F-DVR200 User Manual

Files Revised Record

Date	Version	Remark	Author
2016-12-19	V1.0.0		Wangwr/WSP

Copyright Notice

All contents in the files are protected by copyright law, and all copyrights are reserved by HongKong Four-Faith Communication Technology Co., Ltd.　Without written permission, all commercial use of the files from Four-Faith are forbidden, such as copy, distribute, reproduce the files, etc., but non-commercial purpose, downloaded or printed by individual (all files shall be not revised, and the copyright and other proprietorship notice shall be reserved) are welcome.

Trademark Notice

Four-Faith、四信、　　　 、　　　　 、 　　 are all registered trademarks of HongKong Four-Faith Communication Technology Co., Ltd., illegal use of the name of Four-Faith, trademarks and other marks of Four-Faith is forbidden, unless written permission is authorized in advance.

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com　　　Tel: +86-17750019379　　　Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

Contents

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net

Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

Chapter 1 Brief Introduction of Product

1.1General

F-DVR200 is an embedded linux operation system device, it research and development by four-faith company. F-DVR200 have 8 channel video and audio input, support network 3G/4G/WIFI/LAN, positioning by gps/Compass, local large storage media with safely, protect disk vibration, flexible choices for video channels and encord plan.

This product has been widely used for audio and video monitoring in public transport, tourism, industrial sectors, such as city bus, bus station, custom bus, tour bus, long-distance passenger bus, tourist attractions, industrial minerals and other places.

Application Topology
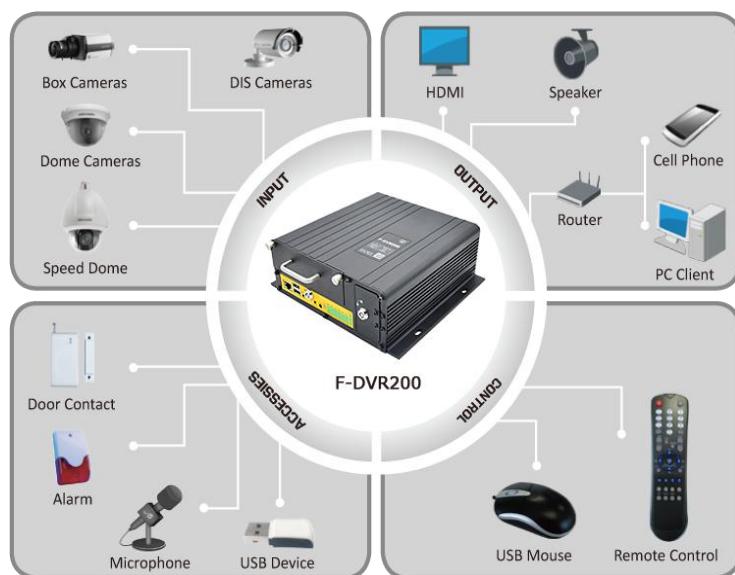
1.2 Product Feature

Design for Vehicle Application

- High-powered 32bits CPU
- Vehicle power supply design, support under-voltage, over-voltage, over-current, reverse connection, short circuit, surge protection
- Wide Power range(DC 9~36V)
- Wide Operating Temperature(-35~+75ºC)
- Aviation plug for power input
- Metal shell, high heat radiating and anti collision performance
- Shockproof design,suitable for vehicle vibrating environment
- Security structure design for TF/SIM card

Stability and Reliability

- Support hardware and software WDT to ensure the stability of the system
- Support auto recovery mechanism, including online detect, auto redial when offline to make router always online
- Data storage with hard disk, ensure the data security and stability on high speed read and write
- Ethernet port: 1.5KV magnetic isolation protection
- RS232/RS485/RS422 port: 15KV ESD protection
- SIM/UIM port: 15KV ESD protection
- Antenna port: lightning protection(optional)

High-performance

- 8 channels runtime video encode and audio encode, h.264 encode.low bitrate, better video quality
- Support 4 channels or 8 channels, choose by demand
- Support 4 channels or 8 channels replay and record
- Support 4 channels 1080p ipc input,support ipc event (md,od and so on) record.
- Support ipc snapshot ipc video record.
- Support USB/remote/local-web Update Firmware
- Support 485 interface
- Support 8 channel analog input (16 bit AD, Support voltage signal, range: 0~5V), 6 channel digit input, 6 channel digit ouput (2 channel for Relay driver)
- Rich led light, can quickly grasp the machine running state
- Matched server platform and client
- Mulit-transfer media,used for every application scenarios
- Useful rate control, keep stability video transfer for wireless network
- Mulit record export, USB local export,remote web download,local web download
- Removable hard-disk, connect hard-disk to pc by usb, used for export and replay record
- Support mulit record mode: IR record,timer record, move detect record, alarm record
- 6 works in sametime: monitor, record, replay, bakeup, network-transfer, ptz
- Support double streams: main stream and sub stream. Main stream (big imagesize) use for local record
- Support stream use for netwrok-transfer to save network bandwidth when wireless
- Support video output use CVBS or HDMIinterface
- Storage media support hard-disk, SD card, Auto Override
- Support protect alarm record, can protect the important record
- Steady storage, power protection mechanism keep record complete, even lost power
- Low voltage protection
- Mulit boot mode: timer, ACC, ACC+timer, Even, IR

- Support IR control, support External infrared antenna
- Support wifi connect to server and transfer data
- Support local UI
- Support remote TTS(optional)
- Support remote vioce talk
- Mulit configuration parameter: local UI, local web, remote web
- Support NTP, RTC embedded
- Support mulit network switch, Configurable for Network priority
- Support the GPS/beidou positioning function (optional)

1.3 Product Specification

Video and audio Specification

Item		Content
Video	Input	8 channels D1 Electrical level: 1.0Vp-p, Impedance: 75Ω
	Output	1 channel CVBS Electrical level: 1.0Vp-p, Impedance: 75Ω PAL: D1 (704*576)
		1 channel HDMI 1024*768
Audio	Input	8 channel Linear Electrical level, Impedance: 1kΩ
	Output	1 channel Linear Electrical leve, Impedance：600Ω
Code	Video Compression	H.264
	Image Resolution	PAL: D1/CIF NTSC: CIF/QCIF
	Video frame	PAL: 1-25fps
	Video rate	Network dynamic adjustment
	Stream type	Optional streaming video or compound flow
	Audio Compression	ADPCM
	Audio rate	32kpbs
	Voice intercom	ADPCM

Storage Specification

| Item	Content
HDD Type	2.5' SATA HDD/SSD
HDD Capacity	HDD: 500GB(optional, optional Extended to 2 TB)
HDD Access	Standard 2.5 inch SATA interface, pluggable type
HDD Protection	Shock absorber hard disk box
SD Type	Standard SD/SDHC
SD Capacity	64GB(optional)

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

SD Access	Standard SD/SDHC card slot, support hot plug

Cellular Specification

Item	Content
Cellular Module	High-performance cellular module (optional single module, double module or no module)
Standard	Can support: TDD-LTE/FDD-LTE/EVDO/WCDMA/TD-SCDMA/CDMA1X/GPRS/EDGE Optional support:single-mode,multi-mode or All network communication
Bandwidth	FDD LTE(DL:100Mbps,UL:50Mbps) TDD LTE(DL:61Mbps,UL:18Mbps) CDMA2000 1X EVDO Rev A (DL:3.1Mbps,UL:1.8Mbps) WCDMA(DL:42Mbps,UL:5.76Mbps) TD-SCDMA(DL:4.2Mbps,UL:2.2Mbps)
TX power	<24dBm
RX sensitivity	<-109dBm

GPS Specification

Item	Content
GPS Module	Industrial GPS module(optional beidou module)
Receiver Type	50-channle GPS L1(1575.42MHz)C/A code SBAS: WAAS,EGNOS,MSAS,GAGAN
Max. update rate	5 Hz
Accuracy	Position: 2.5m CPE SBAS: 2.0m CPE
Sensitivity	Tracking: -160dBm Reacquisition: -160dBm Cold starts: -146dBm

WIFI Specification

Item	Content
Standard	IEEE802.11b/g/n, 2.4G,1T1R,AP model, Station model(optional)
Bandwidth	IEEE802.11b/g: 54Mbps(max) IEEE802.11n: 150Mbps(max)
Security	WEP, WPA, WPA2, etc. WPS (optional)
TX power	13dBm (11n), 14dBm (11g), 16dBm (11b)
RX sensitivity	<-73dBm@54Mpbs

Hardware System

Item	Content
CPU	High-performance ARM Cortex A9 CPU

FLASH	64MB(Extendable to 32MB)
DDR2	512MB(Extendable to 1GB)

