ThermalTronix

TT-1066MD-FTM Series
Thermal Imaging Camera

User Manual

General Information

CONVENTIONAL

⚠ Warning: The improper operation can cause the thermal imaging system the major damage。

⚠ Careful, attention, warning, danger: In the reminder operation should pay attention item
Note, hint, tip and consider: to operates the content and explanation. Please read **"WARNING" & "CAUTION"** in the operation manual attached to the product carefully for proper operation before using the product.

Warnings & cautions

● An infrared camera is a precision instrument and uses a very sensitive IR detector. Pointing the camera towards highly intensive energy sources-such as sun or devices emitting laser radiation or reflections from such devices-may affect the accuracy of the camera readings, or even harm-or irreparably damage-the detector, whether the power supply of the camera is switch on or off.

● Avoid incorrect operation methods such as heavy pressing, shock or strong vibration during the course of transportation, store and installation otherwise the product could be damaged.

● For protective reason please keep the product in the environment between -40℃ and +70℃ during the course of transportation and storage. Original packaging box should be used during transportation.

● For protective reason the camera should be stored in shady, dry and draughty environment, avoids electromagnetic interference.

● Do not use the camera in a manner not specified in this manual or the protection provided by the equipment may be impaired.

Table of contents

1. Introduction

Thank you for choosing the TT-1066MD-FTM thermal imaging camera (referred to hereafter as "camera" or "TT-1066MD-FTM").

The TT-1066MD-FTM uses the high sensitive UFPA detector. Simply connect the camera to a PC or a monitor and produce high-quality real-time images.

Its low weight, ruggedness and compacted. Fully configured I/O functionality allows the TT-1066MD-FTM either to be integrated quickly and easily in your control systems or to be set up as a stand-alone system. Real time color or voice alarm offer.

The TT-1066MD-FTM is available in RJ-45 Ethernet models that are ideal for individual or network multiple camera installations.
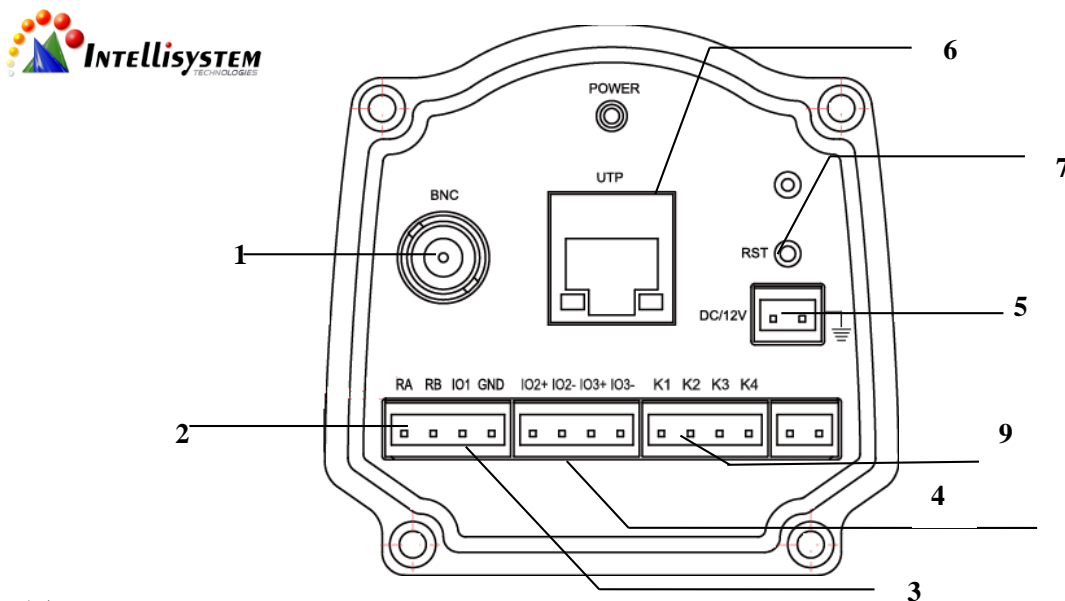
3. Connections & Buttons Description

图 4.1

1. **Video Output Connector:** Connect large monitors for viewing.
2. **RS485 Connector (RA:T+, RB:T-)**
3. **Alarm Output Connector** (DC12V/200mA)
4. **Alarm Output Connector** (Switch Signal)
5. **Power Supply Connector**
6. **Internet Connector**
7. **Reset Port** (Press within 5 seconds to recover to default: 192.168.1.2)
8. **Power Indicator Light**
9. **Button Adjustment Connector**

4. Client software operation

TT-1066MD-FTM_Client is accessional software you can use pc to control the camera by this software.

