

URANUS - MSC

Multi-Spectral Space Camera - Payload System



The URANUS Multi-Spectral Space Camera (MSC), a high resolution panchromatic and multi-spectral payload system, is a complete end-to-end spaceborne remote-sensing payload originally designed for the KOMPSAT II satellite developed by the Korea Aerospace Research Institute (KARI) for multi-purpose use. KOMPSAT II was launched in July 2006.

Main Advantages and Features

- High resolution 1.0 m panchromatic at 685 km altitude
- High resolution 4.0 m multi-spectral at 685 km altitude

The URANUS - MSC payload system includes

- Embedded camera
- Payload Management Unit
- Data compression storage and encryption
- Data link, including data formatting, transmitter and antennas

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Applications

The URANUS - MSC payload provides high spatial resolution earth imaging and mapping for a wide range of applications:

- **Thematic surveys**
- **Environmental monitoring**
 - Air and water pollution
- **Homeland security, including**
 - Border control
 - Drug trafficking
- **Energy and infrastructure**
 - Oil and gas
 - Utilities
 - Mining
 - Roads
- **Emergency planning and operations:**
 - Flood management
 - Disaster relief
 - Search and rescue operations
- **Natural and man-made resources:**
 - Agriculture and forestry
 - Vegetation
 - Agriculture
 - Forestry
 - Bodies of water

Technical Data

• GSD (m) @ 690 km	PAN -1 MS - 4
• Swath (km) @ 690 km	15
• Aperture (m)	0.6
• Focal length (m)	9
• F#	15
• PAN spectral range (µm)	0.50-0.90
• MS spectral bands (µm)	0.45-0.52 0.52-0.60 0.63-0.69 0.76-0.90
• PAN detector pitch (µm)	13
• Number of pixel	15,000
• Max TDI	32
• Duty cycle (%)	10
• Peak (imaging) power (W)	90
Mass (kg)	75



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