Interface type
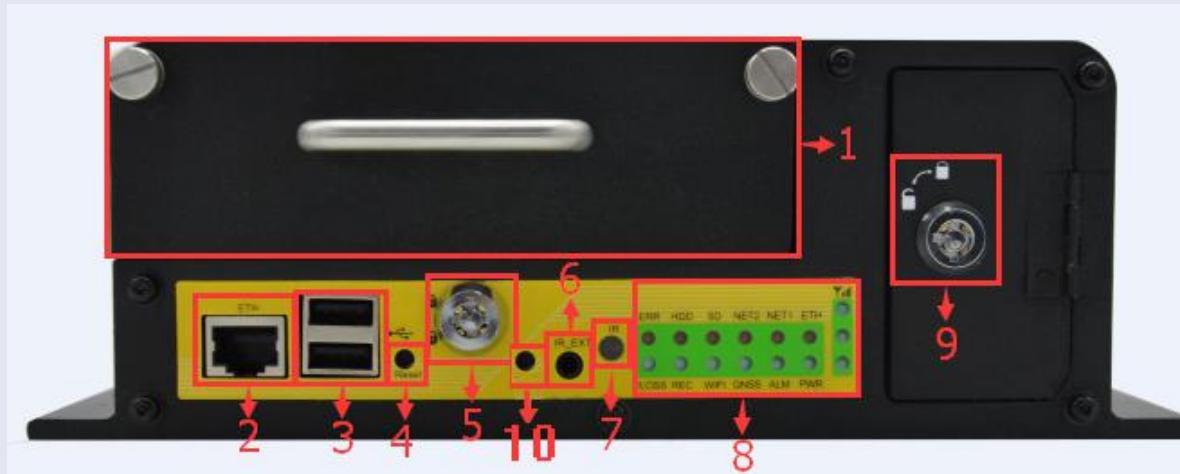
No.	Name	Content
1	HDD Box	Support a 2.5' SATA HDD/SSD, Insert or delete must hard disk lock is open
2	LAN	10/100 Mbps Ethernet interface
3	USB	2 USB2.0 interface
4	Reset	Reset button, press this button more than 0.1 seconds to reset the DVR devices
5	HDD Lock	Protect hard disk with power control equipment
6	IR-EXT	External infrared remote control interface
7	IR	Infrared remote control interface
8	Indicator	PWR: Power indicator
		ALM: Alarm indicator
		GNSS: GPS/beidou indicator
		WIFI: WIFI indicator
		REC: Store the video indicator
		VLOSS: Video loss of indicator
		ETH: Ethernet interface indicator
		NET1: Network 1 indicator
		NET2: Network 2 indicator
		SD: SD Card indicatort
		HDD: Hard disk indicator
		ERR: Error alarm indicator
9	Card Lock	Protect SD or SIM/UIM
10	Restore	Factory Restore
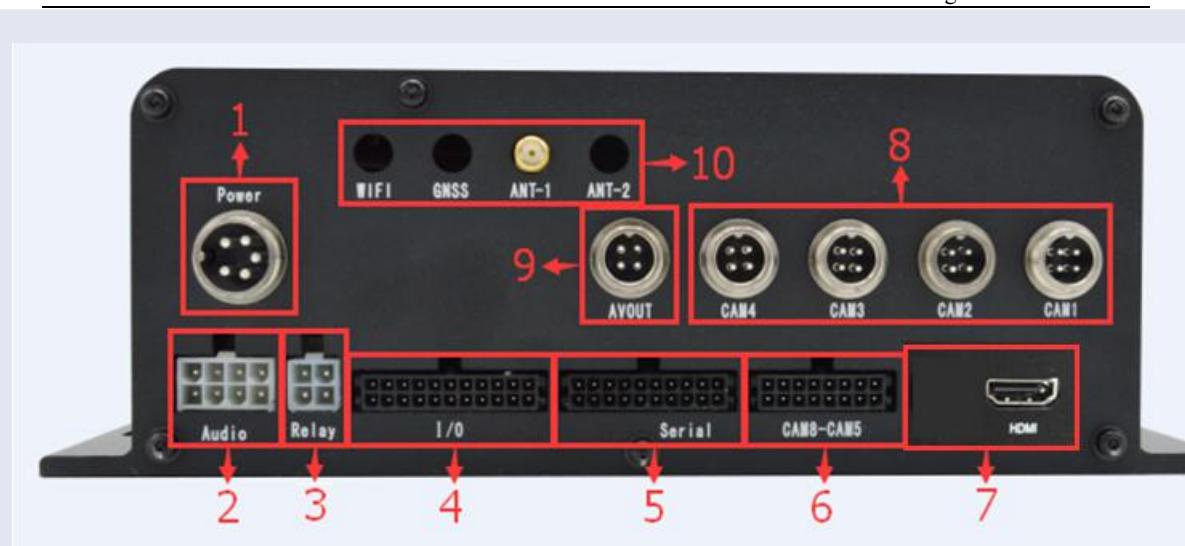
No.	Name	Content
1	Power	Power and start control interface, 5P aviation plug
2	Audio	Audio input, output and control interface, 5557-8P
3	Relay	2 Relay output interface, 5557-4P
4	I/O	6 DIN, 4 DOUT(OC), 8 AIN and Power output
5	Serial	RS232 communication interface, CAN bus, RS232 and RS485 bus and power output
6	CAM5-CAM8	5 ~ 8 channel video and audio input, output power
7	hdmi	Hdmi1.3 interface
8	CAM1~CAM4	1 ~ 4 channel video and audio input, output power, 4P aviation plug
9	AVOUT	Video and audio output, 4P aviation plug
10	Antenna	SMA antenna interface, GNSS antenna, WIFI and 3 g / 4 g module antenna

Power supply

Item	Content
Standard Power	DC 12V/5A(optional DC 12V/8A)
Power range	DC 9~36V
Working current	<1100mA (12V)
Standby current	<170mA (12V)

Physical Characteristics

Item	Content
Housing	Metal shell, shock proof design
Dimensions	231x210x78 mm
Weight	3.22kg

Other Specification

Item	Content
Operating Temperature	-35~+75ºC(-31~+167°F)
Storage Temperature	-40~+85ºC(-40~+185°F)
Operating Humidity	95% (unfreezing)

Stitch definition

No.	Identification	Image	Definition	Description
1	Power	Type: 16M-5P 	1: DCIN+ 2: DCIN+ 3: DCIN- 4: DCIN- 5: ACCIN	Input voltage range: DC 9~36V ACCIN: Ignition control signal
2	Audio	Type: 5557-2*4P 	1: Aout-R 2: Aout-L 3: SPK+ 4: SPK- 5: SW 6: GND 7: MIC+ 8: MIC-	Aout: Dual channel TTS and local propaganda output, Power "2*25W/4Ω" SPK: Listening to the speaker Power "7.5W/8Ω" SW: Propaganda switch MIC: Intercom, propaganda input
3	Relay	Type: 5557-2*2P 	1: RelayA+ 2: RelayA- 3: RelayB+ 4: RelayB-	RelayA: First relay RelayB: Second relay Largest switching voltage: 30VDC/250VAC Largest switching current: 5A Largest switching power: 150W/1250VA
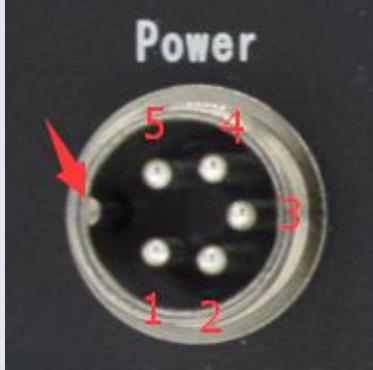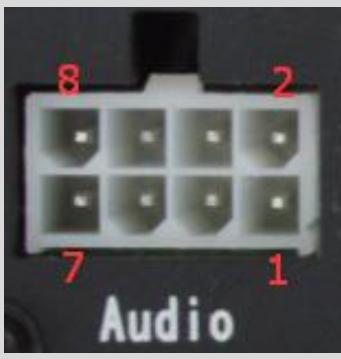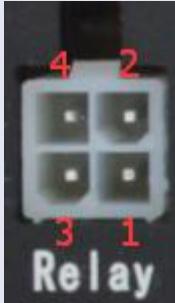
厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

| 4 | I/O | 厦门四信智慧电力科技有限公司

Type: Spacing 3.0mm
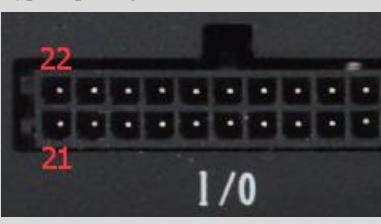
22
21
I/0 | 1: DIN2
2: DIN1
3: DIN4
4: DIN3
5: DIN6
6: DIN5
7: DOUT2
8: DOUT1
9: DOUT4
10: DOUT3
11: +5V
12: COM
13: +12V
14: AGND
15: AIN8
16: AIN7
17: AIN2
18: AIN1
19: AIN4
20: AIN3
21: AIN6
22: AIN5 | DIN: Optical isolation digital input

Logic 0: 0~3V, connect
Logic 1: 5~30V, disconnect

DOUT: Optical isolation OC output
Drive current rating: 50mA
Drive voltage rating: 35V

AIN: Buffer 16 analog input
0~5V Voltage signal input
4~20mA Current signal input (optional)

AGND: Analog input GND
Note: Using DIN and DOUT, Must connect COM.

