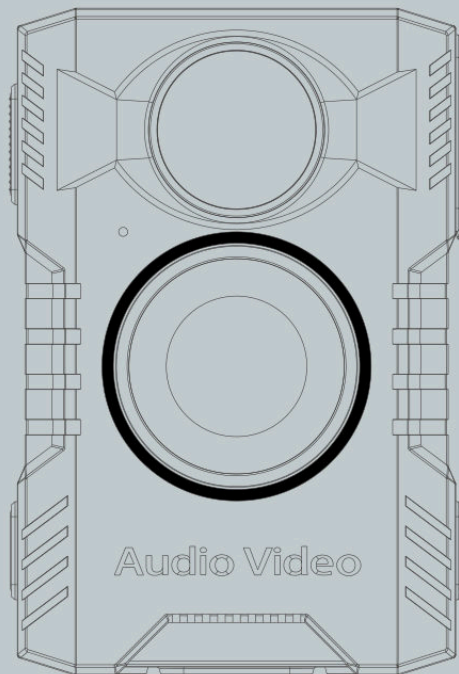




HC200 Body Worn Camera

User Manual





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1. Introduction

1.1 Profile

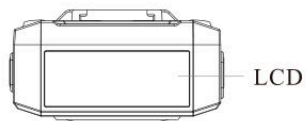
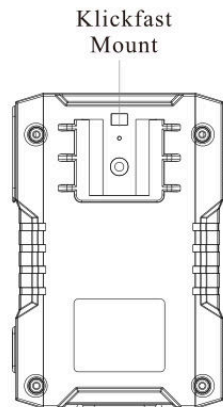
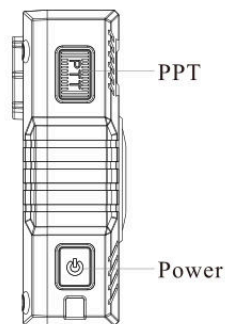
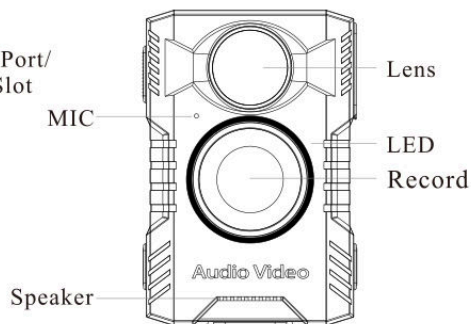
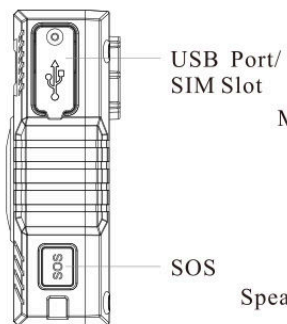
With the comprehensive advancement of overall law-based governance, body-worn cameras are widely used by local law enforcement agencies. It has played an important role in real-time recording of the law enforcement process, accurate backtracking and evidence collection after events, and has gradually become one of the designated equipment for government law enforcement agencies.

The purpose of this manual is to ensure that users can use the product correctly through this manual, so as to avoid hazards or property losses during operation. Before using this product, please read the manual carefully.

1.2 Specification

Model	HC200
Dimensions	88.3mm×58mm×29.7mm
Weight	160g
Video Resolution	720P/1080P/1296P/1440P/1512P
Photo Resolution	10752x6048 (64m) / 5376x3024(16m) / 2688x1512 (4m)
Video Format	MP4
Camera Angle	HFOV 130° / VFOV 75°
Video Coding	H.265/H.264
Data Encryption	AES256
Data Storage	64G (Optional 64 -512G)
Event Buffer	300s pre -recording ,300s post -recording
Screen	0.96 inch LCD
3G/4G	FDD-LTE/TDD-LTE/WCDMA/EVDO/GPRS
WiFi	Support
Positioning	Built-in GPS
Battery Capacity	4200mAh
Battery Life	≥12 hours
Charging Time	3.5 hours
Firmware Upgrade	via USB interface or network
Ingress Protection	IP68
Drop Test	2 meters
Operating Temperature	-20°C -55°C

