

**T1 Series SD Video Tracker**  
**ZX-GZ3-B**  
**Product Test Instructions**  
**V1.1**

---

# CATALOGUE

NOTICE.....	2
PRODUCT LIST.....	2
1 TECHNICAL INDEX.....	3
2 TEST CONNECTION INSTRUCTION .....	4
2.1. INTERFACE SKETCH .....	4
2.2. FLOW CHART OF INSTALLATION .....	5
3 TEST SOFTWARE USAGE .....	5
3.1. FLOW CHART OF SOFTWARE OPERATION .....	6
3.1.1. Communication interface .....	6
3.1.2. Tracking control interface.....	8
3.1.3. Other.....	10
4 SIMPLE MALFUNCTION DIAGNOSIS AND EXCLUSION .....	11
ATTACHMENT 1 PRODUCT STRUCTURE CHART.....	12
ATTACHMENT 2 PIN DEFINITIONS .....	13
ATTACHMENT 3 COMMUNICATION PROTOCOL .....	13
ATTACHMENT 4 COMMON INSTRUCTION SET .....	15



## Notice

- In order to ensure the instruments are in good technical condition, the daily maintenance of the operating personnel is only limited to the replacement and inspection of cables, daily cleaning and functional inspection.
- Please do not open the cabinet in any case even if the system runs into malfunction. Troubleshooting has to be taken on by professional technicians after thorough examinations.
- The video tracker should be kept in a cool, dry environment for storage.
- Please make sure that the connector assemblies were inserted after aligned with sockets. Please do not pull the cable directly for unplugging.
- Wearing anti-static gloves when using and connecting the product to prevent it from being penetrated.
- The power input voltage of the infrared camera should be ranging between 8V~16V, otherwise the device would be damaged.

## Product list

NO.	Title	Quantity	configuration	Remarks
1	SD video tracker	1	√	
2	Connecting cables	1	√	
3	Testing software	1	√	Electroni c

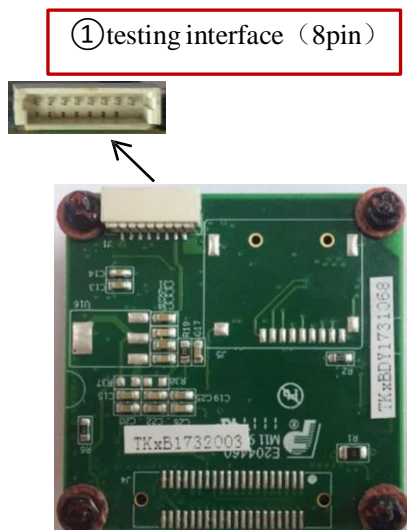
# 1 Technical index

Video format	Input video	SD analog video (PAL)
	Output video	SD analog video (PAL)
Connector	BNC (in/out)	
Communication interface	RS232/TTL	
Tracking index	Data refresh rate	50Hz
	Minimum target contrast	5%
	Tracking velocity	±32 pixels/ frame
	Target effective memory	100 frames
	Tracking characteristic	Second time locating
	Target size	16×16~128×128 pixel
Environmental adaptation	Working temperature	-40℃~60℃
	Storage temperature	-45℃~65℃
	Shock	Meet the GJB 150A vibration test conditions
	Strike	Meet the GJB 150A impact test conditions
Others	Volume	38mm × 38 mm × 19mm
	Power	DC 12V
	Weight	<32g
	Power consumption	<3W (@25℃)