IO Power / Serial Power:
Support: 12V/2A
Support: 5V/2A |

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

5	Serial	Type: Spacing 3.0mm	1: +12V 2: +12V 3: GND 4: GND 5: +5V 6: +5V 7: RS485A1 8: RS485B1 9: RS485A2 10: RS485B2 11: CANL 12: CANH 13: RXD1 14: TXD1 15: RXD2 16: TXD2 17: RXD3 18: TXD3 19: RXD4 20: TXD4	Serial Power / IO Power: Support: 12V/2A Support: 5V/2A RS485A1,RS485B1(TXD2,RXD2 optional), RS485 Camera console. RS485A2,RS485B2(TXD4,RXD4 optional), Optional extension. TXD1,RXD1: Main MCU Debug TXD3,RXD3: Div MCU Debug CANH,CANL: CAN Bus interface, Optional extension.
6	CAM5-CAM8	Type: Spacing 3.0mm	1: AIN5 2: +12V 3: VIN5 4: GND 5: AIN6 6: +12V 7: VIN6 8: GND 9: AIN7 10: +12V 11: VIN7 12: GND 13: AIN8 14: +12V 15: VIN8 16: GND	1~4: 5 channel Video and audio input 5~8: 6 channel Video and audio input 9~12: 7 channel Video and audio input 13~16: 8 channel Video and audio input
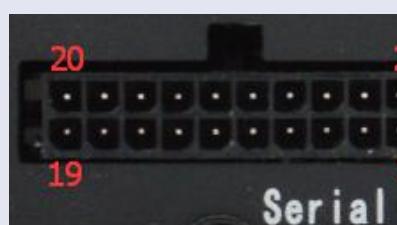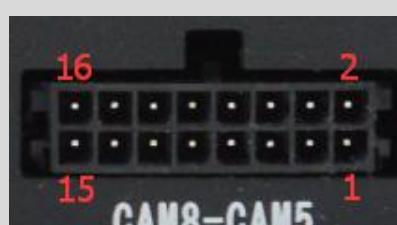
7	hdmi	Type:type-a	Hdmi1.3 interface	Video output
8	CAM1~CAM 4	Type: 12M-4P	1: +12V 2: GND 3: AIN 4: VIN	Video and audio input channel
9	AVOUT	Type: 12M-4P	1: +12V 2: GND 3: AOUT 4: VOUT	Video and audio output channel
10	Antenna	Type: SMA	WIFI: WIFI Antenna GNSS: GNSS Antenna ANT-1: Main 3G/4G Antenna ANT-2: Diversity 3G/4G Antenna	
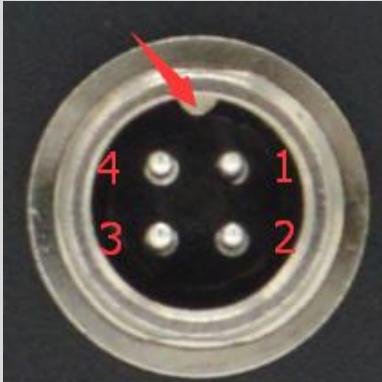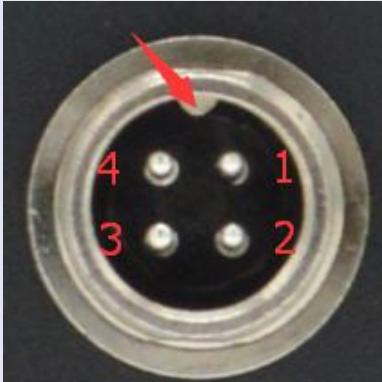
厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

1.4 IR operation instructions

F-DVR200 IR key Figure:

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

IR key function Figure:

key	display	function
Power	Power	Power on/off device
Login	Login	Login UI
Rec	Rec	IR record
Stop	Stop	Stop IR record
Edit+/Edit-	Edit+/Edit-	Controler multi value select (like date controler year select and so on)
Back	Back	Back or exit
Net	Net	Shortcuts for net config
Switch	Switch	1.UI switch focus from one control to another control . 2.switch multi video screen with one video screen
Zoom in/Zoom out	Zoom in/Zoom out	Zoom in/out for ptz
Focus+/Focus-	Focus+/Focus-	Change focus for ptz
Up/Down/Left/Right	Up/Down/Left/Right	Up/Down/Left/Right
Enter	Enter	Submit select
number	-	Number , character or special character input. keymap: {'1','a','b','c'},{'2','d','e','f'},{'3','g','h','i'},{'4','j','k','l'}, {'5','m','n','o'},{'6','p','q','r'},{'7','s','t','u'},{'8','v','w','x '},{'9','y','z','.'}, {'0','_','*','#'},
del	del	Delete input text.
Ptz	-	Shortcuts for ptz operation
play	Play	Pause or play record
Prev/Next	Prev/Next	Play prev/next record
Volume+/Volume-	Volume+/Volume-	Volume control
iris+/iris-	iris+/iris-	Iris control fot ptz
Frame play	Frame play	When record replay,Play next Frame when chick.
forward/rewound	Time+/Time-	fast-forwarded or rewound the record replay.
Stop	Stop	Stop record replay

Chapter 2 Installation Introduction

2.1Overview

F-DVR200 must be installed correctly before they achieve the design features, the device must be installed in a generally recognized by the Company under the guidance of a qualified engineer.

Precautions:
Forbid to install when device power on.

2.2 Encasement List

For safe transport, usually we need a reasonable package, when you are out of the box, please take good care of packing materials for use in future transport needs.It includes the following elements:

It includes the following elements:

✧ F-DVR200 host
✧ 1 (or 2)Wireless cellular antenna (SMA male head)
✧ 1 GPS antenna (SMA male head) (optional)
✧ 1 WIFI antenna (SMA female head) (optional)
✧ 1 Power line
✧ 1 Power Adapter (optional)
✧ 5 aviation plug to video/audio input line
✧ 1 video/audio extern input line (optional)
✧ 1 power amplifier output line(optional)
✧ 1 Relay output line (optional)
✧ 1 gather,control line (optional)
✧ External audio pickup(optional)
✧ 1 External infrared remote control line (optional)
✧ 1 Crosslink Ethernet Cable
✧ 1serial line
✧ 1 IR control
✧ 4 Keys for device lock
✧ Product certification
✧ Warranty Card

2.3 Installation and Cable Connection

Dimension（unit：mm）
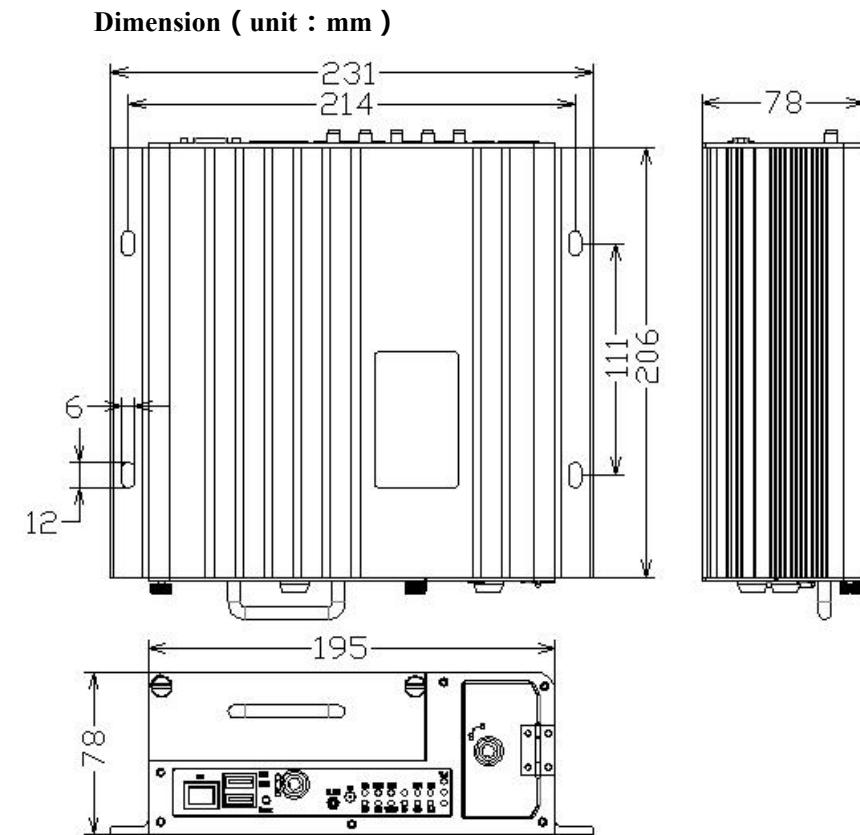
antenna Installation:

1 Wireless cellular antenna   interface is SMA female head（marks:"ANT"），

use provided Wireless cellular antenna (SMA male head) spin to this interface,keep spin closed.

2 WIFI antenna interface is SMA male head（marks:"WIFI"）， use provided wifi antenna

(SMA female head) spin to this interface,keep spin closed.

3 GNSS   antenna interface is SMA female head (mark:"GNSS").

use provided GNSS   antenna (SMA male head) spin to this interface,keep spin closed.

Precautions： Wireless cellular antenna ,WIFI antenna and GNSS antenna must spin to

corresponding interface,otherwise   device cannot work Normal .

SIM/UIM card Installation:

When install or tack out SIM/UIM card，open Cover panel use provided key，

1 Insert into the point left of SIM/UIM card connector Use sharp object，like below   Figure

show

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

2 put card into the connector like below Figure show :

3 Put back SIM/UIM card connect to there   slot ,like   below Figure show :
Make sure insert to the end of slot.

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

SD card Installation：

Install SD card，open Cover panel use provided key，insert SD card into the slot mask "sd"，like below Figure show :

SD card must Make sure insert to the end of slot.