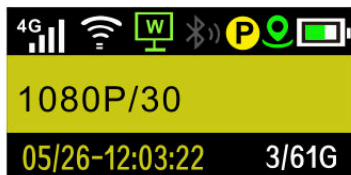
1.3 Structure Feature



1.4 Buttons Operation

Buttons	Operation and Function
Power Button	①Long press the Power Button for 3 seconds to Power on/off the camera. ②Short press the Power Button to display the device information.
Record Button	①Long press the Record Button for 2 seconds to start / stop recording. ②When the Information Display is switched to“QR SCAN: Press Record to Scan”, short press the Record Button to scan QR code from MShield system to configure the servers and connect the camera to MShield system.
SOS Button	Press and hold the SOS Button for 3 seconds to start alarm recording
PPT Button	①Short Press the PTT Button to photograph. ② When the camera is displaying device information, short press the PPT button to switch to another page. ③Press and hold the PTT Button to talk to command center, when the camera is connected to the MShield System and the command center starts the intercom.

1.5 Information Display



Icon	Icon Definition
	4G connection
	WiFi connection ① White: Connected to WiFi ② Gray: Not connected to WiFi
	Streaming Platform connection Green : Successfully connected Blue : Streaming remotely White : Not connected to the platform
	Bluetooth connection Green : Bluetooth beacon has been received successfully Gray:Bluetooth beacon hasn't been received successfully

	Pre-recording
	Alarm recording
	Positioning icon. Green: Positioning is successful Gray: the device is not positioned
	Battery
3/61GB	Storage capacity status: Balance/ Total Capacity
05/26-12:03:22	Device system time
1080P/30	Video resolution /Frame rate

1.6 Indicator Lights

LED Status	Description
Blue Flashing	Video Recording
White Flashing	Charging
White Steady	Charging complete
Off	The device is turned off or in standby mode.

1.7 Charging

1.7.1 Use the USB cable to connect the charger and the Type-C port of the camera.

1.7.2 Place the camera on the charging dock.



1.8 Wireless Activation

The body worn camera is able to be activated into video recording wirelessly.

The operation steps are as follow:

Step 1: Power on the camera.

Step 2: Be sure the Bluetooth icon is displayed on the information display.

Step 3: Turn on the safety switch of HUSHA electronic control device that has Bluetooth module inside, then HUSHA electronic control device will connect to the body camera by Bluetooth and activate it into video recording.

2. Device Setting

2.1 Device Manager

Step 1. Install the software MShield Tool to your computer.
(If the software has been installed, turn to next step)

Step 2. Double click and run the software



MShield Tool

Step 3. Connect the body worn camera to your computer by the USB cable



USB Type-C



Connect the computer

Step 4. When there is “USB connect” at lower right corner on “General setting” window of the software, click “Detect”.

HUSHATOOLS 1.0.0.73

General Settings Advanced settings File management Device search Help

Start up item:

Product ID: **Detect** User: Pssword: **Login**

Enable USB disk **Export log**

TF card capacity: File system: **Format disk** **Reset to default**

Network and time zone:

Area: Country: ☒ DST City: **Get time zone** **Set time zone** **Time sync**

Wifi scan

Wi-Fi list: **Get** **Delete** Wifi SSID: Pssword: **Add**

Upgrade the device:

File: **Select file** **Upgrade**

Process: **0%**

CMD: **Send**

USB connect

Step 5. Select user “admin”, input password “888888”, and click “Login”, then you will see “Login succeeded”

HUSHATOOLS 1.0.0.73

General Settings Advanced settings File management Device search Help

Start up item:

Product ID: User: Pssword:

TF card capacity: File system:

Network and time zone:

Area: Country: ☒ DST City:

Wi-Fi list: Wifi SSID: Pssword:

Upgrade the device:

File:

Process:

CMD:

11:39:15 Login succeeded ● USB connect

2.2 USB Disk Mode

2.2.1 In the device manager, click “Enable USB disk”, and “Set successfully” is shown at lower left corner. Then you will see there is a disk of the camera in your computer.

