



MobiStream

MobileTV over LTE broadcast

MOBISTREAM IS ENENSYS' EMBMS GATEWAY/BM-SC SERVER THAT AIMS AT DELIVERING MULTIMEDIA CONTENT OVER LTE IN BROADCAST MODE USING MBMS TECHNOLOGY. IT ENCAPSULATES MULTIMEDIA CONTENT INTO EMBMS BEARERS, INSERTS SYNCHRONISATION INFORMATION FOR MBSFN OPERATION AND DELIVERS THE EMBMS BEARERS OVER M1 INTERFACE TO ENODEBS.

Running at the core network, the **MobiStream** deals with the delivery of data in eMBMS architecture. It implements the user-plane functions of the BM-SC server to synchronize eNodeBs for MBSFN operation over LTE. It implements the user-plane of the eMBMS Gateway function to deliver the synchronisation information as well as the multimedia content across the Core Network over the M1 interface to the eNodeBs. **MobiStream** may provide user-plane BM-SC and eMBMS Gateway functions within the same unit or within two separate units.

The **MobiStream** enables SFN broadcasting over LTE. It relies on a built-in GPS receiver or external NTP server to provide the most accurate synchronization information to avoid clock and frequency drift over time. It provides synchronization information according to the SYNC protocol. It generates SYNC data according to the user-defined SYNC period and related SYNC sequences. SYNC insertion is managed independently per eMBMS bearers.

The **MobiStream** deals with the encapsulation of multimedia content into eMBMS bearer. Several multimedia content can be allocated to the same eMBMS bearer. It implements M1 interface to transmit the eMBMS bearer across the core network to the eNodeB. **MobiStream** sends the eMBMS bearers through a GTP-U tunnel over UDP/IP. It supports the delivery over IPV4 and IPV6 multicast address.



APPLICATIONS

- Mobile TV broadcasting
- MBSFN broadcasting
- Regionalisation support
- News, VOD, Ads filecasting
- Firmware upload

BENEFITS

- Broadcast-grade equipment
- Standard-based solution (eMBMS)
- Central body of the MBMS over LTE broadcasting
- Improve coverage when broadcasting over SFN
- Interoperable with various eNodeB vendors
- Highly reliable with several redundancy schemes
- Straight integration into the core network
- Reuse existing network equipment

CHARACTERISTICS

- MBMS Gateway and/or BM-SC functions
- Encapsulate IP traffic into GTP-U over M1
- SYNC data generation for MBSFN
- Built-in GPS for accurate SFN broadcasting
- eMBMS bearers management through webServices
- IP remapping for regionalization support
- IPV4 and IPV6 support for data input/output
- VLAN support
- Automatic 1+1 redundancy of the unit
- Automatic 1+1 redundancy of the Ethernet ports
- Easy-to-use web based GUI
- Full SNMPv2 support



INPUTS

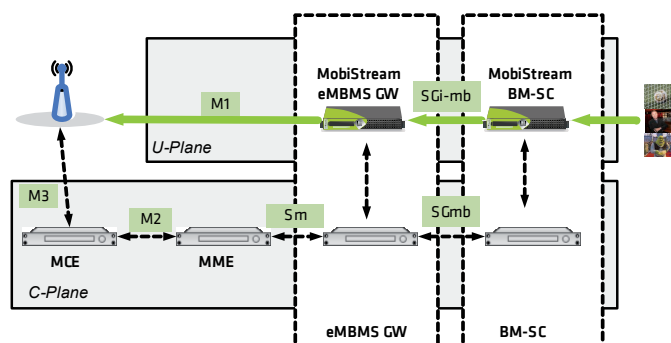
Control	2x Gigabit (RJ45) for GUI / SNMP
Production	2x Gigabit (RJ45) for MBMS bearer management
GPS	1x TNC input for internal GPS

OUTPUTS

UDP/IP	2x Gigabit (RJ45) to output SYNC data over UDP or M1 interface
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FEATURING

3GPP standard	MBMS support over LTE SYNC protocol M1 interface
SYNC protocol	Based on GPS or NTP reference SYNC PDU0/1/3 management Time offset support SGmi interface support
M1 interface	GTP-U encapsulation IPV4 and IPV6 output VLAN support
eMBMS bearers	Management of up to 200 bearers Remote control through HTTP/rest C-TEID and Multicast address generation QCI assignment
Redundancy	Automatic 1+1 redundancy between two MobiStream Automatic 1+1 redundancy of data and control ports
Monitoring and Supervision	Easy-to-use web based GUI User management Full SNMPv2 support



PHYSICAL

Height	44 mm / 1.7 in.
Width	444 mm / 17.48 in.
Depth	274 mm / 10.79 in.
Format	1 RU, width 19"
Power supply	100-240VAC 48V DC (option)
Power consumption	20W



ORDERING CODES

MobiStream-Pilot	Management of up to 10 MBMS bearers
MobiStream-Base	Management of up to 50 MBMS bearers
MobiStream-R0	Management of up to 100 MBMS bearers
MobiStream-XR0	Management of up to 200 MBMS bearers

Options

NN6-GPSv2	Built-in GPS receiver
NN6-In48V	48 V input instead of 110V/220V
NN6-In220VRedundant	110V/220V redundant power supply
NN6-In48VRedundant	48V DC redundant power supply