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

Lock Cover panel.。

Hard disk install:

Turn hard disk lock to open position ,Then counterclockwise unscrew the captive screws on the hard disk box，like below Figure show :

pull out the hard disk box ，like below Figure show :

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.
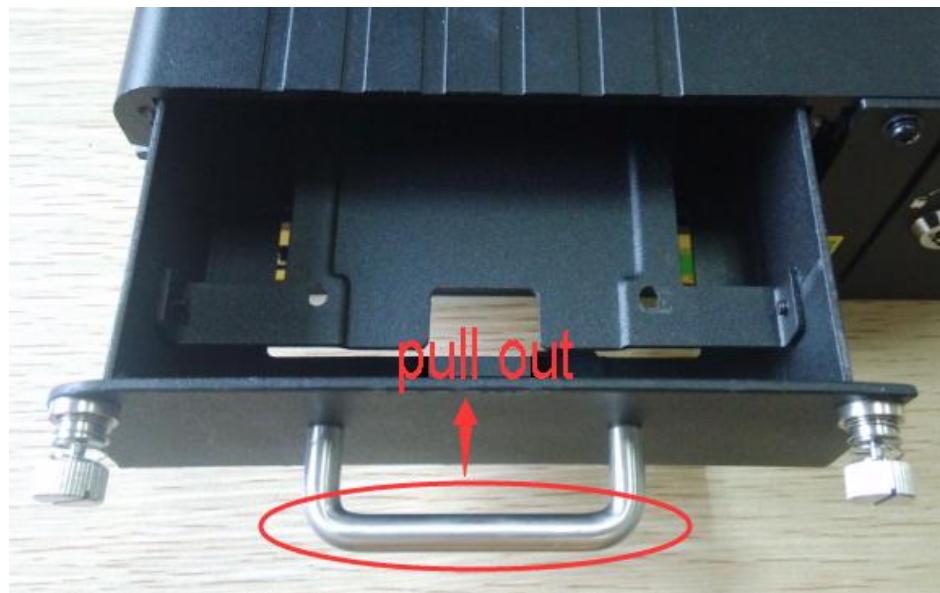
Put 2.5 inch SATA hard disk insert to corresponding interface
like below Figure show :

Lock the hard disk with 4 M3*5 screw 。

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.
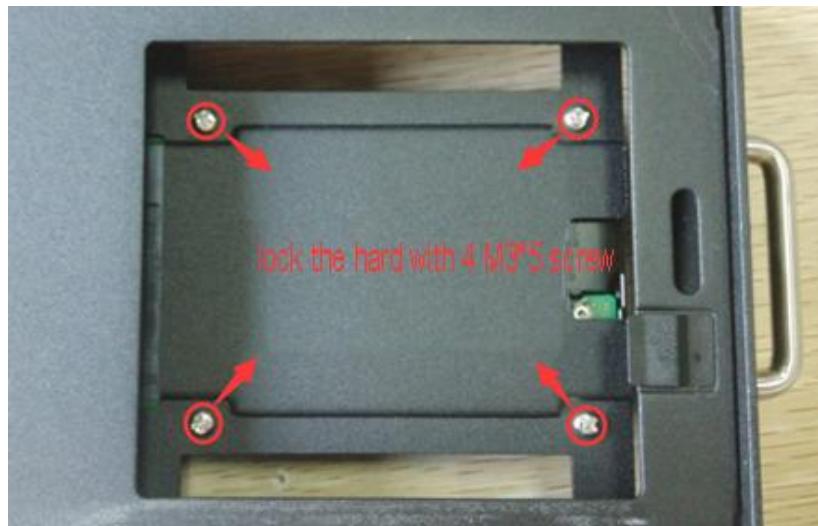
Put back hard disk box to the device ，spin the screw ，turn ard disk lock to close position，

hard disk installer end。

2.4 power connection

1 F-DVR200 used for no Vehicle Application,if used for 4 channel Monitor, we recommend use 12VDC/5A Adapter，if used for 8 channel monitor, we recommend us 12VDC/8A or biger adapter.

2 F-DVR200 used for Vehicle Application,connect to power of car support,device support 12VDC and 24VDC.

Connect instruction：

With different demand ，F-DVR200 provide two work mode,different power connect whit

different work mode .

● acc mode ,delay poweroff

F-DVR200 power when card acc on, device keep poweron (preset time) when acc off,

Device power depend on acc signal;

● Timer mode

F-DVR200 device poweon and poweroff with we preset timer，whole work independent the

power input.

acc mode ,delay poweroff

acc mode depend on acc signal:device "key+" connect to acc switch.

DC+ connect to positive pole of battery.DC- connect to negative pole of battery.DC,connect like below Figure show
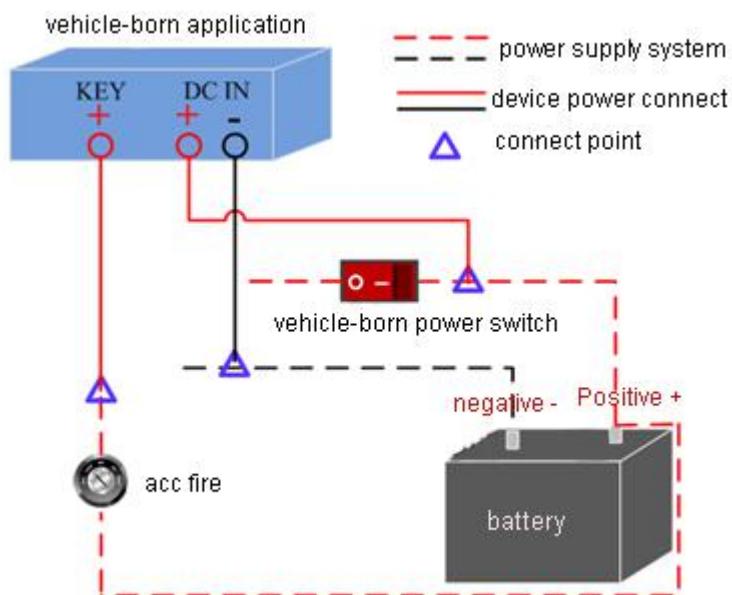
Normal mode

Normal mode:device "key+" connect to positive pole of battery,DC+ connect to positive pole of battery.DC- connect to negative pole of battery.DC,connect like below Figure show
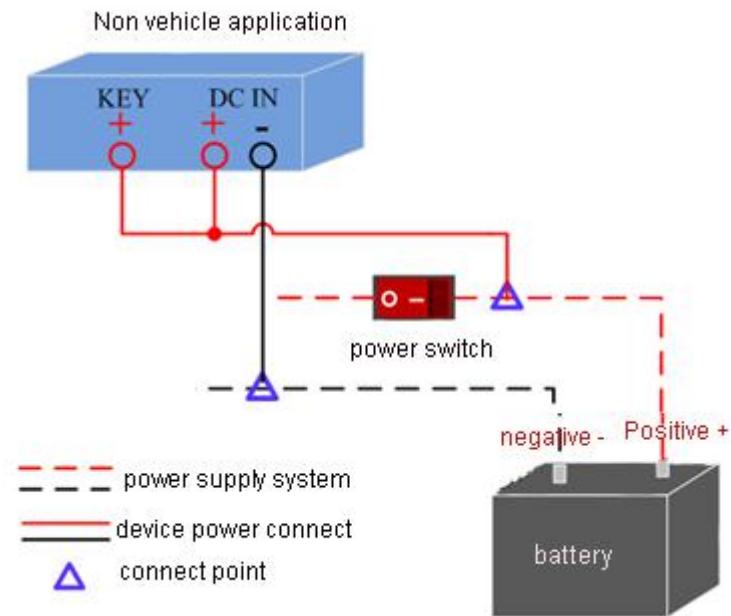
2.5 LED indicator   light Introduction

F-DVR200 provided below led indicator light:
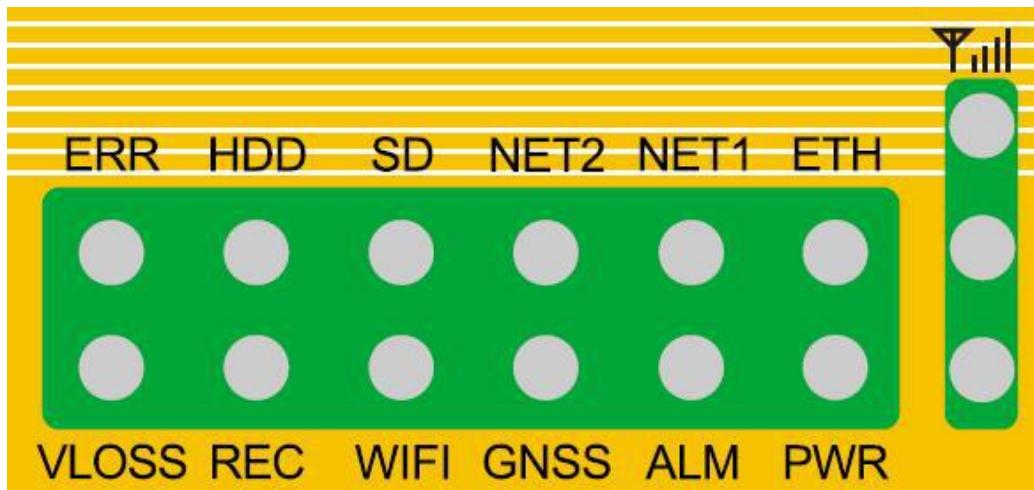
LED indicator   light Introduction like below Figure ：

light	status	Introduction
PWR	on	Device power on
	off	Device power off
ERR	flicker	Record error
	off	Record ok

3G signal 1-3	on	Signal value
	off	Signal value
ETH	on	Lan connect
	off	Lan disconnect
NET1	on	Device connect to video server
	flicker	Device can access to the Interne but cannot connect to video server
	off	Device cannot access to the Interne
NET2	on	Gps connect to server
	off	Gps cannot connect to server
USB/SD	on	Usb storge found
	flicker	Usb storge wirte
	off	Have no usb storge
HDD	flicker	hard disk read or write
	off	Hard disk no found
GNSS	on	GPS position success
	flicker	GPS antenna connect but position no connect
	off	GPS antenna disconnect
WIFI	on	Wifi connect
	off	Wifi disconnect
VLOSS	on	All video channel loss
	flicker	A part of video channel loss
	off	All video channel connect ok
ALM	on	Trigger alarm event
	off	No alarm event
REC	on	All channels recording
	flicker	A part of channels recording
	off	No recording

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

Chapter3 WEB param config

3.1 config connect

✧ Befor config dvr param from web ,we should connect dvr to our LAN   through Crosslink Ethernet Cable or wifi. When use wifi connect you must trun on and config wifi ssid and passwd.

3.2 login to config page

3.2.1 pc local ip config

Config PC ipaddr to 192.168.1.9(or other ip in 192.168.1network segment)， netmask：

255.255.255.0，defalut gateway：192.168.1.1.

3.2.2 install Browser plugin

Execute provided F-DVR200plugin.exe,install to computer
This plugin support IE (version big than 9)

F6934plugin.exe

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

3.2.3 login to config page

This chapter introduce function of device param config pages.you can config device param through the device provide local web config page.

