

# EUTELSAT COMMUNICATIONS VIA KA-SAT:

GLOBAL COMMUNICATION  
SOLUTIONS FOR ANY SITUATION





# WELCOME TO EUTELSAT

## THE LEADING SATELLITE OPERATOR FOR BROADCAST, BROADBAND AND DATA SERVICES

In revenue terms, Eutelsat is one of the three leading satellite operators in the world. As well as reaching the Middle East, Africa, India and significant parts of Asia and the Americas, the company has commercialised capacity on 30 satellites that span the entirety of the European continent.

As of October 2012, Eutelsat's satellites were broadcasting more than 4,400 television channels to over 200 million cable and satellite homes in Europe, the Middle East and Africa.

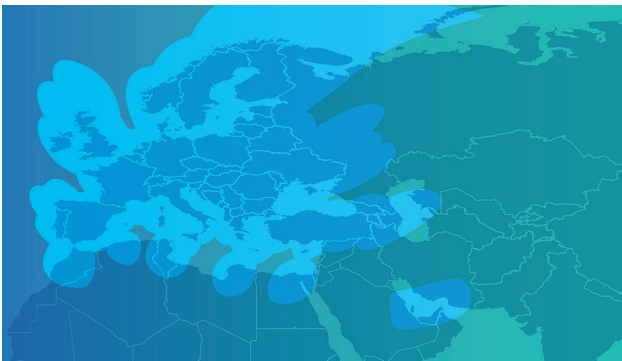
The Group's satellites also serve a wide range of fixed and mobile telecommunications services, TV contribution markets, corporate networks, and broadband markets for Internet Service Providers and for transport, maritime and in-flight markets. Eutelsat's broadband business unit, Eutelsat Broadband, markets and operates access to high speed Internet services through teleports in France and Italy that serve enterprises, local communities, government agencies and aid organisations in Europe, Africa, Asia and the Americas.

Headquartered in Paris, Eutelsat and its subsidiaries employ over 750 commercial, technical and operational employees from 30 countries.

# KA-SAT

**THE FIRST HIGH THROUGHPUT SATELLITE (HTS) IN EUROPE**

**KA-SAT, the first High Throughput Satellite (HTS) in Europe, marks a new generation of multi-spotbeam, high capacity satellites. KA-SAT's revolutionary concept is based on a payload with 82 Ka-band spotbeams connected to a network of ten ground stations. This configuration enables frequencies to be reused 20 times and takes total throughput to beyond 90 Gbps. The ground network uses ViaSat's SurfBeam® 2 technology.**



## Fast internet for everyone

As a powerful new platform for delivering high-bandwidth services, KA-SAT can deliver cost-effective and competitive solutions. The new-generation services on KA-SAT, targeted at users across Europe and the Mediterranean Basin, provides an always-on service delivering speeds of up to 20 Mbps downstream and 6 Mbps upstream.

## High throughput capability for professional applications

KA-SAT responds to professional requirements for higher volume and bandwidth for applications ranging from Enterprises Networks to Internet Backhaul, from Backup Services to M2M Connectivity. For this

type of heavier bandwidth use, the KA-SAT terminal can deliver speeds of up to 50Mbps downstream and 20 Mbps upstream.

## Benefits

- With 90+ Gbps of total capacity, KA-SAT has far more throughput than regional Ku- and first generation Ka-band satellites
- Integrated system designed and optimised for data delivery
- Spot beam architecture enables more effective user bandwidth with frequency reuse
- Smaller, less expensive terminals with greater speeds



## HTS, a game changer

- A quantum leap in bandwidth offered
- Higher speeds for users for smaller antennas
- Changes the cost and bandwidth equation
- HTS is a new type of satellite that increases the market opportunities for satellite, in terms of capacity available, and in terms of applications for consumer and professional markets.

### Optimised for broadcast services

This allows one signal to be received simultaneously by an unlimited number of users across an area covering a continent or more.

### KA-SAT: a green choice

Satellite communication is probably the most ecological way to communicate over long distances today. It is the only way to reach isolated areas with high speed connectivity without having to install environmentally-expensive land lines or build complex ground infrastructure.

