

Howen MDVR SDK

User manual

Version Log:

Editor	Ver	Description	Date
Owen	V1.0	First edition	2018.06.19

1 File description

- 1、 Include: head file
- 2、 lib: import library file
- 3、 dll: library file
- 4、 x86: target machine with 32 bit OS
- 5、 x64: target machine with 64 bit OS

2 Procedures of calling interface.

1, howenDriver::api::HDeviceDriver_Initialize: SDK initialization interface, you must call this as first step, then you can call other interfaces. In this step, you need to define the callback interface of the related service, to receive the data sent from the device. For details, refer to the DEMO procedure.

2, Business (to call the services). (Note: there is no sequence for the following interface)

- howenDriver::api::HDeviceDriver_StartPreview: Live streaming
- howenDriver::api:: HDeviceDriver_Snapshot: Snapshot
- howenDriver::api:: HDeviceDriver_StartVoice: Start voice, use [stopBussiness] to close.
- howenDriver::api:: HDeviceDriver_SendVoiceData2Device: send audio data to device
- howenDriver::api:: HDeviceDriver_FileQuery: File query
- howenDriver::api:: HDeviceDriver_StartRecordReplay: start playingback recoding, use [stopBussiness] to close
- howenDriver::api:: HDeviceDriver_RecordReplayControl: Playback control
- howenDriver::api:: HDeviceDriver_StartSerialPortProxy: Start serial port proxy, use [stopBussiness] to close.
- howenDriver::api:: HDeviceDriver_SendData2DeviceSerialPort : send data to serial port.
- howenDriver::api:: HDeviceDriver_StartTransferFileViaDirect: start to transfer file directly. Use [stopBussiness] to close.
- howenDriver::api:: HDeviceDriver_SendFileData2Device: Send file data to device.
- howenDriver::api:: HDeviceDriver_DeviceSettingDirect : Config the device parameters directly.
- howenDriver::api:: HDeviceDriver_DeviceControl: Device control
- howenDriver::api:: HDeviceDriver_SendStopPreviewToDevice: Send command to close preview (live streaming), to let the device to disconnect the link.
- howenDriver::api:: HDeviceDriver_SendStopVoiceToDevice: Send command to close listening, to let the device to disconnect the link.
- howenDriver::api:: HDeviceDriver_StopBussiness: Stop business

3, howenDriver::api::HDeviceDriver_Uninitialize; SDK Uninitialize , uninstall SDK environment. Call this when the program exit.;

4, For the interface parameter settings and data structure definitions, please refer to the

header file and sample code.

3 Code table

3.1 Error code

Value	Description
0	Success
0x10001	Initialization not executed.
0x10002	Invalid parameter
0x10003	Invalid command
0x10004	Invalid dialog No.
0x10005	Disk not exist
0x10006	File not exist
0x10007	Device offline
0x10008	Device busy
0x10009	Device failed to connect to server
0x1000a	There is data Follow-up
0x1000b	Data ends
0x1000c	Duplicated device No.
0x1000d	Device not exist
0x1000e	Device parameters do not comply with the rules
0x1000f	Buffer full
0x10010	Link dropped
0x10011	Device is not certified
0x10FFE	Not support
0x10FFF	Unknown

3.2 Service type code

Value	Description
0x00	Unknown
0x01	Preview
0x02	Snapshot
0x03	Voice



0x04	File query
0x05	Playback
0x06	Serial proxy
0x07	Transfer files directly
0x08	Transfer files via FTP
0x09	Set device parameters directly
0x0a	Device control

4 Parameter Description

Please note that parameters are case sensitive.

4.1 Clock

field name	CLOCK		
loading data description			
Content	field name	Description	
version	--version	"1.0.1.1"	
Calibration mode	switch	0--Manual 1—GPS adjust 2—NTP	
time zone	timezone	Each time zone has 4 Calibration point :00,:15,:30,:45, correspond number starting from 0~103, for example “GMT+8 0”is correspond to “20”, and convert to time zone, Keep a decimal *10	
NTP server	ntpserver	0~64 byte	
NTP server port	ntpport		
date display mode	DateType	0—YY/MM/DD 1—DD/MM/YY 2—MM/DD/YY	
buzzer	buzzerSwitch	0--OFF 1--ON	
operation time out	OprTimeOut	30~3600 second	

Demo :

```
{
  "CLOCK": {
    "--version": "1.0.1.1",
    "switch": "1",
    "timezone": "200",
```

```

    "ntpserver": "www.ntp.com",
    "ntpport": "123",
    "DateType": "0",
    "buzzerSwitch": "1",
    "OprTimeOut": "60"
  }
}

