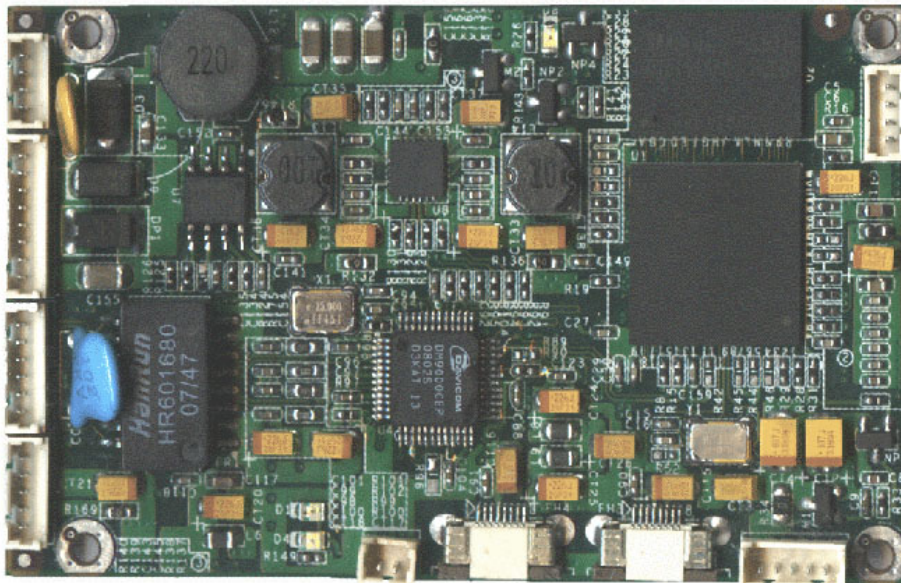
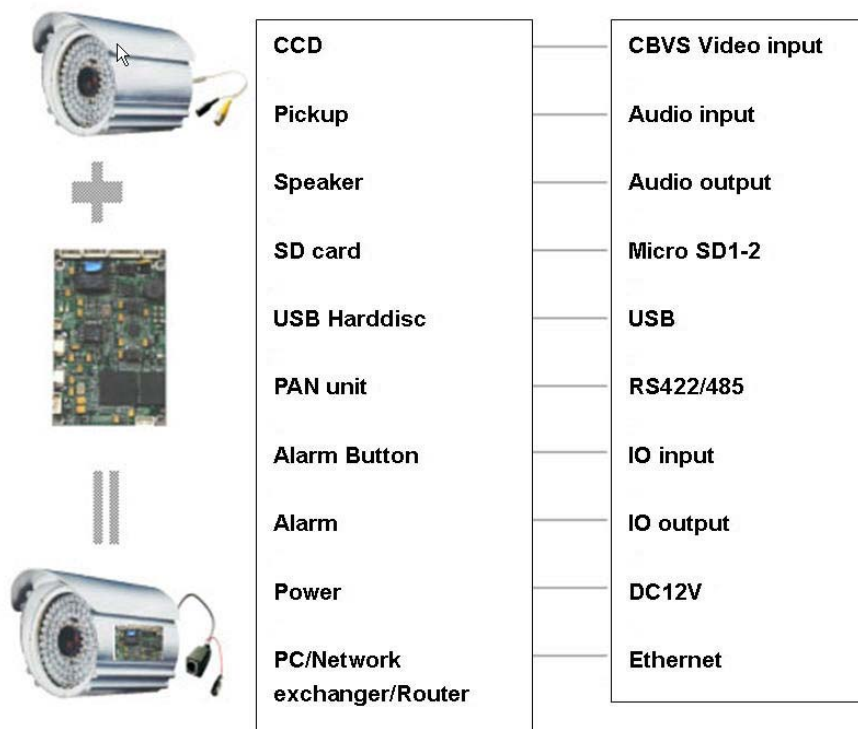