HUSHATOOLS 1.0.0.73

General Settings Advanced settings File management Device search Help

Start up item:

Product ID: User: Pssword:

TF card capacity: File system:

Network and time zone:

Area: Country: ☒ DST City:

Wi-Fi list: Wifi SSID: Pssword:

Upgrade the device:

File:

Process:

CMD:

11:39:15 Login successfully ● USB connect

2.2.2 Click the disk, and the recorded evidences are in the files folder.



bodycam_upgrade



Record



runlog

2.3 Time Zone

- ① In the device manager, at the “Network and time zone”, select relevant Area, country, city as needed.
- ② Click “Set time zone”.

HUSHATOOLS 1.0.0.73

General Settings | Advanced settings | File management | Device search | Help

Start up item:

Product ID: User: Pssword:

TF card capacity: File system:

Network and time zone:

Area: Country: DST ☒ City:

Wi-Fi list: Wifi SSID: Pssword:

Upgrade the device:

File:

2.4 WIFI Network

- ① In the device manager, click “WiFi scan”, WiFi available will be shown.
- ② You can add WiFi SSID and Password directly and click “Add”. Then the camera can connect to the WIFI network through the WIFI.
- ③ By clicking “Get”, Wi-Fi list added can be found and you can delete the WIFI as you want.

HUSHATOOLS 1.0.0.73

General Settings Advanced settings File management Device search Help

Start up item:

Product ID: User: Pssword:

TF card capacity: File system:

Network and time zone:

Area: Country: ☒ DST City:

Wi-Fi list:

Wifi SSID: Pssword:

Upgrade the device:

File:

Process:

CMD:

2.5 4G Network

Be sure the camera has 4G function.

- ① Turn off the camera, then insert the prepared Nano-SIM card into the card slot in the direction shown in the product picture above.
- ② Turn on the camera, if you can see the 4G icon on the top of the screen , it means that the camera is successfully connected to the 4G network.
- ③ If you insert the card while the camera is turned on, it needs to be restarted.

2.6 Command Code

2.6.1 Operation Steps

Through the device manager, device setting can be done by sending command code.

Step 1. According to the setting to be made, send relevant command code from “Appendix 3 Command Codes”.

Step 2. Send “BC+UMSINI=SysCtrl.ctrl=reboot”to reboot device to take effect.

2.6.2 Example

Step 1. If you need to change the video resolution to 1440P, the command to send is “BC+UMSINI=MasterEncCfg.Resolution=1440”, and you will see “Set Successfully”.

HUSHATOOLS 1.0.0.73

General Settings Advanced settings File management Device search Help

Start up item:

Product ID: User: Password:

TF card capacity: File system:

Network and time zone:

Area: Country: ☒ DST City:

Wi-Fi list: Wifi SSID: Password:

Upgrade the device:

File:

Process: 0%

CMD:

18:07:49 Login successfully ● USB connect

Step 2. Send “BC+UMSINI=SysCtrl.ctrl=reboot” to reboot device to take effect.

2.7 Upgrade Device

If the manufacturer issues a file to upgrade the device, click “select file” and find the file, then click “upgrade” and wait for it to be finished.

HUSHATOOLS 1.0.0.73

General Settings | Advanced settings | File management | Device search | Help

Start up item:

Product ID: **Detect** User: **Login** Pssword: **Enable USB disk** **Export log**

TF card capacity: File system: **Format disk** **Reset to default**

Network and time zone:

Area: Country: ☒ DST City: **Get time zone** **Set time zone** **Time sync**

Wifi scan

Wi-Fi list: **Get** **Delete** Wifi SSID: Pssword: **Add**

Upgrade the device:

