Viasat

VuaLe:

Connectivity powers potential

VuaLe: When connectivity is resilient, distance means nothing

Situational awareness is vital for government efficiency and security, and dependable connectivity that extends UAV operations beyond line of sight enables reliable data and rapid decision-making.

Governments increasingly rely on Uncrewed Aerial Vehicles (UAVs) to enhance mission reach, reduce risk, and improve operational efficiency from security, surveillance and scientific missions to emergency response.

However, to unlock their potential, these aircraft need robust, beyond line of sight (BLOS) connectivity to reliably transfer gathered intelligence to decision makers on the ground. The ability to retrieve UAV data BLOS exponentially extends the value of each sortie, enabling strategic decisions to be made, quite literally, on-the-fly.

Introducing VuaLe

VuaLe is our dedicated satellite service for UAVs, delivering secure, ultra-dependable communications through both L-band (99.9% reliability) and Ka-band (high-speed, high-capacity) networks.

With lightweight terminals and global coverage, essential for surveillance, reconnaissance, and long-range missions, VuaLe provides highly secure BLOS data transfer, centralised control, and mission-critical performance.

No matter the aircraft size, VuaLe offers a solution that supports seamless operation wherever and whenever it's needed.

Beyond line of sight UAV operations: enabling resilient ISR and secure command and control

Beyond line of sight (BLOS) operations:
Enables control and data transmission over vast distances, beyond the reach of terrestrial radio or LOS links.

Reliable ISR coverage:
Supports long-endurance missions by maintaining reliable connectivity for full-motion video, imagery, and sensor data.

Ultra dependable command & control (C2):
Provides secure, low-latency links for dynamic tasking, mission updates, and re-routing in flight.

Global and remote access:
Ensures mission effectiveness in remote, maritime, or denied environments where terrestrial infrastructure is unavailable.

Networked operations:
Facilitates integration into broader C4ISR networks, enabling data sharing across platforms and command centers.

Rapid decision making:
Supports time-sensitive targeting and threat response through live situational awareness.

Secure and resilient links:
Offers encrypted and protected communications, critical for contested or high-risk operational environments.

VuaLe L-band services: ultra-dependable BLOS connectivity from our most compact terminals

Viasat's multi award-winning global L-band network has been trusted by aviation partners for more than 40 years, and offers secure, reliable and resilient multi-link communication, with reliable connectivity even in tough conditions.

Seamless connectivity

VuaLe's L-band services can be relied upon by governments for robust ISR and C2 communications, with 99.9% reliability and the L-band speeds customers depend on.

Mission-critical connectivity anywhere

Secure, resilient satellite connectivity allows UAVs to operate over greater distances BLOS of the operator, ensuring reliable ISR operations anywhere in the world, even in contested or remote environments.

Real-time data and video

From border surveillance to disaster response and tactical reconnaissance, our L-band live data link enables real-time video-streaming, allowing operators to react to situations as they occur.

Powerfully small

Despite heavyweight features, VuaLe L-band terminals are lightweight, starting at just 435g, easy to install, and available in options for all aircraft sizes, leaving space for additional mission-critical assets.

Trusted provider

Backed by decades of aviation and satellite expertise, Viasat is a trusted partner to governments worldwide. Our resilient, multi-award-winning global L-band network – trusted by aviation regulators – underpins our commitment to continuous service improvement and product innovation, supporting operational excellence and mission success.