4.1 Getting started

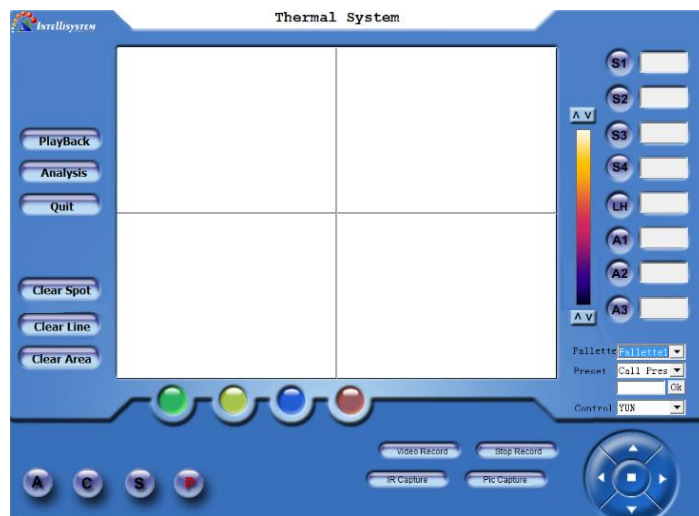Double click on   IR_Client   to start up the software, with the interface shown as following:

Figure 5.1

4.2 Graphical user interface
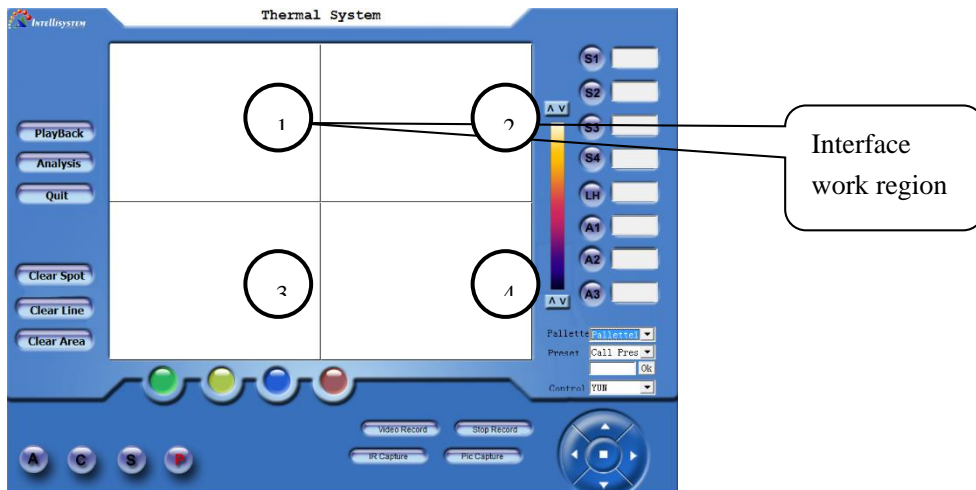
4.2.1 Interface and Connection description

Figure 5.2

There are four small work regions on the software interface, it's said that four apparatus can be connect to the PC and operate by the software, and then operate one of the regions to control the corresponding apparatus.
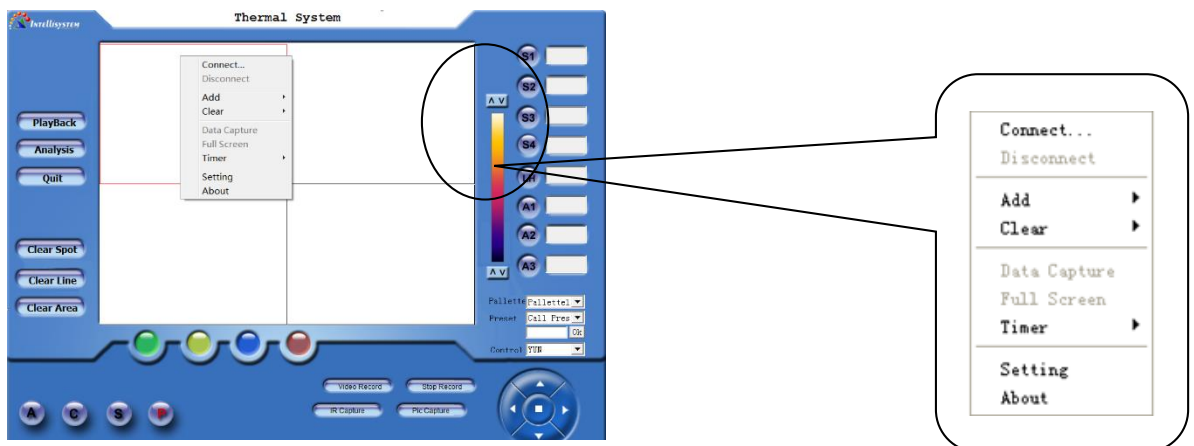

Figure 5.3

■ Move the mouse cursor to region 1 and click the mouse to active the region 1, and then click right button to display the pop-out menu.

■ Point to the **System** and click to display the system setting dialog box. You can set the ip, alarm, emissivity etc on the dialog box. For more information see the 5.3 system setting.

■ Point to Connect on the pop-out menu and click to begin connecting with the PC and apparatus.

Figure 5.4

■ If the apparatus in the sleep mode will automatically awaken, the video will display on the screen if the connection is successful.
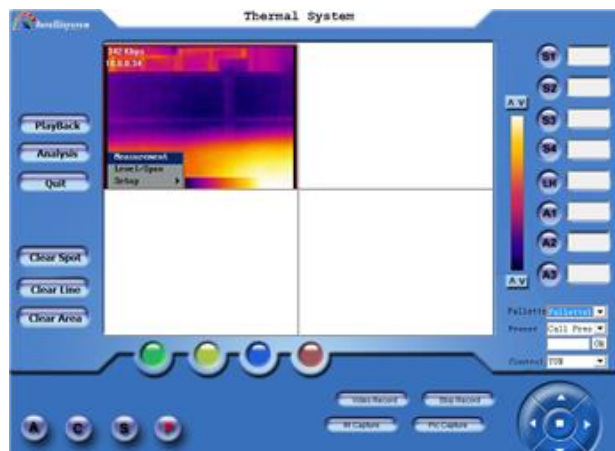

Figure 5.5

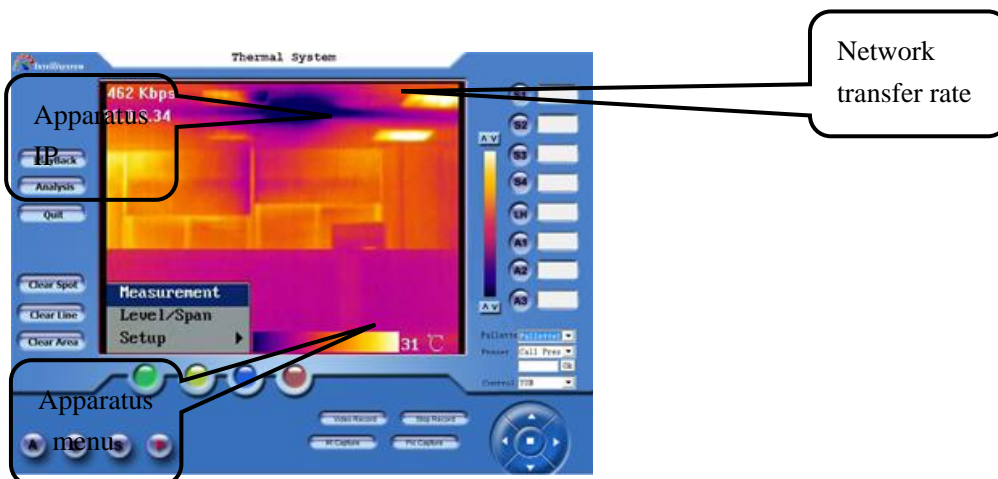■ Click the work region 1 to zoom in the region 1 to whole work region.
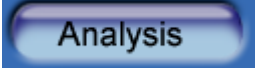