```

4.2 Mobile Network

field name	DIALUP	
loading data description		
Content	field name	Description
version	--version	"1.0.1.1"
function switch	switch	0--OFF 1--ON
type	type	0--WCDMA 1--EVDO 2--TD-SCDMA, 3--TDD-LTE 4--FDD-1(), 5--FDD-2()
apn	apn	0~64 byte
Server Code	servercode	0~64 byte
User Name	user	0~64 byte
password	passwd	0~64 byte
Service number	SmsService	0~64 byte

Demo :

```

{
  "DIALUP": {
    "--version": "1.0.1.0",
    "switch": "1",
    "type": "0",
    "apn": "3gnet",
    "servercode": "*99#",
    "user": "card",
    "passwd": "card",
    "smsservice": "13800138000"
  }
}

```

4.3 Disk Abnormal

field	DiskAbnormal
-------	--------------



name				
loading data description				
Content	field name	Description		
version	--version	"1.0.1.1"		
disk root node	disk	ID from 0~3, for example disk 0 is disk0,there are 4 disks in total		
		Content	field name	Description
		enable	enable	
			interval	reserved
			delay	reserved
			holdTime	reserved
		linkage	linkage	reserved

Demo :

```
{
  "DiskAbnormal": {
    "--version": "1.0.1.1",
    "disk0": {
      "enable": "0",
      "interval": "600",
      "delay": "15",
      "holdTime": "60",
      "linkage": "0"
    },
    "disk1": {
      "enable": "0",
      "interval": "600",
      "delay": "15",
      "holdTime": "60",
      "linkage": "0"
    }
  }
}
```

4.4 Live Viewing

field name	DISPLAY		
loading data description			
Content	field name	Description	



version	--version	"1.0.1.1"		
resolution	DisplayType	0--720x576	1--1024x768	2--1280x720
	e	3--1920x1080	4-- Maximization	
channel root node	chn	chn0 is channel 1, chn1 is channel 2, and so on . There are 16 channels in total		
		Content	field name	Description
		chroma	Brior	0~255
		brightness	Coght	0~255
		contrast	ColIntrast	0~255
		saturation	Saturatio n	0~255
		display position	DisPos	0—left up 1—left down, 2—right up 3—right down
		live view	Preview	0--OFF 1--ON
		channel name	ChnName	0~12byte

Demo :

```
{
  "DISPLAY ": {
    "--version": "1.0.1.1",
    "DisplayType": "1",
    "chn0": {
      "Brior": "64",
      "Coght": "64",
      "ColIntrast": "304",
      "Saturation": "32",
      "DisPos": "1",
      "Preview": "1",
      "ChnName": "1"
    },
    "chn1": {
      "Brior": "64",
      "Coght": "64",
      "ColIntrast": "304",
      "Saturation": "32",
      "DisPos": "1",
      "Preview": "1",
      "ChnName": "CH2"
    }
  }
}
```

}

4.5 G-SENSOR

field name	GSENSOR			
loading data description				
Content	field name	Description		
version	--version	"1.0.1.1"		
switch	switch	0: OFF 1: ON		
unit	unit	reserved		
	brakedirect	reserved		
	correctx	X direction correct		
	correcty	Y direction Correct		
	correctz	Z direction Correct		
direction root node		The below name is corresponded to each direction xalarm—x direction yalarm—y direction zalarm—z direction hitalarm—impact tiltalarm—tilt		
		Content	field name	Description
		enable	enable	0--OFF 1--ON
			limit	threshold
			delay	alarm delay duration, unit: second
		record	record	0--OFF 1--ON
			holdtime	reserved
		linkage	linkage	bit0—Alarm output1 bit1—Alarm output 2 bit2—buzzer bit3—snapshot bit4—request for intercom bit5—center server bit6—GUI prompt

Demo :

{


```
"GSENSOR": {
  "--version": "1.0.1.0",
  "switch": "0",
  "unit": "0",
  "brakedirect": "0",
  "correctx": "0",
  "correcty": "0",
  "correctz": "0",
  "xalarm": {
    "enable": "0",
    "limit": "80",
    "delay": "0",
    "record": "0",
    "holdtime": "5",
    "linkage": "0"
  },
  "yalarm": {
    "enable": "0",
    "limit": "80",
    "delay": "0",
    "record": "0",
    "holdtime": "5",
    "linkage": "0"
  }
}
```

4.6 Alarm input and output

field name	IOSET			
loading data description				
Content	field name	Description		
version	--version	"1.0.1.1"		
input root node	input			
		Content	field name	Description
		channel root node	chn	chn0 is channel 1, chn1 is channel 2, and so on
				please refer to the below input parameter for the exact configuration
output root node	output			



		Content	field name	Description
		channel root node	chn	chn0 is channel 1, chn1 is channel 2, and so on
				please refer to the below output parameter for the exact configuration