Global Xpress Air-IQ: Smarter ISR connectivity

Air-IQ for VuaLe, powered by our Global Xpress (GX) Ka-band network, is the ultimate connectivity solution for uncrewed intelligence, surveillance, and reconnaissance (ISR) aircraft.
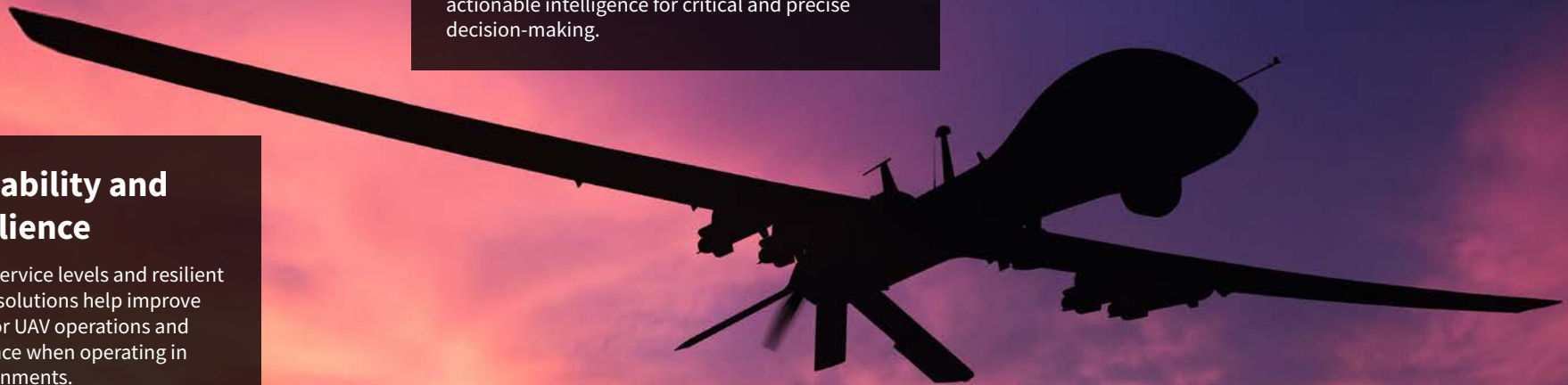
Flexibility

Maximise cost efficiency with Air-IQ's flexible commercial offers, adaptable to mission needs. Lightweight terminals and scalable service plans enhance payload efficiency and operational flexibility across diverse UAV fleets.

Enhanced real-time situational awareness

With optimised uplink speeds, 3-6 Mbps for standard operations and 20+ Mbps for sophisticated missions, Air-IQ for VuaLe delivers immediate, actionable intelligence for critical and precise decision-making.

Reliability and resilience

Our committed service levels and resilient communication solutions help improve PACE planning for UAV operations and provide confidence when operating in contested environments.

Security

Air-IQ for VuaLe is engineered for secure UAV missions and helps to ensure low probability of intercept/low probability of detection, enabling data encryption and network security monitoring.

Sovereign augmentation

VuaLe increases sovereign capability and enables governments to augment indigenous solutions with Viasat's compatible terminals and technology, while maintaining control and data security.

VuaLe: Services

L-band network:

Uncrewed Air

- Designed for UAVs
- Straightforward, secure satellite link
- Integrates easily with aircraft hardware and communication systems
- Powered by our resilient and technologically advanced L-band network
- Real-time BLOS data transfer
- 99.9% reliability

L-MAX

- Secure, reliable government lease service
- Bridges the gap between L-band and Ka-band
- High data-rate airborne communications
- Enables full motion video (FMV) transmission
- Reliable situational awareness for mission-critical ISR operations

Global Xpress Air-IQ network

G2X Air

- Global, high-speed BLOS for UAVs
- High-speed prioritising uplink
- Scalable and flexible wideband performance
- Easy-to-use terminals
- Guaranteed 99.5% Committed Information Rate (CIR) SLA
- Mission-ready reliability worldwide

G2X Air Plus

- High-speed, stable connectivity for demanding ISR missions
- Fully managed, priority subscription-based service
- Regional CIR speeds up to 6 Mbps
- Seamless switching between G2X and G2X Air Plus networks

K-Max

- Private Ka-band leasing service
- Up to and over 20 Mbps global return CIR
- Built for ISR missions in volatile regions
- Supports real-time updates and live streaming
- Flexible leasing options tailored by geography or mission needs

A product for every aircraft and every mission

Our comprehensive product portfolio ensures there is an option to suit every kind of mission.

Group 2
LALE

Altitude:	<3,500 ft
Endurance:	<24 hours
Weight:	20-55kg
Services:	SwiftBroadband
Terminals:	Gotonomi V200, Gotonomi Module, Gotonomi Multilink, Gotonomi 200-A Omni, Versawave Class 15 LGA, Aviator 210U

Upper Group 3
MALE

Altitude:	<18,000 ft
Endurance:	24 – 48 hours
Weight:	<600kg
Services:	SwiftBroadband, Uncrewed Air, L-MAX, G2X Air, G2X Air Plus, K-MAX
Terminals:	Gotonomi V200, Gotonomi Module, Gotonomi Multilink, Gotonomi 200-A Omni, Versawave Class 15 LGA, Aviator 210U, Versawave Class 7 IGA, Viasat ULW 4035, Viasat ULW 4040, GX30, GX46, MCS8000, SD PSKA

