



**MALAYSIAN SPACE AGENCY (MYSA)
MINISTRY OF ENERGY, SCIENCE, TECHNOLOGY, ENVIRONMENT
AND CLIMATE CHANGE (MESTECC)**

SpaceOps Committee Meeting 2019

Hamid Salim

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Oberpfaffenhofen, Germany



MALAYSIAN SPACE AGENCY (MYSA)



INTRODUCTION TO MYSA

- **The Cabinet on 20th February 2019 had approved the establishment of Malaysian Space Agency (MYSA) through the merging of Malaysian Remote Sensing Agency (MRSA) and National Space Agency (ANGKASA). The initiative of MYSA is to ensure the development and management of the national space sector in a strategic, organised and comprehensive manner.**



MALYSIAN SPACE AGENCY (MUSA)



MAIN ACTIVITIES:

- **Space System Development and Operation**
- **Space Application and Technology Development**
- **Space Science and Awareness Programme**
- **Research and Development (R&D) activities in remote sensing and related technologies and integrated services for standard and value added remote sensing data.**



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SPACE TECHNOLOGY FACILITIES

- **Mission Operation Facility**
- **Satellite Assembly, Integration and Test Facility (AIT)**
- **Space Observatory Station**
- **Earth Observation Data Receiving Station**



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ANTENNA SYSTEM FOR TELEMETRY, TRACKING AND COMMAND (TT&C)

1.0 S-Band (5 Meter)

	S-Band
Uplink Frequency Range	2025 MHz - 2110 MHz
Downlink Frequency Range	2200 MHz - 2300 MHz
Gain over Temperature (G/T)	15 dB/K
Effective Isotropic Radiated Power (EIRP)	55dBW
Maximum Data Rate	20Mbps (Uplink) Configurable of Mission dependant (Downlink)



2.0 S+X-Band (7.3 Meter)

	S-Band (TT&C)	X-Band (Payload Data)
Uplink Frequency Range	2025 MHz - 2110 MHz	N/A
Downlink Frequency Range	2200 MHz - 2300 MHz	8000 MHz - 8500 MHz
Gain over Temperature (G/T)	19 dB/K	33 dB/K
Effective Isotropic Radiated Power (EIRP)	56dBW	N/A
Maximum Data Rate	20Mbps (Uplink) Configurable of Mission dependant (Downlink)	640 Mbps





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ANTENNA SYSTEM FOR EARTH EXPLORATION SATELLITE

1.0 X/L-Band (3.0 Meter)

	L-Band (Payload Data)	X-Band (Payload Data)
Downlink Frequency Range	1682 MHz - 1710 MHz	7700 MHz - 8500 MHz
Gain over Temperature (G/T)	9.5 dB/K	25 dB/K
Maximum Data Rate	3.5 Mbps	40 Mbps

2.0 X-Band (7.3 Meter)

	X-Band (Payload Data)
Downlink Frequency Range	8000 MHz - 8500 MHz
Gain over Temperature (G/T)	32 dB/K
Maximum Data Rate	500 Mbps





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PAST MISSIONS

- **LEOP for GIOVE-A : European Space Agency (ESA), Dec. 2005**
- **RazakSAT[®] : July 2009 – Dec. 2010**
- **GSLV-D05 : Indian Space Research Organisation (ISRO), Jan. 2014**
- **Flying Laptop : Institute of Space System (IRS), University of Stuttgart, Germany, Oct. 2018**



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FUTURE PROJECT

- **New ground station (4.5m antenna) in collaboration with Institute of Space System (IRS), University of Stuttgart, Germany;**
- **AIT facility diagnosis and certification by AIRBUS;**
- **Feasibility Study on National Earth Observation Satellite Program;**
- **Ground Station Network (GSN) with Swedish Space Corporation (SSC);**
- **TT&C for ALTEC / ASI in collaboration with Malaysian local company.**



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THANK YOU

Contacts details:

**Director General
Malaysian Space Agency (MYSA)
Ministry of Energy, Science, Technology, Environment and Climate Change
(MESTECC)
No. 13, Jalan Sultan Ismail
50480 Kuala Lumpur
MALAYSIA**

**Tel : +603 – 2697 3400
Fax : +603 – 2697 3350
Website : www.mysa.gov.my
Email : mysa_hq@mysa.gov.my**