Alarm Input Parameter		
Content	field name	Description
Name	name	
Enable	enable	0--OFF 1--ON
	limit	0--low, 1--high
	delay	Alarm delay duration, unit: second
record	record	0--OFF 1--ON
	holdtime	Duration of state protection, unit: second
linkage	linkage	bit0—alarm output 1 bit1—alarm output 2 bit2—buzzer bit3—snapshot bit4—request for intercom bit5—central server bit6—GUI prompt
live view channel	PreviewChn	channel 1 ~n is corresponding to the number starting from 0

alarm output parameter		
Content	field name	Description
Name	name	
enable	enable	0--OFF 1--ON
	limit	0--low, 1--high
	delay	reserved
record	record	0--OFF 1--ON
	holdtime	reserved
linkage	linkage	bit0—alarm output 1 bit1- alarm output 2 bit2—buzzer bit3—snapshot bit4—request for intercom bit5—Central Server bit6—GUI Prompt
live view channel	PreviewChn	channel 1 ~n is corresponding to the number

	starting from 0
--	-----------------

Demo:

```
{
  "IOSET": {
    "--version": "1.0.1.0",
    "input": {
      "chn0": {
        "name": "in1",
        "enable": "0",
        "limit": "1",
        "delay": "0",
        "record": "1",
        "holdtime": "5",
        "linkage": "1",
        "PreviewChn": "1"
      }
      "chn1": {
        "name": "in2",
        "enable": "0",
        "limit": "1",
        "delay": "0",
        "record": "1",
        "holdtime": "5",
        "linkage": "1",
        "PreviewChn": "1"
      }
    },
    "output": {
      "chn0": {
        "name": "out1",
        "enable": "0",
        "limit": "0",
        "delay": "0",
        "record": "0",
        "holdtime": "0",
        "linkage": "0",
        "PreviewChn": "0"
      }
      "chn1": {
        "name": "out2",
        "enable": "0",
        "limit": "0",
```

```

        "delay": "0",
        "record": "0",
        "holdtime": "0",
        "linkage": "0",
        "PreviewChn": "0"
    }
}
}
}

```

4.7 Basic Configuraiton

field name	JTBASE	
loading data description		
Content	field name	Description
version	--version	"1.0.1.1"
Province Code	province	0~8 byte
City Code	city	0~8 byte
Manufacturer	manufacturer	0~32 byte
Device ID	DevId	0~32 byte
Phonenum	phonenum	0~16 byte
terminal model	model	0~32 byte
terminal ID	TerminalId	0~32 byte
	color	
vehicle License	license	0~16 byte
center Server 1-protocol type	protocol1	0:shutdown, 1:T standard, 2:T ministerial standard, 3:T extension, 4:R standard
Center server 2 protocol type	protocol2	0:shutdown, 1:R standard, 2:R extension, 3:F ministerial standard, 4: ministerial standard , 5:R ministerial standard video
gpsGPS interval	gpsInterval	Second
Gps position mode	gpsPosMode	

Demo :

```

{
    "JTBASE": {
        "--version": "1.0.1.2",

```

```

    "province": "9",
    "city": "8",
    "manufacturer": "999999999999",
    "DevId": "888888888888",
    "phonenum": "013900000002",
    "model": "999999999999",
    "TerminalId": "888888888888",
    "color": "0",
    "license": "AAAAAA",
    "protocol1": "1",
    "protocol2": "0",
    "gpsInterval": "0"
    "gpsPosMode": "0"

  }
}

```

4.8 Wired Network

field name	LOCAL	
loading data description		
Content	field name	Description
IP address	ip	0~20 byte
subnet mask	mask	0~20 byte
gateway	gw	0~20 byte
domain name	dns	0~20 byte
MAC address	mac	0~20 byte
	LinkType	reserved, reserved for LAN port Peripheral

Demo :

```

{
  "LOCAL": {
    "--version": "1.0.1.0",
    "ip": "192.168.001.010",
    "mask": "255.255.255.000",
    "gw": "192.168.001.001",
    "dns": "113.068.119.068",
    "mac": "113.68.119.68",

```

```
"LinkType": "0"
}
}
```

4.9 Motion Detection

field name	MOTIONDETECT			
loading data description				
Content	field name	Description		
version	--version	"1.0.1.1"		
channel root node	chn	chn0 is channel 1, chn1 is channel 2, and so on . maximum 16 channel		
		Content	field name	Description
		channel root node	chn	chn0 is channel 1, chn1 is channel 2, and so on, maximum 16 channel
		sensitivity	Sensitivity	
		alarm parameter root node	alarm	alarm linkage trigger relative parameter, refer to the alarm parameter
		region parameter root node	Rect	motion detection region parameter, refer to the region parameter

