

An abstract graphic consisting of numerous thin, wavy lines and dots in a light blue color, set against a dark blue background. The lines and dots are concentrated in the upper left and lower right areas, creating a sense of movement and connectivity.

EMPOWERING IP CONTRIBUTION WITH LEO

**INTRODUCING VIDEO CONTRIBUTION
OVER EUTELSAT'S ONEWEB NETWORK**

VIDEO CONTRIBUTION, THE SHIFT TO FULL IP

Live video coverage is now expected to be broadcast from anywhere, at any time and under any conditions. Whether covering breaking news, global sports events, or remote field productions, broadcasters must deliver high-quality, real-time content, seamlessly.

Video contribution workflows rely on Ku-band SNG trucks to transmit via geostationary (GEO) satellites. This model remains essential for broadcasting Tier 1 events, where consistent high quality content delivery is non-negotiable.

However, for Tier 2 and Tier 3 productions, broadcasters are increasingly transitioning toward IP-based workflows using bonded cellular networks to gain greater flexibility and operational agility. While effective, relying solely on cellular connectivity can create vulnerabilities in areas with limited coverage or during periods of network congestion, pushing purely terrestrial systems to their limits.

Low Earth Orbit (LEO) satellite systems introduce instant internet access perfectly adapted to meet this growing demand for reliable, low-latency and fully IP video contribution workflows.

To meet these evolving broadcaster requirements, Eutelsat has expanded its Video Contribution Solutions to include the OneWeb LEO constellation, alongside its GEO solutions. This multi-orbit video contribution ecosystem enables broadcasters to:

- **Achieve truly global coverage, including the most remote and underserved regions**
- **Support fully native IP workflows end-to-end**
- **Streamline field operations, with lighter, faster-to-deploy solutions**
- **Strengthen resilience through hybrid connectivity models.**

EUTELSAT'S MULTI-ORBIT SOLUTIONS

Combining the broad coverage of GEO satellites, with the low latency and high-speed performance of LEO, Eutelsat delivers resilient, secure and scalable connectivity worldwide.

What makes Eutelsat unique:

- Only European LEO constellation
- Multi-orbit (GEO + LEO) architecture
- Backed by European governments
- Trusted by defence, enterprise and institutions

Leveraging the advantages of our unique GEO and LEO satellite networks, we offer the best of both technologies in terms of coverage and performance.

Our LEO satellite constellation relays signals between Earth stations and user terminals, complementing terrestrial networks and providing high-end connectivity for users beyond the range of terrestrial networks.

WHAT IS VIDEO CONTRIBUTION OVER LEO?

Video Contribution over LEO uses Eutelsat's OneWeb LEO constellation to deliver GEO-grade reliability, with cellular-level agility, giving broadcasters the ubiquity, efficiency and availability of satellite communications, via compact, light user terminals, with no skilled engineers needed.

Used in conjunction with Cellular Bonding, OneWeb LEO brings reliable IP connectivity in the field, overcoming local cellular network congestion, for seamless high-quality content delivery from anywhere.

NETWORK ARCHITECTURE

Eutelsat's OneWeb constellation is composed of over 600 satellites in 12 near-polar orbital planes, providing global coverage through Ku- and Ka-band spectrum. Each satellite operates 16 beams covering large areas (~1600 km wide and 65 km tall) for short durations of about 11 seconds per beam. A user terminal typically has connectivity with a passing satellite for around 2.3 minutes. The system enables continuous communication between user terminals, LEO satellites, and ground gateways, ensuring seamless global connectivity.

The Video over LEO solution relies on the OneWeb constellation for a robust satellite IP link from the field, overcoming the typical bottlenecks of cellular bonding. At the same time, it continues to leverage cellular networks to recover any packet loss caused by temporary obstructions on the satellite link, ensuring resilient and consistent video contribution performance.

The result is significantly improved service availability and greater predictability for remote, temporary and mobile video production scenarios.

EUTELSAT LEO CONSTELLATION



END-TO-END CONFIGURATION

In a nutshell, OneWeb LEO connectivity is integrated in the customer’s cellular bonding video contribution workflow simply by connecting the Ethernet output of the cellular bonding video encoder directly to the OneWeb terminal.

The OneWeb user terminal provides an instant internet satellite connectivity layer, enabling a direct and managed transport path over the LEO network without requiring additional RF or satellite-specific configuration on the user side.

Eutelsat’s solutions are fully compatible with any cellular existing equipment designed to integrate with a wide range of Cellular Bonding technologies, allowing customers to leverage their existing partners.

In a standard cellular bonding workflow, the video signal is encoded and segmented by the cellular bonding transmitter. The stream is then distributed across multiple IP links in parallel, typically combining 4G and 5G SIM cards along with available Ethernet connections. These aggregated links are transmitted simultaneously and received at the broadcaster’s premises by a cellular bonding receiver, which reconstructs the original video stream.