Network transfer rate

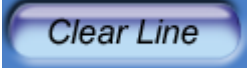Apparatus IP

Apparatus menus

Figure 5.6

4.2.2 Interface operation description

1. **PlayBack** To start up the video play software. For more information see section 5.4.
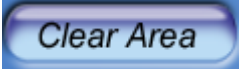
2. **Analysis** To analyze thermal image. it's spare function in currently.

Quit Click to quit the software and then the TT-1066MD-FTM_Client dialog box will pop-out. (Right figure) Press Y to disconnect the apparatus.

TT-1060MD-FTM _Client ✕

? Close?

Yes   No
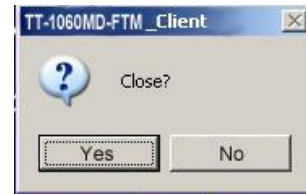
3. **Clear Spot** To clear all spots on the screen. For more information about clear spot see section 21.

4. **Clear Line** To clear line on the screen. For more information about clear line see section 22.

5. **Clear Area** To clear all areas on the screen. For more information about clear area see section 23.

6. **A** Click to calibrate the apparatus.

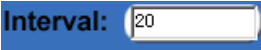This function is for getting a more accurate measurement and optimal images.

7. **S** Freeze the image on the display.

8. **C** Click to quit the last operation.

9. **P** Click to make the apparatus enter sleep mode and disconnect the network connection.

10. **IR Capture** Click to capture a single frame infrared image. You can also capture infrared by click the "infrared" in pop-out menu to Original Infrared date is saved in single frame rate for your later analysis by using report software.

11. **Frames:** `2` To set the frames of the infrared original data record.

12. **Interval:** `20` To set the frame capture interval. Unit: millisecond (mS), the parameter must be the multiple of 20.otherwise the system will automatic amend the parameter.

13. **IR Recorder** Click to record the infrared data. Every time operation will record the frames according with the setting of "Frames", and the interval of the adjacent frame decided by the setting of "Interval".

14. **Video Record** Click to start recording video. The record will be saved in compressed file. But the monitoring record could not be analyzed by the report software.

15. **Stop Record** Stop the monitoring record.

16. **Pic Capture** Click to capture current image, and the image will be saved in MPEG4 compressed format, but the images could not be analyzed by the report software.

17. Simulating keyboard All the function could be operated by controlling this keyboard with keys of A.C.S.P. In menu inactive mode click middle confirm button to autofocus, Click left and right key to manual adjust focus.

18. **Pallette1** To set the color scale. There are nine different palette selections. And the current selected palette will be displayed in the result table

19. **Preset :** To Yun terrace position preset. Click ▼ to display pull down menu(right figure):

➢ **Call Preset**：Recall the preset position data.
➢ **Set Preset**：To set the Yun terrace preset position data.
➢ **Clear Preset**：To clear the preset data.
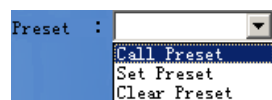
20. `Control: KEYBOARD ▼` Control item selection. Click ▼ to display options(right figure)：

When you select one of the items the others `Control: KEYBOARD ▼ / YUN / LENS / KEYBOARD` item will be invalid.

➢ **YUN**：Select to control Yun terrace；

➢ **LENS**：Select to control LENS, Click left/right button to adjust focus, or press C button to autofocus.

➢ **KEYBOARD**：Select to control the camera. The simulate keyboard has different function in different option.
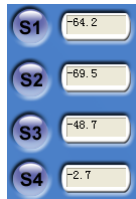
21. `S1 -64.2 / S2 -69.5 / S3 -48.7 / S4 -2.7` For spot temperature with its temperature value being measured in real-time. While the camera is in the monitoring mode, maximum four spots can be displayed with its temperature being shown respectively. Detailed description is as following:

Example: Press button S2, and move the mouse onto the monitoring frame. Click on its let key on the position you appointed, a spot with No. of 2 will be displayed, with its temperature value being shown in the result table
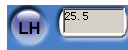
22. `LH 25.5` Draw the temperature line, displaying the temperature in real-time. Only one line can be drawn while the camera is in the monitoring mode, displaying its temperature of midpoint.