Alarm Parameter		
Content	field name	Description
enable	enable	0--OFF 1--ON
	limit	reserved
	delay	reserved
record	record	0--OFF 1--ON
	holdtime	reserved
linkage	linkage	bit0—alarm output 1 bit1—alarm output 2 bit2—buzzer bit3—snapshot bit4—request intercom bit5—center server bit6—GUI prompt



live view channel	PreviewChn	channel 1 ~n is corresponding to the number starting from 0

region parameter		
Content	field name	Description
Start X coordinate	sx	region start X coordinate
start Y coordinate	sy	region start Y coordinate
width	width	region Width
height	height	region Height

Demo:

```
{
  "MOTIONDETECT": {
    "--version": "1.0.1.0",
    "chn0": {
      "Sensitivity": "20",
      "alarm": {
        "enable": "0",
        "limit": "1",
        "delay": "15",
        "record": "1",
        "holdtime": "5",
        "linkage": "1",
        "PreviewChn": "1"
      },
      "rect": {
        "sx": "1",
        "sy": "1",
        "width": "1",
        "height": "1"
      }
    }
  }
}
```

4.10 OSD

field name	OSD			
loading data description				
Content	field name	Description		
version	--version	"1.0.1.1"		
region Node	region	Region0 is Region 0, Region 1 is Region 2, and so on. There are 9 regions at max.		
		Content	field name	Description
		Start X coordinate	sx	Region Start X coordinate
		Start Y coordinate	sy	Region Start Y coordinate
		width	width	Region width
		Height	height	Region Height
		display type	type	0--no Pulse location information 1--date velocity3—GPS 2--text 4--
		text information	text	0~64 byte

Demo :

```
{
  "OSD": {
    "--version": "1.0.1.3",
    "region0": {
      "sx": "50",
      "sy": "900",
      "width": "304",
      "height": "32",
      "type": "1",
      "text": "CH1"
    }
  }
  "region1": {
    "sx": "50",
    "sy": "400",
    "width": "304",
    "height": "32",
    "type": "1",
  }
}
```



```

    "text": "CH2"
  }

}
}

```

4.11 Power Management

field name	POWER			
loading data description				
Content	field name	Description		
version	--version	"1.0.1.1"		
Switch	switch	0--OFF 1--ACC 2—schedule		
delay power off	delay	Second		
screen off time	ScreenOffTime	Second		
power startup	PowerOnTime	relative to the exact time (second) in a day		
power off time	PowerOffTime	relative to the exact time (second) in a day		
ACC power off recording channel	AccPowerOffRecEnable	Channels keep recording when acc is off.Set by bit. 0--OFF 1—ON. E.g. 15 means 0x0f, so channel 1 – 4 will keep recording		
ACC power off recording time	AccOffRecTime	Second		
Enable reboot schedule	TimeRebootEn	0—off, 1--on		
Scheduled time to reboot	RebootTime	The second in a day		
week root node	week	week0 is Sunday, week1 is Monday, and so on		
		Content	field name	Description
		time slot 1	time0	xx:xx-xx:xx format, xx means hour and minutes
		time slot 2	time1	Same as above



		time slot 3	time2	Same as above
		time slot 4	time3	Same as above

Demo:

```
{
  "POWER": {
    "--version": "1.0.1.0",
    "switch": "1",
    "delay": "1",
    "AccOffRecTime": "1",
    "ScreenOffTime": "3",
    "PowerOnTime": "0",
    "PowerOffTime": "86399",
    "AccPowerOffRecEnable": "15",
    "TimeRebootEn": "0",
    "RebootTime": "0",

    "week0": {
      "time0": "00:00-23:59",
      "time1": "00:00-00:00",
      "time2": "00:00-00:00",
      "time3": "00:00-00:00"
    }
  }
}
```

4.12 PTZ

field name	PTZ			
loading data description				
Content	field name	Description		
version	--version	"1.0.1.1"		
channel root	chn	chn0 is channel 1, chn1 is channel 2, and so on. There are 16channels in max.		
		Content	field name	Description
		protocol	Protocol	0--Pelco-D1--Pelco-P
		number Address	Number	1~63



		preset	Perset	1~27

Demo:

```
{
  "PTZ": {
    "--version": "1.0.1.0",
    "chn0": {
      "Protocol ": "1",
      "Number": "1",
      "Perset": "1"
    }
    "chn1": {
      "Protocol ": "1",
      "Number": "2",
      "Perset": "1"
    }
  }
}
```

4.13 Record

field name	RECORD		
loading data description			
Content	field name	Description	
version	--version	"1.0.1.1"	
Sysnorm	SysNorm	0--PAL	1--NTSC
recording mode	RecMode	0--start	1—schedule 2--alarm
over writing	AutoCover	0--OFF	1--Enable
Audio output gain	AOVolume		
audio compression type	AudioType		
pack time	PackTime	Unit: second, 15*60s~10*60*60s	
camera tpe	CameraType	0—8*1080P [Means 8 channels 1080P] 1—4*1080P 2—8*720P	