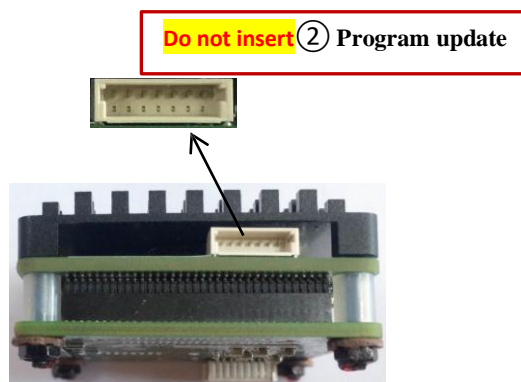
## 2 Test connection instruction

### 2. 1. Interface sketch

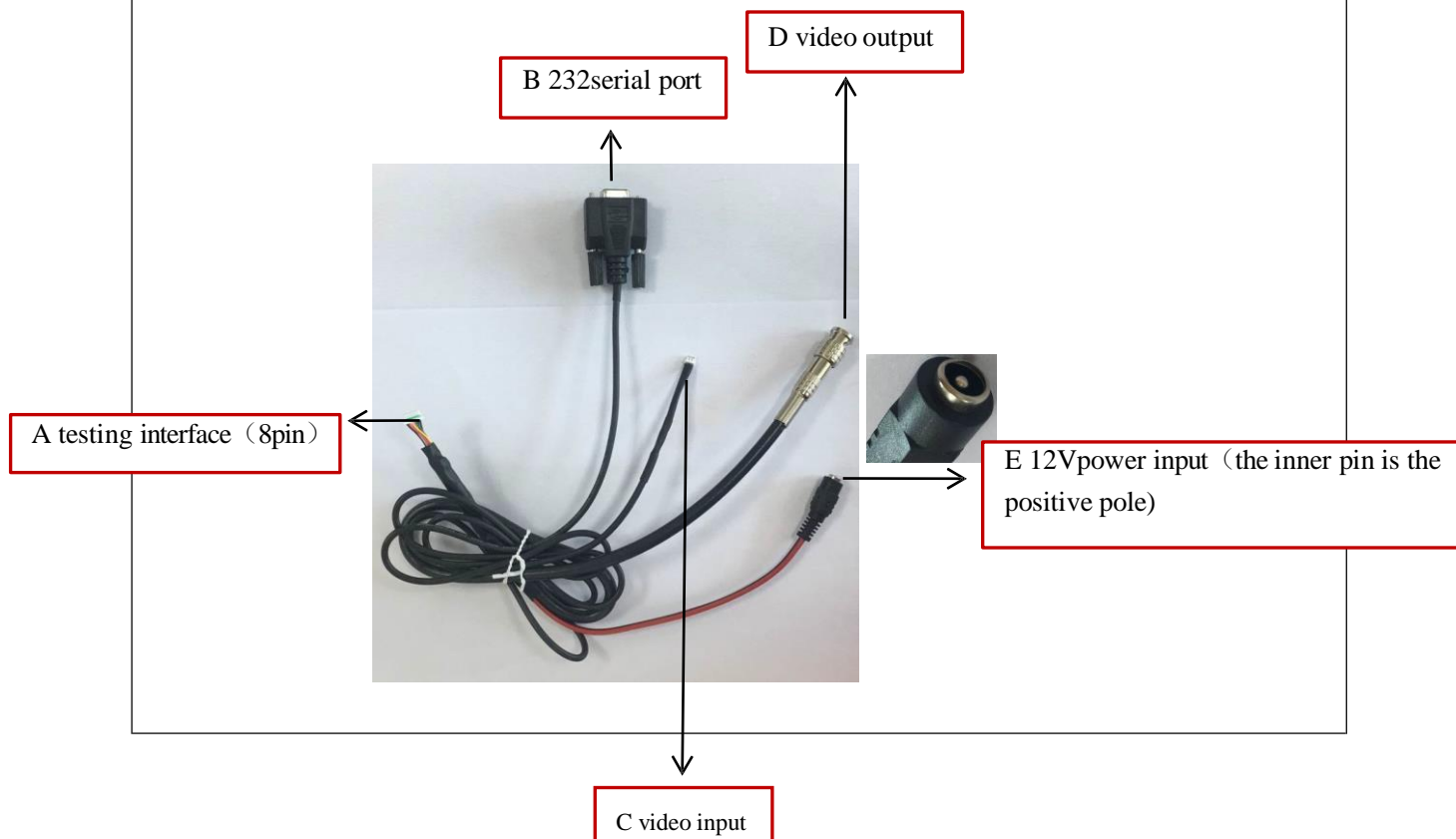
picture1 front interface diagram of the product:



