

## Spacecraft Bus Details: I-1K, I-2K, I-3K, I-4K and I-6K Bus

The satellite bus platforms developed by Indian Space Research Organisation—namely I-1K, I-2K, I-3K, I-4K and I-6K cover a wide spectrum of spacecraft classes ranging from ~1000 kg to ~6000 kg, supporting missions in communication, navigation, earth observation, and deep space exploration.

Each class includes multiple variants with differing payload capacities, power systems, mission life, and subsystem configurations tailored to specific mission requirements. For each class of satellite, representative mission examples are provided; however, interested industry partners are advised to refer to the ISRO official website for detailed information on individual satellites and their capabilities. The technology of the individual sub-systems/systems would also be made available on a ToT basis.

It is emphasized that the parameters indicated are only representative, and detailed technical discussions with ISRO are necessary to finalize the appropriate variant for technology transfer based on specific mission needs. The exact hardware specifications would change to address the mission specific requirements. Further for certain cases such as Sensors, although the hardware is standard, the total quantity and mounting locations on spacecraft would be dependent on the mission requirements.

## 198 Spacecraft Bus Details: I-1K Bus

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed the I-1K (INSAT1000 / IRS-1K) satellite bus. The I-1K bus is designed for lightweight geostationary and LEO satellites, commonly used for meteorological, navigation, and science missions. It is compatible with ISRO's PSLV and GSLV launch vehicles.

### 198.1 Major Specifications

Sub-System	Specifications
Size	Typical Dimensions: 1.5 m × 1.5 m × 1.6 m
Launch Mass	1000 to 1700 kg
Spacecraft Power	1kW to 2kW
Payload Mass	Upto 600kg
Payload Power	Upto 800 W
Propellant Capacity	Upto 850 kg
Mission Life	>5 years
Missions	GSAT-12/12R, IRNSS 1 <sup>st</sup> generation series, Oceansat Series, Resourcesat Series, Megha Tropiques

### 198.2 Technology Transfer from ISRO

URSC-ISRO offers to transfer this bus technology 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. Enterprises interested in obtaining knowhow may register and submit their proposal to IN-SPACE, Ahmedabad.

<https://www.inspace.gov.in>

## 199 Spacecraft Bus Details: I-2K Bus

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed the I-2K (INSAT-2000) satellite bus. The I-2K is the standard bus for 2,000-2500kg class satellites primarily supporting communication, meteorology, and navigation missions. It is compatible with ISRO's GSLV and commercially available launch vehicles.

### 199.1 Major Specifications

Sub-System	Specifications
Size	Typical Dimensions: 1.6 m × 1.5 m × 2.4 m
Launch Mass	2000 to 2500 kg
Spacecraft Power	3kW to 5kW
Payload Mass	150-350 kg
Payload Power	2.5kW to 3.5kW
Propellant Capacity	850 - 1420 kg
Mission Life	>15 years
Missions	GSAT-31, GSAT-6/6A, GSAT-7/7A, INSAT-3D/3DR/3DS, NVS-01, GISAT-1/1A

### 199.2 Technology Transfer from ISRO

URSC-ISRO offers to transfer this bus technology 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. Enterprises interested in obtaining knowhow may register and submit their proposal to IN-SPACE, Ahmedabad.

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## 200 Spacecraft Bus Details: I-3K Bus

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed the I-3K (INSAT-3000) satellite bus. The I-3K is the standard bus for 3,000-3500 kg class satellites primarily used for communication and advanced payload missions. It is compatible with ISRO's GSLV and commercially available launch vehicles. The I-3K bus was the first Indian-built satellite bus sold commercially to a foreign customer (Eutelsat W2M).

### 200.1 Major Specifications

Sub-System	Specifications
Size	2.0 m × 1.8 m × 3.2 m
Launch Mass	3000 to 3500 kg
Spacecraft Power	6.5kW to 12kW
Payload Mass	300 – 400kg
Payload Power	6kW to 8.5kW
Propellant Capacity	1600 - 2600kg
Mission Life	>15 years
Missions	GSAT-8/10/14/15/16/ 17/18, Eutelsat W2M, GSAT-30, GSAT-24

### 200.2 Technology Transfer from ISRO

URSC-ISRO offers to transfer this bus technology 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. Enterprises interested in obtaining knowhow may register and submit their proposal to IN-SPACE, Ahmedabad.

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## 201 Spacecraft Bus Details: I-4K Bus

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed the I-4K (INSAT-4000) satellite bus. The I-4K is the standard bus for 4,000 - 5000 kg class primarily for advanced communication and high-throughput missions. It is compatible with ISRO's LVM3 and commercially available heavy lift launch vehicles.

### 201.1 Major Specifications

Sub-System	Specifications
Size	Typical Dimensions: 2.2 m × 2.2 m × 5.0 m
Launch Mass	4000 to 5000 kg
Spacecraft Power	~14kW
Payload Mass	500-750 kg
Payload Power	5kW – 8kW
Propellant Capacity	~2500kg
Mission Life	>15 years
Missions	GSAT-20

### 201.2 Technology Transfer from ISRO

URSC-ISRO offers to transfer this bus technology 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. Enterprises interested in obtaining knowhow may register and submit their proposal to IN-SPACE, Ahmedabad.

<https://www.inspace.gov.in>

## 202 Spacecraft Bus Details: I-6K Bus

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed the I-6K satellite bus. The I-6K is the standard bus for ~6,000 kg class satellites supporting the most demanding communication and broadcasting payloads. It is compatible with ISRO's LVM3 and commercially available heavy lift launch vehicles.

### 202.1 Major Specifications

Sub-System	Specifications
Size	Typical Dimensions: 2.2 m × 2.2 m × 5.0 m
Launch Mass	Upto 6500 kg
Spacecraft Power	Upto 20kW
Payload Mass	700 to 900 kg
Payload Power	8.5kW – 12kW
Propellant Capacity	2600 - 3200kg
Mission Life	>15 years
Missions	GSAT-11

### 202.2 Technology Transfer from ISRO

URSC-ISRO offers to transfer this bus technology 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. Enterprises interested in obtaining knowhow may register and submit their proposal to IN-SPACE, Ahmedabad.

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