		3—8*1080N 4—4*1080P+4*D1[Mixed mode,4 ch 1080P and 4ch D1] 5—4*720P+4*D1 6-- 2*1080P+6*720P 7-- 2*1080P+4*720P 8-- 2*1080P+6*D1 9-- 2*1080P 10-- 2*720P 11-- 4*1080N 12-- 4*720P 13-- 2*720P+2*D1 14-- 4*D1 15-- 1*1080P+1*D1 16-- 4*D1+4*720P 17-- 4*D1+2*1080N 18-- 2*1080P+2*720P 19-- 2*1080P+2*D1 20-- 6*720P+2*D1 21-- 2*720P+6*D1 22-- 8*960H 23-- 4*960H 24-- 6*1080P+2*960H 25-- 4*D1+2*1080P		
time root node	RecTimers	Summary of time node		
		Content	field name	Description
		time root node	time	Time0 for Sunday, time1 for Monday, and so on. There are 7 root nodes for time . Refer to the following time period for details
Main stream root node	MainChn	Summary of main stream node		
		Content	field name	Description
		channel root node	chn	chn0 is channel 1, chn1 is channel 2, and so on. There are

				16channels. for more detail, please refer to the below main stream description
substream root node	SubChn	Summary of sub stream node		
		Content	field name	Description
		channel root node	chn	chn0 is channel 1, chn1 is channel 2, and so on. There are 16channels. for more detail, please refer to the below sub stream description
IPC root node	IPCChn	summary of IPC root node		
		Content	field name	Description
		channel root node	chn	chn0 is channel 1, chn1 is channel 2, and so on. There are 8channels. for more detail, please refer to the below IPC description

Time parameter		
Content	field name	Description
start time1	start1	relative to the exact time (second) in a day
End time1	end1	relative to the exact time (second) in a day
start time2	start2	relative to the exact time (second) in a day
End time2	end2	relative to the exact time (second) in a day

main stream parameter		
Content	field name	Description
record	isRec	0--OFF 1--ON



frame rate	FrameRate	1~25(PAL) 1~30(NTSC)
resolution	Resolution	0--HD1080 1--HD720 2--VGA, 3--D1 4--HD1 5--CIF 6--WD1
quality	Quality	0(best) ~7
with audio	HaveAudio	0--OFF 1-ON
bit rate	Bitrate	
	PicLevel	
	Gop	
mirror	Mirror	0--OFF 1--left / right mirror 2--up / down mirror

sub stream parameter		
Content	field name	Description
record	isRec	0--OFF 1--ON
frame rate	FrameRate	1~25(PAL) 1~30(NTSC)
resolution	Resolution	0--HD1080 1--HD720 2--VGA, 3--D1 4--HD1 5--CIF 6--WD1
quality	Quality	0 (best) ~7
with audio	HaveAudio	0--OFF 1--ON
bit rate	Bitrate	
	PicLevel	
	Gop	
mirror	Mirror	0--OFF 1--left / right mirror 2--up/ down mirror

IPC parameter		
Content	field name	Description
switch	isOpen	0--OFF 1--ON
device type	DevType	0--IPC 1--DVR
protocol	Protocol	0--ONVIF 1-user define
remote channel No.	ChlNo	
remote port	CameraPort	
remote address	CameraIP	0~20 byte
user name	UserName	0~20 byte
password	UserPwd	0~20 byte
IPC address	ipcAddr	0~256 byte
rtsp address 1	rtspUrl_0	0~256 byte
rtsp address 2	rtspUrl_1	0~256 byte

Demo:

```
{
  "RECORD": {
    "--version": "1.0.1.1",
    "SysNorm": "0",
    "RecMode": "0",
    "AutoCover": "1",
    "AOVolume": "1",
    "AudioType": "1",
    "PackTime": "1",
    "CameraType": "12",
    "RecTimers": {
      "time0": {
        "start1": "0",
        "end1": "12000",
        "start2": "0",
        "end2": "0"
      }
      "time0": {
        "start1": "12000",
        "end1": "86399",
        "start2": "0",
        "end2": "0"
      }
    }
  },
  "MainChn": {
    "chn0": {
      "isRec": "1",
      "FrameRate": "25",
      "Resolution": "1",
      "Quality": "4",
      "HaveAudio": "1",
      "Bitrate": "4096",
      "PicLevel": "1",
      "Gop": "25",
      "Mirror": "0"
    }
    "chn0": {
      "isRec": "1",
      "FrameRate": "25",
      "Resolution": "1",
      "Quality": "4",
      "HaveAudio": "1",

