Versatile industrial drone YOROI

YOROI series

YOROI 12D1750F

Payload 40kg

YOROI 6S2200F

Payload 40kg

YOROI 6S1750F

Payload 20kg

YOROI 4S1200F

Payload 10kg

YOROI 12D1750F Features

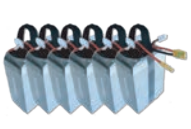
- **Realizes the industry's top-class maximum load capacity of 40 kg!**
  We have further expanded the stage of drones for business.
- **High applicability by combination**
  By combining the main body and unit, it is possible to respond to various usage cases.
- **Uses a carbon shell,and the arm can be attached and detached.**
  By adopting a carbon shell, it became a robust and lightweight aircraft.

SPEC Basic specifications

Flight dimensions	W1,853mm×D1,625mm×H805mm	Maximum takeoff weight	140kg
Dimensions when stored	W870mm×D910mm×H805mm	Maximum payload	80kg (when hovering)
Material	Carbon fiber	Flight speed	60km/h
Motor Pitch	1,750mm	Maximum flight altitude	2.500m（Domestic scale150m)
FC	Pixhawk(USA)	Flight mode	ATT / GPS / GCS
Battery	12S18000mAh x 6 24.6Kg	Operating environment temperature	0-45°C
Airframe weight	30kg	payload flight time*	0 kg → 17 min / 10 kg → 14 min / 30 kg → 9 min 40kg → 10 min

* Depends on the environment

ACCESSORIES Standard accessories



Battery
12S18000mAh 6 pcs

12S Support
Battery Charger

Battery Checker

Battery storage case
（12S18000, holds 6 pcs）

Provo Futaba 16I

YOROI 6S2200F Features

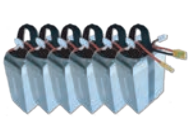
- **Realizes the industry's top-class maximum load capacity of 40 kg!**
  We have further expanded the stage of drones for business.
- **High applicability by combination**
  By combining the main body and unit, it is possible to respond to various usage cases.
- **Uses a carbon shell,and the arm can be attached and detached.**
  By adopting a carbon shell, it became a robust and lightweight aircraft.

SPEC Basic specifications

Flight dimensions	W3,200mm×D2,900mm×H1,080mm	Maximum takeoff weight	145kg
Dimensions when stored	W1,150mm×D1,000mm×H1,080mm	Maximum payload	80kg (manufacturer recommended 40kg)
Material	Carbon fiber	Flight speed	60km/h
Motor Pitch	2,200 mm	Maximum flight altitude	2.500m（Domestic scale150m)
FC	Pixhawk(USA)	Flight mode	ATT / GPS / GCS
Battery	12S18000mAh x 6 pcs 24.6Kg	Operating environment temperature	0-45°C
Airframe weight	39kg	payload flight time*	0kg → 18 min / 10kg → 14 min / 20kg → 11 min / 30kg → 10 min /40kg → 9 min

* Depends on the environment

ACCESSORIES Standard accessories



Battery
12S18000mAh 6 pcs

12S Support
Battery Charger

Battery Checker

Battery storage case
(12S18000, holds 6 pcs)

Provo Futaba 16I

YOROI 6S1750F Features

- **Uses a carbon shell,and the arm can be attached and detached.**
  The latest carbon shell is used to create a robust, lightweight and compact airframe.
- **Detachable arm**
  Since the arm part is detachable, it is excellent in portability and maintainability.
- **High applicability by combination**
  By combining the main body and unit, it is possible to respond to various usage cases.

SPEC Basic specifications

Flight dimensions	W1,853mm x D1,625mm x H805mm	Maximum takeoff weight	60kg
Dimensions when stored	W870mm x D910mm x H805mm	Maximum payload	30kg (when hovering)
Material	Carbon fiber	Flight speed	65km/h
Motor Pitch	1,750mm	Maximum flight altitude	2.500m（Domestic scale150m)
FC	Pixhawk(USA)	Flight mode	ATT / GPS
Battery	12S18000mAh x 3 12.3Kg	Operating environment temperature	0-45°C
Airframe weight	17kg	payload flight time*	0 kg → 28 min / 10 kg → 17 min / 15 kg → 14 min 20kg → 12 min / 25kg → 10 min / 30kg → 9 min

* Depends on the environment

ACCESSORIES Standard accessories

Battery
12S18000mAh 3 pcs

12S Support
Battery Charger

Battery Checker

Battery storage case
（12S18000, holds 6 pcs）

Provo Futaba 16I

YOROI 4S1200F Features

■ **High applicability by exchanging units**

By combining the main unit and unit, it can be used in various ways.

■ **Selectable number of batteries**

You can choose 2 batteries or 1 battery depending on the work content, and you can consider the flight time and load.

■ **Uses a carbon shell,and the arm can be attached and detached**

Since the arm part is detachable, it is excellent in portability and maintainability.