File: **Select file** **Upgrade**

Process: **0%**

CMD: **Send**

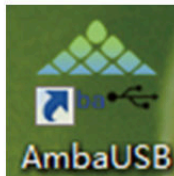
USB connect

3. Appendix

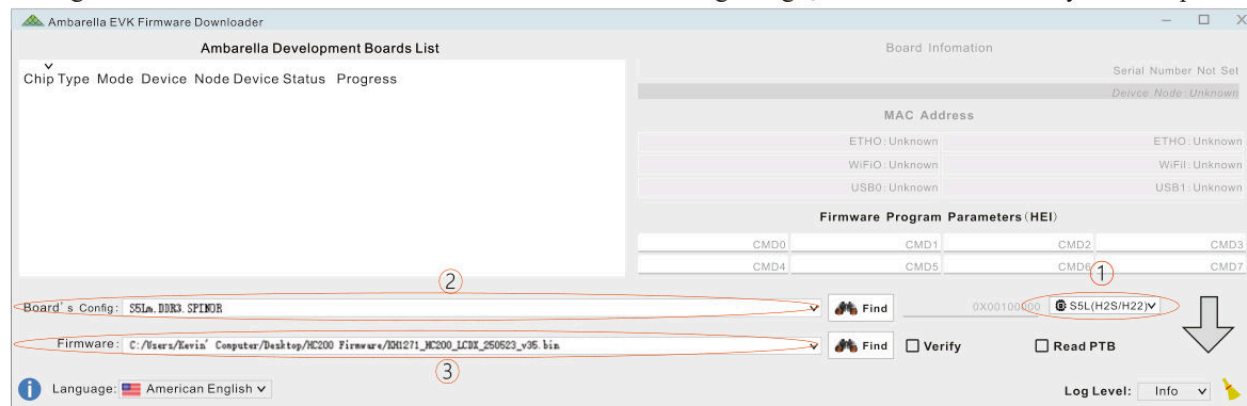
3.1 Instruction to Upgrade Firmware

Step 1. Install the software AmbaUSB on your computer. (If the software has been installed, turn to the next step)

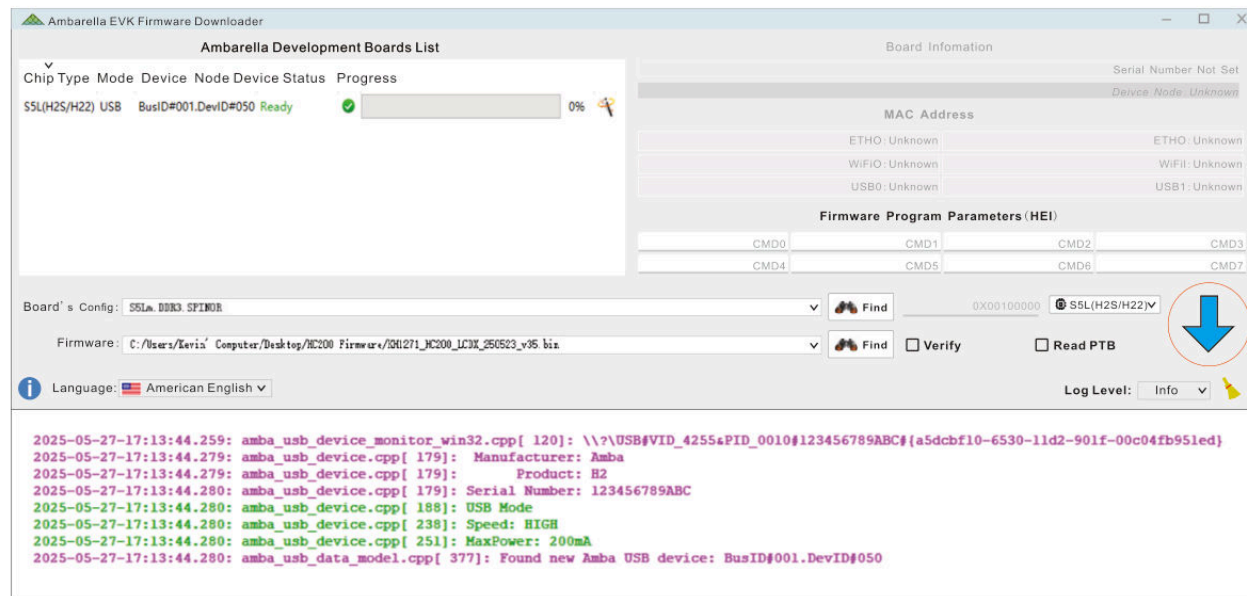
Step 2. Double click and run the software.



Step3. Select the chip type “S5L(H2S/H22)” as shown ① in the following image; select the board's config “S5Lm.DDR3.SPINOR” as shown ② in the following image; find the firmware in your computer.



Step 4. Be sure that the camera is power off. Holding the SOS button when connecting the camera to your computer with USB cable until the arrow icon turns blue, see the image below.



Step 5. Click the blue arrow icon and start upgrading. The progress bar will run from 0%-100%.