The Config and operat contains five parts:video operat,record task,system config,system manage,system information.

Video page include local live video show,search record,replayrecord,download or export record.

Record task:config record task.

System config include pages: general settings, codesettings, networking, servers, output settings, capture, alarm set, datatime set, gensor setting, wifi auto upload, Roi.

System manage include pages: harddisk manage, account, auto maintenance , restore default, firmware upgrade , boot mode, reboot, cmddebug.

System information include pages: system log ,virsion ,log info.

accessto device ip use browser,enter username and passwd ,default adminitrotar username and passwd are "admin". Default operator username and passwd ar "operator" ,different authority for different user.

（user manage in account page）

The home page like below page:
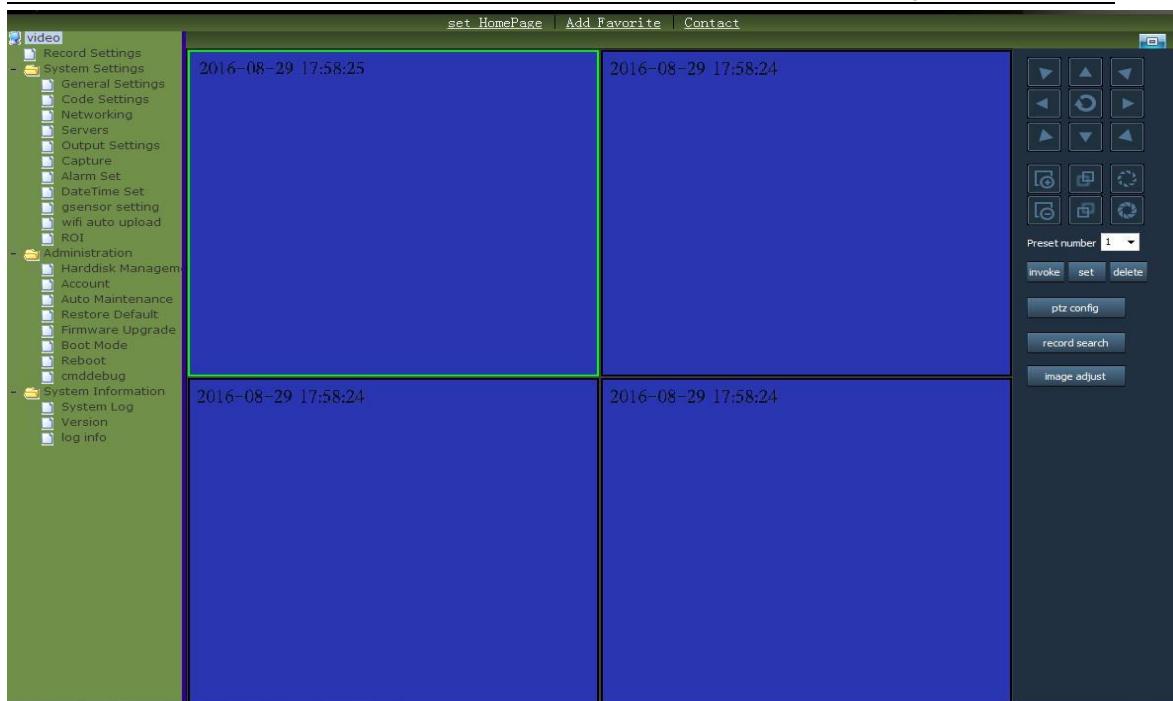
3.3 manage and config

3.3.1 video operation

3.3.1.1 local live video view

The plugin auto show 4 or 8 channels(general   settings) video when the page open,

3.3.1.2 ptz operation
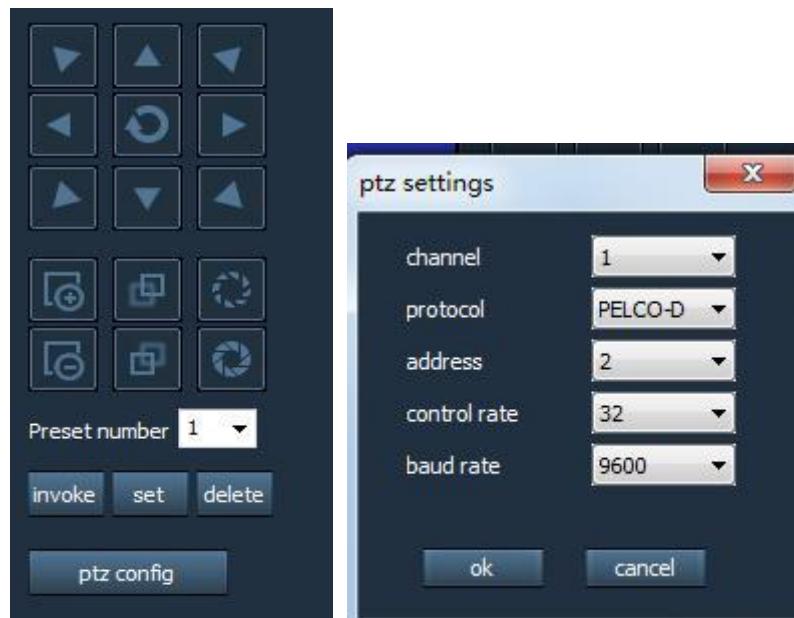
Check button "ptz config" to set channl's ptz param. And then you can   control ptz device.

Howto operation: select channel on the video view ,check ptz operation buttons to control ptz

device ,result show in video.

3.3.1.3 record operation

Check button"record search"will show the UI of record operation:

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.
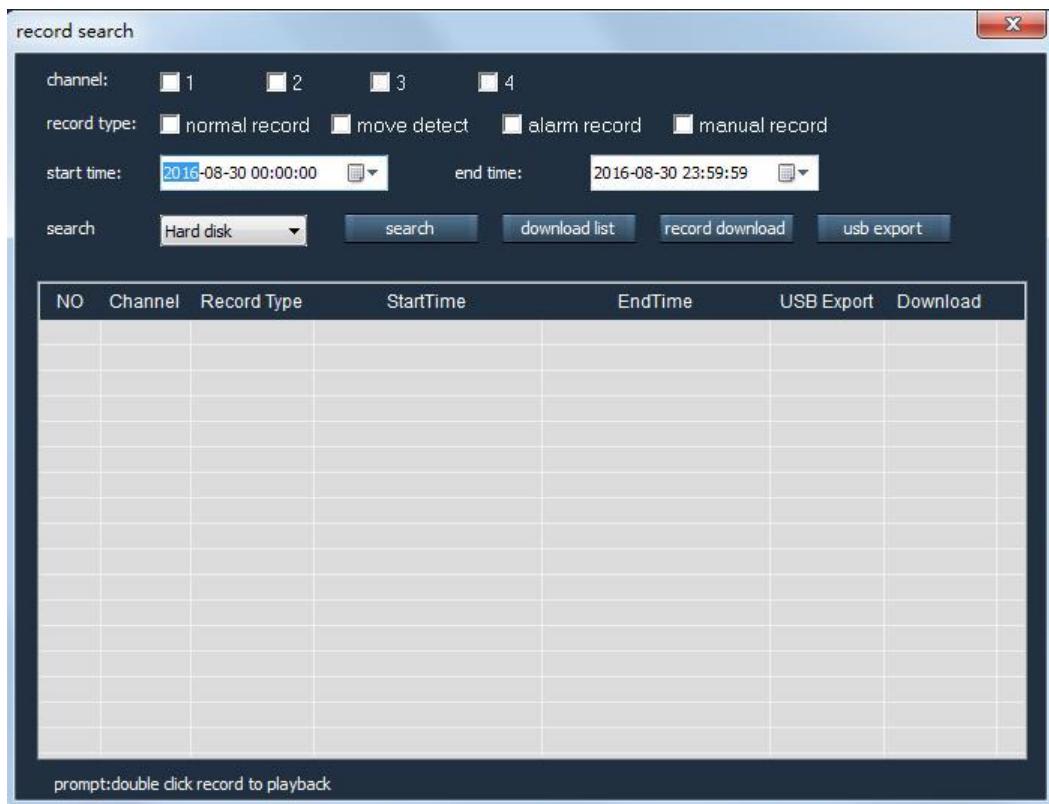
Record search：

Select channel,record type,start time,end time,storge type. The search result like below figure

Record playback：

Double click a record item to playback,you can drag the scroll bar to control the view

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

Download record to computer：

select a record item and check button "record download",download select file to local computer. Show progress in download list. multi file can be download on the same time.

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.
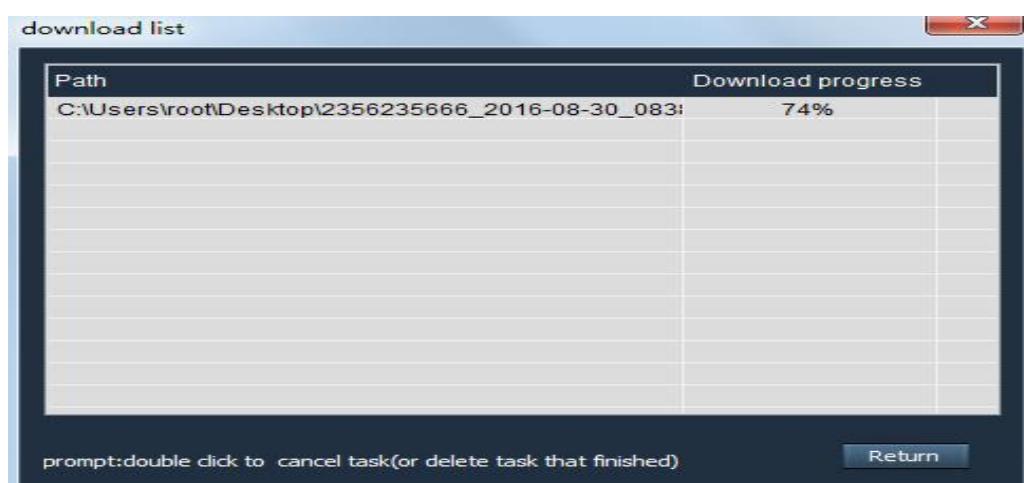
Usb storge export:

select a record item and check button "usb export",export this record to the usb storge connected to device. Show progress in "usb export"column.export only one file on the same time.