Group 4 & 5
HALE

Altitude:	>18,000 ft
Endurance:	>32 hours
Weight:	>600kg
Services:	SwiftBroadband, Uncrewed Air, L-MAX, G2X Air, G2X Air Plus, K-MAX
Terminals:	Gotonomi V200, Gotonomi Module, Gotonomi Multilink, Gotonomi 200-A Omni, Versawave Class 15 LGA, Aviator 210U, Versawave Class 7 IGA, Viasat ULW 4035, Viasat ULW 4040, GX30, GX46, MCS8000, SD PSKA

Current L-band terminals

Terminal Name	V200	Module	Multi Link Module	200-A Omni Antenna	VersaWave Class 15 LGA	VersaWave +5G Class 15 LGA*	VersaWave +5G Class 7 IGA*	AVIATOR 210U*
Manufacturer	Gotonomi	Gotonomi	Gotonomi	Gotonomi	Honeywell	Honeywell	Honeywell	Thales
Viasat Services	Uncrewed Air SwiftBroadband	Uncrewed Air SwiftBroadband	Uncrewed Air SwiftBroadband	Uncrewed Air SwiftBroadband (When paired with the Gotonomi module)	Uncrewed Air SwiftBroadband	Uncrewed Air SwiftBroadband	Uncrewed Air SwiftBroadband	Uncrewed Air SwiftBroadband
Size	83mm x 145mm (D)	15mm x 94mm x 94.5mm	15mm x 140mm x 95mm	72mm x 104mm (D)	Antenna 142mm x 112mm x 51mm	Antenna 142mm x 112mm x 51mm	Antenna 119mm (flange mounted) 142mm (base mounted) x 345mm (D)	64mm x 160mm x 240mm
System Weight	580g	195g	245g	240g	982g	1.06 kg total	1.66kg total (no radome) 2.47kg total (with radome)	1.45 kg

*type approval is expected in 2025

Current L-MAX terminals

Terminal Name	Viasat ULW 4035	Viasat ULW 4040
Manufacturer	Viasat	Viasat
Viasat Services	L-MAX	L-MAX
Size	312mm x 239mm x 48mm	254mm x 246mm x 254mm
System Weight	2.45kg	3.58kg

Current Air-IQ GX terminals

Terminal Name	GX-30	GX-46	MCS8200	Plane Simple Ka-band
Manufacturer	Orbit	Orbit	Honeywell	Satcom Direct
Viasat Services	G2X Air G2X Air Plus K-MAX	G2X Air G2X Air Plus K-MAX	G2X Air G2X Air Plus	G2X Air G2X Air Plus
Size	307mm x 328mm	500mm x 490mm	206mm x 297mm x 349mm	376mm x 337mm
System Weight	Antenna: 10kg	Antenna: 14.25kg	Antenna: 4.5kg	Antenna: 12.02kg