# Mini35 Network Video Module

- *Highly-integrated and Highly-reliable Embedded Mini Network Video Module based on DaVinci DM355 ARM9 Processor with a 640MHz DSP (digital signal processor) core*
- *Video Input, Audio Input/Output, Ethernet, USB Host, Micro SD card socket...*
- *D1+CIF Double-stream MPEG-4 encoder, AVI Format, Bit Stream 0.1M~4Mbps adjustable*
- *Support embedded Web Server and has the function of Video Sever*



Mini35 Network Video Module (Mini35)



## Description

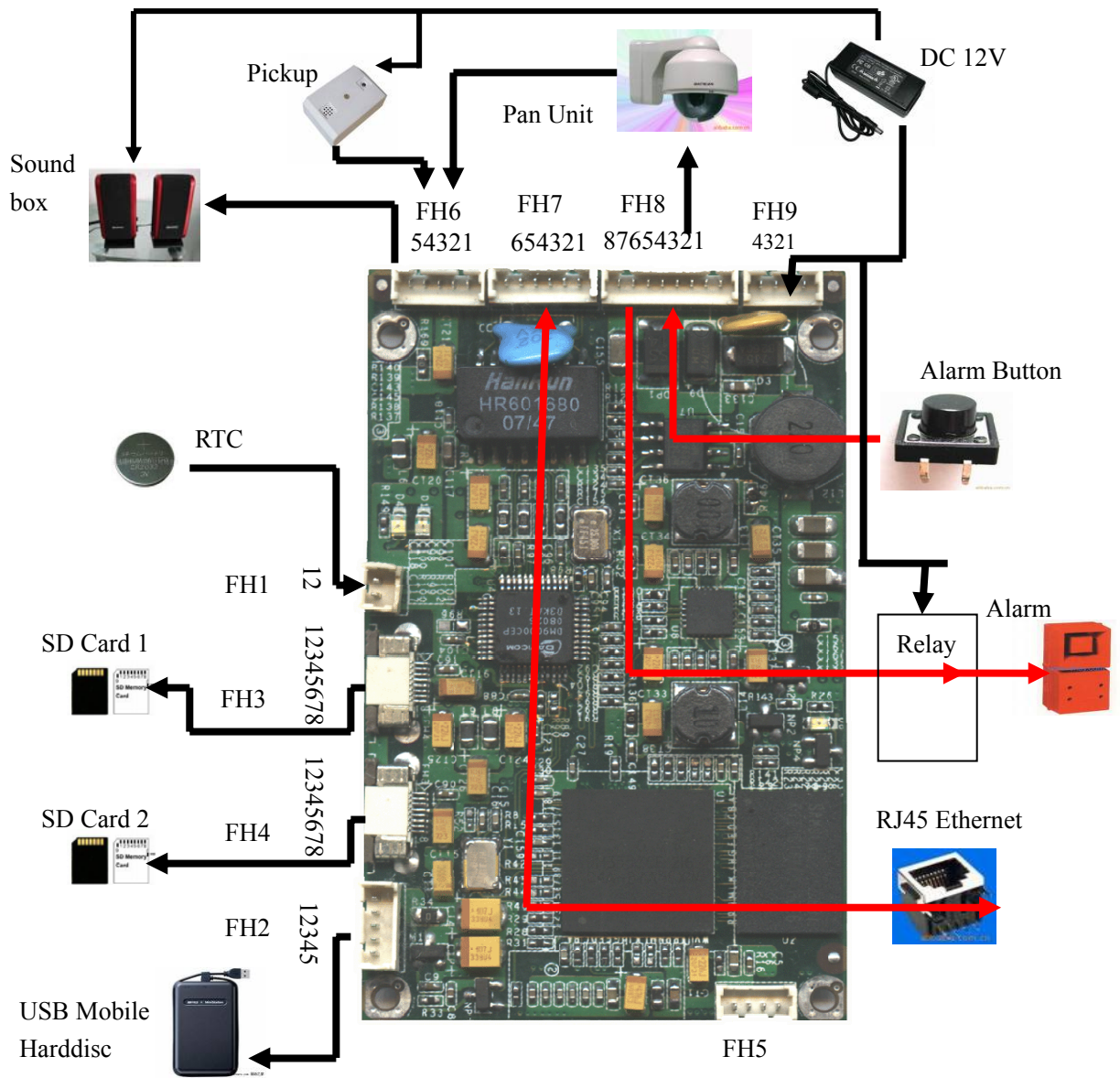
Measuring only 42mm by 70mm, Embest Mini35 Network Video module is a tiny video module based on TI DaVinci DM355 ARM926EJ-S processor. It is with low cost, low power consumption and well video and audio processing functions.

