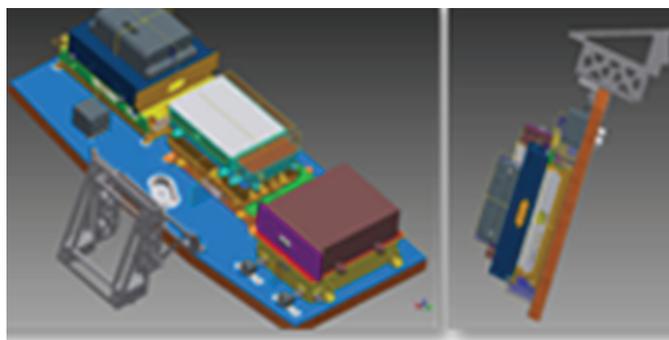


MiniSAR: X band Airborne SAR

Salient Features

- A miniaturized airborne synthetic aperture radar@X band.
- Spatial resolution of around one foot.
- Swath: 5 km.
- Imaging in stripmap mode.
- Single, dual or circular polarization.
- Weight: 5.5kg SAR electronics.
- SAR designed for airborne platform height of 3km to 10 km @ maximum Velocity of 120 m/s.



MiniSAR : Technology

- Light weight, dual polarized, broadband, X-band, planar Antenna.
- Compact GaN MMIC based dual polarized Solid state Power Amplifier with pulse modulators.
- MMIC based multi frequency and broadband

X Band LFM Frequency Generator on single board.

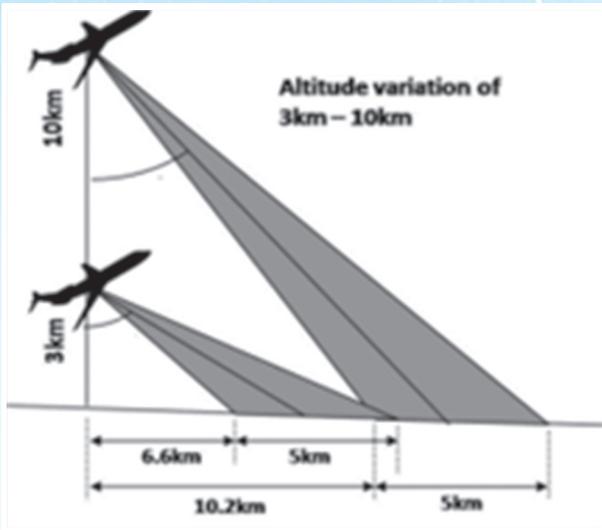
- LTCC based dual polarized, Low noise, high gain Receiver.
- Miniaturized Pulsed/CW electronic power conditioners.
- High speed quad channel digitizer and High speed, wide band direct digital chirp synthesis based Chirp Generator.
- Inbuilt Payload Controller for Control, Coordination and status monitoring and timing and control signal generation for different subsystems.
- Operator Console software.
- High speed miniaturized Solid State Recorder.

Potential Applications

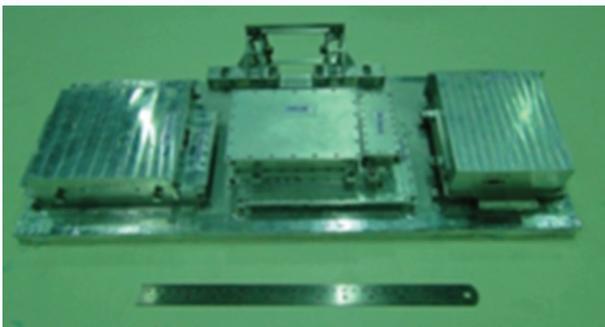
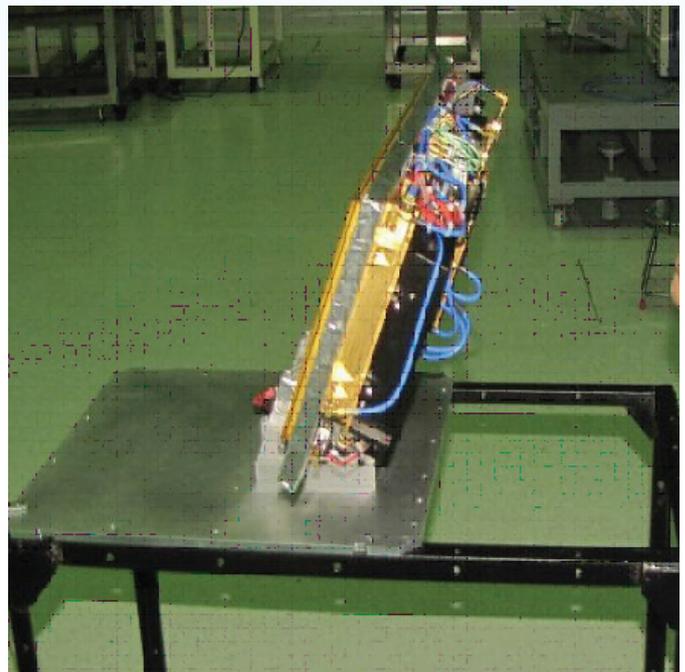
- High resolution imaging
- Disaster management
- Urban planning
- 'Anytime imaging', day or night from airborne platform

TECHNOLOGY TRANSFER

Interest Exploratory Note



Imaging Geometry



Weight : 5.5Kgs
Size : 260mm X 590 mm X 110mm
DC Power : 130W