
Viasat
GX10A and GX10B - seamlessly integrating
ARCTIC COVERAGE
into the worldwide GX network

THE **ARCTIC** CIRCLE:
IT'S GETTING HOT **UP THERE**

The Arctic is warming at twice the rate of the global average, and the resulting reductions in Arctic sea-ice and permafrost have become increasingly difficult to ignore. According to the WWF, sea ice has been lost at a rate of almost 13% per decade over the past three decades and the oldest/thickest ice has diminished by over 90%. This reduction has led to significant increases in shipping in the Bering Strait as well as increased military exercises and patrols, with the polar region emerging as a modern military hot spot.

The security landscape in the Arctic is deteriorating as rapidly as the ice caps

Recent satellite imagery has revealed a continuous build-up of Russian military bases, hardware and underground storage facilities, as well as weapons testing in the country's Arctic coastline. This increased presence of both Russian and Chinese assets has in turn led to the US ramping up patrols over the area, joined by UK, Canada, France and other allied countries.

Situational Awareness Challenges

Whilst governments and the intelligence community agree that increased Intelligence, Surveillance and Reconnaissance activities (ISR) are key to a strong response to this military build-up, these activities have traditionally been hampered by a lack of reliable communications channels above 65° North.

PARTNERSHIP BETWEEN GOVERNMENT AND COMMERCE

In July of 2019, Inmarsat (now Viasat) announced that it would introduce two new satellite payloads dedicated to the Arctic region in a partnership with Space Norway and its subsidiary Space Norway HEOSAT in 2024, helping address the communications challenges faced by governments in the region.

Announcing this partnership, Jostein Rønnerberg, CEO of Space Norway said: "In close collaboration with Inmarsat and government partners we are about to get in place a strategically important capacity for all those currently operating in the Arctic without access to broadband capabilities. Our focus is on the users – fishermen, researchers, rescue personnel, coast guard, military and others. We are proud to join forces with Inmarsat and we are confident that this collaboration will be welcomed by those operating in the High North."

The Arctic region satellites will be operated by Space Norway's Arctic Satellite Broadband Mission (ABSM) team and represent the world's first and only mobile wideband payload dedicated to the Arctic region.

The new GX payloads are designed to provide continuous, assured communications to tactical and strategic government users operating in the Arctic region, including customers in the USA, Canada, Scandinavia and other Arctic regions. Importantly, these payloads are engineered to provide KA Government capacity through service beams covering the full Arctic region continuously supplemented by high-capacity steerable beams, specifically dedicated to the most demanding government requirements.

Together these payloads, and the associated ground infrastructure, represent the world's first and only mobile wideband payloads dedicated to the Arctic. With planned placements into Highly Elliptical Orbits (HEO), they are expected to provide continuous coverage above 65° North, helping to ensure direct capacity to the areas of highest demand in real time.

FUTURE PROOF AND SCALEABLE TO MEET OPERATIONAL NEEDS

Building on Viasat's current operational Global Xpress capabilities up to and beyond the 75th parallel North, the payloads are intended to improve network performance by providing Global Xpress users access to services at a very high latitude and with much higher elevation angles to enhance available forward and return throughput. This new Arctic capability will provide a seamless extension to Vuasat's Global Xpress network, trusted by mobility and government users today, further increasing network flexibility and efficiency through multi-beam, high-throughput capacity that can be fully dialled up and down, depending on customer demand in the region.

VIASAT GLOBAL INFRASTRUCTURE PROVIDING **PEACE OF MIND**

As military traffic cannot be landed in the region due to the Svalbard Act, which classifies it as a demilitarised zone, Viasat is landing military traffic on the mainland thanks to a network of ground stations specially designed to fit this purpose. Once operational, the new GX Arctic payloads are designed to improve network performance in very high latitudes by flying directly overhead, providing existing GX antennas with much higher elevation angles to optimise throughput.