Example: Press LH button and move the mouse onto the monitoring frame. Press the left key of the mouse while moving it until to a certain position and release the key. The start point of the line is where you start moving the mouse and its end point is where you release the key. Its temperature of midpoint will be displayed in the result table.
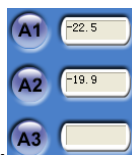
23. `A1 -22.5 / A2 -19.9 / A3 ___` Area function, displaying its temperature value in real-time. While the camera is in the monitoring mode, maximum three areas are available, measuring either the maximum or minimum temperature within a rectangular.

Example: Press button A2, and move the mouse onto the monitoring frame. Click on the left key of the mouse while drawing it. A rectangular will be created marked as no. 2. Its highest temperature or the lowest temperature will be indicated in the result table．

24. Click **Add** in pop-out menu can also add temperature measured.
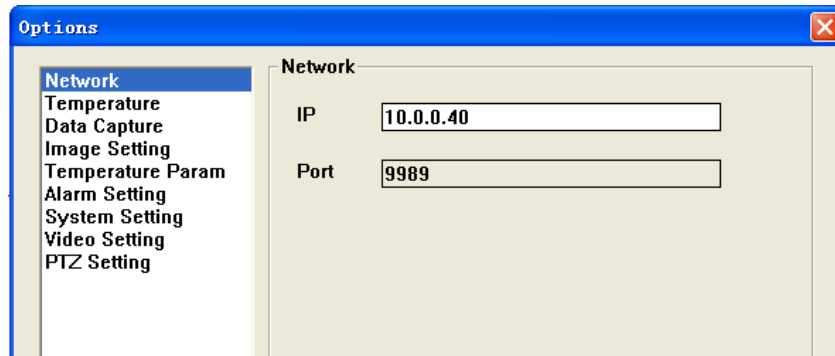
4.3. System setting

Figure 5.7

IP address：Set IP address of the apparatus.

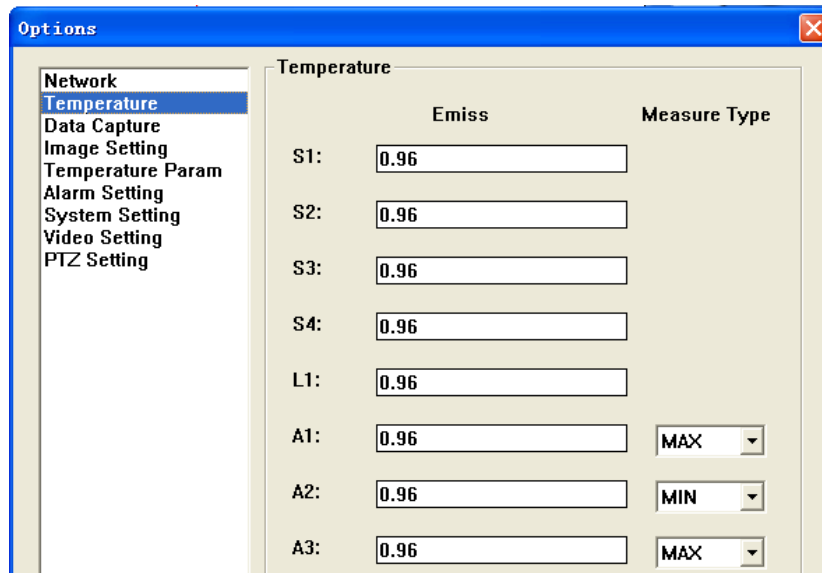Note: the IP address setup must same as the current apparatus