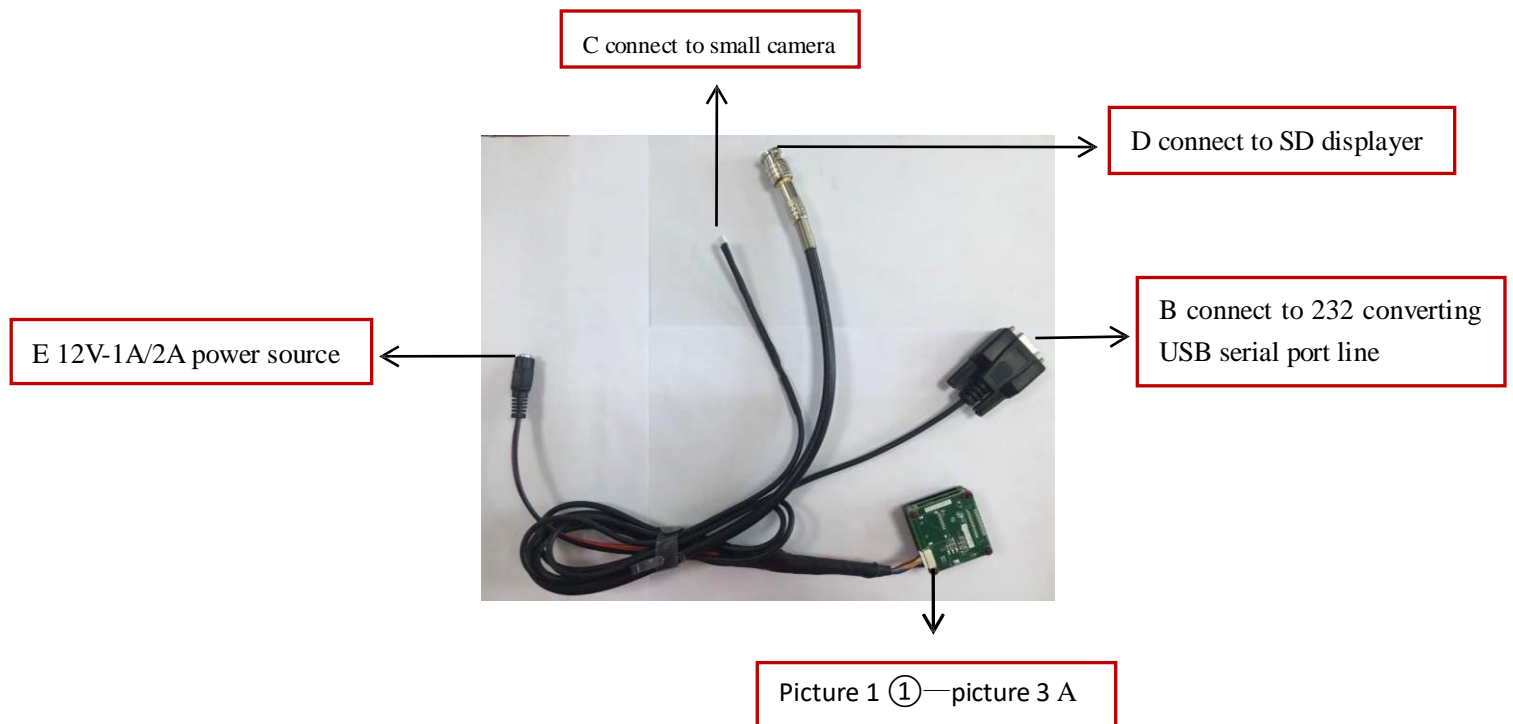
picture2 lateral interface diagram of the product:



picture3 Test line interface diagram :



