

# 星际荣耀


EXPANDING HUMAN  
LIVING SPACE

BEIJING  
INTERSTELLAR GLORY  
SPACE TECHNOLOGY



[www.i-space.com.cn](http://www.i-space.com.cn)



A full-page background image of a starry night sky. The sky is dark blue and black, filled with numerous stars of varying brightness. Some stars form recognizable constellations. Near the bottom of the image, there is a thin, bright horizontal line of light, possibly representing a horizon or a distant celestial body. The overall mood is serene and cosmic.

Interstellar Glory is a high-tech start up which is focus on the research and development of launch vehicles and space crafts, we are open, passion, overall-viewed and concentrated in the aerospace technology and market, committed to be the pioneer of global aerospace enterprises.



# Content

## About us

Culture / Company profile / Structure / Team

## Product Service

Ispace Products / Technology innovation / Services / Business process

## Business Process Exhibition

Development planning / Outlook for the future



## About us

### **Mission**

expanding human living space

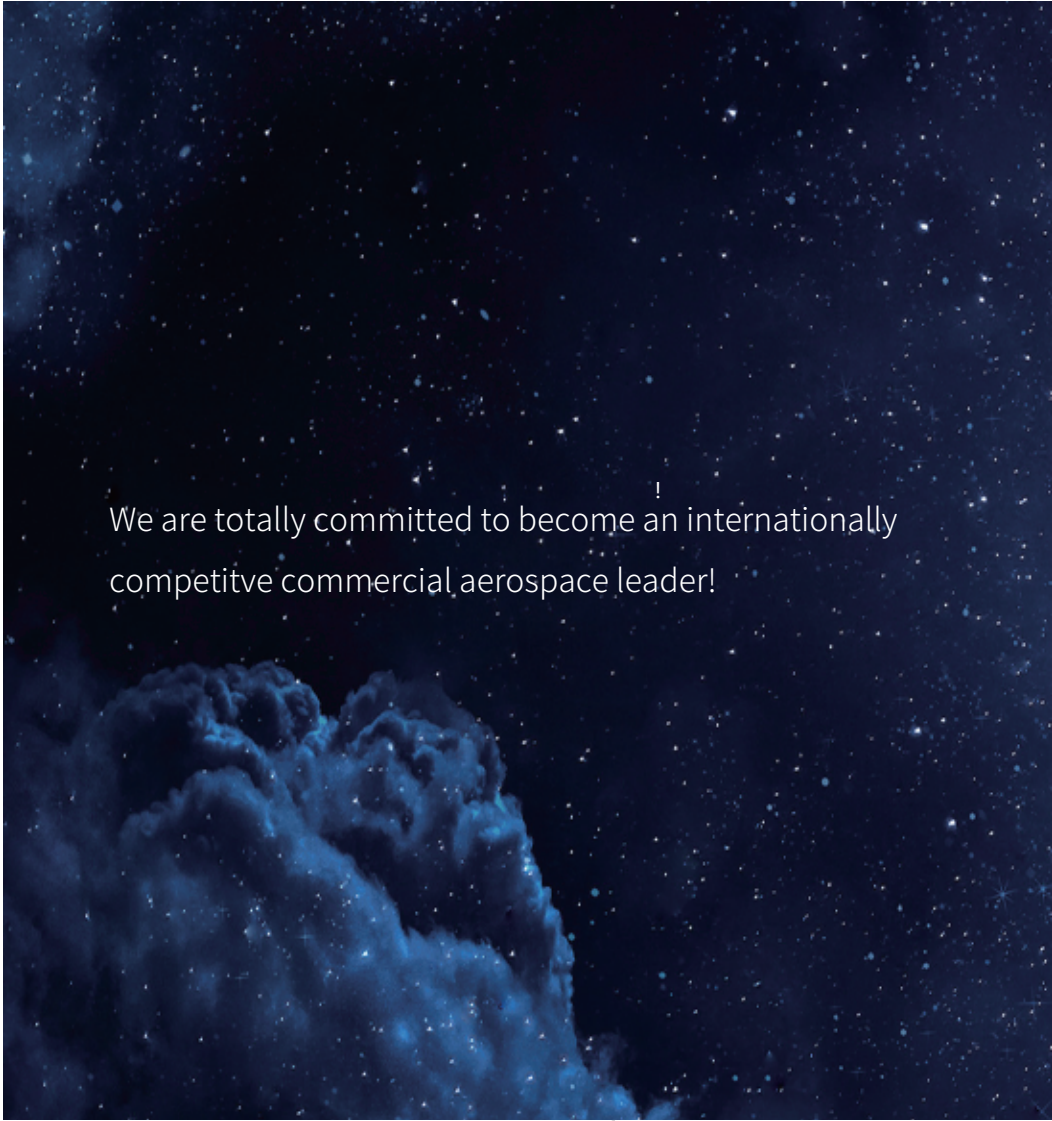
### **Vision**

the global leader in commercial aerospace

### **Management philosophy**

act now and do your best

Interstellar Glory is an aerospace high-tech company founded on the occasion of the new space era, and is passionately committed to become one of the global leaders in commercial aerospace! Determined to become an outstanding representative in the field of global commercial aerospace!



We are totally committed to become an internationally competitive commercial aerospace leader!





As the backbone of commercial aerospace as well as an important participant and beneficial supplement of global aerospace, pursuing the aspiration for world-class status in the space sphere!





## Organigramme Chart of the organization

A flat and efficient corporate structure



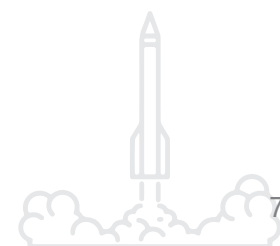


## Our Team

Currently, the team has more than 200 members. It is an excellent domestic team of aerospace R&D designers and first-class program managers. It has rich practical experience in aerospace engineering research and development. As well as fruitful results; trustworthy technical and managerial strength.

