

# airstream live™

## A complete end-to-end content delivery solution

airstream Live™ is a unique, DVB-NIP compatible, cloud service offering cost-effective live streaming and content delivery solution over broadcast satellite or terrestrial networks. It consists of an airstream Live mABR server featuring open-standard interfaces for simple and quick integration with origin servers and uplink DVB-S2/S2X modulators at the broadcast headend side and airstream Live gateway receivers and mobile player application for playout devices such as tablets, smartphones and laptops/PCs to be used by the end users.

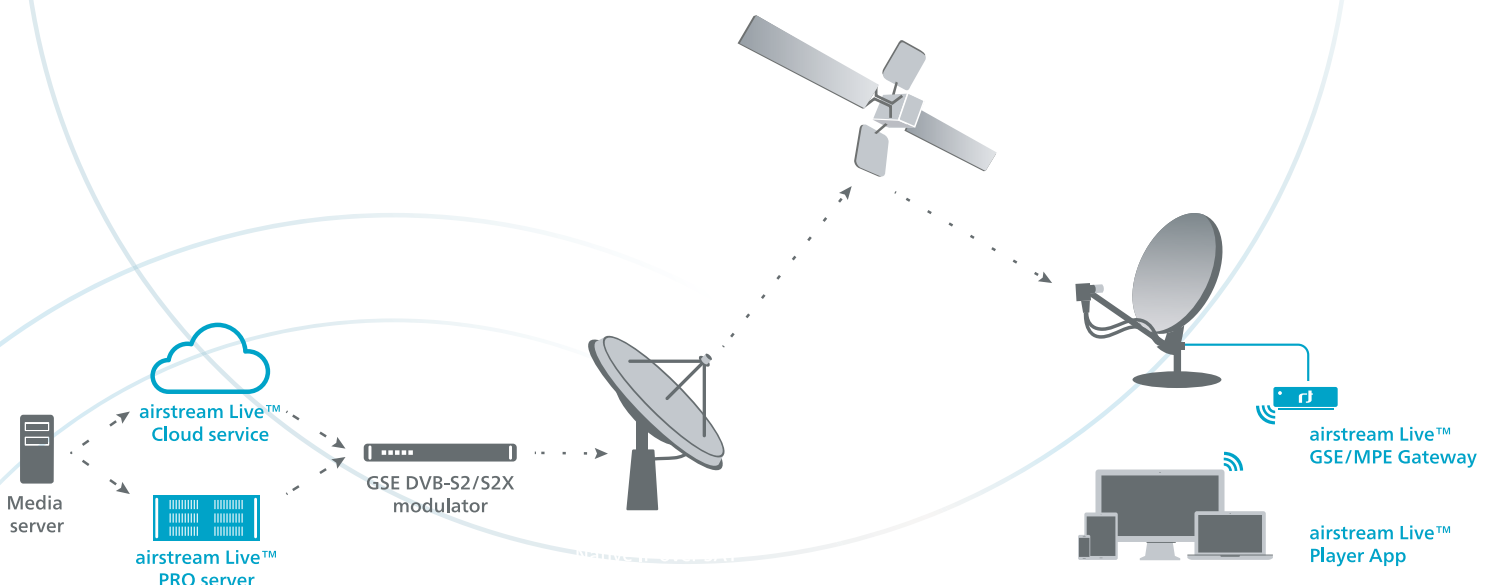
The content broadcast via airstream Live™ – ABR live/VoD DASH/HLS streams or any type of files - is received by the airstream Live gateways and is streamed to end users devices over Wi-Fi. The airstream Live cloud service can also be provided as an on-premise installation if on-premise deployment is preferred.

The airstream Live solution is addressing a plethora of use cases where content delivery over satellite is the only economically viable and ecologically sound option including e-learning for rural schools, maritime and connected vehicle entertainment applications, e-health to isolated communities, digital signage and smart city applications as well as multi-screen satellite TV services. In addition to serving rural communities, sea or air crews and passengers, airstream Live can be used to boost content delivery to CDN edges and to 5G nodes to deliver low latency streaming and far better user experience to customers.

### Applications:

- e-learning applications for rural schools
- Multi-screen Satellite/Terrestrial TV
- Live/VoD content delivery to public sites
- Digital signage
- Smart cities video services
- e-health and telemedicine video applications
- Download-to-carry, live streaming entertainment services over WiFi hotspots
- Live streaming, media and data delivery to rural communities, sea and air crews and passengers
- Live streaming and media delivery to CDN edges and 5G nodes

**DVB NIP**®



Scan the QR code for more information or contact [airstream@inverto.tv](mailto:airstream@inverto.tv) to schedule a demo.





## **airstream Live™ PRO mABR Server**

**IDLA-SERVO1-OLPRO-OPW**

**Item 6039**

Designed to address the growing need to converge IP video streaming and broadcast technologies in order to allow service providers to seamlessly deliver their service across multiple networks such as over-the-top, broadcast and IPTV, the airstream Live™ PRO mABR server is an on-premise content delivery server compatible with the DVB-NIP tech stack. It can receive HLS/DASH streams or files of any type over multiple interface protocols, encode them into FLUTE packets and generate a DVB-MPE transport stream or an IP stream ready for GSE/DVB-S2X broadcast.