SPEC Basic specifications

Flight dimensions	W1,000mm x D1,000mm x H680mm	Maximum takeoff weight	25kg
Dimensions when stored	W900mm x D900mm x H680mm	Maximum payload	15 kg (when hovering)
Material	Carbon fiber	Flight speed	60 km/h (30 km/h in flight)
Motor Pitch	1,200mm	Maximum flight altitude	2.500m（Domestic scale150m)
FC	Pixhawk(USA)	Flight mode	ATT / GPS / GCS
Battery	12S18000mAh x 1 pc	Operating environment temperature	0-45°C
Airframe weight	about 7kg (excluding battery)	Pay load flight time 1 battery*	0 kg → 19 min / 2 kg → 17 min / 5 kg → 12 min / 7 kg → 10 min 10kg → 8 min / 12kg → 7 min / 15kg → 6 min
		Pay load flight time 2 battery*	0 kg → 28 min / 2 kg → 24 min / 5 kg → 19 min / 7 kg → 15 min /10 kg → 14 min / 12 kg → 12 min / 15 kg → 9 min

ACCESSORIES Standard accessories

* Depends on the environment

Battery
12S18000mAh 1 pc

12S Support
Battery Charger

Battery Checker

Battery storage case
（12S18000, holds 6 pcs）

Provo Futaba 16I

YOROI Exclusive Options

Compatible with 12D1750F / 6S2200F / 6S1750F

By exchanging units, transportation, surveying, inspection, spraying, etc. perform various tasks. choose according to the purpose

12D1750F

6S2200F

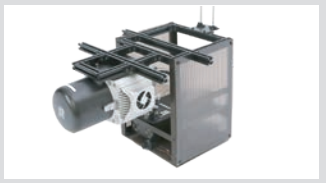
6S1750F

Spray tanks

HD camera unit

Unloading reel and hook

Gas analyzer



RIEGL-UAV unit

Medical container

Temperature-controlled transport bag unit

Green laser scanner

Examples of Utilization

Logistics & Transportation

We are responsible for transportation to mountainous areas and rapid support in the event of a disaster.

Disaster Relief

Drones are used to check the status of disaster sites and transport supplies to rescue victims.

Civil construction

Drones efficiently carry out materials transportation, overhead lines, and bare roads at construction sites in mountainous areas.

Forestry

It greatly improves work efficiency such as transporting seedlings on slopes with height differences and poor footing.

Agriculture

It is used for work such as crop growth surveys and as a countermeasure against the declining and aging population of producers.

Inspection Measurement

Drones are responsible for infrastructure inspections such as bridges and high tunnels, as well as measurement surveys

YOROI Exclusive Options

Compatible with YOROI 4S1200F

Perform various tasks by exchanging units.
Please choose according to the application.

4S1200F

Unit type attachment

10ℓ tank for liquid application

10ℓ tank for granule spray

Equipped with 10kg container for transportation

Equipped with a camera for investigation and observation

Equipped with life buoy

Equipped with cableway rope transport mechanism

option

Color variations

Compatible with 12D1750F / 6S2200F / 6S1750F

You can choose from 94 colors of 3M wrap film color samples and 83 colors of painted color samples.

yellow

orange

red

pink

gold

carbon

※Aircraft color sample using 3M wrap film.

YOROI Exclusive Options

Compatible with YOROI 12D1750F/YOROI 6S2200F/YOROI 6S1750F/YOROI 4S1200F

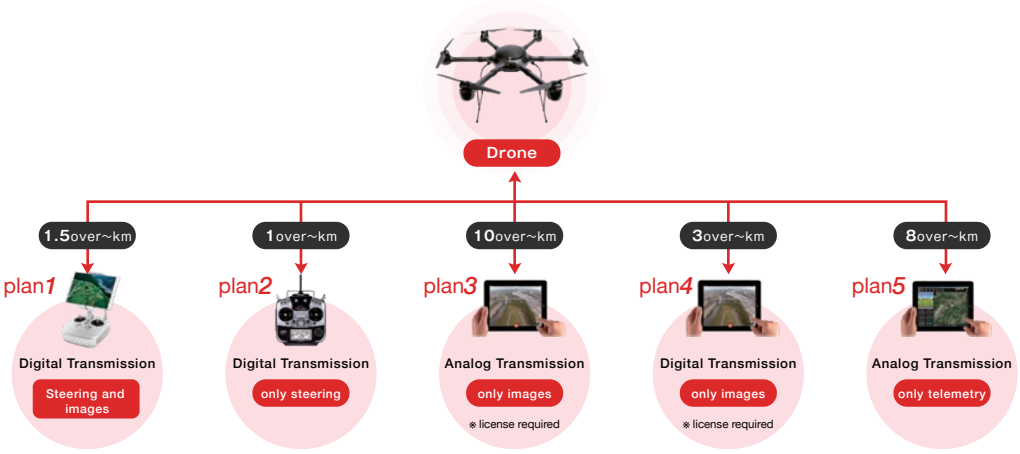
Automatic detection and tracking system

It is a system that enables autonomous drone operation.Confined spaces, moving vehicles, precise take-off and landing from vessels, tracking, etc.
By installing the minimum necessary hardware, you can control the drone by performing image processing in real time using an advanced control system such as artificial intelligence and computer vision.