## 2. 2. Flow chart of installation

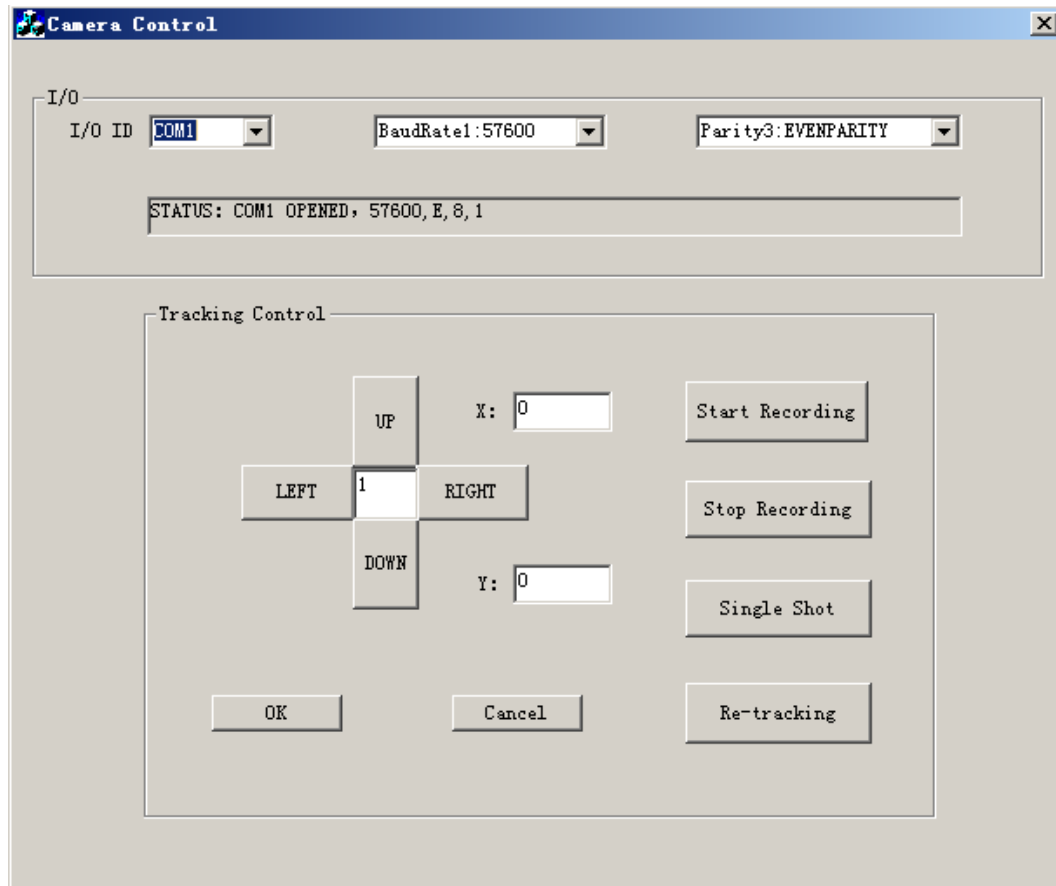


**Note: To prevent the equipment from being damaged, please connect it to the power in the last step.**

**Attention, Attention: the position of 8 pin insert pin.**

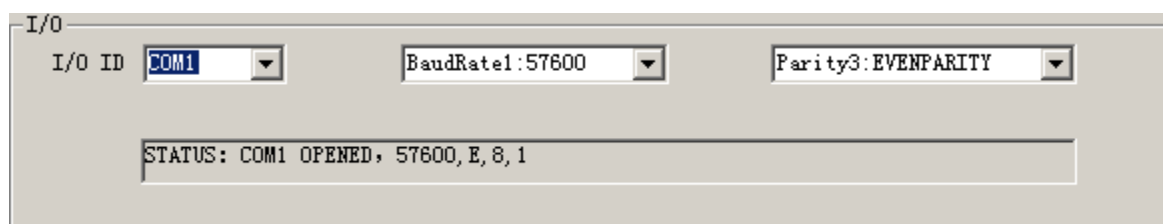
## 3 Test software usage

- The software installation instructions refer to the software installation package