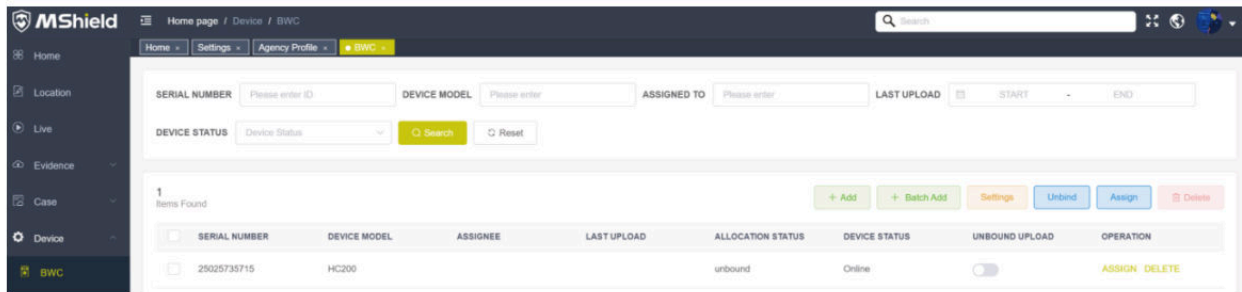
Step 6. As long as the arrow icon turns grey and “status is Success” is shown on the information window, remove the USB cable from your computer. The camera will restart automatically, which means firmware upgrading is finished.

3.2 Instruction to Connect BWC to MShield System

Step1: Add the S/N of BWC to MShield System

① Sign in MShield System

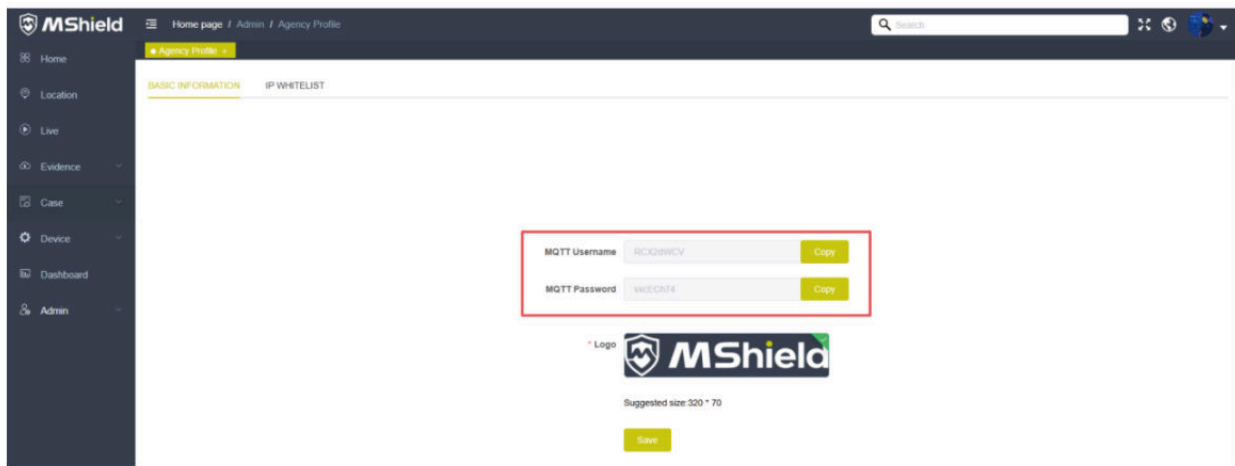
② Add the S/N of BWC through Device->BWC->Add



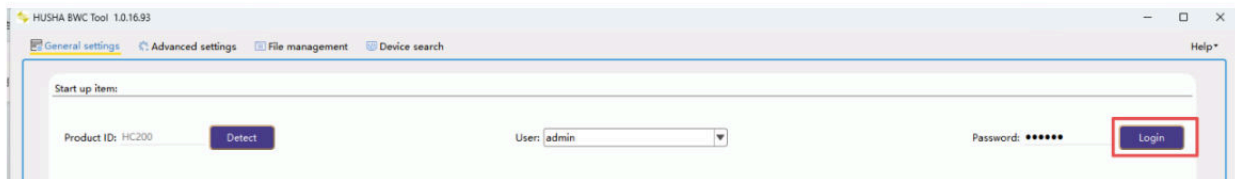
Step2: Get the MQTT username and password.