The core members of our team are all graduated from top universities at home and abroad. Among them, over 95% graduated from 985 and 211 universities, more than 90% graduated with master degrees, and over 80% possessing senior titles such as researcher, senior engineer, etc.

Our team has won a dozens of national and ministerial awards, hundreds of awards for achievements in the aerospace industry, hundreds of academic monographs and papers, and hundreds of granted patents in total.





# Product service

**Products** .....

## Product system

Small-sized solid launch vehicles  
Reusable Small-sized liquid launch vehicles  
Reusable medium-sized liquid launch vehicle  
Reusable large-sized liquid launch vehicle  
Suborbital concept aircraft





Hyperbola-1  
(Small-sized solid)



Hyperbola-2  
(Small-sized liquid)



Hyperbola-3  
(medium-sized liquid)



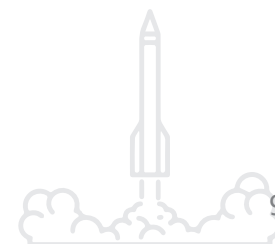
Hyperbola-3 two-boosted  
(large-sized liquid)



Hyperbola-3 four-boosted  
(large-sized liquid)



The Suborbital concept aircraft





## Technological innovation

Autonomously controllable  
recycling for reuse

Wireless ground measurement and  
launch Space-based measurement  
and control/Wireless transmission  
on rocket

Massive use of digital wind  
tunnel, virtual vibration test and  
virtual modal test to verify  
product performance



Structural/electrical integration design  
electrical high integration, unified  
power supply and distribution

Integrated ground measurement and  
control technology  
Remote troubleshooting/health  
management and simple launch

Intelligent control to achieve flight  
autonomous fault tolerance  
Fault online reconstruction / Intelligent  
ballistic flight



## Business model

### Satellite Launch Service

Low cost, high quality,  
fast respond premium services

### Payload Launch Services

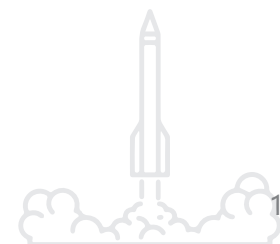
Providing payload launch  
services for Cube-Sat,  
science experiment, etc.

### Emergency Launch Services

providing whole rocket product  
to meet the needs of  
fast respond launch, etc.

### Value-Added Services

naming rights of  
rocket launch missions,  
rocket commercial advertisements, etc.