long distance transmission system

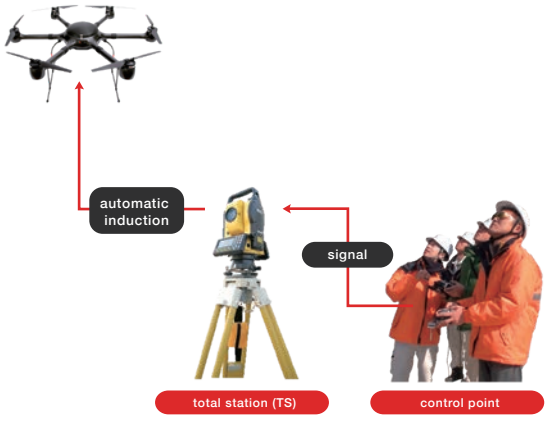
In order to ensure safe operation management in long-distance flights, a system that displays accurate drone position information and camera images attached to drones to explorers is essential.You can choose according to the transmission distance.

* Plan 3 and Plan 4 require a license of Third-Class Land Radio Operator or higher



RTK induction system

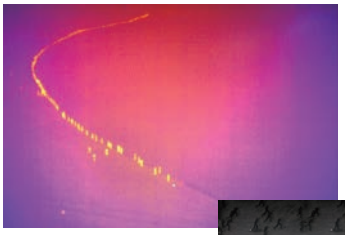
Effective for surveying and inspection indoors or in a non-GPS environment where GPS reception is not clear.
A series of systems that communicate and control drones and surveying instruments via software.
A reflective prism that reflects the racer light is attached to the drone, and it is tracked by an automatic tracking total station for surveying.
The position of the drone is measured in real time, and the difference between the predetermined 3D position and the position of the drone is automatically guided.
No expensive investment is required because it uses a small modification of an existing drone and a surveying instrument that is widely distributed.
It is a system that can obtain automation and labor saving at low cost.



surveillance radar system

A single-channel Ku-band (or X-band) surveillance radar system with a mechanical gimbal.
It is compact, lightweight, and consumes little power, yet delivers high performance.
It can be easily operated using dedicated software.

Various data necessary for surveillance and reconnaissance such as SAR imaging, change point detection, maritime surveillance, moving target indicator, etc. can be obtained from the generated high quality data.
Surveillance radar mounted on drones produces high-resolution images of the ground, unaffected by obstacles such as fog and clouds.
Optical sensors such as photo and video cameras use the visualization spectrum.
And, the image looks like what we see with our eyes, but the SAR sensors used by surveillance radar use long-wavelength signals, so the image resembles a black-and-white photograph.



YOROI Exclusive Options

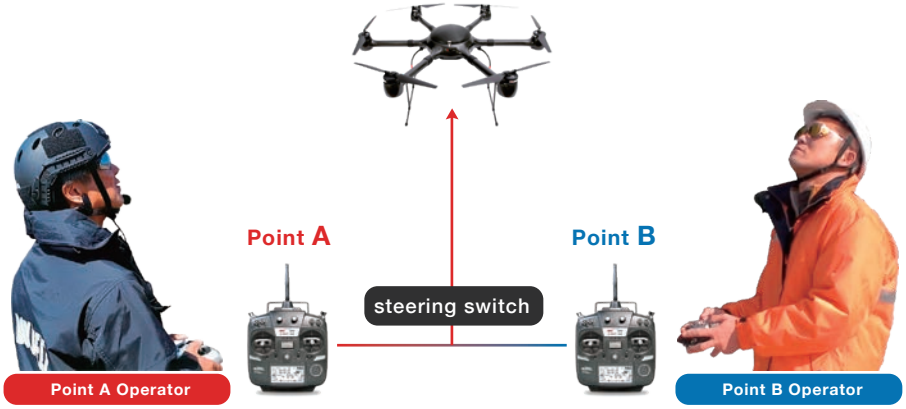
Compatible with YOROI 12D1750F/YOROI 6S2200F/YOROI 6S1750F/YOROI 4S1200F

anti-collision system

It is a system that can avoid collisions with otter drones, which is one of the biggest themes of drones.
During autonomous flight operations, using AI algorithms, it is possible to judge situations in real time.
It is an emerging technology for small size, light weight and low power consumption.
A powerful sensor recognizes both day and night.
Even in clouds, smoke, fog and other difficult weather conditions,3D radar can accurately track and safely move objects over long distances.
It is easy to system with a simple and intuitive interface.

Two-man operation system

Automatic navigation is performed from the departure point to the landing point,
and from the landing point, visual control is performed for safety, we will switch the pilot and land as a visual maneuver.
Especially for long-distance transportation of goods, it is a two-man operation system that ensures reliable operation at points A and B.



grand station

This is an optional system for large-scale drone operations, such as disasters, when it is necessary to set up base stations at the take-off point and the destination point.

Destination Base Station (Bravo)

- Dimensions in use：W550xD270xH650（excluding legs）
- Mass when stored：W550×D270×H460（Excluding parts of belt）
- Mass of case：30kg

Takeoff Point Base Station (Alpha)

- Dimensions in use：W1,300×D600×H680
- Mass when stored：W600×D450×H680
- Mass of case：30kg