Unlike other wired communication technologies that require energy-expensive civil engineering works at every house, a single satellite consumes little or no operational fuel and can service entire continents.

The satellite transmissions run on 100% solar energy and the complete satellite launch procedure, using hydrogen engines, generates about the same amount of CO<sub>2</sub> as a normal US coast-to-coast aeroplane trip

**“Satellite communication is probably the most ecological way to communicate over long distance today.”**



on a Boeing 747 in all its operational life (16 years)!

### HTS: an innovation in satellite technology

- High frequency re-use and multiple smaller spot beams
- Advanced development of ground infrastructure and services centres

#### Some Numbers about KA-SAT

10	Gateways all over Europe
82	Ka-band spots of 250km diameter
Over 90 Gbps	Total capacity
55	Countries covered in Europe and Mediterranean Basin
9° East	Orbital position, located near Eutelsat's premium HOT BIRDTM TV neighbourhood at 13 ° East
26 December 2010	KA_SAT satellite launch
31 May 2011	Launch of services through KA-SAT infrastructure
16 years	KA-SAT lifetime

# KA-SAT ACCESS

## HIGH THROUGHPUT CONNECTIVITY SOLUTION FOR ENTERPRISES AND INSTITUTIONS

**Our standard offer has a maximum download speed of up to 20 Mbps and a maximum upload speed of up to 6 Mbps. The offer includes one static public IP address, minimum guaranteed bandwidth and a specialised technical premium support contact 24/7. We have seven different standard packages to satisfy every customer's needs in terms of allowance, speed and cost:**

### KA-SAT Telemetry

- Download: 2 Mbps
- Upload: 2 Mbps
- Volume: 2 GB/Monthly

### KA-SAT Bronze

- Download: 20 Mbps
- Upload: 6 Mbps
- Volume: 25 GB/Monthly

### KA-SAT Silver

- Download: 20 Mbps
- Upload: 6 Mbps
- Volume: 60 GB/Monthly
- Min bandwidth before exceeding volume:
  - Download: 128 Kbps
  - Upload: 64 Kbps

### KA-SAT Gold

- Download: 20 Mbps
- Upload: 6 Mbps
- Volume: 75 GB/Monthly
- Min bandwidth before exceeding volume:
  - Download: 256 Kbps
  - Upload: 64 Kbps

### KA-SAT Symmetric

- Download: 6 Mbps
- Upload: 6 Mbps
- Volume: 75 GB/Monthly
- Min bandwidth before exceeding volume:
  - Download: 128 Kbps
  - Upload: 128 Kbps

### KA-SAT Platinum

- Download: 20 Mbps
- Upload: 6 Mbps
- Volume: 100 GB/Monthly
- Min bandwidth before exceeding volume:
  - Download: 256 Kbps
  - Upload: 128 Kbps

### KA-SAT Diamond

- Download: 20 Mbps
- Upload: 6 Mbps
- Volume: 125 GB/Monthly
- Min bandwidth before exceeding volume:
  - Download: 512 Kbps
  - Upload: 256 Kbps

**The main advantages that our solution can supply are:**

- Professional internet access
- LAN interconnection
- Back up solutions

**There are three different options that can be associated to KA-SAT Access:**

1. Volume booster: this option allows the customer to have a traffic basket they can use after the consumption of their monthly allowance.
2. VoIP: this option allows VoIP services with QoS
3. National IPs: on request, IP addresses can be provided.

# VNO'S SOLUTIONS ON KA-SAT

**THE VIRTUAL NETWORK OPERATOR (VNO) ON KA-SAT LEASES BANDWIDTH IN ORDER TO PROVIDE TAILORED, FLEXIBLE SOLUTIONS TO CUSTOMERS**

**It allows customers the creation of virtualised networks and repackage services that satisfy different requirements for different markets. For web surfing or data connectivity, for Cloud and even for legacy applications, VNO enables operators to partition the satellite network and efficiently allocate resources to specific end customers. VNO on KA-SAT integrates the latest satellite features and the most advanced technology to provide excellent tailored and reliable services.**

VNO solutions on KA-SAT represent the most flexible modular approach to establishing private networks to increase revenues and obtain the full flexibility of technical and administrative control over a customer base. Furthermore, this avoids the cost of investment in teleport infrastructure.