① Find the MQTT username and password through the menu Admin->Agency Profile

② Each agency has its own MQTT username and password.



Step3: Run the software “MShield Tool” and login.



Step4: Click “Advanced Settings”



Step5: Evidence Server Setting

- ①Click “Get” to get the values that have been set.
- ②If evidence server address is not “doc.mshieldems.com”, modify it.
- ③If the evidence port is not “6681”, modify it.
- ④If you need to upload the data when network used is LAN+WIFI+4G, please select relevant item;
- ⑤If you need to upload the data only when the camera is put on the dock which connects to the internet by LAN, please select LAN.
- ⑥If you need to keep data in the camera after the data are uploaded, please select “keep”; otherwise, select “delete”.
- ⑦Click “Set” to save the setting.

The screenshot shows the 'Evidence service configuration' form. It is divided into two main sections. The left section contains three input fields: 'Evidence server address' with the value 'doc.mshieldems.com', 'Network used' with a dropdown menu showing 'LAN', and 'WEB port' with the value '80'. The right section contains three input fields: 'Evidence port' with the value '6681', 'Files after uploaded' with radio buttons for 'Keep' (selected) and 'Delete', and 'Fingerprint access port' with the value '9877'. To the right of these fields are two checkboxes: 'Upload enable' (checked) and 'File type' (with radio buttons for 'All' (selected) and 'IMP file'). At the bottom right of the form are two buttons: 'Get' and 'Set'.

Step 6: MSEM Server Setting

① Turn to the section named “Service Configuration”

The screenshot shows the 'Service configuration:' section. A red box highlights the title. Below it, there is a dropdown menu labeled 'Select:' with 'CMSV6' selected. To the right of this is an unchecked checkbox labeled 'Enable'. Further right is a text field for 'Server address:'. To the right of that is a text field for 'Port:'. Below the 'Port:' field is a text field for 'Report time(s):'. At the bottom right, there are two buttons: 'Get' and 'Set'.

② Select “MSEMS” and Click “Get”.

The screenshot shows the 'Service configuration:' section. A red box highlights the title. Below it, there is a dropdown menu labeled 'Select:' with 'MSEMS' selected. To the right of this is a checked checkbox labeled 'Enable'. Further right is a text field for 'Server address:' containing 'live.mshieldems.com'. To the right of that is a text field for 'Port:' containing '1883'. Below the 'Server address:' field are two unchecked checkboxes: 'Intercom enable' and 'Convert enable(p2p/sfu)'. Below the 'Port:' field is a text field for 'User name:'. To the right of that is a text field for 'Password:'. At the bottom right, there are two buttons: 'Get' and 'Set'. A red box highlights the 'Get' button, and a red number '2' is written above it.

③ If the server address is not “live.mshieldems.com”, modify it.

④ If the port is not “1883”, change it to “1883”.

Step 7: Set MQTT Account

- ① Input the MQTT username and password that have been got from the MShield System.
- ② Click “Set” to save the settings.