## The Hyperbola-1 small-size solid launch vehicle

The integrated orbit and Attitude  
Simple and reliable

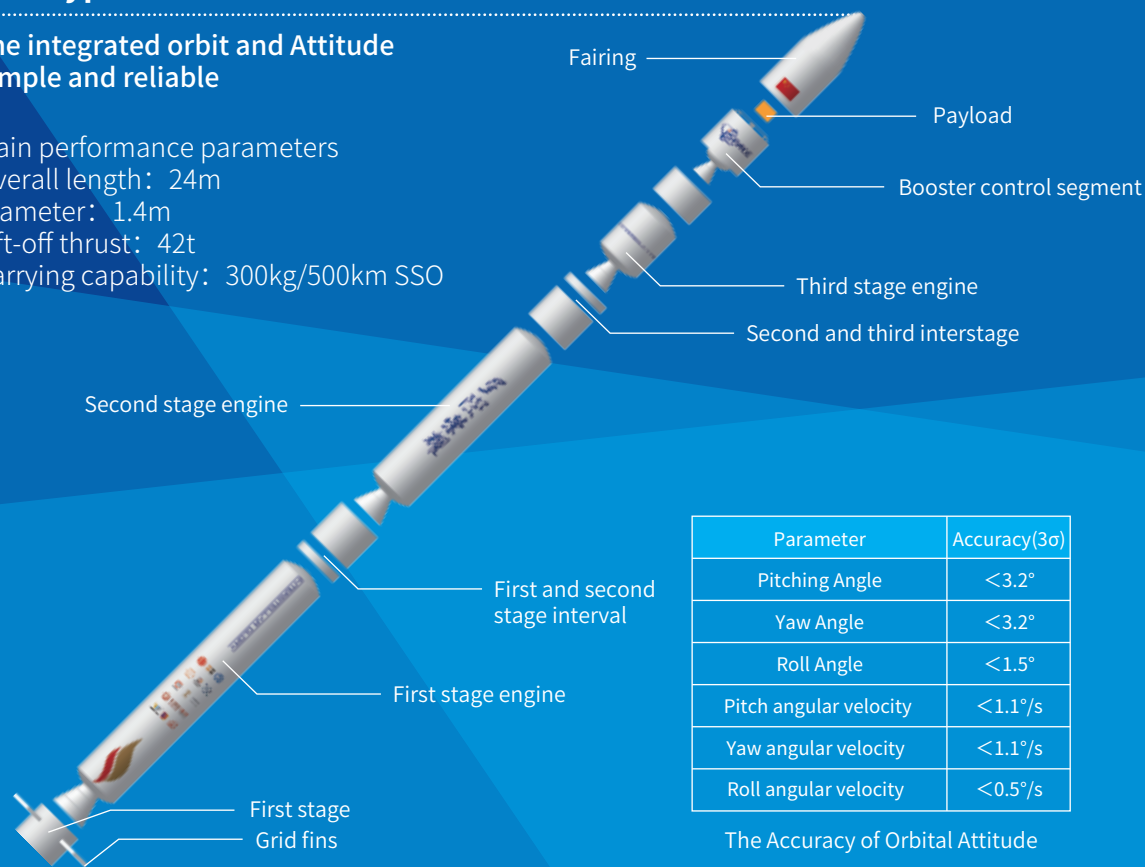
Main performance parameters

Overall length: 24m

Diameter: 1.4m

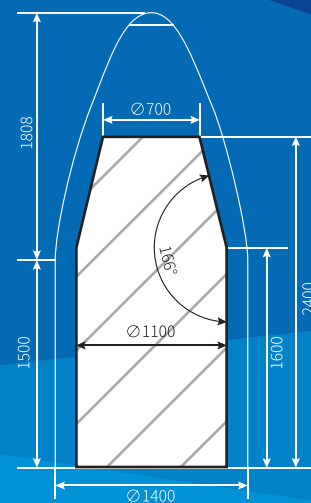
Lift-off thrust: 42t

Carrying capability: 300kg/500km SSO



Parameter	Accuracy(3σ)
Pitching Angle	<3.2°
Yaw Angle	<3.2°
Roll Angle	<1.5°
Pitch angular velocity	<1.1°/s
Yaw angular velocity	<1.1°/s
Roll angular velocity	<0.5°/s

The Accuracy of Orbital Attitude

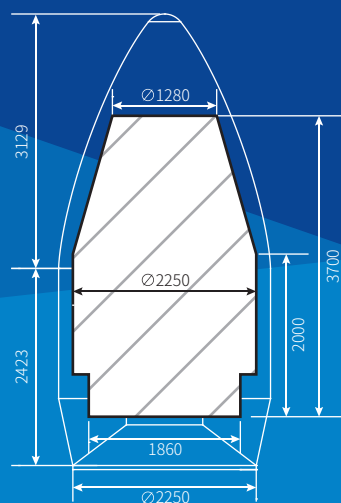


The Hyperbola-1 Payload fairing

Parameter	Symbol	Orbit accuracy
Semi-major axis	$ \Delta a $	$\leq 5\text{km}$
Eccentricity	$ \Delta e $	$\leq 0.003$
Orbit inclination angle	$ \Delta i $	$\leq 0.1\text{deg}$