KA-SAT VNO solutions are highly scalable and carefully engineered to meet the evolving needs of users with various network requirements.

## **Simple, flexible and scalable**

VNOs on KA-SAT can configure different networks to different speeds, performance and QOS. Expansion or change capabilities are easily permitted without altering remote site equipment in both directions. This type of hub architecture allows customers to grow their networks intelligently, with adaptations towards customised services enabling significantly lower costs.

KA-SAT can offer new service packages for second-tier provider, who in turn repackage these services to their customers. This allows users to concentrate on the more refined aspects of their purchased services and to manage their own resources with minimal support from the satellite operator.

## **Benefits:**

- Quick deployment
- Lowers the barrier to entry for resellers of satellite services
- Scalable private network
- Design your network to fully support your desired business model
- Determine speeds, network performance and rate plans as you see fit
- Support applications like VoIP, video and Private Networks
- Easily expand your service capacity as you build customer demand
- Potential to reduce operating expenses for the primary satellite service provider since the VNO user assumes a greater role in managing its own assigned resources
- A software development kit is available for custom applications

# VNO'S SOLUTIONS: IP CONNECT

**HIGHLY FLEXIBLE, TWO-WAY SATELLITE SOLUTIONS FOR  
INTERCONNECTING LOCAL AREA NETWORKS (LANS)**

**Ideal for linking corporate networks, or for communications between educational, governmental or health-care institutions, IP Connect is a cost-effective and reliable solution. With IP Connect you can interconnect any kind and size of network, based on Star Topology, or for Closed Users Groups on your dedicated bandwidth.**

With IP Connect, an enterprise can communicate freely and constantly with branch offices, and benefit from a wide range of services such as LAN interconnections, video conferencing, voice and data transmissions, and much more thanks to satellite dedicated resource.

#### **Key applications:**

- LAN interconnection
- Satellite VPN solutions
- Video conference
- Unified Communications Application

#### **Your profile:**

- Corporations
- Regional administrations
- Rural communities

#### **IP Connect advantages:**

- Global availability
- Standard end-to-end solutions
- Operational excellence through knowledge and expertise
- Round-the-clock customer support



# VNO'S SOLUTIONS: M-BEAT

**FLEXIBLE BANDWIDTH ALLOCATION  
OVER DIFFERENT BEAMS**

**M-BEAT (Multi-beam Best Effort Aggregated Throughput) provides flexible best effort bandwidth allocation over different beams: the best solution to create a wide range of broadband services with the possibility to customise peak rates, volume allowance and CIR.**



**M-BEAT provides best effort bandwidth over selected beams.**

A minimum and maximum aggregated peak rate is defined accordingly with business needs where all customer terminals contribute to reach it.

Once aggregated throughput is set up, customers can flexibly define specific configurations and service profiles for the end user through:

- Best effort peak rates being accessible to a single user terminal for both traffic directions
- Monthly volume allowance (if any)
- CIR

## **The M-BEAT service model**

The model allows you to choose your dedicated bandwidth over different beams. Create your personal network within a dedicated bandwidth, and specify:

- Terminals
- Priorities
- Allowances
- CIR

# VPN

## EUTELSAT + ONEACCESS SOLUTIONS

### Key applications

- **Secure LAN extension to remote branch offices, customers and suppliers**
- **Extension of VPN coverage to regional offices with limited Internet access**
- **Extension of throughput and performances for existing office connections (offload service)**
- **Emergency back-up or permanent business continuity solutions**

### Plug-and-play satellite VPN solution

For organisations operating with a geographically dispersed network of offices and business locations, maintaining a high-speed, secure, interbranch communications network is a critical part of the corporate IT infrastructure.

Traditionally this has been achieved using dedicated leased-lines, or more recently, using IP-VPN technology over a standard broadband connection. The Eutelsat/OneAccess technology partnership offers an industry-first: an integrated high-speed satellite IP-VPN solution comparable to existing DSL performance, availability and pricing.