```

```
"Bitrate": "4096",
"PicLevel": "1",
"Gop": "25",
"Mirror": "0"
}

},
"SubChn": {
  "chn0": {
    "isRec": "1",
    "FrameRate": "6",
    "Resolution": "5",
    "Quality": "4",
    "HaveAudio": "0",
    "Bitrate": "1",
    "PicLevel": "1",
    "Gop": "1"
  }
},
"IPCChn": {
  "chn0": {
    "isOpen": "1",
    "DevType": "1",
    "Protocol": "1",
    "ChlNo": "1",
    "CameraPort": "1",
    "CameraIP": "1",
    "UserName": "1",
    "UserPwd": "1",
    "ipcAddr": "1",
    "rtspUrl_0": "1",
    "rtspUrl_1": "1"
  }
}
}
}
```

4.14 Serial port

field name	RSBASE
loading data description	

Content	field name	Description		
version	--version	"1.0.1.1"		
series node	rs	rs0 is channel 1, rs1 is channel 2, and so on. There are 8 channels.		
		Content	field name	Description
		baudrate	baudrate	baudrate, for example: 115200
		data bit	databit	data bit, 5, 6, 7, 8
		stop bit	stopbit	stop bit, 1 or 2
		parity bit	parity	parity. N—no parity, O—Odd parity, E—event numbers parity, S—SpaceParity M--MarkParity
		function	func	0x00--series port close 0x0--transparent transmission 0x02—PTZ 0x03--external GPS 0x04--user define 1 0x05-user define 2 0x06 --car OBD interface 0x07--Ultrasonic fuel sensor 0 ID: TUWS02-2 manufacturer:MXD 0x08-- Ultrasonic fuel sensor 1 ID: TUWS02-2 manufacturer: MXD 0x09—card swapping machine, manufacturer:DK 0xa—people counting 0xb—Fatigue driving sensor 0xc —TTS. For Chinese voice;Encode with GB2312 ;Manufacture:HD KJ 0xd —Capacitive fuel sensor.ID: CR-606



				Manufacture:HNCR 0xe — DAVITEQ Capacitive Fuel Sensor 0xf —Third party transparent transmission 0x10-- LLS30160 CapacitiveFu el Sensor 0x11 —Transparent transmission with ministerial standard protocol 0x100--STD GPS send 0x200 —Serial port test
--	--	--	--	---

Demo:

```
{
  "RSBASE": {
    "--version": "1.0.1.1",
    "rs0": {
      "baudrate": "38400",
      "databit": "8",
      "stopbit": "1",
      "parity": "0",
      "func": "0"
    }
    "rs1": {
      "baudrate": "11500",
      "databit": "8",
      "stopbit": "1",
      "parity": "0",
      "func": "9"
    }
  }
}
```

4.15 Cental Server

field name	SERVER
loading data description	



Content	field name	Description		
version	--version	"1.0.1.1"		
Server node	server	server0 is server 1, server1 is server 2, and so on, maximum 4 servers		
		Content	field name	Description
		switch	enable	0--OFF 1--ON
		connection type	conntype	reserved
		IP address for main server	mainip	IP address for main server, 0~64 byte
		main port 5V	mainport	main server port
		main udp port	mainudpport	reserved
		backup address	bakip	backup server address, 0~64 byte
		backup port	bakport	backup server port
		backup udp port	bakudpport	reserved

Demo:

```
{
  "SERVER": {
    "--version": "1.0.1.0",
    "server0": {
      "enable": "1",
      "conntype": "0",
      "mainip": "192.168.001.37",
      "mainport": "6608",
      "mainudpport": "8000",
      "bakip": "113.108.120.47",
      "bakport": "6608",
      "bakudpport": "9000"
    }
  }
  "server1": {
    "enable": "0",
    "conntype": "0",
    "mainip": "192.168.001.121",
    "mainport": "6608",
    "mainudpport": "8000",
    "bakip": "113.108.120.47",
    "bakport": "6608",
    "bakudpport": "9000"
  }
}
```

```

    }

}
}

```

4.16 Speed parameter

field name	SPEED	
loading data description		
Content	field name	Description
version	--version	"1.0.1.1"
source	source	0--GPS 1--car 2—mixed
unit	unit	speed unit: 0-Km/s, 1-MPH
Velocity coefficient	pulse	Coefficient between pulse and velocity
position mode	posmode	0x01--GPS0x02—beidou 0x03—dual mode
stop alarm	stopalarm	stop alarm sub node, for more detail, please refer to the alarm parameter
low speed warning	lowprealarm	sub node, for more detail, please refer to the alarm parameter
low speed alarm	lowalarm	sub node, for more detail, please refer to the alarm parameter
high speed warining	highprealarm	sub node, for more detail, please refer to the alarm parameter
high speed alarm	highalarm	sub node, for more detail, please refer to the alarm parameter
harsh break	harshbraking	sub node, for more detail, please refer to the alarm parameter
hardsh breacker	harshacc	sub node, for more detail, please refer to the alarm parameter

