



EUROVISION SATELLITE DISTRIBUTION ON EUTELSAT 10B MULTIPLEX PLATFORM HYPERMUX 6 (HM6)

Special Notice EV 2023/08 August 2023

1. INTRODUCTION

EUTELSAT 10B - HYPERMUX HM6

By mid-August 2023, Eurovision are establishing a permanent Multiplexer called HyperMux 6 (HM6), transmitted in NS4 modulation, on transponder EVS72 on Eutelsat's 10B satellite, located at 10° East.

This platform will be used for the distribution of major sporting events, along with a variety of other transmissions to European broadcasters.

2. SATELLITE COVERAGE

Eutelsat 10B covers Europe and the Middle East in Ku-Band with linear polarization. Its restricted uplink beams make it more resistant to interferences.

See verso for E10B-EVS72 EIRP coverage map.

3. TRANSPONDER E10B-EVS72

E10B-EVS72 has been identified as the most suitable transponder to host this HyperMux, which will utilise the whole 72Mhz of bandwidth. In agreement with the satellite operator, we have merged two 36MHz transponders into a single 72Mhz transponder, aggregating all content previously spread across two transponders, reducing the number of receives required for the takers, and giving more flexibility.

Orbital Position:	10° East
Transponder:	EVS72
Txp dw central frequency:	11200.00 MHz
Bandwidth:	72 MHz
Uplink polarization:	Linear Vertical
Downlink polarization:	Linear Horizontal

4. RECEPTION ANTENNA REQUIREMENTS

Antenna diameter	1.8m	2.4m	3.0m	3.6m
Antenna G/T	22.8dB/K	25.1dB/K	26.8dB/K	28.3dB/K

VSWR RX better than 1.3:1 Operating frequency 10.95 - 11.70 GHz Polarization Linear Horizontal LNB PLL type with L.O. stability better than +/- 25 kHz

5. BEACONS

Antennas equipped with a tracking system will have to be adapted to the beacon frequencies shown below (unmodulated CW carriers):

Beacon	Coverage	Ku band	Polarisation
CW1	Europe	11 698.60 MHz	х
CW2	Europe	11 699.20 MHz	Y

6. MPEG DIGITAL STREAMS

The configuration of the HM6 on the E10B-EVS72 is the following:

ASI Interface bitrate :	200.714Mbps
Modulation NS4:	16APSK
FEC (BCH+LDPC):	3/4
Pilot:	ON
Frame:	Normal
Roll-off :	2%
Symbol Rate :	70 Ms/s
Occupied bandwidth :	72 MHz

See verso for an example of demodulator configuration and licenses required.

7. CONTACTS

EVC Geneva 24/7 Tel: +41 22 717 2790

Eurovision Bookings

E-mail: bookings@eurovision.net Tel: +41 22 717 2900

Eurovision Demodulator support

E-mail: demodsupport@eurovision.net

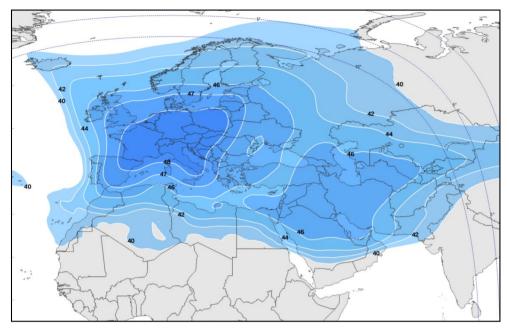
Contact the Demodulator Support team if you need to register new demodulators or require reception or encryption troubleshooting for HM6.

Eurovision Satellite Operations Manager

Mayeul Mermin

E-mail: mermin@eurovision.net

E10B Nominal Coverages, Ku-band Widebeam



home log	y in m anual cal	culator contact L	ogged in as admin				
	System license						
NS2000 Menu							
monitor >	License issued date	10/11/2013					
	License ID	3					
system 🕨							
system config 🛛 🕨	Licensed Features						
demodulator config	Name				License-Type	Days-Left	
	L-band 950-2150MHz				permanent	NA	
	1 Channel Option (Default)				permanent	NA	
	Dual Channel Option						
	DVB-S2/NS3/NS4 QPSK/8PSK/16A	PSK 70Msps			permanent	NA	
	Dynamic Distortion Compensator				permanent	NA	
	DRM (EBU)				permanent	NA	

Figure 1 - Ku-band Widebeam: typical EIRP (in dBW. Saturated performance)

home	log in manu	al cal	culator	contact
	Line setting	s		
NS2000 Menu	Line Mode	NS4	~	
monitor	Dual Channel More		-	
system	Symbol Rate	70.000000	MSPS	
	LNB LO Freg	10000.00000	MHz	
system config	RF Freg	11200.00000	MHz	
demodulator config		0.02	~	
	Golden Seg	0	-	
	LNB Control	OFF	~	
	NS4 NLC Mode	OFF	~	
	Fast Sync Mode	Disable	v	
	ACM Mode	Disable	•	
	Auto CCM Mode	Disable	~	
home NS2000 Menu	log in man Channel 1 s	settings	culator	contact
			culator	contact
NS2000 Menu monitor system	Channel 1 s	settings	culator	contact
NS2000 Menu monitor system system config demodulator confi	Channel 1 s	settings	culator	contact
NS2000 Menu monitor system system config demodulator confi	Channel 1 s ISI Range (0)	settings - fr al calo	ulator	contact
NS2000 Menu monitor system system config demodulator confi	Channel 1 s ISI Range 00	settings - fr al calo	ulator	contact
NS2000 Menu monitor system system config demodulator confi home NS2000 Menu	Channel 1 s ISI Range 00	ettings - fr al calo nel (HOST (ulator	contact
NS2000 Menu monitor system onfig demodulator confi home NS2000 Menu monitor	bog in manu MGMT Char State Enable ISI Range fe	settings - fr al calo	ulator	contact
NS2000 Menu monitor system system config demodulator confi home NS2000 Menu	Channel 1 s ISI Range 00	ettings - fr al calo nel (HOST (ulator	contact
NS2000 Menu monitor system onfig demodulator confi home NS2000 Menu monitor	bog in manu MGMT Char State Enable ISI Range fe	ettings - fr al calo nel (HOST (ulator	contact

Demodulator Line status

General			
Mode	NS4	Symbol Rate	70.00 MSPS
State	Sync	Symbol Rate Offset	1.15 PPM
Pilot-SNR	16.48 dB	Roll Off	0.02
Composite Power	-41.16 dBm	RF Frequency	11200.00 MHz
Signal Power	-45.51 dBm	Frequency Offset	17.89 KHz

Data Rate	200.72 Mbit/Sec
Link Margin	6.53 dB
Status	Locked
SNR	15.98 dB
Modulation	16APSK
FEC-Rate	3/4
Pilot	YES
Frame-Size	Normal
Frames	1.377e+06
Error Frames	0
FER	0.00e+00

Modulation FEC-rate	Pilot Fra	Frame-size	Frames	Error- Frames	FER	Link- Margin	SNR	Designated To-Unit?	
DUMMY				67,080					
8PSK	8/15	YES	Normal	396	0	0.00e+00	12.30	16.19	NO
16APSK	3/4	YES	Normal	1.377e+06	0	0.00e+00	6.51	15.98	NO

Figure 2 - Typical demodulator settings, licenses required and example of reception