Figure 5.8

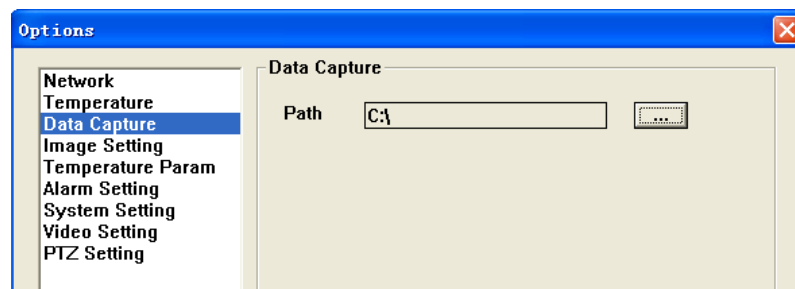To set the emissivity of spots, line and areas .To select the display temperature type of areas.
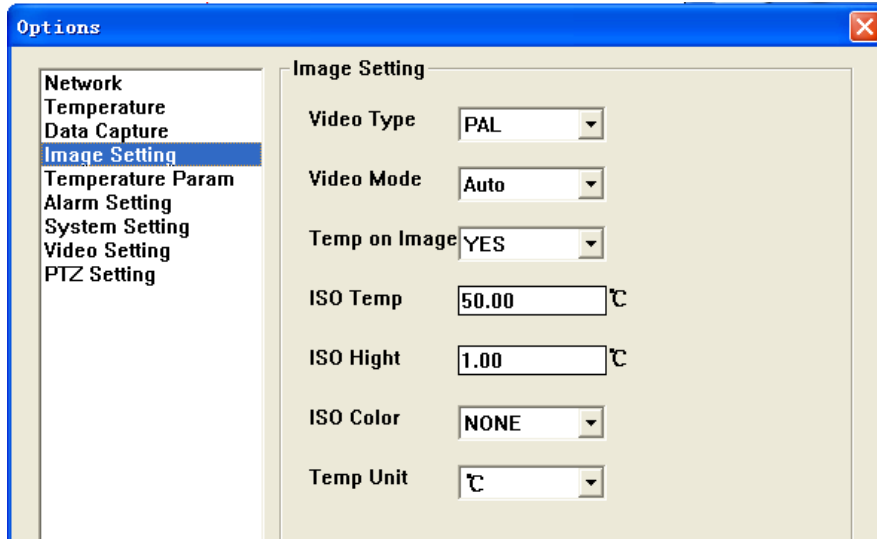

Figure 5.9

Click [**...**] button to change the path.

Figure 5.10

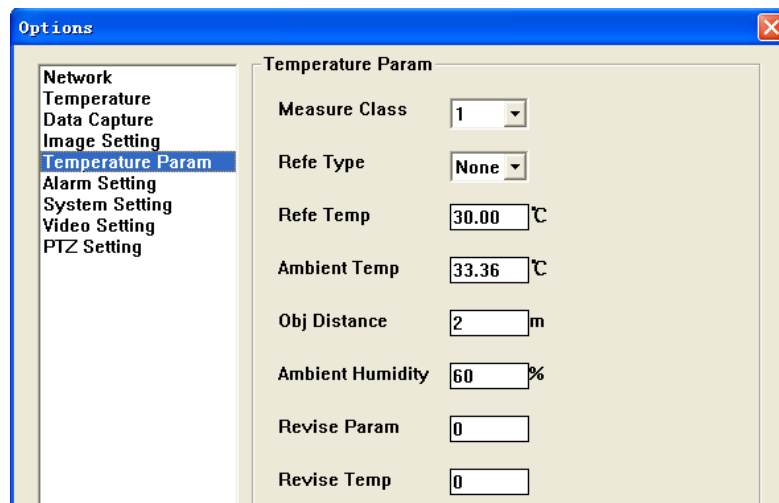| Item	Optional	Comments
Video Type	PAL/NTSC	Analog video output
Video Mode	Auto/Manual	Brightness, contrast adjustment mode
Temp on Image	Yes/No	To show or hide the temperature result and palette.
ISO Temp	User-defined	Isotherm temperature. Reference the 4.2.3.3
ISO Hight	User-defined	Isotherm height Reference the 4.2.3.3
ISO Color	User-defined	Isotherm color. Reference the 4.2.3.3
Temp Unit	℃,F,K	To select the display unit.

