

HISPAMAR-LINK BUDGET

DIGITAL SERVICES

TRANSPONDER N°

SATELLITE

AMAZONAS-3

GENERAL DATA

Transponder bandwidth(MHz)	450
bandwidth (MHz)	4.0
carrier type	DVB-S2
Modulation	8PSK
Information rate (Kb/s)	8000
FEC	6/7
bandwidth occupied (KHz)	4000.00
BER (Tasa de errores)	-
Eb/No (dB)	8.6
LINEALIZADOR (O=NO, 1=S/I)	si
N° of carriers	112.50
IBO total (dB)	6.0
OBO total (dB)	4.0
C/I intermodulation	23.0
Occupation factor	1.20
availability (%)	clear sky
satellite longitude	-61

UPLINK

Clear Sky

Continent E/T Rx	AMERICA
Country E/T Rx	MEXICO
Name E/T Tx	MEXICO
E/T Tx (degrees E) Longitude	-46.64
E/T Tx (degrees N) latitude	-23.55
E/T Tx (m) Altitude	760.00
Uplink Frequency (GHz)	23.75
ERP E/T Tx (dBW)	52.25

Automatic Power Control

0.00

E/T Tx example

HPA (W)	4.00
HPA-antenna (dB) loss	0.40
Ant. gain (dB)	46.63
Ant. Diameter (m)	0.9

Polarization discrim. (dB)	30.00
Accuracy polarization(*)	0.10
% unavailability	
Rain atten.	
Atmosp. Atten. loss (dB)	2.50
aiming error loss (dB)	0.50
sky loss (dB)	213.20
D.F.P. (dBW/m2)	-115.03
saturation D.F.P.in the center (dBW/m2)	-85.00
Back-off input (dB)	30.03
Geogr. advantage (dB)	-2.00
G/T satellite in the contour (dB/K)	20.0
C/N up (dB)	16.63
C/I aggregate co-polar cross-polar up(dB)	25.00
C/I aggregate co-polar cochannel up(dB)	23.00
C/(N+I without other interf. satellites up) (dB)	15.25
psd Interference from satellite 2nd(dBW/Hz)	-56.50
C/I with other interf. Satellites 2° up (dB)	21.26
c/(N+I) with other interf. Satellites up (dB)	14.27

DOWNLINK

Clear sky

Continent E/T Rx	AMERICA
Country E/T Rx	USA
Name E/T Tx	LAREDO
E/T Rx (degrees E) Longitude	-99.51
E/T Rx (degrees N) Latitude	27.51
E/T Rx (Km) Altitude	150.00
Down Frequency (GHz)	18.55
ERP satellite in the beam center (dBW)	65.00
Back-off output (dB)	28.0
Geogr. advantage (dB)	0.00
% unavailability	
Rain Atten.	
Atmosp. Atten. loss (dB)	1.60
aiming error loss (dB)	0.50
sky loss (dB)	209.42
G/T E/T Rx. (dB/K)	36.35

E/T Rx Example

Ant. Gain(dB)	59.46
antenna-receptor loss(dB)	0.40
Tba (°K)	120.00
Ta (°K)	45.00
Tsyst. (°K)	186.56
Ant. Diameter (m)	6.00

Polarization discrim.(dB)	25.00
C/N down (dB)	24.39
C/I aggregate co-polar cross-polar down(dB)	22.00
C/I aggregate co-polar cochannel down(dB)	20.00
C/I channel adjacent (dB)	22.70
C/(N+I without other interf. satellites down) (dB)	15.18
desp Interference from satellite 2nd(dBW/Hz)	-16.00
C/I with other interf. Satellites 2° down (dB)	32.98
c/(N+I) with other interf. Satellites down (dB)	15.11
	5.5

GLOBAL RESULTS

Clear sky

C/(N+I without other interf. satellites TOTAL) (dB)	12.20
C/(N+I with other interf. satellites) Total (dB)	11.66
Eb/No available (interf nominal)(dB)	8.65
Eb/No request (dB)	8.60
Margin (nominal)(dB)	0.05