The accuracy of orbit entry





The Hyperbola-2 Payload fairing

Parameter	Symbol	Orbit accuracy
Semi-major axis	$ \Delta a $	$\leq 5\text{km}$
Eccentricity	$ \Delta e $	$\leq 0.003$
Orbit inclination angle	$ \Delta i $	$\leq 0.15\text{deg}$

The accuracy of orbit entry

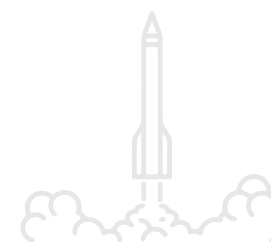
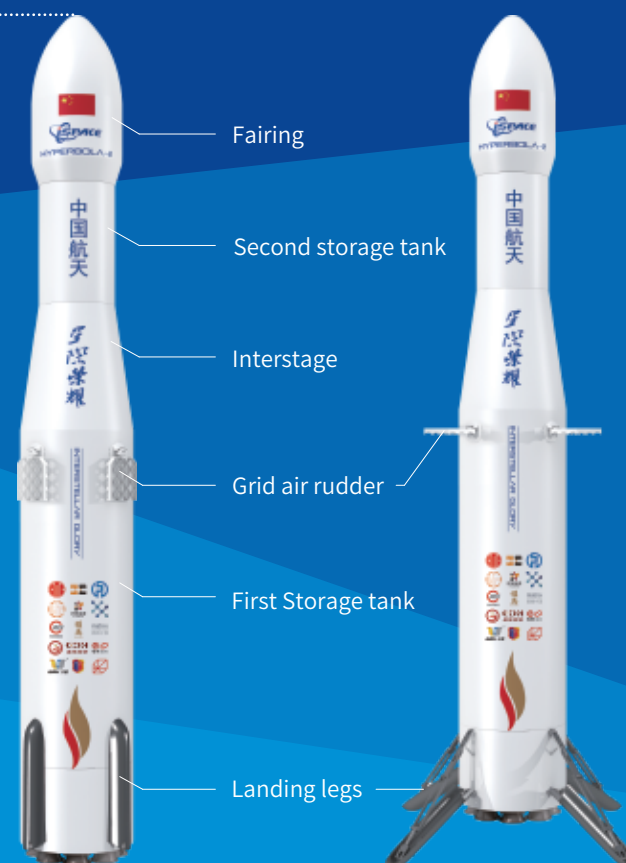
## The Hyperbola-2

Environmentally friendly and reusable small liquid oxygen and methane private launch vehicle

Main performance parameters  
 Overall length: 28m  
 Diameter: 2.25m/3.35m  
 Lift-off thrust: 106t  
 Carrying capability:  
 Recycle: 1.1t/500km LEO  
 No Recycle: 1.6t/500km LEO

Parameter	Accuracy(3σ)
Pitching Angle	$< 2^\circ$
Yaw Angle	$< 2^\circ$
Roll Angle	$< 2^\circ$
Pitch angular velocity	$< 1.5^\circ/\text{s}$
Yaw angular velocity	$< 1.5^\circ/\text{s}$
Roll angular velocity	$< 1.5^\circ/\text{s}$

The Accuracy of Orbital Attitude





## The Hyperbola-3 launch vehicle

Environmentally friendly and reusable medium/large size liquid private launch vehicle

Main performance parameters  
Overall length: 58m  
Diameter: 3.35m  
Lift-off thrust: 270t  
Carrying capability:  
Recycle: 2t/500km SSO  
No Recycle: 3.5t/500km SSO

First flight in 2022



Type of the maiden flight

Double boosters

Four boosters

## The Suborbital concept aircraft

China's first domestically designed and built Suborbital space tourism concept aircraft launched by a private company





### JD-1

Reusable, variable thrust  
liquid engine

Main performance parameters

Propellant: liquid oxygen/methane

Thrust in vacuum: 15t

Impulse in vacuum:  $\geq 355s$

Variable thrust range: 40%~105%

Reused time: 30



### JD-2

100t Reusable,  
variable thrust liquid engine

Main performance parameters

Propellant: liquid oxygen/methane

Thrust at sea level: 100t

Impulse at sea level:  $\geq 300s$



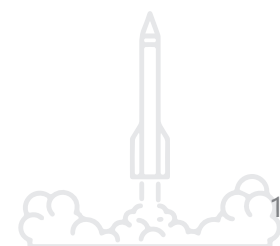
Lightweight, high performance,  
liquid and integrated attitude and  
orbit control of power system