Alarm Parameter		
Content	field name	Description
enable	enable	0--OFF 1--ON
	limit	the threshold
	delay	alarm delay duration, unit: second
record	record	0--OFF 1--ON
	holdtime	Duration of state protection, unit: second
linkage	linkage	bit0--alarm output 1 bit1--alarm output 2



		bit2—buzzer bit3—snapshot bit4—request intercom bit5—center server bit6—GUI marks

Demo:

```
{
  "SPEED": {
    "--version": "1.0.1.1",
    "source": "0",
    "unit": "0",
    "pulse": "0",
    "posmode": "0",
    "stopalarm": {
      "enable": "0",
      "limit": "0",
      "delay": "0",
      "record": "0",
      "holdtime": "0",
      "linkage": "0"
    },
    "lowprealarm": {
      "enable": "0",
      "limit": "0",
      "delay": "0",
      "record": "0",
      "holdtime": "0",
      "linkage": "2"
    },
    "lowalarm": {
      "enable": "0",
      "limit": "10",
      "delay": "0",
      "record": "0",
      "holdtime": "0",
      "linkage": "0"
    }
  },
}
```

4.17 Storage management

field name	STORE			
loading data description				
Content	field name	Description		
alarm pre-record	prerecord	Unit: second		
alarm post-record	delayrecord	Unit: second		
Record file protect	protectEnable	0—OFF, 1--Enabled		
	protectday	reserved		
alarm recording push switch	sendEnable	0—OFF 1--CMSV6 2--FTP		
disk info root node	diskinfo			
		Content	field name	Description
		disk list	disk	disk0 is disk 0, disk1 is disk 2, and so on. There are 6 disks. 0—no recording 1—main 2--mirror 3--bakeup
	stdpartsize			
		Content	field name	Description
		disk list	disk	disk0 is disk 0, disk1 is disk 2, and so on. There are 6 disks. 0--non stream recording 1—main 2--mirror 3—backup For more detail info, pleas refer to the below disk parameter
	priblksize			
		Content	field name	Description
		disk list	disk	disk0 is disk 0, disk1 is disk 2, and so



				<p>on. There are 6 disks.</p> <p>0--non 1—main stream recording</p> <p>2--mirror 3— backup</p> <p>For more detail info, pleas refer to the below disk parameter</p>
--	--	--	--	---

Demo:

```
{
  "STORE": {
    "--version": "1.0.1.3",
    "prerecord": "10",
    "delayrecord": "120",
    "protectEnable": "0",
    "protectday": "0",
    "diskinfo": {
      "disk0": "1",
      "disk1": "0",
      "disk2": "0"
      "disk3": "0"
      "disk4": "0"
      "disk5": "0"
    },
    "sendEnable": "1",
    "stdPartSize": {
      "disk0": "0",
      "disk1": "0",
      "disk2": "0"
      "disk3": "0"
      "disk4": "0"
      "disk5": "0"
    },
    "priblksize": {
      "disk0": "0",
      "disk1": "0",
      "disk2": "0"
      "disk3": "0"
      "disk4": "0"
```

```

    "disk5": "0"
  }

}
}

```

4.18 Temperature

field name	TEMP	
loading data description		
Content	field name	Description
unit	unit	
temperature root node		the below name corresponding to each control type lalarm—low temperature halarm—high temperature for more detail information, please refer to the alarm parameter

alarm parameter		
Content	field name	Description
enable	enable	0--OFF 1--ON
	limit	the threshold
	delay	alarm delay duration, unit: second
record	record	0--OFF 1--ON
	holdtime	Duration of state protection, unit: second
linkage	linkage	<p>bit0—alarm output 1</p> <p>bit1—alarm output 2</p> <p>bit2—buzzer</p> <p>bit3—snapshot</p> <p>bit4—request intercom</p> <p>bit5—center server</p> <p>bit6—GUI prompt</p>

Demo:

```

{
  "TEMP": {
    "--version": "1.0.1.0",
    "unit": "0",
    "lalarm": {

```



```
"enable": "0",
"limit": "11",
"delay": "0",
"record": "0",
"holdtime": "0",
"linkage": "0"
},
"halarm": {
  "enable": "0",
  "limit": "15",
  "delay": "0",
  "record": "0",
  "holdtime": "0",
  "linkage": "17"
}
}
```

4.19 Remote Upgrade

field name	UPGRADE	
loading data description		
Content	field name	Description
IP address of Server	ip	FTP server address, 0~64 byte
Port of Server	port	FTP server port
user name	user	FTP server user name, 0~32 byte
password	passwd	FTP Server password, 0~32 byte

Demo:

```
{
  "UPGRADE": {
    "--version": "1.0.1.0",
    "ip": "192.168.001.100",
    "port": "21",
    "user": "test",
    "passwd": "123456"
  }
}
```

