



AMOS-4 Ka Beam

Technical Specifications / Version 1.4

January 2015

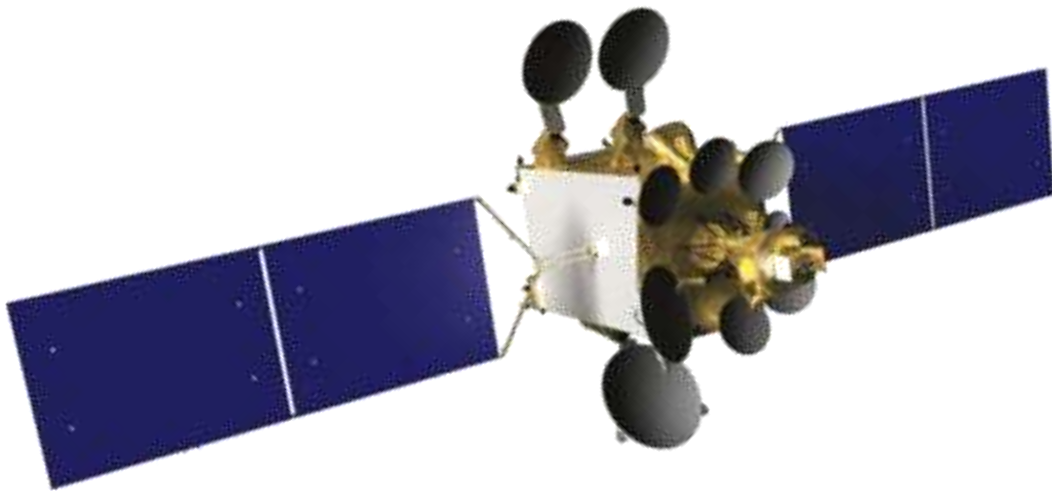
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1. INTRODUCTION

Launched in 2013, Spacecom's AMOS-4 satellite established a new orbital position at 65°E, providing a full range of satellite services for Asia, Russia, the Middle East as well as other service areas.

AMOS-4's Ka beam serves as an ideal precursor to a full blown HTS satellite, by reducing the risk and creating the right service brand and utilizing the right permanent equipment prior to the launch of a very high capacity satellite.



Picture 1- AMOS-4 Deployed View



2. GENERAL SPECIFICATIONS

Orbital location.....65° East
Launch date.....August 2013
Number of available Ka-band Transponders.....4 x 216MHz
Ka beam coverage.....Steerable beam

3. FREQUENCY BANDS AND POLARIZATION

3.1. Ka Frequency Band-1

Uplink frequency range.....27.5 to 31.0 GHz
Uplink Polarization.....RHCP
Downlink center frequencies.....19.875 or 20.125 or
20.375 or 20.625 GHz
Downlink Polarization.....LHCP

3.2. Ka Frequency Band-2

Uplink center frequencies.....29.625 & 29.875 GHz
Uplink Polarization.....RHCP
Downlink center frequencies.....18.325 & 18.575GHz
Downlink Polarization.....LHCP



4. PAYLOAD CHARACTERISTICS

4.1. EIRP at Beam Peak

Band	Ka
EIRP [dBW]	51.4

4.2. G/T at Beam Peak

Band	G/T [dB/K]
Ka1	8.9
Ka2	9.9

4.3. Saturated Flux Density (defined at Peak beam)

Band	SFD @ Min. Gain Setting [dBW/m ²]	SFD @ Max. Gain Setting [dBW/m ²]
Ka1	-72	-92
Ka2	-75	-96

4.4. Operational Modes:

4.4.1. Fixed Gain (FGM) or Automatic Level Control (ALC)

4.4.2. Gain Range and Gain Setting:

Gain Range = 22 dB Gain Step ~0.5dB

4.5. Beacons Parameters

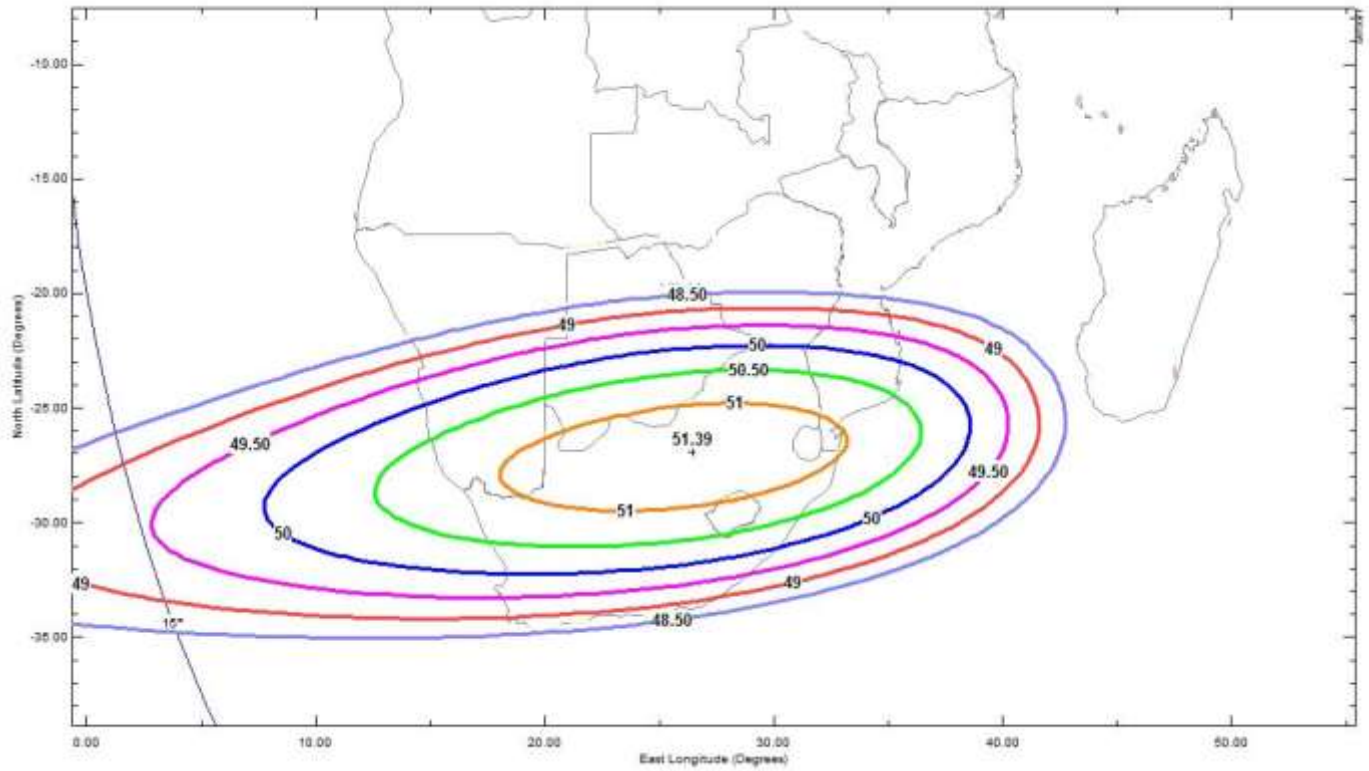
Band	F1	EIRP (dBW)	F2	EIRP (dBW)
Ka*	18.75 GHz (RHCP+LHCP)	8.3	18.95GHz (RHCP+LHCP)	8.3

*Only one Beacon can transmit at a time but both can be received in RHCP or LHCP



5. Typical Coverage Maps:

5.1. EIRP Coverage MAP over SA





5.2. G/T Coverage MAP over SA