3.3.2 record task setting

Manual record：

Set the channels will record when IR control button "record"Checked.

Set record channel：

"Set record channel" include move detect value,od alarm switch,packet record file time

len,alarm record time len,alarm record prerecord time len,record mode.

move detect value：

Little value can trigger the move detect alarm easier, choose suitable value or close it.

od alarm switch:

obscured detect on/off;

packet record file time len:

this param make easier for record search and playback,too long packet time len take more

time to record serach and playback. too short packet time len make too much record file ,it make

hard management record.

range:10~30min.

Alarm delay record time len:

Record time len for alarm tigger.

range:1~30min.

Alarm prerecord time len:

record a few seconds before alarm tigger.

range:0~10 second

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

record mode:

1 close:close record anytime.

2 config: four periods for record everyday ,format is hh:mm.

3 always:alway recording.

3.3.3 system settings

3.3.3.1 general settings

General Setting

Device Pos	花铺二号
Device Name	ff_dvr1号位
Video Num	4 Chn
No Space	No Record
Save Media	DISK+SD
Transfer Type	TCP
Display Mode	VGA
Alarm record protect	No
Alarm record protect day	1
Web Log	On
Log Level	Debug
Language	English

Refresh   Set

Device pos:
Len:0~20 character
full disk:
While disk full ,howto record:
1 stop record 2 Override
When select Override,the oldest will be Overridefirst.

Alarm record protect:

If open it,when disk full,record Override write will no Override it if it less protect day.

Alarm record protect day:

range:1~99day

Transfer Type:

Transfer protocol with video server,include RTP/UDP/TCP

Udp is based on rtp ,add packet reset if loss,it has simple rate control,has less time   delay.

Tcp use tcp protocol ,it has perfect rate control.

Web Log;

Open/close web log. Web log page in System information.

3.3.3.2 code settings

Analog mode:

resolution:

Video resolution :include D1,CIF,QCIF

D1resolution :704×576   CIF:352×288   QCIF:176×144

RC_Mode：

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

Rate control mode:include vbr,cbr,fixqp;

We suggest select vbr.

Pictrue quality：

Pictrue beater need bigger rate.

I frame interval:

It meas a key frame or complete frame,it can decode one complete picture,

If loss date when transfer ,video have mosaic,it need new I frame interval to   revert normal video.

We suggest this value four times of video target frame rate.

Sub stream:

If open sub stream , sub stream be transfered when remote preview video .

If normal config small resolution or less target frames,to got less data rate for net transfer.

It also include resolution set,target frame rate,I frame interval:

Config suggest:

1 if need storage High quality video ,choose biggest resolution .if need High quality preview and have enouth network bandwidth   close sub stream .

If narrow network bandwidth   open sub stream and choose small resolution or less target frames.

2   I frame interval value choose four times of target frames.

3   rc_mode choose vbr.

Digital mode:

Ipc addr :check "ipc search" button open ipclist page,ipclist page list ipc device in LAN.

Check "select" button to select ipc addr.

Sub sttream:open it,bs live video will use ipc substream.

Ipc config:check "ipc config" button open the home page of ipc config web.

3.3.3.3 network settings

Networking enable:

Enable wired/WIFI/wireless(3G/4G) function.

Networking param:

http port:

Local web http port,if config it ,web url must be http://ip:port.

Network priority:

priority   1 is highest, device choose higher priority net to connect to Internet.

Like if "wired"priority higher than "wifi",wifi connected to Internet,now "wired"net revert normal,it will close wifi connect,connect by"wired"net.

network adapter:

Include wired,WIFI,3G/4G

1.wired:

Connect type have static ip,dhcp

Choose "dhcp" it maybe need dhcp hostname（optionnal）

Choose "static ip"there should be config：IP，netmask，Gateway，Primary DNS，Secondary

DNS. Like below figure：

2.WIFI config：

Need config param:ssid,pasword,connect type.

3.3G config：

Choose "3G",there param need config:dialiing number,user name, password, APN, PIN, keeponline type, keeponline server.like below figure:

dialiing number:

"*99# （UMTS/3G/4G）"

"#777(CDMA/EVDO)"

"*99*1# （TD-SCDMA）"

"#99***3# （LTE/3.75/4G）"。

Username/password:

Value normal should be null or "card"。

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

APN：

Value normal should be null or "card" 。

PIN：

Value normal should be null　or　sim card pin。

keeponline：

"none","ping","route",。 "none" close 3G/4G keeponline function，config be "ping" or "route" will check route online status ,when offline ,it will redial.

3.3.3.4 servers
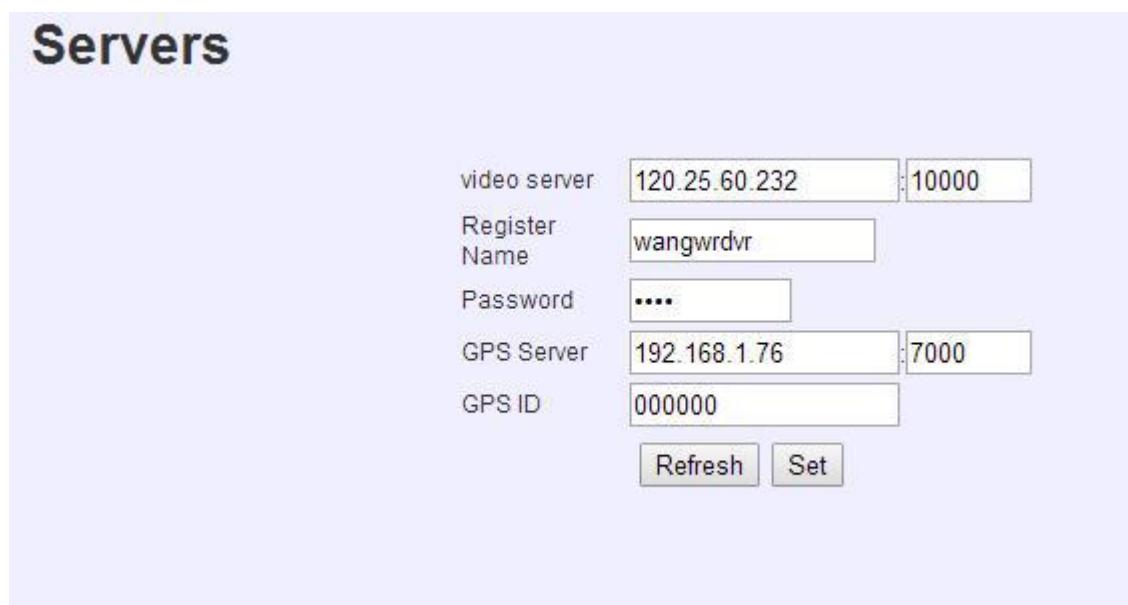
Video server：

Video server addr/port.,addr could be ip or domain name.

Register name/password：

allocated　by video server.

Gpsserver：

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com　　　　Tel: +86-17750019379　　　　Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

Gps server addr/port,addr could be ip or domain name.

3.3.3.5 output setting
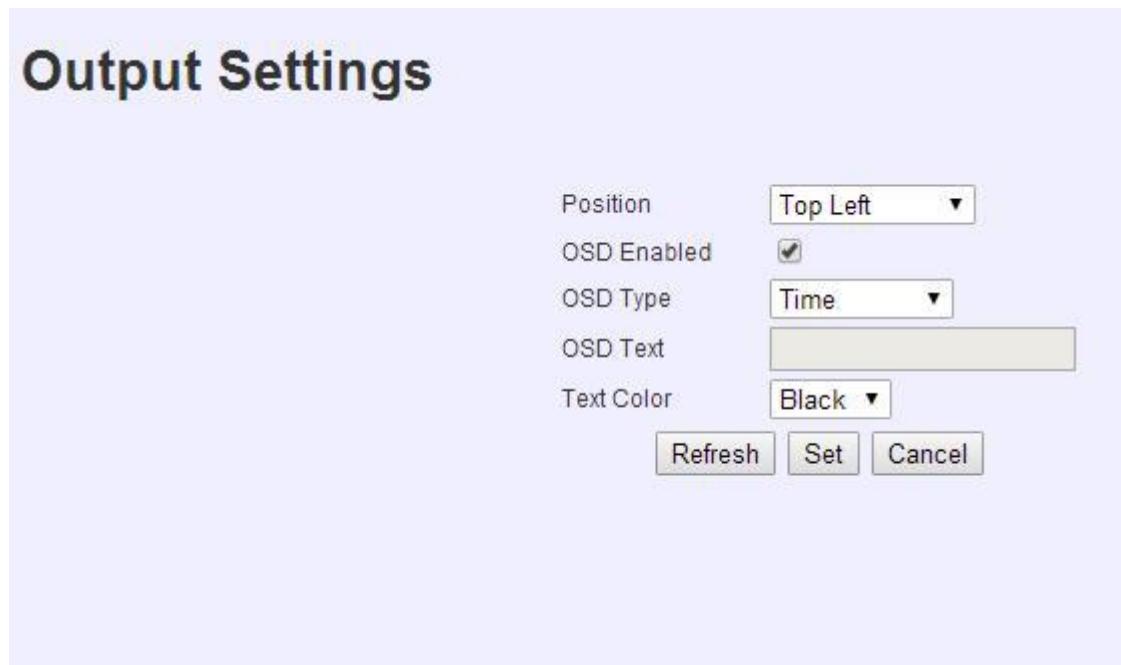
Position:

Four position can be conifg: top_left,top_right,bottom_left,bottom_right。

Osd enabled:

Enable or disable choose position status.