Utilizing PCIe extension slots, the airstream Live™ PRO mABR server can, depending on the target application, integrate with a variety of modules such as receivers, video encoders and modulators, turning it into a powerful all-in-one platform converging traditional broadcast and the latest IP streaming technologies.

The airstream Live™ PRO mABR server embeds an intuitive web UI allowing users to ingest content from various sources, manage play out lists for broadcast and define the target group of gateways for each broadcast. Its high performance, cost-effective hardware combined with simplicity of operation, makes it an ideal solution for video service providers that want to profit from the convergence of IP and broadcast technologies, extend their service over multiple networks and screens to locations with limited or no Internet connectivity.

### **Main features and benefits:**

- Economic DVB-NativeIP compatible mABR server solution
- Live and on-demand media streaming
- Secure, low latency streaming
- Multipurpose multi-format file transfer over broadcast satellites
- Intuitive content ingestion, receiver groups management and play out broadcast tools
- Redundant power supply
- Open and flexible interface to teleport uplink equipment
- Available as an on-premise installation or as a cloud service

\*Product image is for illustration purpose, actual server may look different depending on availability.

## Minimum technical specifications

<b>System</b>	
CPU	Intel® Xeon® processor E3-1585 v5 4-Core 8 Threads Intel® C236 chipset Intel® Iris Pro Graphics P580 (GT4e)
Memory and storage	32GB DDR4 2133MHz 256GB SSD 1TB HDD
Networking interface	Dual 10GBase-T LAN with Intel® X550
Storage interface	6 SATA3 (6Gbps) via C236; RAID 0, 1, 5, 10
USB ports	5 USB 3.0 (2 rear, 1 Type A, 2 internal)
Extension slots	7x PCIe 3.0 extension slots
Broadcast interface	IP (OPTIONAL: DVB-ASI, DVB-S2X, DVB-T2)
Power supply	2 built-in power supply units
<b>Input / Output streams</b>	
File formats	ABR files, Apple HLS, MPEG-DASH, CMAF Generic files – documents, firmware, video, audio, data
IP Protocols	HTTP, HTTPS, Multicast, Unicast, RTP, RTSP, RTMP, FLUTE, DVB-mABR
DVB transport stream protocols	GSE HEM, DVB-MPE
Containers	MPEG TS, MP4, RAW RTP H.264/AAC/OPUS, FLV
<b>Security</b>	
HTTPS, AES, DTLS-SRTP, SSL certificate management	
<b>File system</b>	
EXT3, EXT4, XFS	
<b>System management</b>	
SSH, web UI, REST API, System management port, IPMI, Watchdog	



## **airstream Live™ Gateway**

### **IDLA-GATW01-OL000-OPW**

#### **Item 6358**

Inverto's airstream Live™ Gateway is a cost-effective DVB-NIP compatible satellite receiver designed to receive content distributed over broadcast satellites using Inverto's airstream Live content distribution solution. The airstream Live™ Gateway features a DVB-S2X front end and supports content delivery over GSE HEM or DVB-MPE transport streams. It receives live ABR video streams or any other type of media files including VoD, documents and data files over multicast streams and publish the content over a built-in web server. The airstream Live Gateway features a LAN port and a WLAN Access Point to stream the content to mobile devices directly or through a companion airstream Live Edge server when a larger number of end users' mobile devices shall be supported at the same time.

In addition, the airstream Live™ Gateway can decode the live mABR TV streams and display over a TV screen using its HDMI and analogue A/V ports. The airstream Live Gateway features a USB2.0 port for connecting an optional local storage.

#### **Main features and benefits:**

- Access free-to-air satellite mABR TV streams
- Built-in dual band Wi-Fi software Access Point (Optional)
- Local storage over USB 2.0 port
- DVB-S2X, DVB-NIP compatibility
- Reception of mABR video streams, VOD and generic data files over GSE HEM or DVB-MPE transport stream
- Content distribution to connected devices over LAN/WLAN
- Scalable distribution to a large number of connected devices using an airstream Live Edge server
- Available as SDK for integration into 3rd-party mobile apps and STBs

\*Product image is for illustration purpose, actual Gateway may look different depending on availability.