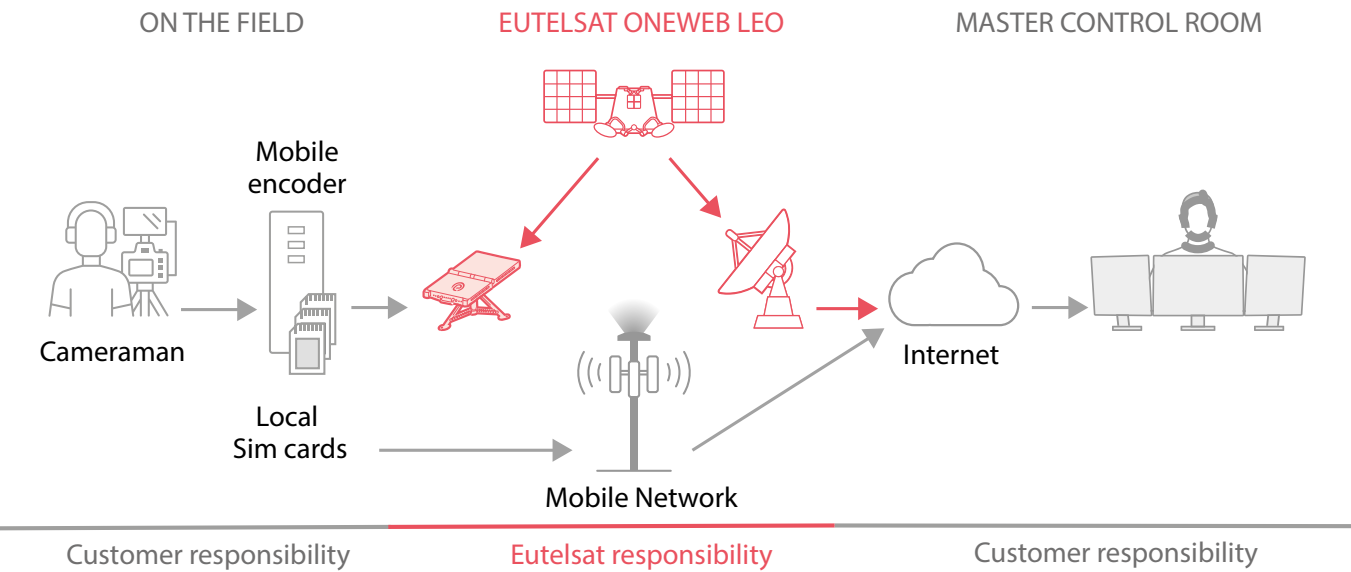
Intelligent link prioritization is also configured by the customer within the bonding system. IP links can be assigned priority levels depending on operational requirements. A common setup designates OneWeb as the primary link via Ethernet, while 4G and 5G connections act as backup paths. This configuration enables automatic failover between links, ensuring uninterrupted transmission even in cases of degradation or loss of one of the connectivity paths.

The Video over LEO system is fully IP-based and integrates seamlessly into standard broadcast workflows.

A typical contribution chain is as follows:

- 1. Video Source
 - Camera feed or SDI/IP output from a camera or field video mixer (programme feed), encoded on-site using broadcast encoders (e.g. H.264 / H.265), often embedded in the cellular bonding transmitter
- 2. Cellular Bonding transmitter
 - Equipped with an H.264/265 ABR video encoder or simply providing cellular and ethernet connectivity
- 3. User Terminal (LEO antenna + modem)
 - Provides IP connectivity on the field to Private or Public (Internet) IP networks
 - Maintains continuous tracking of LEO satellites
- 4. Satellite Segment
 - Signal is transmitted to a OneWeb LEO satellite
 - Seamless handover occurs between satellites every few minutes
- 5. Gateway / Ground Station
 - Traffic is downlinked and routed into terrestrial IP backbone
- 6. Broadcast / Production Centre
 - Stream is received by:
 - Playout systems
 - Production switchers
 - Cloud production platforms

This enables a plug-and-play operational model for live production teams.



KEY PERFORMANCE SPECIFICATIONS

CONNECTIVITY PLANS

VIDEO over LEO connectivity plans are available for land, maritime and aeronautical communications, supporting both static and on-the-move operations.

- COTP (Communication on the Pause) connectivity plans allow a terminal to be relocated and to operate on the network when stationary. Traditional “SNG-like” use cases are addressed by User Terminals operating under COTP connectivity plans.
- COTM (Communication on the Move) connectivity plans enable the terminal to remain operational while in motion. OneWeb links significantly expand the scope of Video Contribution applications by enabling contribution feeds from moving platforms, supported by COTM plans, opening up new operational scenarios not previously feasible with conventional satellite contribution systems.

USER TERMINALS

LEO connectivity is delivered through a User Terminal (UT) equipped with an Ethernet interface, enabling straightforward integration with standard IP encoders, cellular bonding solutions, or other contribution infrastructures. The terminal provides fully automated satellite acquisition, tracking and beam handovers, ensuring seamless and uninterrupted service, even in dynamic environments.

The OneWeb User Terminal portfolio addresses a wide range of operational scenarios, from fixed installations to communications on the move, across terrestrial, maritime, and aeronautical environments.

