.

In 2020, the decision was made to procure a new satellite system – the Thuraya-4 Next Generation Satellite (NGS) – to further develop and enhance our services as part of a programme to modernise and upgrade our Mobile Satellite Services (MSS) space and ground assets as well as our mobile product and solution portfolios.

Delivered through partnerships with companies such as Airbus, SpaceX and Cobham, Thuraya-4 NGS will allow Yahsat to grow across new and existing product lines to deliver higher capabilities and flexibility while increasing capacity and coverage across Europe, Africa, Central Asia and the Middle East to serve all customer segments, including governments, enterprises and consumers.

The new capabilities will drive leadership across many strategic product lines, such as maritime, IoT and data solutions, offering a wide range of throughput capabilities and the highest speeds available in the market, while reinforcing Thuraya's strengths in the MSS voice market.

Despite the continued disruption experienced throughout the year, during 2021 we continued to commit significant investments to the programme, particularly in terms of the satellite itself, its related ground segment and other elements, including the launcher.

The programme remains on track, with the commencement of operations in 2024. This represents a major opportunity for our business, impacting all segments – from space and ground to user terminals and solutions. It is also underpinned by a 15-year UAE Government contract worth more than US\$ 700 million, commencing in 2024.

Building on our two existing MSS satellites – Thuraya-2 and Thuraya-3, Thuraya-4 NGS represents a crucial addition to the fleet that will allow us to continue to support our existing customer base with critical communications and applications, whilst also paving the way for the introduction of new offerings for our customers and distribution network.

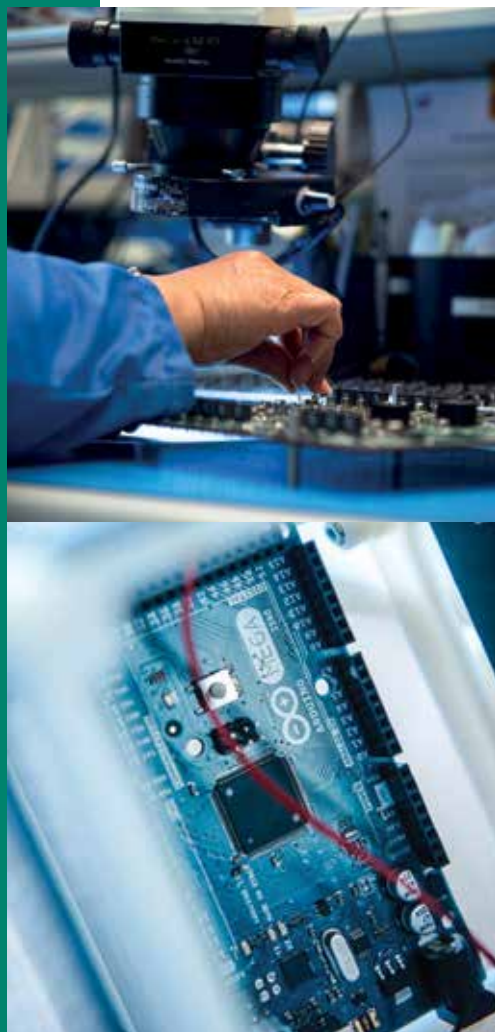
Case studies continued

Star Technologies launched to develop and manufacture satellite communications technology.

# Delivering

a self-sustaining satcom industry in the UAE





## Satellite Technology. Critical Communications. Human Progress.

Star Technologies, a new joint venture has been established to create value for end users by leveraging R&D and acquisitions to spur the generation of new intellectual property, forming the bedrock of a self-sustaining satcom industry in the UAE.



Star Technologies will specialise in the engineering, design and in-country manufacturing of customised hardware and software, including advanced satellite modems, small form factor antennas and tracking solutions. Its mandate is fully aligned with the UAE Government's economic diversification programme, with the goal of creating UAE-made intellectual property while inspiring future generations to enter the space technology industry.

To support the new JV, Yahsat Government Solutions began focussing its R&D efforts in 2021 toward the development of L- and Ka-band terminals. The first product will be a Star Technologies-branded IP satellite modem system that will complement Yahsat's existing satcom capabilities to enable differentiated high-performance solutions and establish an integrated end-to-end commercial offering for multiple end user segments.

Case studies continued

High-speed internet connectivity via satellite to support smart learning for 300 students in remote areas of the UAE.

# Enabling

remote education during the pandemic



Students reached

**300**

Overall investment

**AED 1.1m**



## Satellite Technology. Critical Communications. Human Progress.

In order to solve issues stemming from the lack of internet connectivity in certain rural communities within the UAE, which were limiting access to e-learning materials during the pandemic, the Ministry of Education sought the support of Yahsat to provide connectivity for students continuing their distance e-learning in the 2021–2022 school year.

Yahsat therefore sought to provide students in remote areas underserved by connectivity options with fast and easy access to the smart learning platforms provided by the Emirates Schools Establishment (ESE).

Having performed onsite accessibility surveys with families to determine number of students and locations that required assistance in Ras Al Khaimah, Fujairah and Sharjah, the Yahsat team provided a solution based on leveraging its YahClick Internet Package and related equipment (satellite dishes and Wi-Fi modems), backed by ongoing technical support for families, at a total overall investment of around AED 1.1 million in 2021–2022.

The solution connected 74 villas to high-speed data services to support e-learning, and more than 300 students served by ESE in remote locations across the Emirates.

Coupled with Yahsat's high-speed satellite broadband, ESE's Smart Learning programme has been one of the primary drivers of e-learning and inclusion among young children in the UAE since the onset of the pandemic.