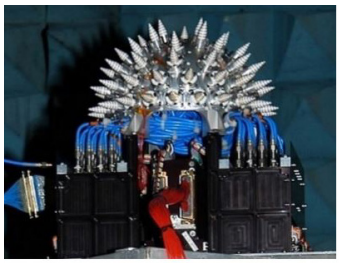
Phased Array Antenna

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed a Hemispherical dome based 64-elements Phased Array Antenna with scan coverage of 360° in azimuth and 90° in elevation.



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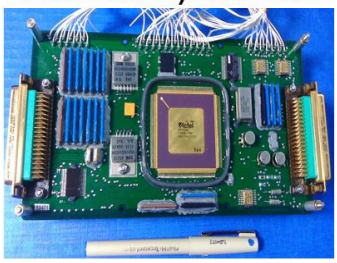

Beam Steering

Salient Features

- Antenna meets the EIRP specification of 24 dBW in all beam directions at X-band frequency band (8.0 to 8.4 GHz).
- FPGA based Beam Steering Electronics is capable of fast update of beam (<125ms).
- Dual beam, dual polarization capability design available. Mass and DC power is doubled for dual beam or dual polarization.

Major Specifications

Frequency of Operation	8.0 to 8.4 GHz
Beam Width	± 6° (typical for (0,0) beam direction)
Scan Coverage	0 to 90° in elevation & 0 to 360° in azimuth
Polarization	RHCP or RHCP & LHCP
Cross-Polarization level	20 dB (typical for (0, 0) beam direction)
Side Lobe Levels	-13 dB (typical for (0, 0) beam direction)
No. of Beams	One
DC Power Requirements	~64 watts on secondary side
Mass	~10 Kgs for single polarization
RF Interface	SMA

Technology Transfer

URSC/ISRO offers to transfer this technology of Phased Array Antenna to industries in India with adequate experience and facilities. Industries interested in obtaining knowhow may write giving details of their present activities, infrastructure and facilities.

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