Figure 5.11

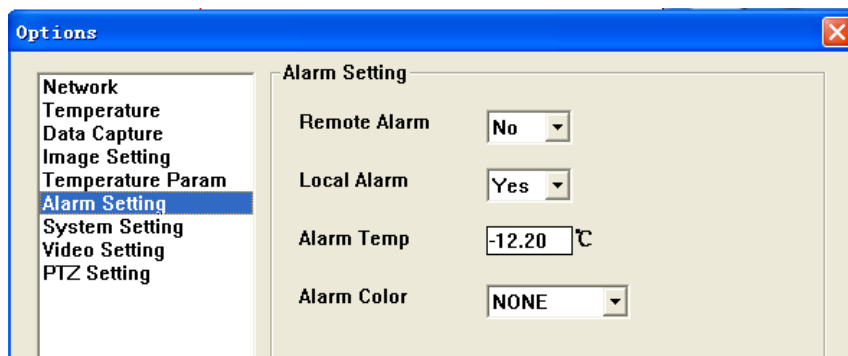| Item	Value	Comments
Measure Class	1/2	To select temperature range
Refe Type	9 optional	To select reference temperature type
Refe Temp	User-defined	To set the temperature if the Refe Type selected Value
Ambient Temp	User-defined	To set the ambient temperature
Obj Distance	User-defined	To set the distance from camera to object
Ambient Humidity	User-defined	To set the ambient atmospheric humidity
Revise Param	User-defined	Reference 4.2.3.2
Revise Temp	User-defined	Reference 4.2.3.2

Figure 5.12

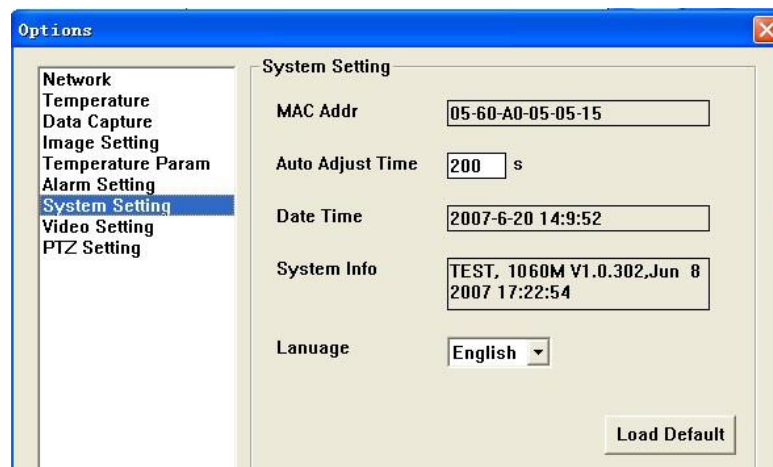| Item	Value	Comments
Remote Alarm	Yes/No	Select to active or inactive remote alarm
Local Alarm	Yes/No	Select to active or inactive local alarm
Alarm Temp	User-defined	To set the alarm temperature
Alarm Color	Optional	To select alarm color

Figure 5.13

| Item	Parameter	Comments
MAC Addr	Settled	The unique MAC address of every apparatuses set by manufactory
Auto Adjust Time	User-defined	To set the automatic calibrate time. If set 0 this function will inactive. Range (60~600)
Date Time		To display current date and time
System Info		To display system information
Language	English/Chinese	To select the display language
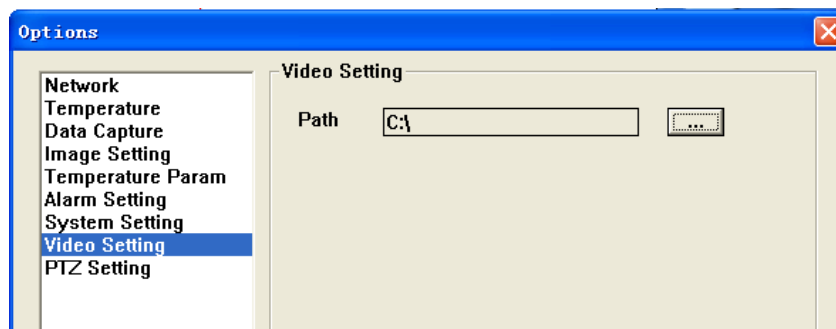
Figure 5.14