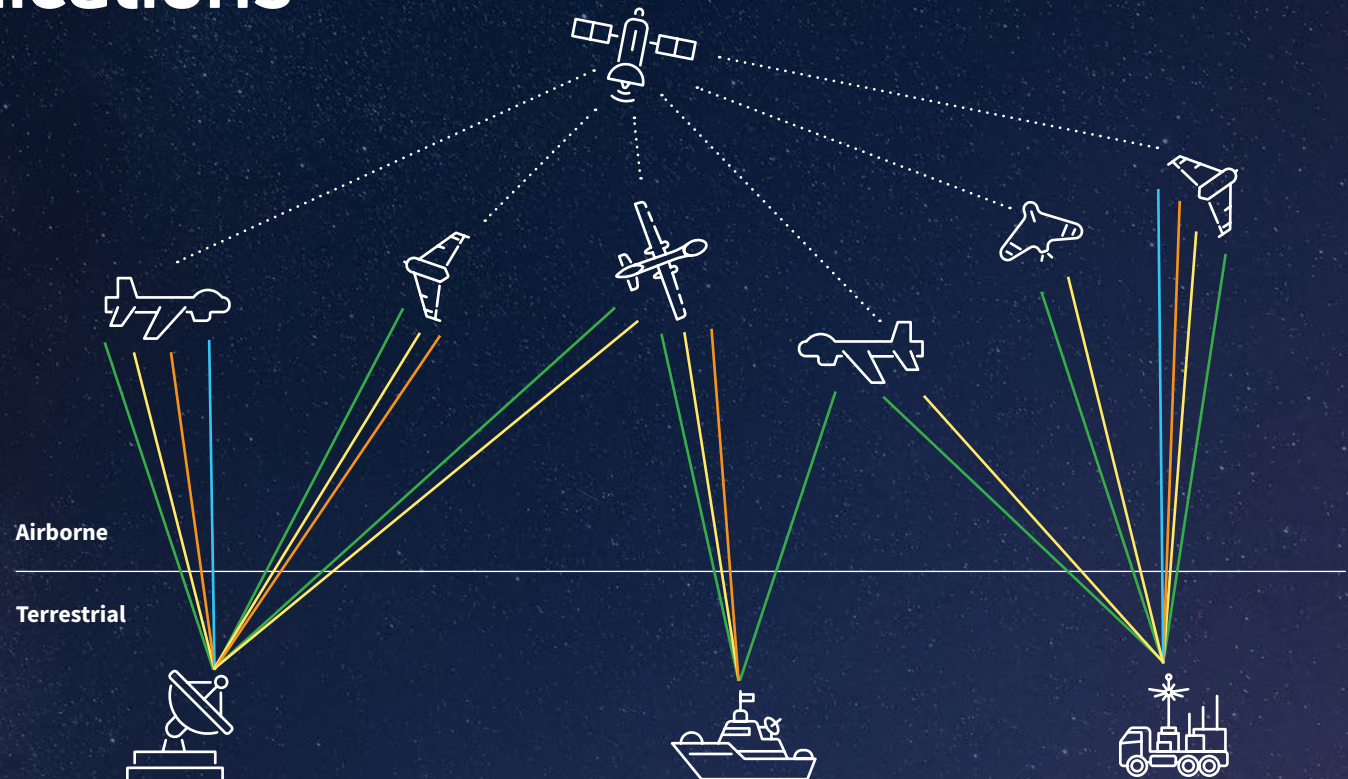# Multi-Domain Unified Secure Integrated Communications

Multiple autonomous platforms, managed in harmony.

Multi-Domain Unified Secure Integrated Communications is a software-defined networking solution that simplifies the management of multiple autonomous platforms, providing automated, real-time connectivity across crewed and uncrewed systems.

This allows your team to focus on mission execution while maintaining secure and consistent communication in dynamic operational environments.

- **Automated data-sharing:** Minimise manual coordination by enabling seamless data exchange between assets

- **Secure communication:** Ensure secure connectivity across air, land, and sea

- **Enhanced situational awareness:** Integrate real-time data from various sources to improve decision-making

- **Interoperability:** Connect different networks to support seamless system integration

Use as a standalone solution or combine it with other Viasat solutions for a strengthened and harmonised network.

Airborne

Terrestrial

Priority One
- Control data to/from UAV

Priority Two
- Control data to/from UAV
- UAV PLI/Location data

Priority Three
- Control data to/from UAV
- UAV PLI/Location data
- Mission data

Priority Four
- Control data to/from UAV
- UAV PLI/Location data
- Mission data
- Mission full motion video

Multiple applications, unlimited responsibilities

Intelligence, Surveillance & Reconnaissance (ISR)

VuaLe's live data link enables UAV video streaming enhancing surveillance, reconnaissance, and target acquisition, and boosting situational awareness and decision-making.

Public safety

From border patrol to disaster zones, VuaLe empowers UAVs to deliver surveillance in hard-to-reach areas, supporting effective response and public safety.
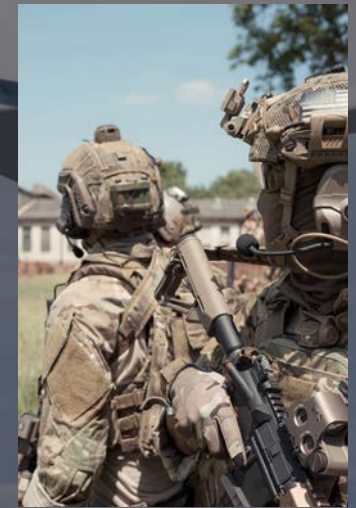
Military applications

VuaLe gives forces a tactical edge with enhanced "eye in the sky" capabilities, supporting a wide range of mission-critical military operations.

Scientific research

VuaLe transforms UAVs into flexible scientific research tools, enabling extended missions and safe observation of inaccessible or hazardous environments.

Special mission

Have a unique requirement? VuaLe is adaptable. Talk to us about your mission, we'll help you find the right solution.