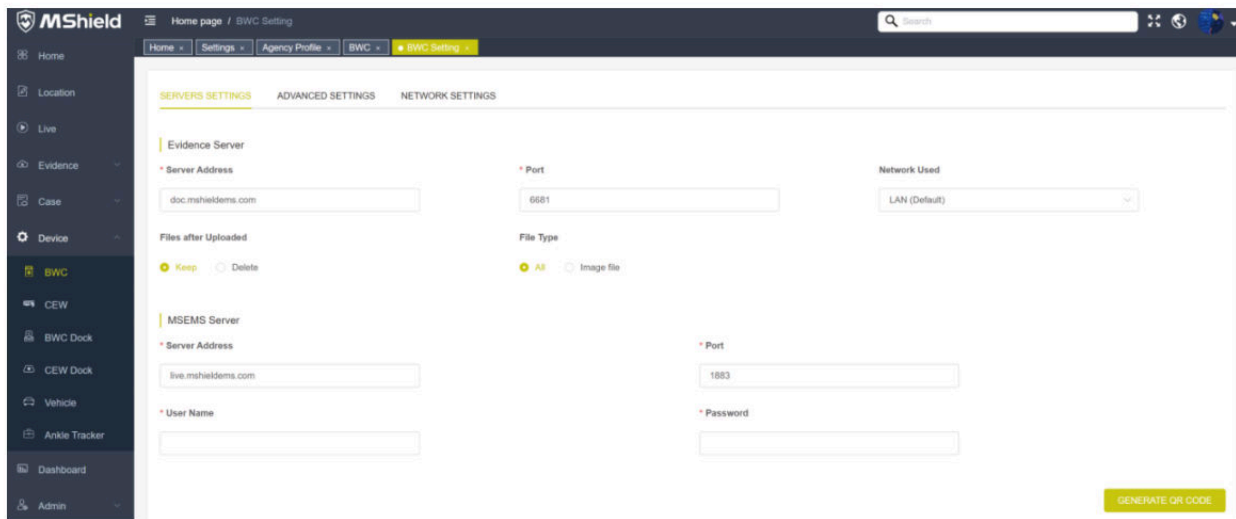
The screenshot shows a 'Service configuration' window. It includes a dropdown menu set to 'MSEMS', an 'Enable' checkbox, a 'Server address' field with 'live.mshieldems.com', and a 'Port' field with '1883'. Below these are 'Intercom enable' and 'Convert enable(p2p/sfu)' checkboxes. A red rectangle highlights the 'User name' field (containing 'MQTT Username') and the 'Password' field (containing 'MQTT Password'). 'Get' and 'Set' buttons are at the bottom right.

Step 8: Connect the BWC to the internet

- ① If you have a BWC Dock, connect the BWC Dock to the internet by LAN, then place the BWC on it.
- ② Then the BWC will be activated, you can find the BWC is online through MShield System.
- ③ You can also connect the BWC to the internet by WIFI or 4G network to activate it, rather than by LAN.

3.3 Servers Settings by QR code

- ① If the firmware of your BWC is the latest version, it is okay to set the servers and MQTT account by QR code.
- ② The QR code can be generated through MShield System ->Device->BWC->Settings->Servers Settings



The screenshot displays the MShield web interface. The left sidebar contains navigation links: Home, Location, Live, Evidence, Case, Device, BWC (highlighted), CEW, BWC Dock, CEW Dock, Vehicle, Ankle Tracker, Dashboard, and Admin. The main content area is titled 'Home page / BWC Setting' and includes a search bar and navigation tabs: Home, Settings, Agency Profile, BWC, and BWC Setting (active). Below these are sub-tabs: SERVERS SETTINGS (active), ADVANCED SETTINGS, and NETWORK SETTINGS. The 'Evidence Server' section contains three input fields: 'Server Address' (doc.mshieldems.com), 'Port' (6681), and 'Network Used' (LAN (Default)). Below these are radio buttons for 'Files after Uploaded' (Keep selected, Delete) and 'File Type' (All selected, Image file). The 'MSEMS Server' section contains four input fields: 'Server Address' (live.mshieldems.com), 'Port' (1883), 'User Name', and 'Password'. A 'GENERATE QR CODE' button is located at the bottom right.

- ③Power on the BWC
- ④Press power button and the device information is showed on the Information Display
- ⑤Press PTT button to switch the information to another page until you see “QR SCAN: Press Record to Scan”
- ⑥Press Record Button and scan the QR code until you see “Success” on the Information Display.

Note:

As HC200 has no LCD, QR code can't be seen from LCD during scanning, it is recommended to configure the servers by MShield Tool.

