

# **DHRUVA SPACE PRIVATE LIMITED**

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## FULL STACK SPACE ENGINEERING



### SPACE SEGMENT

#### SMALL SATELLITES

- Design to specification
- Assembly & Integration
- Testing & Qualification
- Constellation Design
- Inter Satellite Links

### LAUNCH SEGMENT

### SATELLITE LAUNCH

- CubeSat Deployer
- SmallSat Deployer
- Launch Liaising
- Frequency Coordination

### GROUND SEGMENT

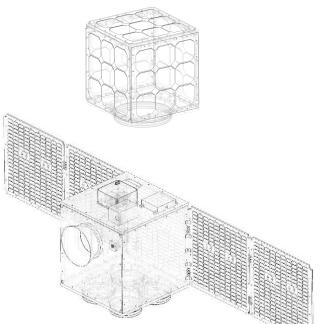
#### EARTH STATIONS

- VHF / UHF / S / X / Ka / Ku Band
- Miniaturized Terminals
- Remotely Operable Terminals
- Mission Control & Operations

| SPACE SEGMEN                      | JT                 |                  |                |
|-----------------------------------|--------------------|------------------|----------------|
| P-DOT                             | P-30               | P-90             |                |
| Up to 6 kg                        | 10 to 50 kg        | 50 to 300 kg     | PLATFORM MASS  |
| 100 x 100 x 200 mm                | 100 x 200 x 300 mm | Mission specific | PAYLOAD VOLUME |
| Up to 4 kg                        | Up to 15 kg        | Mission specific | PAYLOAD MASS   |
| Up to 4 W                         | Up to 30 W         | Mission specific | PAYLOAD POWER  |
| CONFIGURABLE ACCORDING TO PAYLOAD |                    |                  | INTERFACES     |



# **SPACE SEGMENT**



Small Satellite BUS (up to 300 kg)

- Advanced Communication and

### **Earth Observation Constellations**

- Solar Arrays

- Electrical Power Systems
- On board Computers
- Communication Systems
- Antenna Systems
- Guidance, Navigation and Control Systems
- Drives and mechanisms
- Electric Propulsion Systems
- Mission planning and analysis tools



Private & Confidential information | Not to be shared without written consent from founders of Dhruva Space Private Limited



# LAUNCH SEGMENT

Dhruva Space Satellite Orbital Deployer



DSOD-1U



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- Rapid build, assemble and deploy capabilities
- Launch on-demand from Space
  - Launch on PSLV / SSLV / Soyuz / International Space Station (ISS)



# **GROUND SEGMENT**



**Ground Station - Turnkey & Services** 

- Capabilities in VHF / UHF / C / S / X / Ka / Ku Bands
- Global Coverage Polar & Equatorial



#### **Mission Operations and Control Centre**

- Remote Operability Solutions
- End-to-end Mission Control and Operations



# **ONGOING RESEARCH**

### **ISRO: PSLV IV Stage Orbital Platform**

- 1. Integrated Inter Satellite Link Module
- 2. Reconfigurable Deployers
- 3. Microgravity Experiments
  - a. Drug Discovery
  - b. Organ-on-chip
- 4. Novel Release Mechanisms for Space Applications

### ISRO: Human Spaceflight Program

- 1. 3D printed antennas for Space applications
- 2. Food supplements for long space missions
- 3. Human-in-loop Space System Simulator
- 4. Miniaturized antennas for high speed data links
- 5. SMA based actuators
- 6. 3D printing of composite materials
- 7. Phase Change Materials for Space Applications
- 8. Thermal protection systems for re-entry vehicles



## **GLOBAL PARTNERSHIPS & PROJECTS**









HAPS ALLIANCE



## **CORE TEAM**





SANJAY NEKKANTI CEO

ABHAY EGOOR CTO



KRISHNA TEJA COO



CFO



CBDO



VISHAL LB MISSION SPECIALIST

### EXPERIENCE