### 3. 1. Flow chart of software operation

#### 3. 1. 1. Communication interface

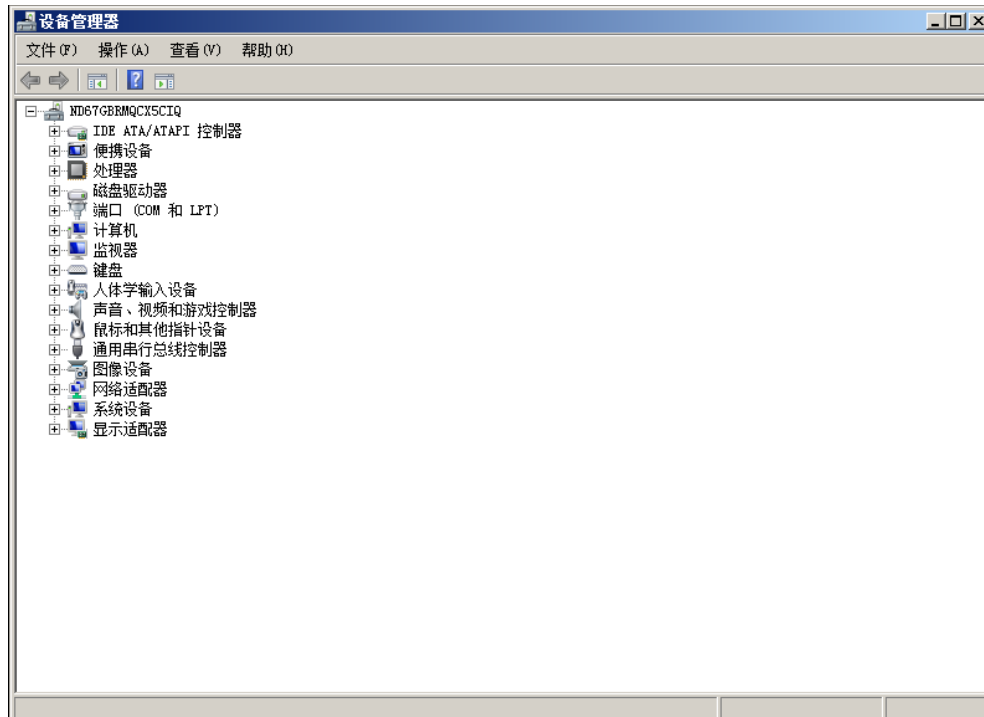


- Serial number setting and connection
- (Please install CH340 driver if there is no signal or showing exclamation mark when you refresh the page)

\* Normally, the selected serial number should be the refreshed number after connecting line inserted.

Step 1: Confirm the serial number

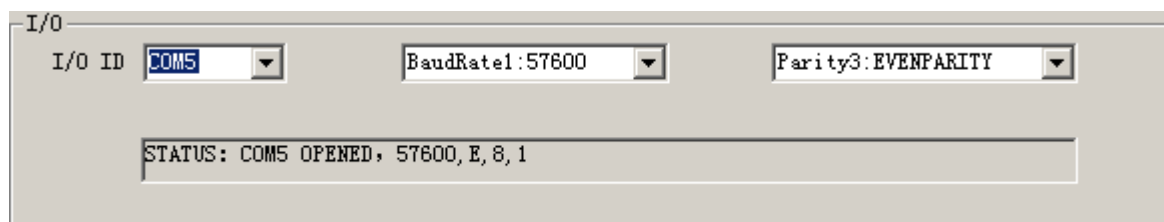
Right-click the Computer , select Computer Properties and the following interface appears