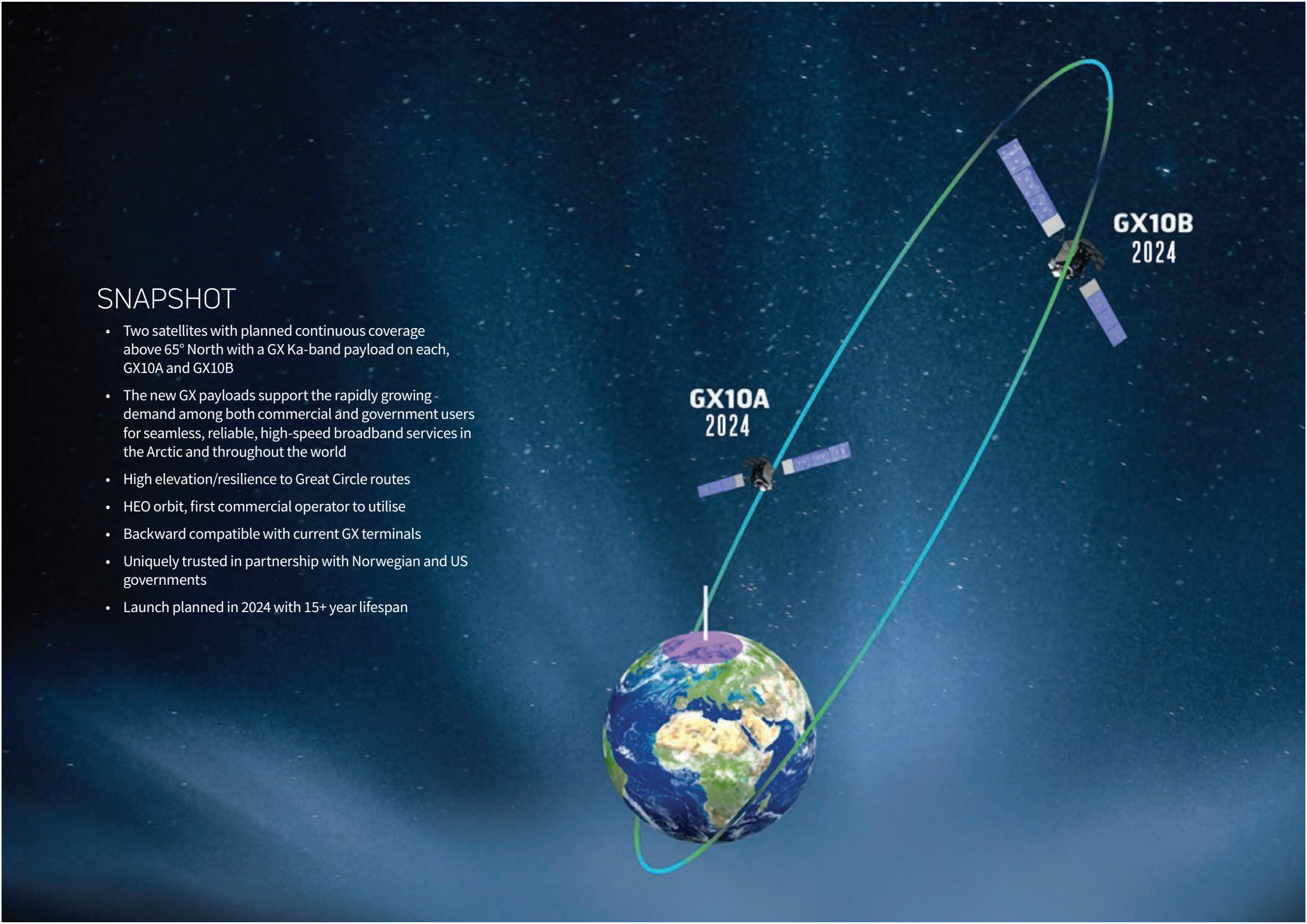
Government customers will be able to use existing GX assets to roam seamlessly onto 10 A/B for continual Arctic coverage. It is worth noting that, while functioning as a HEO constellation instead of the GEO orbit used by all other Inmarsat satellites, government customers will be able to travel to and from the Arctic region unaware that they are passing from one satellite or orbit to another. This is because the user terminals, satellites and payloads will be fully and seamlessly integrated into the entire Global Xpress network.

With the expected launch of GX10A and GX10B, Viasat continues to develop ground-breaking technology innovation to anticipate and match accelerating demand for seamless government mobile connectivity, anywhere around the world. The payloads are expected to provide continuous, assured and interoperable Global Xpress service to tactical and protected tactical government operations in the Arctic region.

The increased situational capability will be a game changer for the region and should go some way to restoring a workable co-existence.

SNAPSHOT

- Two satellites with planned continuous coverage above 65° North with a GX Ka-band payload on each, GX10A and GX10B
- The new GX payloads support the rapidly growing demand among both commercial and government users for seamless, reliable, high-speed broadband services in the Arctic and throughout the world
- High elevation/resilience to Great Circle routes
- HEO orbit, first commercial operator to utilise
- Backward compatible with current GX terminals
- Uniquely trusted in partnership with Norwegian and US governments
- Launch planned in 2024 with 15+ year lifespan



Arctic Coverage July 2024