Highly scalable, secure and resilient, the system gives major telcos and ISPs the ability to offer customers operating with dispersed branch locations, including in areas with limited broadband access, a viable alternative means of enabling a secure, bi-directional communication link under a single, unified SLA contract.

The purpose-designed OneAccess dual-core router technology includes a standard DSL connection as well as an Ethernet port linked to the satellite modem and antenna. Incorporating specialised WAN optimisation and standards-based security software, the CPE device offers dynamic traffic optimisation capabilities for high-priority applications. It can be configured in a closed user group satellite-only mode, or as an extension to an existing terrestrial VPN system to reach remote locations without access to a broadband service. The system can also be configured in off-load mode for locations that already enjoy broadband connectivity, thereby extending the existing throughput, performance and services already offered to subscribers.

Supporting the TR-069 CPE Web Management Protocol (CWMP) and including an intuitive web management GUI, the plug-and-play system can be installed and operational within one hour with no requirement for specialist satellite knowledge.

#### 1. Eutelsat and OneAccess win 'Business Service Innovation' Award for Provision of Advanced Enterprise Services on KA-SAT Satellite. Paris, London 5 June, 2013.

Eutelsat Communications and OneAccess Networks have won the Business Service Innovation Award at the 2013 Global Telecoms Business (GTB) Innovation Awards for radically

transforming the landscape for satellite-based enterprise communications across Europe, North Africa and the Middle East.

Eutelsat Communications and OneAccess were recognised by judges for successfully enabling high-speed Internet access via next-generation satellites to become secure and affordable for businesses, delivering DSL-like service at DSL-like prices.

# NEWSSPOTTER

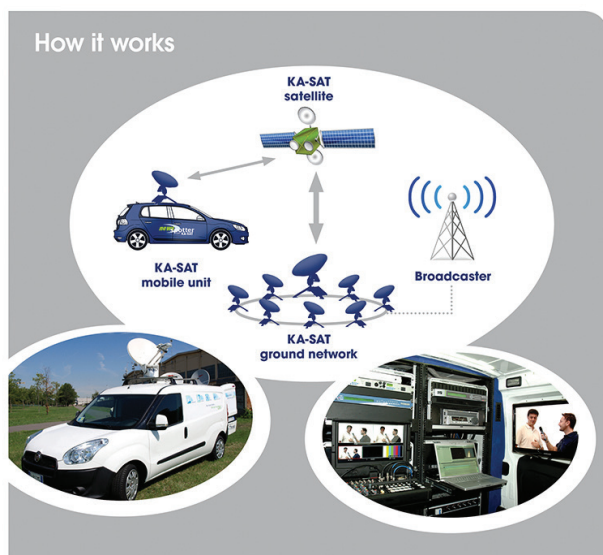
## COST-EFFECTIVE SATELLITE NEWS AND DATA GATHERING SERVICE

Satellite news and data gathering across Europe and the Mediterranean Basin has been made simple and cost-effective using NewsSpotter, the KA-BAND news gathering and data service offered via Eutelsat's KA-SAT satellite.

Using the compact, lightweight equipment, one person can start transmitting and receiving real-time, high-quality video, images and data from any location, in just a few minutes.

### NewsSpotter, an IP Contribution service solution for satellite news gathering

- **EASY**  
Easy to deploy and point
- **SIMPLE**  
Automatic scheduling, internet-based booking and delivery of signal to your injection point
- **TRANSPORTABLE**  
Lightweight kits with small antennas; simple and easy to transport everywhere
- **COST EFFECTIVE**  
Very competitive price of equipment and service
- **FAST**  
High speed rate for IP Streaming Contribution up to HD Contents



Ideal for occasional or nomadic use, NewsSpotter delivers seamless integration into IP networks using state-of-the-art satellite technology. Bandwidth can be reserved online using the self-booking application - perfect for occasional, last minute use, or for guaranteeing reservations for dedicated use.

**news spotter**  
eutelsat broadband



**eutelsat broadband**

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