

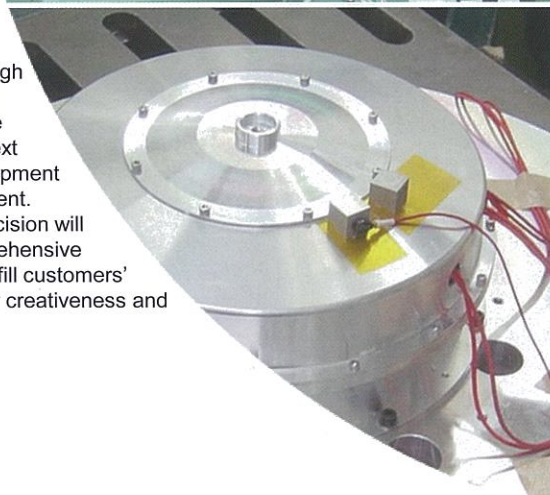
# Production System

Design/analysis to Fabrication/Verification

Mitsubishi Precision has an integrated work process starting from marketing research, development and planning, manufacturing and construction, to after-sales services. This total support system enables us to respond customers' needs accurately and quickly.



Further customers' demands indicated through the after-sales services will be reflected on next product development and improvement. Mitsubishi Precision will provide comprehensive solutions to fulfill customers' needs with our creativeness and mutual trust.



 **MITSUBISHI PRECISION CO., LTD.**

*SPACE ACTIVITIES*

 **MITSUBISHI PRECISION CO., LTD.**

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According to Japanese law "Foreign Exchange and Foreign Trade Act", IRU export is under strictly controlled.  
For the export, permission of Minister of Economy, Trade and Industry will be necessary.  
Subject to change without prior notice.

UEXKOKU-120001-B (E) Feb.2013



# Inertial Reference Unit Reaction Wheel

Attitude Control for Satellite

# Electronics Components

For the Bus and Mission Control

# Guidance & Navigation Control System

Japan's First Technology, To Be Continued For The Future

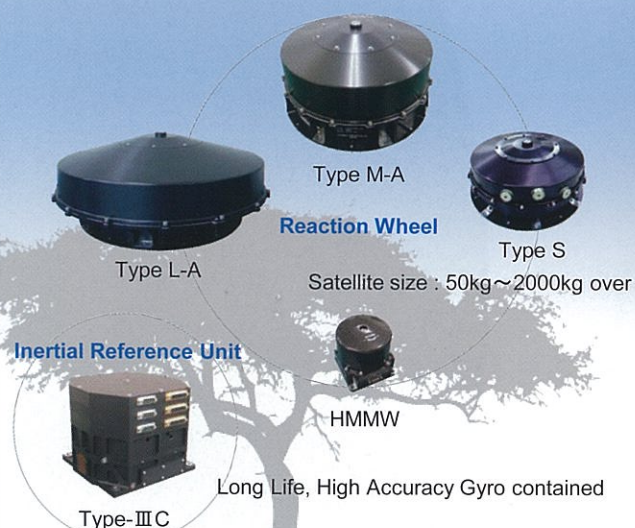
Flight Heritage

## • Reaction Wheel (RW)

Heritage : 107sets  
Total Accumulated Operation Time on the orbit: 52years  
No failure in orbit

## • Inertial Reference Unit (IRU)

Heritage : 36sets (On Operation : 16sets)  
Gyro's Accumulated Operation Time on the orbit : 356years  
No failure in orbit



## • For Satellite

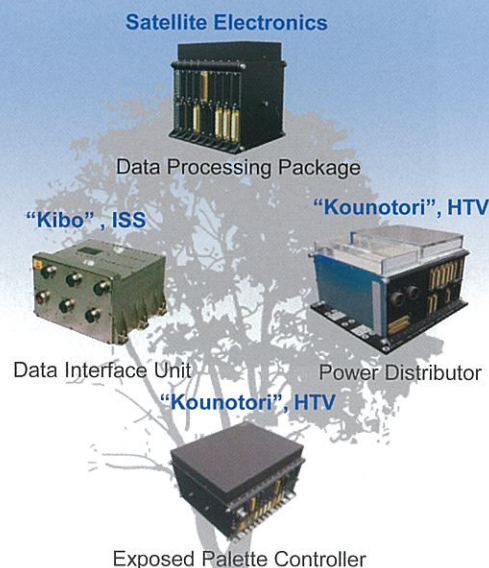
Heritage : 172sets  
Drive Electronics  
MTQ, Thruster,  
Valve, Heater  
Power Distribution  
Mission Controller  
Signal Conversion  
Rader Signal Controller  
Communication & Data Handling (C & DH)

## • For "Kibo", ISS

Data Interface Unit  
Power Controller  
Video Controller  
Experiment Controller

## • For "Kounotori", HTV

Power Distributor  
Exposed Palette Controller

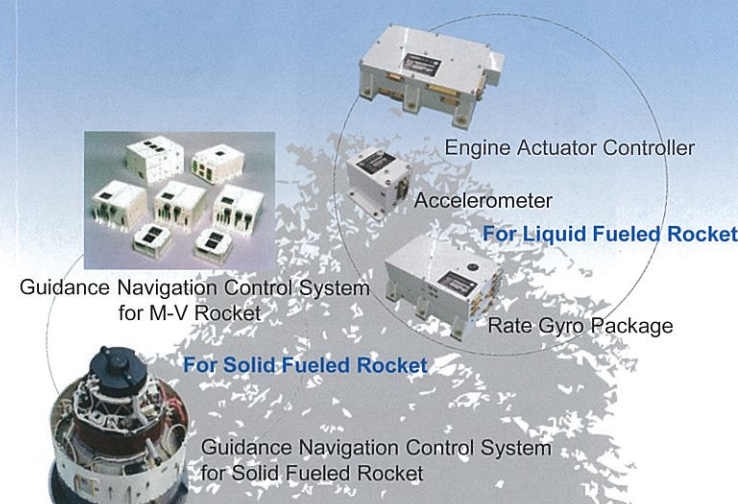


## • For Solid Fueled Rocket

Heritage : 70Rockets  
Guidance Navigation Control System for  
K/L series (1964~1980)  
S series (1982~1998)  
M series (1969~2006)

## • For Liquid Fueled Rocket

Heritage : 41Rockets  
Engine Actuator Controller  
Rate Gyro Package  
Accelerometer  
Current Sensor



Products

Long Life, High Reliability

Lubrication

Craftsmanship

Fine Mechatronics



- Management System
- JIS-Q-9100 /CAS9100/EN9100
- Aerospace Quality System Standard
- ISO14001 Environment Management System
- ISO/IEC 27001 Information Securing Management System

C & DH

Power Control

Data Processing & Control



- Program Control
- Quality Control
- Reliability Control
- Safety Management Control
- Software Control
- Design and Analysis
- System
- Electrical / Thermal / Structure
- Software / Firmware
- Manufacturing Technique

Inertial Sensor

System Design

Guidance & Navigation Software



- Processing and Fabrication
- Precise Processing Machine
- Clean Room
- Processing and Arranging Machine
- Specialized to Rotary Components
- Automatic Soldering
- Verification
- Functional / Electrical / Physical
- Vibration / Shock
- Thermal / Thermal Vacuum
- EMC

Technology / Capability