OSD type:

1.Time   format:"yyyy-mm-dd hh:mm:ss".

2.Deviceid+channleno：format: deviceid   chn:1.

3.Device pos：value conifg by general settings.

4.GPS info：display gps information,such as longitude and latitud.

5.speed：display car speed value.

6.alarm：display alarm status if alarm tigger.

7.extext：limit input 20 character.

Text color:

OSD color for UI local display.

3.3.3.6 alarm set

1.Alarm linkage config:

Status : alarm enable/disable.

out1、out2、out3: when alarm tigger linkage digital output.

Alarm type :speed high,speed low,IN1(digital input 1),IN2,IN3,IN4,IN5.
Speed high,speed low tigger threshold config by gps server.
digital input tigger by outside device.

2.Alarm record config:

When alarm tigger,those choose channles will be recorded.

3.Alarm other config：

Include osd display enable,alarm effect times(second),alarm mode,alarm output

times(second).

osd display enable: enable alarm osd for ui display.

Alarm effect times: the same alarm tigger in the effect time should be ignore, different alarm

or out of effect times alarm tigger should be valid.

Alarm mode: tigger mode 1 low to high 2 high to low.

Alarm output times : times for linkage digital output.

3.3.3.7datetime set

Datetime set：set device date and time and refresh to rtc .

button "set"，manual mode.

Sync to device: sync pc date/time to device.

Sync mode: include close,gps sync,ntp sync.

gps sync,time sync with the time support by gps.

Ntp sync,time sync with the time support by ntp server.

3.3.3.8 capture

Interval time:capture picture ever interval time second.

3.3.3.9 gsensor setting

Alarm threshold:x axis,y axis,z axis,unit:g

3.3.3.10 wifi auto upload

Upload record when network switch wifi,

3.3.3.11 ROI setting

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

3.3.4 system manage

3.3.4.1harddisk management

Auto get curtime disk info when the harddisk management page open,show like :

Num	Disk	Capacity
1	mmcblk0	64.4GB

Format   Refresh

Format:prealloc multi large files user for video record,is userful of protect filesystem when

power lost.

notice:it is a long time for format disk ,please keep power on device when format start,wating

for end of format without operat.

3.3.4.2 account
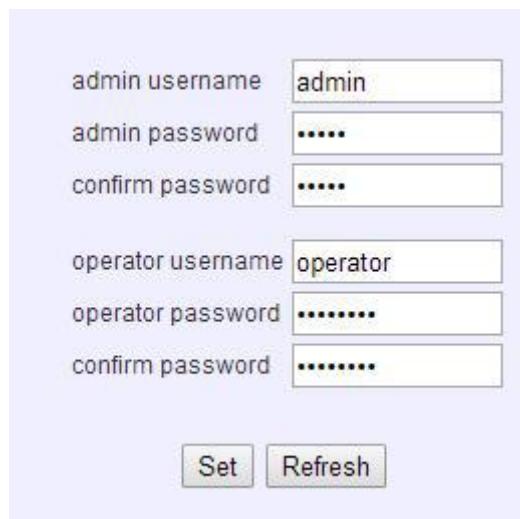
Only administrator can access the page,operation include modify admin username/password and operator username/password for web and UI login.

3.3.4.3 Auto Maintenance

Auto reboot for keep system healthy.
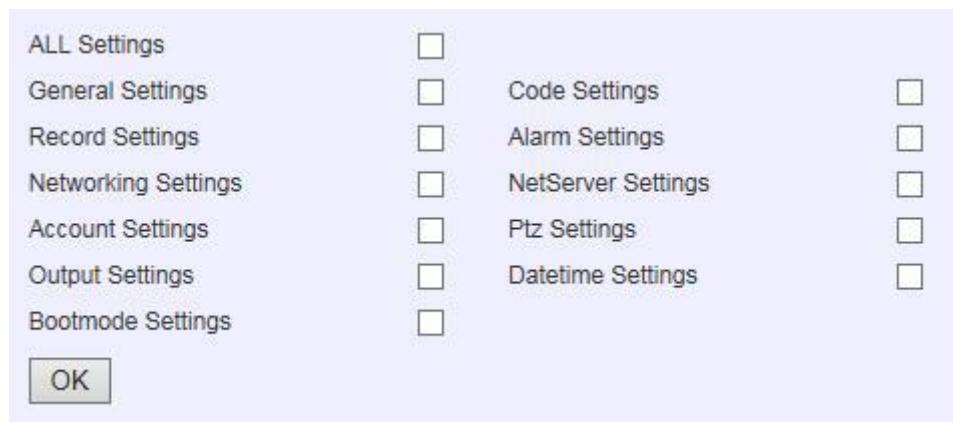
3.3.4.4 Restore Default

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

3.3.4.5 Firmware Upgrade

Check the "Browser" button,select the upgrade   file ,check "upgrade" button to upgrade the device firmware.

notice:it is a long time for upgrade ,please keep power on device when upgrade

start,wating for end of upgrade without operat.

3.3.4.6 bootmode setting

Param include: 1. acc delay poseroff (only for   vehicle device)

2. Adc lower poweroff   (only for   vehicle device)

3. Boot mode (ever,acc ,timer,acc+timer)
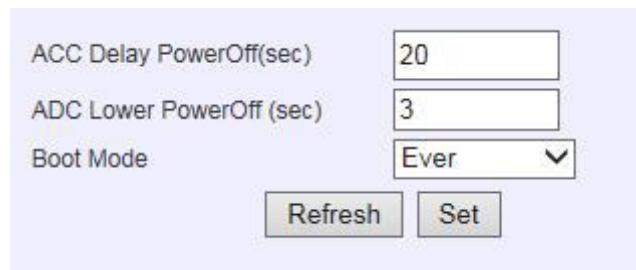
acc delay poseroff (sec):

system power off after the preset seconds if acc close When bootmode is ever or acc+time

mode.

adc lower poweroff(set):

system power off after the preset seconds if under-voltage . It can protect the device ,stop

device reboot again and again when under-voltage .

System recovery power on if voltage up to normal value (if device in the boot time period).

Boot mode

1) Ever

Only Infrared remote controller can power-on-and-off   the device.

2) Acc

In this mode:acc and   Infrared remote controller power-on-and-off   the device.

(1) Device power on when acc on.

(2) Device power off when acc off

(3) Ir control device power on when device power off state.off acc can shutdown device

when device power on by ir .

(4) Ir control device power off when device power on state.up acc can power on device when

device shutdown by ir.

3) Timer

In this mode,ir can power-on-and-off   the device.
(1)   device shutdown when curtime out of   boot time segments.
(2)   device power on when curtime in boot time segments.
(3)   device shutdown   next out of   boot time segments when device power on by ir .

(4)   device power next in boot time segments when device shutdown by ir .

4) Acc+timer

In this mode: Infrared remote controller power-on-and-off the device

(1) Power on device when acc on or curtime in boot time segments.

(2) shutdown device when acc off   and   curtime out of boot time segments.

(3) device shutdown next out of boot time segments and acc off when device power on by ir .

(4) power on device next boot time segments (or acc up from off state) when device

shutdown by ir.

3.3.4.7 reboot

Reboot DVR device.

3.3.4.8 cmddebug

For debug,operat by technician   for manufacturer .

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

3.3.5 system information

3.3.5.1 system status

System status include 3g/4g net status ,wifi status   ,gps status,store status,record status ,running time of device.

3.3.5.2 version

Include   rootfs version,app version,mcu software version.

Software	Softwave Version
rootfs version:	F6934_STD-FS-v1.0-20160831-152339
app version:	F6934_STD-APP-v1.0-20160831-152339
MCU Softwave Version:	F693x_STD_MCU-v1.0-20160831

Refresh

3.3.5.3 device log

log info

```
hi_dvr  debug::FILE: src/common/http_proto.c, FUN :ff_pic_upload_thread LINE: 1148: check resend
jpg,chn:0,filenum:0,upindex:0

hi_dvr  debug::FILE: src/dvr/signalcontrol.c, FUN :control_findcmd LINE: 2016:
 protonum = ffff body =<?xml version="1.0" encoding="utf-8"?><Message><IE_HEADER
MessageType="KEEPALIVE_ACK" MessageDir="CONTROL_TO_TERMINAL" /><IE_BODY result="0"  /></Message>

hi_dvr  debug::FILE: src/common/http_proto.c, FUN :ff_pic_upload_thread LINE: 948: checking i=0
now.tv_sec=1472737624,pretime.tv_sec=1472734702,tag:1,gap:3600

hi_dvr  debug::FILE: src/common/http_proto.c, FUN :ff_pic_upload_thread LINE: 1148: check resend
jpg,chn:0,filenum:0,upindex:0

hi_dvr  debug::FILE: src/common/http_proto.c, FUN :ff_pic_upload_thread LINE: 948: checking i=0
now.tv_sec=1472737629,pretime.tv_sec=1472734702,tag:1,gap:3600

hi_dvr  debug::FILE: src/common/http_proto.c, FUN :ff_pic_upload_thread LINE: 1148: check resend
jpg,chn:0,filenum:0,upindex:0

hi_dvr  debug::FILE: mcu/mcu_interface.c, FUN :beatDo LINE: 1273: beatDo=====

hi_dvr  debug::FILE: mcu/mcu_interface.c, FUN :send_commend LINE: 296: recv:OK

hi_dvr  debug::FILE: src/common/http_proto.c, FUN :ff_pic_upload_thread LINE: 948: checking i=0
now.tv_sec=1472737634,pretime.tv_sec=1472734702,tag:1,gap:3600

hi_dvr  debug::FILE: src/common/http_proto.c, FUN :ff_pic_upload_thread LINE: 1148: check resend
```

backup   Refresh

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

Chapter4 UI config param

The UI parameter is basically the same as the web parameter , does not introduce the meaning of each parameter one by one, detailed reference the web parameter .

