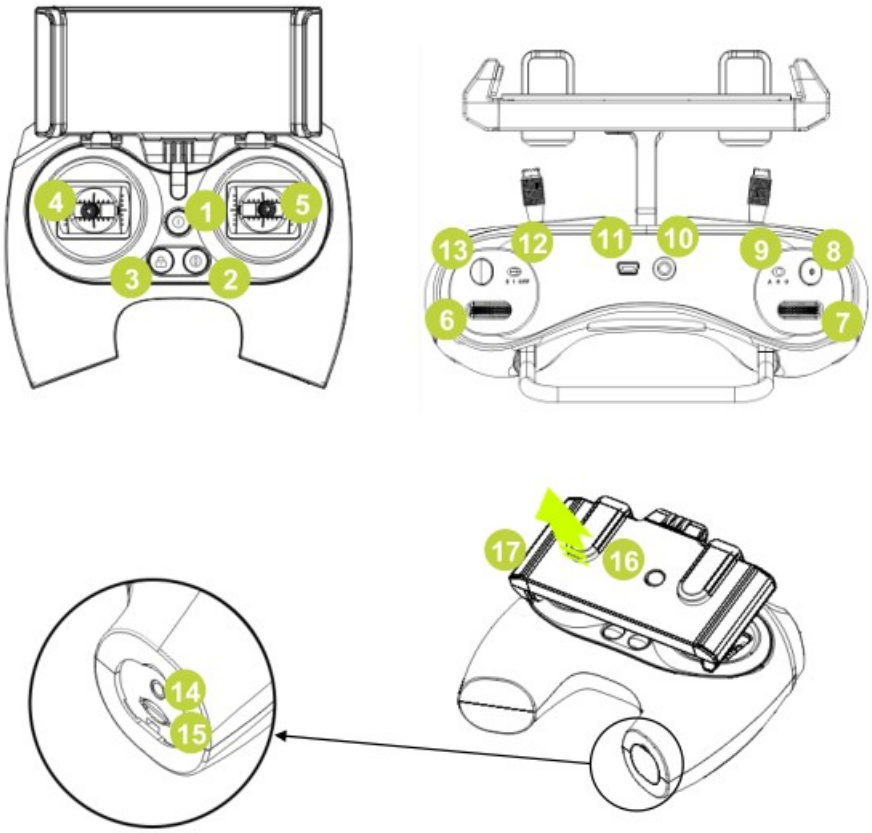
FFRC10A FIFISH Communication Station
User Manual

Model: FFRC10A

The Communication Station FFRC10A is used for the FIFISH series robot of QINGDAO QIYUAN CXIN KEJI and Shenzhen QIYUAN technology limited company.
It works as a video/image signal repeater station by achieving signal reception between robot and mobile devices.

Communication Station

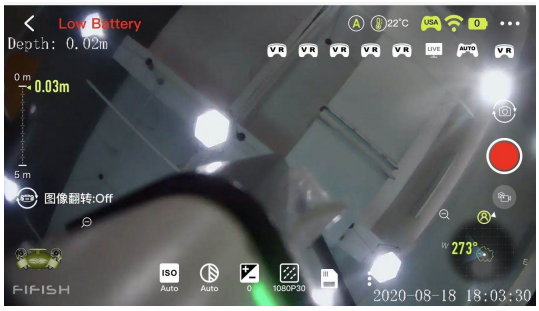


1. ON/OFF
2. Depth Holding (ON/OFF)
3. LOCK/UNLOCK
4. Left Stick
5. Right Stick
6. Right Wheel
7. Left Wheel
8. Video Record/Stop
9. Modes (Attitude / Sport / Combine)
10. Tether Port
11. Ethernet port
12. LED Brightness (OFF, 1, 2)
13. Photo (As default can be customized defined)
14. Charging Port
15. Micro SD Slot
16. Clamp Release Button
17. Clamp for Smart Device