3.4 Command Codes

1. Recording Resolution :

BC+UMSINI=MasterEncCfg.Resolution=value;

value: 1512, 1440, 1296, 1080, 720, 360

comment : 1512-1512P, 1440-1440P, 1296-1296P, 1080-1080P, 720-720P, 360-360P\

2.FPS :

BC+UMSINI=MasterEncCfg.Fps=value;

value: 30,25,20,15,10,5

3.Record Quality:

BC+UMSINI=MasterEncCfg.BpsLevel=value;

value: 0,1,2,3

comment: 0-super,1-high,2-medium,3-low

4.Recording EncType:

BC+UMSINI=MasterEncCfg. EncMode=value;

value: 0,1

comment : 0-H.264, 1-H.265

5.Live Resolution:

BC+UMSINI=SlaveEncCfg.Resolution=value;

value: 1080, 720, 360

comment: 1080 - 1080P, 720 - 720P, 360 - 360P

6.Live view FPS :

BC+UMSINI=SlaveEncCfg.Fps =value;

value: 30,25,20,15,10,5

7.Live Quality :

BC+UMSINI=SlaveEncCfg.BpsLevel =value;

value: 0,1,2,3

comment : 0-super,1-high,2-medium,3-low

8.Live EncType:

BC+UMSINI=SlaveEncCfg. EncMode =value;

value: 0, 1

comment: 0-H.264, 1-H.265

9.Picture Size:

BC+UMSINI=JpegCfg. JpegSize=value;

value: 1X, 4X, 16X

comment : 1X -4M, 4X -16M, 16X -64M

10.HDR Mode :

BC+UMSINI=VinCfg. HdrMode=value;

value: 0,1

comment : 0-off,1-on

11.USB Mode :

BC+UMSINI=UsbModeCfg.UsbMode=value;

value: 0,1,2

comment : 0-auto,1-host,2-device

12.3G/4G :

BC+UMSINI=MobileNetCfg.bEnable=value;

value: 0,1

comment : 0-off,1-on

13.WiFi:

BC+UMSINI=WifiDevCfg.Mode=value;

value: 0,1

comment : 0-off,1-on

14.GPS Module:

BC+UMSINI=GpsComCfg.bDisable=value;

value: 0,1

comment : 0-on,1-off

15.LCD Brightness :

BC+UMSINI=PowerCfg.LcdBL=value;

value: 255, 150, 50, 0

comment : 255- High , 150- Medium , 50- Low , 0- Auto

16.Auto screen off :

BC+UMSINI=PowerCfg. LcdOff=value;

value: 0, 30, 60, 180, 300

comment : 0 -keep display, 30 -30seconds, 60 -60s, 180 -180s, 300 -300s

17.Record mode :

BC+UMSINI=RecordCfg. RecordMode=value;

value: 0 , 1

comment : 0-Manual, 1-Auto

18.OverWrite Mode :

BC+UMSINI=RecordCfg. OverWriteMode=value;

value: 0,1

comment : 0 -overwrite ,1-not overwrite

19.Pre-Recording :

BC+UMSINI=RecordCfg. PreRecord=value;

value: 0,10,30, 60,90,120, 300

comment : 0: off ,10-10s, 30-30s, 60-60s, 90-90s, 120-120s, 300-300s.

20.Post-Recording :

BC+UMSINI=RecordCfg. PostRecord =value;

value: 0: off, 5,10,20

comment : 0: off ,5-5s, 10-10s, 20-20s

21.File Length :

BC+UMSINI=RecordCfg. TimeLength =value;

value: 300, 600, 900, 1800

comment: 300-5 minutes; 600-10 minutes; 900-15 minutes; 1800-30 minutes;

22.Record Encrypt :

BC+UMSINI=RecordCfg. RecordPwdEnable =value;

value: 0,1,2

comment : value: 0-off ,1-DES, 2-AES256

23.Mic Volume :

BC+UMSINI=VolumeCfg. MicVolume =value;

value: 0, 30, 36, 43, 50, 56, 63, 143, 150, 156, 163

comment : they are irregular, 30 means minimum, 163 means max

24.Spkr Volume :

BC+UMSINI=VolumeCfg. SpkrVolume =value;

value: 0, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63

comment : they are irregular, 36 means minimum, 163 means max

25.Voice reminder :

BC+UMSINI=UINotifyCfg. AudioEnable =value;

value: 0,1

comment : 0-off ,1-on

26.Vibrate reminder :

BC+UMSINI=UINotifyCfg. MotoEnable =value;

value: 0,1

comment : 0-off ,1-on

27.Time Sync :

BC+UMSINI=TimeCfg.NTPEnable =value;

value: 0,1

comment : 0-off ,1-on

28.Password :

BC+UMSINI=UserCfg. KeyLockEnable =value;

value: 0,1

comment : 0-off ,1-on