4.1 system setting

UI man page:

4.1.1 login

Check ir control button "login" into UI parameter page. If you are on login ,UI turn to login

page:

User/passwd is admin Factory default set.you can change them.

Software keypad usage:the software keypad show when the cursor into editbox,use ir control key "left","right","up","down" select character ,check ir control   key "enter" input the character to editbox,check ir control "back" close software keypad.

4.1.2 record setting

Ir_record: check ir control key "rec" start or stop ir record .

4.1.3 record search

Check Ir control key "↑","↓" switch ui controls,when cursor on search result editbox,check ir control key "edit+" ,"edit-" select record file,check "enter" to replay selected record:

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

Use   ir controler key "play", "forward", "rewound", "frameplay" control video replay .

Key "prev", "next" switch record video.
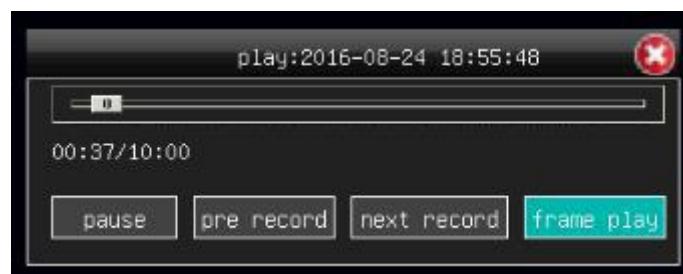
4.1.4 encode setting

Param reference web param:

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

4.1.5 network setting

Param reference web param:

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

4.1.6 server setting

Param reference web param:
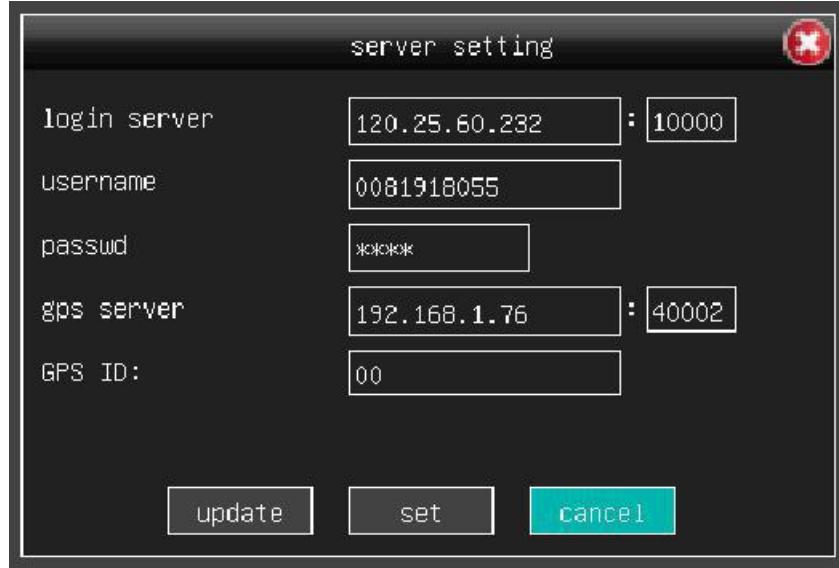
4.1.7 OSD setting

Param reference web param:
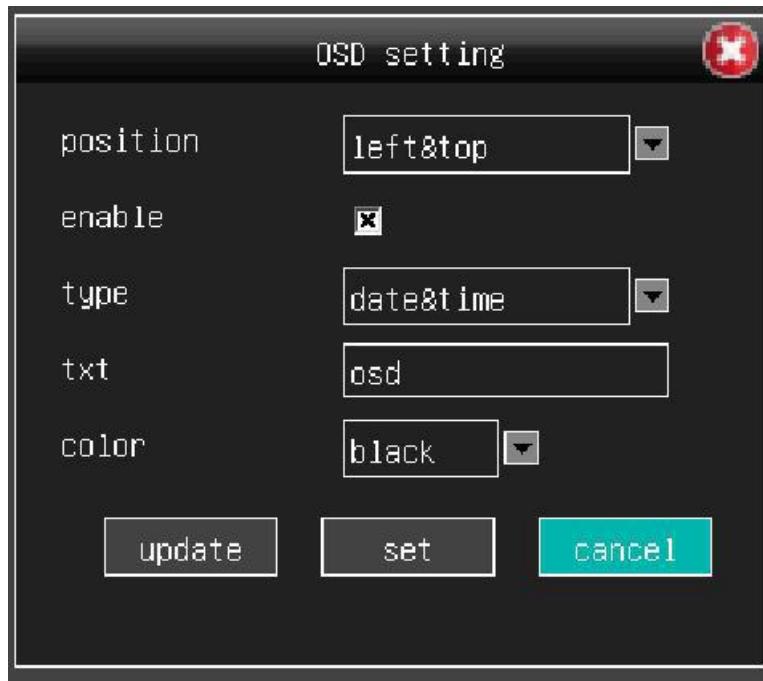
厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

4.1.8 date setting

Param reference web param:

4.1.9 ptz setting

Param reference web param:

4.1.10 capture setting

4.2 system manage

4.2.1 general setting

Param reference web param:

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net

Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

4.2.2 self maintaine

Operat reference web param:

4.2.3 account

Operat reference web param:
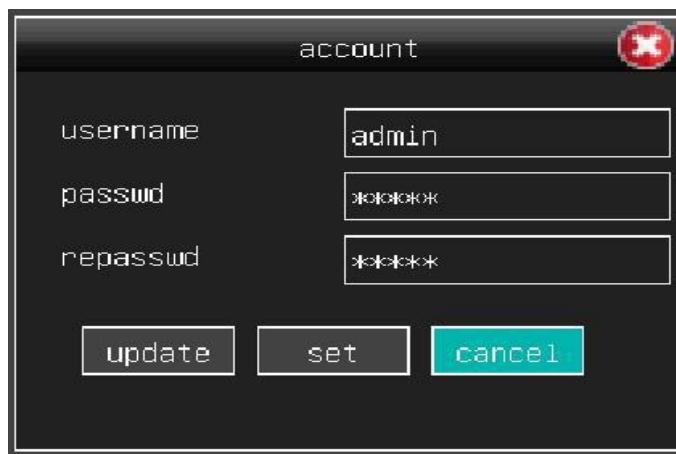
4.2.4disk manage

Operat reference web param:
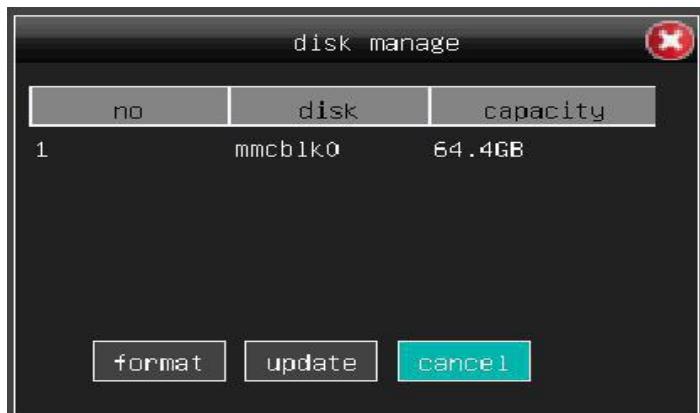
4.2.5 restore

Operat reference web param:

4.2.6 record export

After record search ,check key "enter" to export video to usb storge

4.2.7 bootmode setting

Param reference web param:

厦门四信智慧电力科技有限公司
Xiamen Four-Faith Smart Power Technology Co.,Ltd.

Email: business@four-faith.com   Tel: +86-17750019379   Web: en.four-faith.net
Add.:11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.
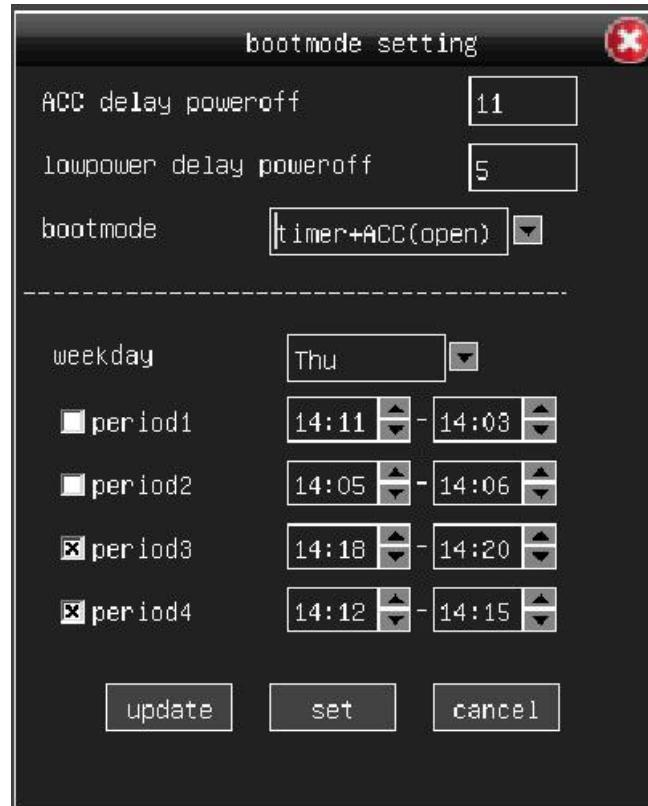
4.2.8 reboot

Device reboot operat.

4.2.9 alarm setting

Param reference web param:

4.2.10 version