Double-click the port (COM and LPT), refreshed USB port should be selected, as shown in the picture below:



Step 2: Click the dropdown list, select the serial number (State: opened, the serial port cable is connected correctly)



➤ Baud rate setting

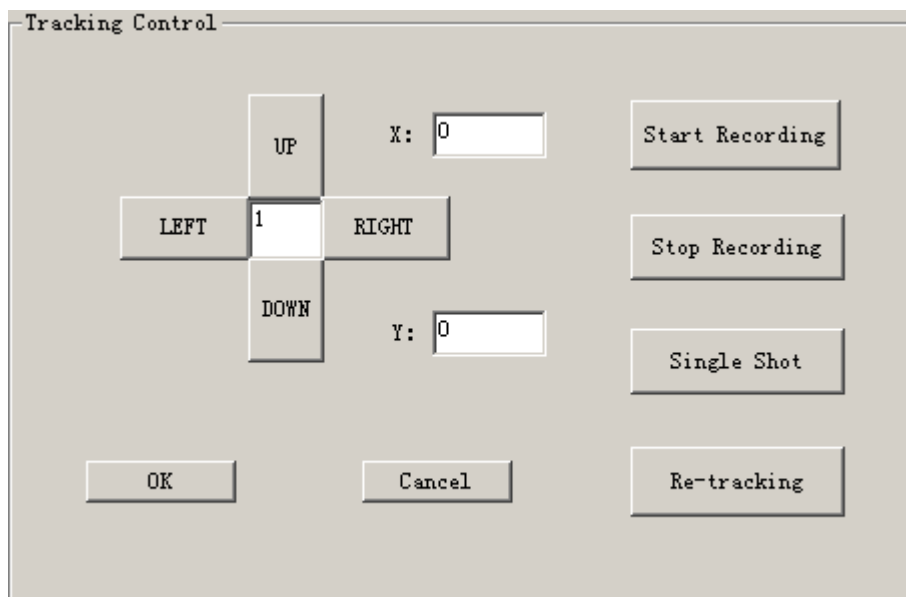


Click the dropdown list and select baud rate

➤ Verification mode setting

Click the dropdown list and select verification mode

### 3. 1. 2. Tracking control interface



- Click the UP, DOWN, LEFT and RIGHT button and the cross cursor will show up.



“LEFT” button: display interface 3



“RIGHT” button: display interface 4



### Step 1: Locate the tracking target

Click the Direction button in the tracking control interface and the cross cursor will show up, input the cursor in the input-box of the tracking control interface to adjust the steps( Unit: Pixel). Adjust the position of the cross cursor through UP, DOWN, LEFT and RIGHT button. Click  ‘confirm’ button and complete the target locating when the tracking box appear.

Locating, tracking: display interface 1



### Step 2: Second time target tracking

Click the  ‘second time tracking’ button in the tracking control interface, the cross cursor will show up again on the displayer. And you can adjust the cursor position according to step 1 and then locking the tracking target.

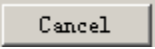
Second time tracking: display interface 1



Second time tracking: display interface 2



### Step 3: Cancel target tracking

Click  'cancel' button in tracking control interface and cross cursor will disappear, and target tracking is cancelled.