## Technical specifications

SoC	Montage Symphony4, 2-core Cortex-A7 (ARM) 32-bit SoC, up to 1.2GHz
Decoding	HEVC/H.264/H.263/MPEG-4/MPEG-2/AVS/AVS+/VC1/VP8/VP9 HD decoding HEVC Main Profile@Level 4.1 and Main 10 Profile @L4.1, High tier, VP8 2K@30fps, VP9 2K@60fps profile 0 and profile 2, MPEG2 MP@ML/HL
DDR	256MB DDR3
USB	USB 2.0 (for software updates)
Wi-Fi (Optional)	2.4 GHz and 5.0 GHz IEEE 802.11 b/g/n/ac wireless LAN. Up to 3 simultaneous connections over the built-in WLAN software access point Optional scaling and extended coverage over an external Inverto OneNet PROx MESH Wifi6 Router
LAN	10/100 Mbps
Display	HDMI (analog A/V jack port optional)
Satellite input	1x DVB-S/S2/S2X front end, female F-connector, 950-2150 MHz
Power	12VDC, 1.5A max.
File formats	ABR files - Apple HLS, MPEG-DASH, CMAF Generic files – documents, firmware, video, audio, data
IP Protocols	HTTP, HTTPS, Multicast, Unicast, RTP, RTSP, RTMP, FLUTE, DVB-HB
DVB Transport Stream protocols	GSE HEM, DVB-MPE
Containers	MPEG TS, MP4, RAW RTP H.264/AAC/OPUS, FLV
Optional design spin offs	1x LTE modem with integrated SIM reader for internet connectivity (different PCB version) 1x DVB-T2 receiver for free-to-air digital TV (redesign required).
	Local storage management over USB (integration with 3rd party software may be required depending on customer requirements)

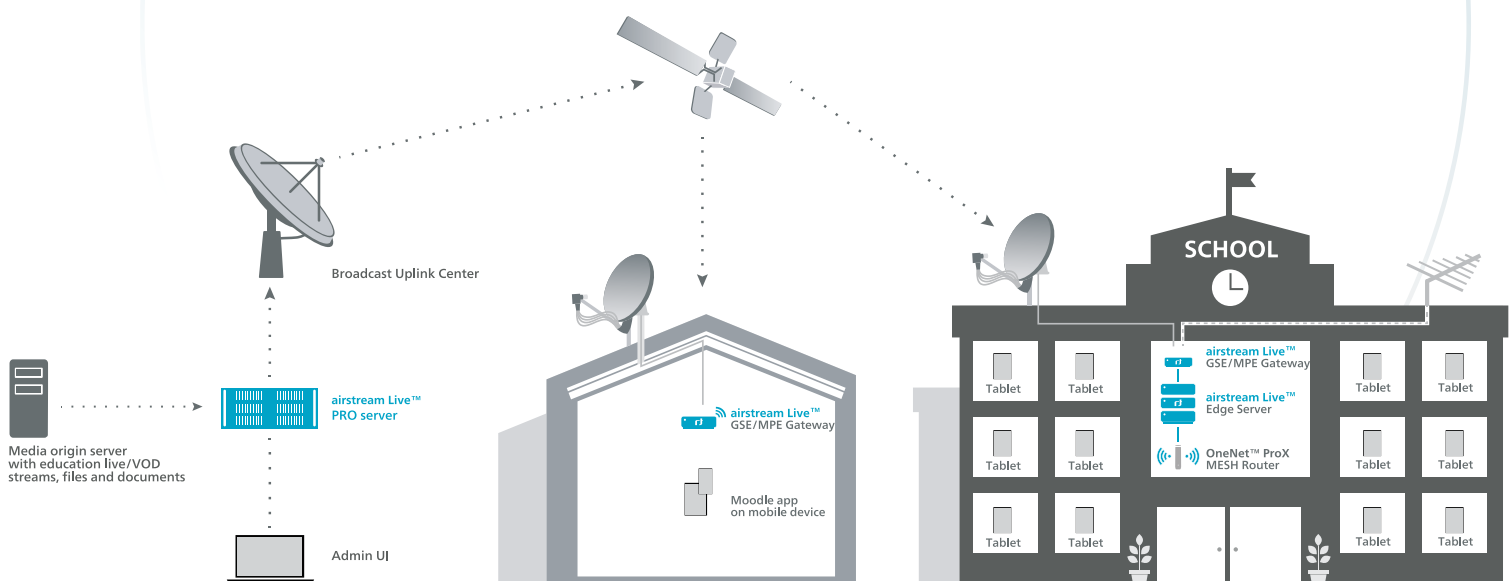
## Example use case - Education content delivery to rural schools

Making online education services available to rural schools and homes over satellite broadcast is of high importance to governments of developing countries that decided to close the digital divide.

An airstream Live™ PRO mABR server (on-premise or as a cloud service) receives learning material files (including video, audio and documents) from a media server over the internet and broadcasts them over satellite to airstream Live™ gateways installed in rural schools and homes. The gateways integrate the airstream Live™ software stack that is responsible for extracting the educational material files from the broadcast streams and make them available for local streaming to end users' mobile devices over Wi-Fi. When many users shall be supported, a companion and more powerful airstream Live Edge server is installed in addition to the gateway device.

In addition to the online educational material streamed from the airstream Live Gateways to the end users' devices, the gateways will be able to decode and display the streams on a connected TV over an HDMI or analog A/V port.

The following diagram describes the system architecture for the use case:



For purpose of brevity, some product descriptions/images/specifications in this sheet remain at platform level and may not be referred to as detailed data-sheets of the products. FTA Communication Technologies S.à r.l. reserves the right to amend, omit or add products, product-lines, and / or features without notice.

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