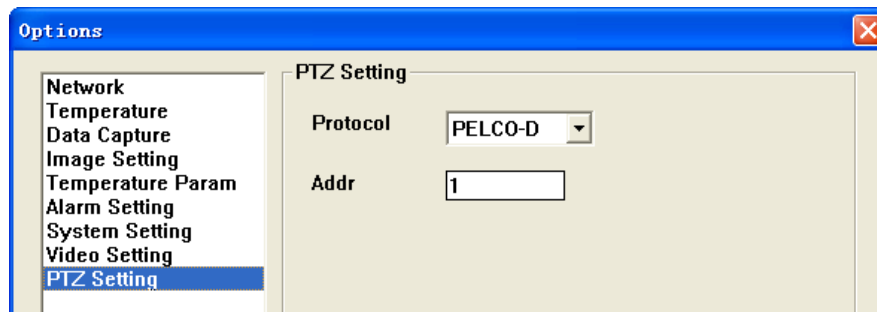Click [...] button to change the MEPG4 video saved path.

Figure 5.15

■ **Protocol**：To select the communication protocol with Yun terrace. Optional: PELCO-D and YAAN

■ Addr：Spare address
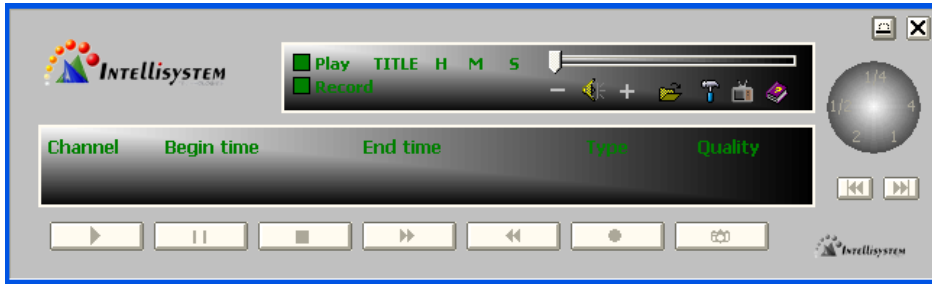
4.4. Video play software

Figure 5.16

■ Click to display a windows dialog box, select the file that you want and then click

open to play the video.

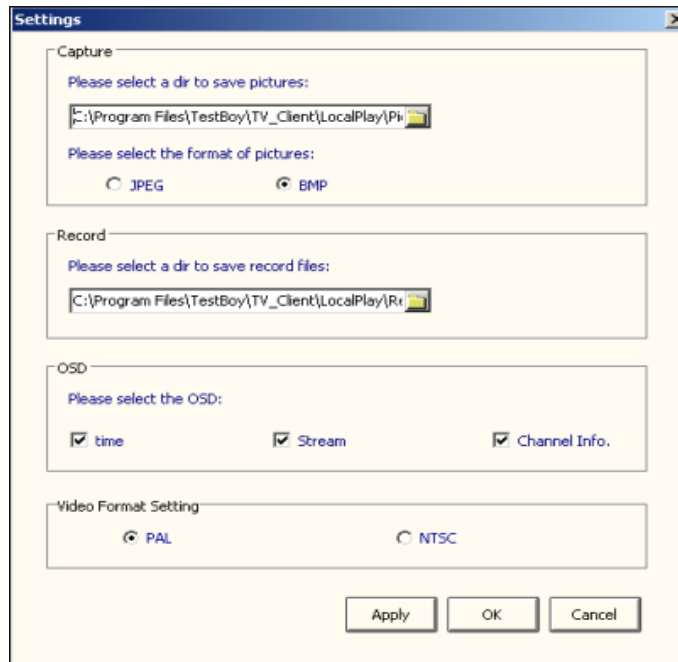■ Click to display the following dialog box.

Figure 5.17

■   Click to play the video in full screen.

■   To control the play speed

■

These buttons are used for controlling video play.

■   To record a section of the video. You can set the save path via operate the

setting dialog box.

■   To capture a frame image and save to hard disk. You can set the save path

via operate the settings dialog box.