1. ON/OFF: Power on/off key.
2. Depth (ON/OFF): Depth information on/off
3. Lock/unlock: Lock and unlock the imaging
4. Left stick: choose left side of video or image.
5. Right stick: choose right side of video or image
6. Right wheel: choose up side of video or image
7. Left wheel: choose down side of video or image
8. Video record/stop: Video record key
9. Mode select: change video or image modes.
10. Tether port: insert hole of the communication tether.
11. Ethernet port: a Ethernet output port.
12. LED brightness: brightness of the LED.
13. Photo: press for taking photo.
14. Charging port: insert the 5V/3A adapter to charge the battery
15. Micro SD slot: can insert a micro SD card to download the data from internal camera of robot.
16. Button to adjust holder width.
17. Holder for mobile phone or pad

Note:The device is restricted to indoor use only when operating in 5150 to 5250MHz frequency range.

When it works, the router processor will broadcast a SSID: FIFISHRC_xxxx; in mobile device's wifi setting, choose to connect to this SSID, then launch FIFISH APP and can see the camera image. The signal transmission path can refer to the block diagram above:
Image from Camera of the Robot go through PLC modem and PHY via Ethernet to arrive the router processor, processor then forward these data to 5GHz Radio chip via PCIE, at the end,Radio chip send the image and video to mobile device using PCB antenna for wireless communication.



FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception,
which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different
from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.
The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction

EN
This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada’s licence-exempt RSS(s). Operation is subject to the following two conditions:
1.This device may not cause interference.
2.This device must accept any interference, including interference that may cause undesired operation of the device.
FR
L’émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d’Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L’exploitation est autorisée aux deux conditions suivantes :
1.L’appareil ne doit pas produire de brouillage;
2.L’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

RF Specification:

Function	Operation Frequency	Max RF outputpower:	Limit
Wi-Fi 5.2G(802.11a/n20/n40/ac20/ac40/ac80)	802.11a/ n20/ac20:5180MHz~5240MHz 802.11 n40/ac40:5190MHz~5230MHz 802.11ac80:5210MHz	14.48 dBm	23dBm.

EU Declaration of Conformity

We,

QINGDAO QIYUAN CXIN KEJI CO.,LTD(No. 111 Daoli Street Tianheng Town Jimo District Qingdao, Shandong, P.R. China) hereby declares that this Communication Station is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

According to Article 10(2) of Directive 2014/53/EU, the FFRC10A can be used in Europe without restriction.

Warning:

RED

Manufacturer's Name: QINGDAO QIYUAN CXIN KEJI CO.,LTD

Product Name: Sigur MR100-Multi reader

Model number: Communication Station

Operating Temperature: -10℃ to 40℃

This product can be used across all EU member states.

Hereby, QINGDAO QIYUAN CXIN KEJI CO.,LTD declares that this Communication Station product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. A copy of the Declaration of Conformity can be found at Website: http://www.qysea.com

The device complies with RF specifications when the device is used at 20cm from your body.

Care for the environment! Must not be discarded with household waste!

Restrictions in the 5 GHz band:

According to Article 10 (10) of Directive 2014/53/EU, the packaging showsthat this radio equipment will be subject to some restrictions when placedon the market in Belgium (BE), Bulgaria (BG), the Czech Republic (CZ),Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain(ES), France (FR), Croatia (HR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania(LT), Luxembourg (LU), Hungary (HU), Malta (MT), Netherlands (NL), Austria(AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK),Finland (FI), Sweden (SE), the United Kingdom (UK), Turkey (TR), Norway(NO), Switzerland (CH), Iceland (IS), and Liechtenstein (LI).

The WLAN function for this device is restricted to indoor use only when operating in the 5150 to 5250 MHz frequency range.

	ES	LU	RO	CZ	FR	HU	SI
	DK	HR	BE	BG	DE	EE	IE
	EL	IT	Cy	LV	LT	SK	MT
	NL	AT	PL	PT	FI	SE	UK
	TR	NO	CH	IS	LI		