



## Advanced Technology from ISRO



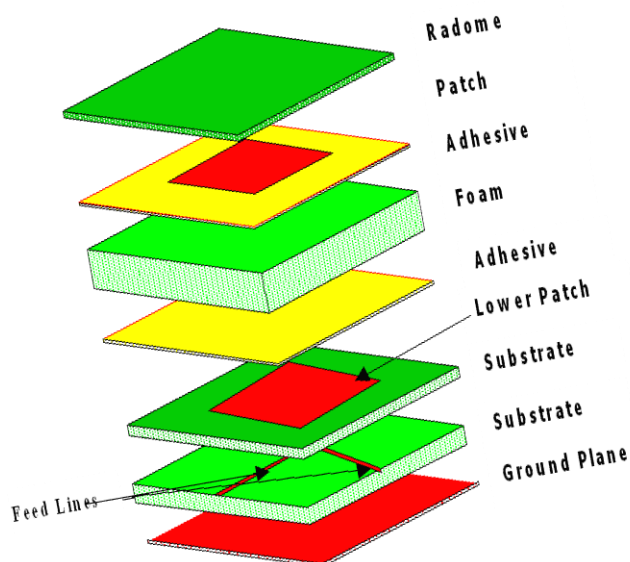
Space Applications Centre of Indian Space Research Organisation at Ahmedabad has developed multilayer printed antenna array technology and delivered antenna for various ISRO's projects. The salient feature of technology includes light weight structure, can be made conformal to the surface, computer controlled automated fixture for aligning layers, inspection of layers and bonding of layers.

There is an ever increasing demand of multilayer printed antenna from mobile communication to very sophisticated space qualified active phased array antenna systems.

The design includes the usage new type of light weight low dielectric constant material for high radiation efficiency, low surface wave propagation, low cross polar suppression. The development include fixture capable of performing surface roughness using laser, inspection of PCB, high speed drilling, vacuum bagging for bonding all the antenna layers and vacuum gripping for pick and place.

### Applications

- Mobile Communication
- VSAT Terminals
- Electronic controlled Active Phased Array Antenna
- MSS Type C and D
- GPS and GPR



### Terminal Specifications

**Antenna Type:** Planar

**Cross Polarization:** Better Than -30 dB

**Beam width and Gain:** As per specification (efficiency better than 60 %)

**Bandwidth:** up to 40 % (2:1 VSWR)

**Polarization:** Vertical/Horizontal/Circular

**Size:** up to 1.2 M X 1.2 M

**Alignment:** 20 micron

**Inspection:** 10 micron

**Repeatability:** 5 Micron

**Curing Chamber:** 1.3 M X 1.3 M

**Magnification:** 50 X / 100 X

**Clean Room:** Class 1 lac

**Drilling Speed:** 40,000 rpm

**Adhesive:** Prepreg

### Technology Transfer

ISRO offers to transfer technology of Multilayer printed antenna to industries in India with adequate experience and facilities. Enterprises interested in obtaining knowhow may write giving details of their present activities, infrastructure and facilities to the following address.

### Contact Us:

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