Within this portfolio, several terminals are particularly suited for Video Contribution applications. These include flat-panel antennas designed for vehicle-mounted deployments, enabling SNG-like operations, as well as portable tripod-mounted solutions for rapid fly-away deployments in remote production scenarios.

OneWeb User Terminals are differentiated by several key characteristics, including:

- Physical size and weight
- Receive and transmit throughput
- Mobility capabilities (Fixed, COTP, COTM)
- Duplex mode operation (Full-Duplex or Half-Duplex)
- Environmental and deployment constraints

The UT portfolio is diverse, with power consumption field-tested and validated for multiple operational needs and production environments. Examples of suitable OneWeb UTs for Video Contribution, which provide connectivity for Fixed Service, COTP and COTM use cases, include:

- Intellian OW11FV
- Intellian OW10HV

Specification	Intellian OW10HV	Intellian OW11FV
Form Factor	Half Duplex	Full Duplex
Targeted Video Contribution Usage	Vehicle-mounted live production and contribution on the move or Tripod mounted for COTP	Vehicle-mounted live production and contribution on the move or Tripod mounted for COTP
Dimensions (L × W × H)	560 × 450 × 120 mm	973 × 505 × 132 mm
Weight	12.2 kg (27 lbs)	20.5 kg (42.5 lbs)
Maximum Throughput (DL/UL)	Up to 78 / 15 Mbps	Up to 190 / 35 Mbps
Power Consumption	130W typical / 180W peak	250W typical / 380W peak
Mobility Support	COTP, COTM	COTP, COTM
Deployment Advantages	Compact, lightweight, optimized for mobility and rapid deployment	Higher throughput capacity for demanding contribution workflows

Additional terminal references and detailed antenna specifications are available on the official Eutelsat and partner manufacturer websites.

VIDEO OVER LEO OFFERING

Customers can choose between two flexible Video over LEO plan structures, depending on whether they require dedicated capacity per terminal, or a pooled model optimized for fleet operations and variable usage patterns.

DEDICATED PLAN (ONE TERMINAL – ONE PLAN)

Each (UT) is assigned its own dedicated plan, with bandwidth that is not shared across other terminals. This model is simple, predictable and ideal for standalone deployments where consistent performance per site is required. Customers can select either an unlimited data option for continuous operations or a volume-based plan with a fixed GB allowance and possible overage.

MONTHLY GB ALLOWANCE	THROUGHPUT IN MBPS	
	HALF DUPLEX	FULL DUPLEX
100	MIR 50/10	MIR 100/20
250		
500		
Unlimited COTP	MIR 50/10 + CIR 0.25/1	MIR 100/20 + CIR 1/5
Unlimited COTM		

POOLED PLANS (MANAGING A FLEET OF TERMINALS)

Designed for fleets of at least five UTs, this model allows each terminal to contribute its individual data allowance into a shared pool. The total capacity (e.g. 10 UTs × 50 GB = 500 GB) is then dynamically allocated across all terminals based on demand. It is particularly well suited for SNG fleets or multi-site operations with uneven traffic, as it maximises bandwidth efficiency and overall resource utilisation.

MONTHLY GB ALLOWANCE	THROUGHPUT IN MBPS	
	HALF DUPLEX	FULL DUPLEX
50	MIR 50/10	MIR 100/20
100		

USE CASES & APPLICATIONS

NEWS GATHERING

When terrestrial coverage is limited or unavailable, Video over LEO enables fast and reliable live coverage. Lightweight user terminals allow journalists to go live within minutes, ensuring operational flexibility and independence from local infrastructure.

LIVE SPORTS PRODUCTION

In dynamic environments, Video over LEO supports stable, high-quality contribution, including mobile and remote production scenarios. In high-density events, hybrid LEO and cellular setups ensure consistent performance despite network congestion.

MAJOR EVENTS

For large-scale productions, Video over LEO provides scalable and reliable connectivity independent of local infrastructure. It enables consistent uplink performance across multiple feeds and locations.

BREAKING NEWS

In time-critical situations, Video over LEO enables rapid deployment and immediate live transmission from the field. It ensures reliable coverage even in unpredictable or infrastructure-limited environments.

KEY BENEFITS:

- Rapid Deployment & Operational Agility**
Go live within minutes with lightweight, portable terminals, enabling fast response and flexible operations anywhere
- Reliable Connectivity Anywhere**
Deliver live video from remote, mobile, congested, or infrastructure-limited environments, independent of terrestrial networks. Reliable transmission from moving platforms and remote locations
- Instant, Low-Latency Live Contribution**
Support real-time HD/UHD video transmission with consistent performance for mission-critical live production
- Scalable & Resilient Operations**
Seamlessly support multiple simultaneous feeds and hybrid LEO + cellular connectivity to maximize capacity, resilience, and business continuity.

HOW TO ORDER?

VIDEO over LEO Plans and catalogues are available in Europe, North America and the Middle East, directly via Eutelsat or through one of our Distribution Partners.



Contact us for more information

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