Main performance parameters

Propellant: dinitrogen tetroxide/Methylhydrazine

Thrust specification: 3000N、2000N、300N、30N

Impulse in vacuum:  $\geq 285s$





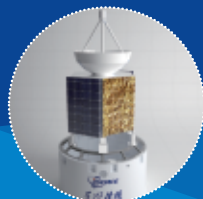
## Xingkong 1

As the core of launch vehicle, it is able to realize the function of flight control, power supply, timing control, integrated navigation, servo control, autonomous safety control, telemetry data acquisition, transmission, etc.

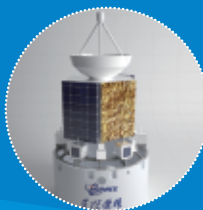
High-speed fiber bus FC-AE-1553B is used for interconnection inside and outside the Xingkong1. Modularization, combination and ideas of generalization design are adopted. It can be tailored flexibly according to the requirements.



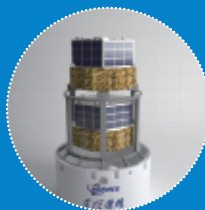
A variety of mechanical interface options are provided, in order to meet different requirements for satellite launch



Single satellite installation



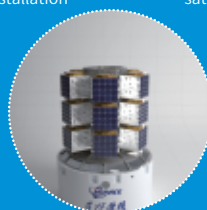
Small satellites around the main satellite Installation



Drawer Double satellites Installation



Multi-Installation Parallel Installation



Multi satellite Installation



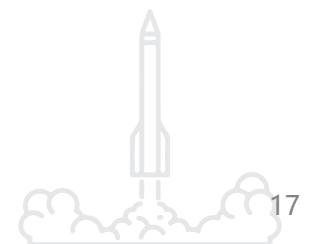
Multi microsatellites Installation

### Load interface:

Provide standard or custom satellite interface

### Value added service:

- 1) Providing standard or customized satellite interface Providing short-distance measurement and control transfer service, Enhance the capability of satellite Orbit Injection.
- 2) Record the attitudes and key actions of satellite injection.
- 3) Providing wired power supply measurement and control services, Assist in satellite pre-launch flight control.





# Interstellar service

We provide refined/specialized/integrated launch services for small /medium size satellite users

## Launch service features

### High quality

High design reliability index, mechanical and thermal environment friendly for payloads

### High-frequency

Plan to launch once a week to guarantee the needs of small satellite networking

### Rapid response

Mission cycle as short as six months. to meet the requirement of rapid launch of satellites

### Cost-effective

The launch price is competitive. Provide value-added comprehensive services

### R&D development mode:

Technology innovation+ Industrial ecology+ Internet

### Product features:

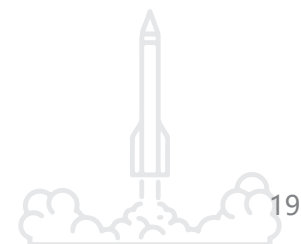
High quality+ High frequency+ Rapid response + Cost-effective

To meet the needs of fast networking and high frequency launch for small /medium size satellite

Helping medium/small size satellite users achieve significant cost savings

Let space technology reach more people as soon as possible

Business process

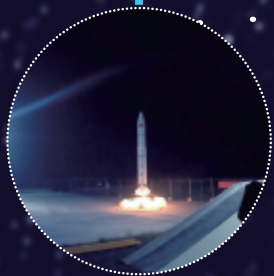




# Outlook

## Development plan

April 2018



Hyperbola-1S (SQX-1S) was successfully launched from Hainan island.

September 2018



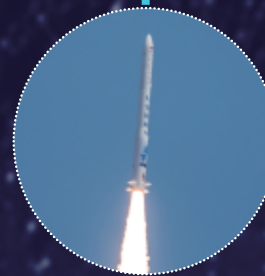
Hyperbola-1Z (SQX-1Z) was successfully launched with three cube satell Jiuquan Satellite Launch Center.

July 2019



Focus1 (JD-1) a reusable liquid oxygen/methane engine conducted successfully in the long run test.

25 July 2019



Hyperbola-1 Y1 (SQX-1 Y1) made its maiden flight from Jiuquan with a high accuracy orbit entry, make iSpace become the first Chinese private company to send satellite into orbit successfully.