4.20 Video lost

field name	VideoLostAlm	
loading data description		
Content	field name	Description
version	--version	"1.0.1.1"
channel root node	chn	chn0 is channel 1, chn1 is channel 2, and so on, There are 16 channels. for more detail, please refer to the configuration parameter

Configuration parameter		
Content	field name	Description
enable	enable	0--OFF 1--ON
	interval	reserved
	delay	reserved
	holdTime	reserved
	linkage	bit0—alarm output 1 bit1—alarm output 2 bit2—buzzer bit3—snapshot bit4—request intercom bit5—center server bit6—GUI prompt

Demo:

```
{
  "VideoLostAlm": {
    "--version": "1.0.1.1",
    "chn0": {
      "enable": "0",
      "interval": "600",
      "delay": "15",
      "holdTime": "60",
      "linkage": "0"
    },
    "chn1": {
      "enable": "0",
      "interval": "600",
      "delay": "15",
      "holdTime": "60",
      "linkage": "0"
    }
  }
}
```

```

},
"chn2": {
  "enable": "0",
  "interval": "600",
  "delay": "15",
  "holdTime": "60",
  "linkage": "0"
},
"chn3": {
  "enable": "0",
  "interval": "600",
  "delay": "15",
  "holdTime": "60",
  "linkage": "0"
}
}

```

4.21 Video Output

field name	VIDEOOUT	
loading data description		
Content	field name	Description
version	--version	"1.0.1.1"
screen mode	mode	0—single screen 1-2 screens 2—4 screens 3—6 screens 4—9screens
	chn	Set by bit
	ShowNum	reserved
	LoopTime	reserved

Demo:

```

{
  "VIDEOOUT": {
    "--version": "1.0.1.0",
    "mode": "2",
    "chn": "15",
    "ShowNum": "4",
    "LoopTime": "0"
  }
}

```

4.22 Voltage

field name	VOLTAGE	
loading data description		
Content	field name	Description
version	--version	"1.0.1.1"
unit	powerdelay	delay power off when power valtage is abnormal , unit is second
valtage root		The below name is corresponding to each type of control type lalarm—low voltage halarm—high voltage for more detail, please refer to the configuration parameter

Content	field name	Description
enable	enable	0--OFF 1--ON
	limit	The threshold
	delay	alarm delay duration, unit: second
record	record	0--OFF 1--ON
	holdtime	Duration of state protection, unit: second
linkage	linkage	<p>bit0—alarm output 1</p> <p>bit1-- alarm output 2</p> <p>bit2—buzzer</p> <p>bit3—snapshot</p> <p>bit4—request intercom</p> <p>bit5—center server</p> <p>bit6--GUI prompt</p>

Demo:

```
"VOLTAGE ": {
  "--version": "1.0.1.0",
  "powerdelay": "0",
  "lalarm": {
    "enable": "0",
    "limit": "110",
    "delay": "0",
    "record": "1",
    "holdtime": "0",
```

```

    "linkage": "0"
  },
  "halarm": {
    "enable": "0",
    "limit": "150",
    "delay": "0",
    "record": "1",
    "holdtime": "0",
    "linkage": "0"
  }
}

```

4.23 WIFI

field name	WIFI	
loading data description		
Content	field name	Description
version	--version	"1.0.1.1"
module open	isOpen	0--OFF 1--ON
password open	EncSw	0--OFF 1--ON
authorized mode	AuthMode	0—open type 1—share mode 2--WPA 3--WPA-PS
encryption	Encrypt	0--No 1—WEP 2--TKIP 3--AES
Purpose	Purpose	0--Station, 1--AP
Dhcp	Dhcp	1-DHCP, 0—static IP
SSID	SSID	0~32 byte
password	Pwd	0~16 byte
IP address	IpAddr	0~20 byte
Subnet masker	SubNet	0~20 byte
gateway	GateWay	0~20 byte

Demo:

```

{
  "WIFI": {
    "--version": "1.0.1.0",

```

```
"isOpen": "0",
"EncSw": "1",
"AuthMode": "3",
"Encrypt": "2",
"Purpose": "0",
"Dhcp": "1",
"SSID": "howen",
"Pwd": "123123",
"IpAddr": "192.168.002.202",
"SubNet": "255.255.255.000",
"GateWay": "192.168.002.002"
}
}
```

4.24 TTX

Field name	TTX	
loading data description		
Content	Field name	Description
Version	--version	"1.0.1.1"
Heartbeat	heartbeat	Heartbeat interval
Center Server1	gpsinterval1	Data upload interval, Unit:second
Center Server2	gpsinterval2	Data upload interval, Unit:second

Demo:

```
{
  "TTX": {
    "--version": "1.0.1.0",
    " heartbeat ": "60",
    " gpsinterval1": "15",
    " gpsinterval2": "20"
  }
}
```