Cancel tracking: display interface 1



### 3. 1. 3. Other

➤ **SD video tracker has no storage function momentarily**

Start Recording
Stop Recording
Single Shot

## 4 Simple malfunction diagnosis and exclusion

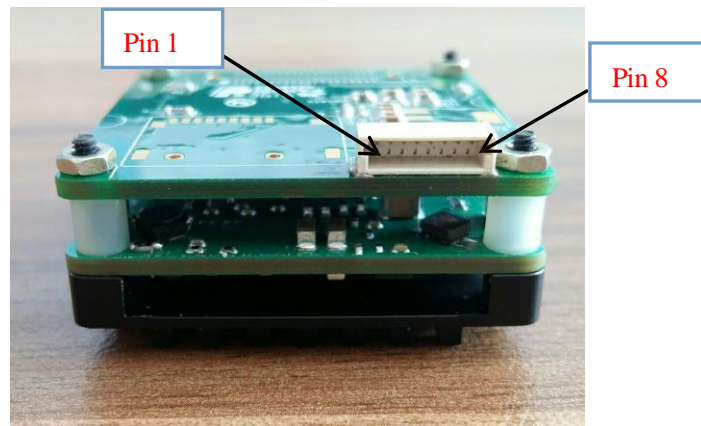
Please use the form below to check the infrared camera when it has any trouble. Disconnect the power and contract our technical support department if the problem cannot be fixed.

Malfunction	Reason and solution
Video tracker cannot start /the power light is not on	1. Check whether the power is connected. 2. Check whether the voltage is lower than required which should be 12V.
No image display	1. Check whether the video input format of video tracker is PAL 2. Check whether the video input format of displayer is PAL 3. Check whether the baud rate is correct
The serial command does not respond	1. Check whether the serial port is open(not serial port 1 open) 2. Check whether the verification mode is correct
No tracking box	1. The target is too close or not obvious, reselect target

## Attachment 1 Product structure chart

表壳编号										
CAD										
+  会签										
+  会签										
制图					沈阳上博智像科技有限公司					
审核	标记	更改单号	签字、日期	标准或标准						
旧版图登记号	设计									
底图登记号	校对			阶段标记	重量	比例				
	审核			C						
	工艺		批准	共 1 页 第 1 页						

## Attachment 2 Pin definitions



PIN No.	PIN Name	Function
1	POWER IN	+8V+16V power input
2	GND	Ground
3	RS232_TXD	Video tracker Serial port sending
4	RS232_RXD	Video tracker Serial port receiving
5	GND	Video output GND
6	VIDEO_OUT	SD video tracker video output
7	GND	Video input GND
8	VIDEO_IN	SD video input

## Attachment 3 Communication protocol

Baud rate: 57600

Without the start bit, 8 bit data bits, 1 bit stop bit, even check

### 1. Control instruction set of video tracker control

(Reserved for infrared camera engineering commissioning mode occupied, please write 0x00)

There are two working states :( the working states are independent from each other)

0x00: Imaging mode;

0x71: Tracking mode;

Byte mark	Number and function
0	0x7E
1	0x7E
2	0x44
3	0x00
4	0x00
5	0x71
6	0x00
7	X-axis movement is low 8 bits
8	X-axis movement is high 8 bits
9	Y-axis movement is low 8 bits
10	Y-axis movement is high 8 bits
11	00: Cancel the tracking 01: Confirm the tracking
12	0x01(Please do not change factory settings)
13	0x05(Please do not change factory settings)
14	0x00
15	0x00
16	0x00
17	0x00
18	0x00
19-47	0x00
48	Checksum



Note:

1. The movement of X and Y axis is an excursion relative to the former position
2. The method of exiting tracking mode: enter imaging mode

## Attachment 4 Common instruction set

The cross cursor moves 10 pixels to the right:

[illegible]

The cross cursor moves 10 pixels to the left:

7e-7e-44-00-00-71-00-f6-ff-00-00-00-01-05-00-00-00-00-00-00-00-00-00-00-00-0  
0-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-ac

The cross cursor moves 10 pixels upward:

`7e-7e-44-00-00-71-00-00-00-f6-ff-00-01-05-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-ac`

The cross cursor moves 10 pixels downward:

[illegible]

Confirm tracking:

[illegible]

Second time tracking:

[illegible]

No shutter/ cancel tracking:

[illegible]