November 2019



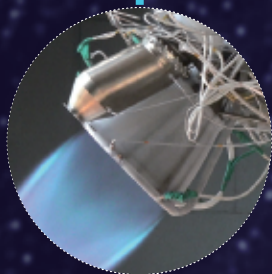
The exclusive test bench of i-Space completed a performance check-out test.

December 2019



JD-1 Engine successfully passed a 500-second full-system test run.

May 2020



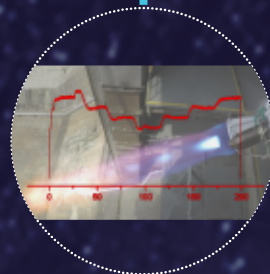
JD-1 Engine successfully passed a full-system rated condition 200-second long-range test run.

May 2020



JD-1 Engine passed a 500-second secondary ignition long-range test run.

July 2020



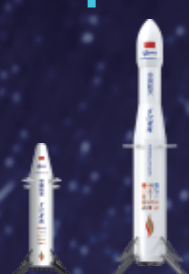
JD-1 Engine passed a wide-range continuous variable thrust long-range test run.

2020



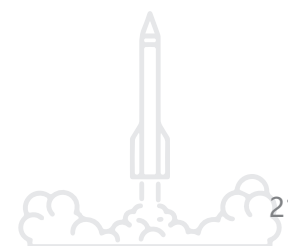
Hyperbola-1 Y2 (SQX-1 Y2) flight mission will be completed in 2020

2021

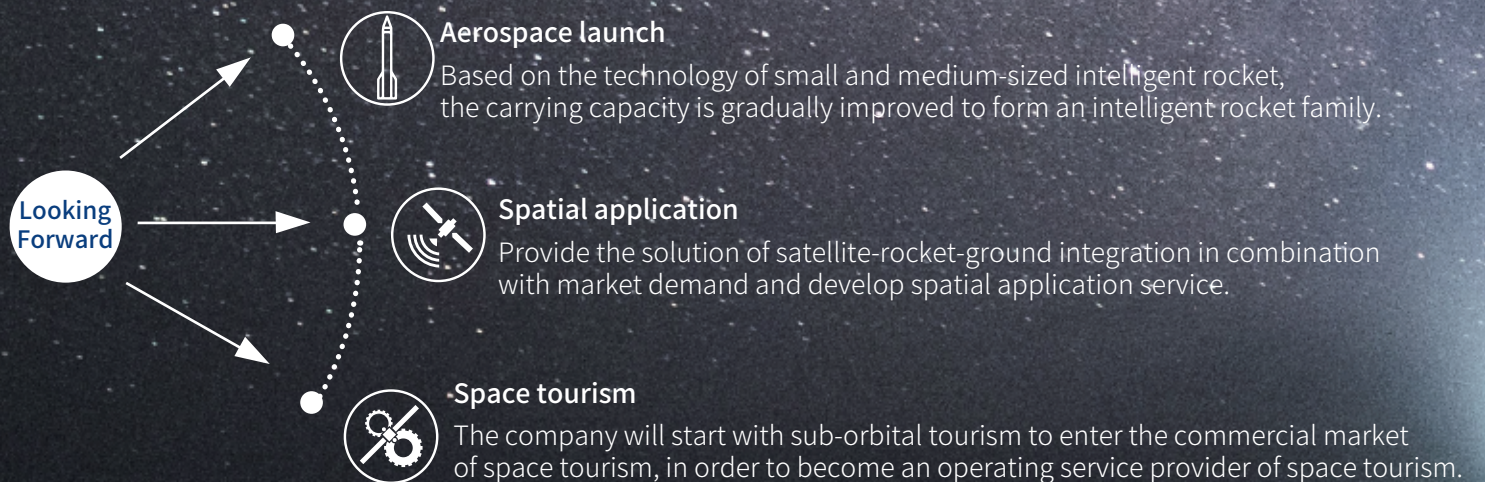


Hyperbola-2 Z2 (SQX-2 Z2) 100km-class vertical reusable test

Hyperbola-2 Y1 (SQX-2 Y1) flight mission will be completed in 2021.





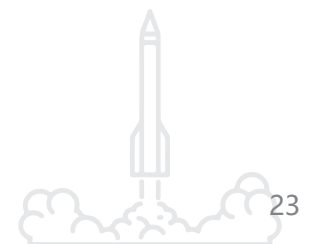




Interstellar Glory has a first-class management and R&D team

Industry cutting-edge technology strength

We are willing to share the achievements of industrial  
development with investors and our clients!







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