## Hardware Features

- Size: 42mm x 70mm
- DC12V power input interface, 3W power dissipation
- Processor: TI DaVinci DM355 (32-bit, a 216MHz or 270MHz ARM926EJ-S core with a 640MHz DSP core), watchdog, 32MB Flash, 128MB DDR2
- 1-channel CBVS video input, PAL/NTSC auto-detection, Video processing functions: D1 + CIF dual-stream MPEG4 encoder, AVI format, bit stream 0.1M ~ 4Mbps adjustable; frame rate 1f~30f/s adjustable; low code-stream and high-definition stream-media processing function.
- 1-channel audio input (can connect with pickup); 1-channel audio output (can connect with earphone or speaker). Audio processing functions: support Bi-way talking system, G.711 encoding, G.711 codec.
- 1-channel 10/100M Ethernet interface, supporting FTP / PPPOE / DHCP / DDNS / NTP / UPnP network protocol, etc.
- Two Micro SD card interfaces, a high-speed USB interface. Support front-end dual-Micro SD memory card or USB mobile storage device access.
- Mini35T provides RS422/RS485 serial port to support transparent serial transmission, tilt control support, high-speed ball machine or external cameras and other equipment.
- Mini35T has 1-channel switch input (can connect with external alarm button); 1-channel switch output (can connect with external siren).
- Functions: front-end storage, remote monitoring can also be stored (running Embedded Web Server and supporting the functions of video server), Motion Detection Alarm / Storage linkage, OSD, unified client remote monitoring (UC) and control.

*Note: Mini35 Network Video Server provides two types of configuration as Mini35T and Mini35S. Compared with Mini35T, Mini35S has no RS422/RS485 serial port and alarm interface, others are the same*

## Mini35 Interfaces



FH1: Battery Interface

1	3.0V
2	Ground

FH2: USB interface

1	USB_5V
2	USB_D+
3	USB_D-
4	NC (No Connection)
5	GND

FH3, FH4: SD card interface

1	Word Size 2
2	Word Size 3
3	Command/Reset
4	Supply Voltage 3.3V
5	Clock
6	Ground
7	Word Size 0
8	Word Size 1

FH5: Special Debug port, make sure do not connect any.

FH6: CVBS video input, audio input and output interfaces

1	Audio output 1.0 V (virtual value)
2	Audio input 2.0 V (virtual value)
3	Audio GND
4	Video GND
5	CVBS video input 2.0V (peak value)

Audio input (pickup), Audio output (sound box)

FH7: Ethernet Interface

1	RJ6
2	RJ3
3	RJ2
4	RJ1
5	LED anode
6	LED cathode

FH8: Pan Unit controls RS485 interface, alarm I/O input, siren I/O output.

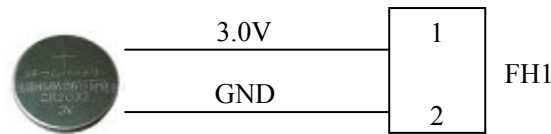
1	Alarm input	
2	GND	
3	Alarm output A	
4	Alarm output B	
5	422_RX-	
6	422_RX+	
7	422_TX-	485_TX-
8	422_TX+	485_TX+

FH9: Power input, External Reset interface

1	DC12V/1A
2	GND
3	External Reset
4	GND

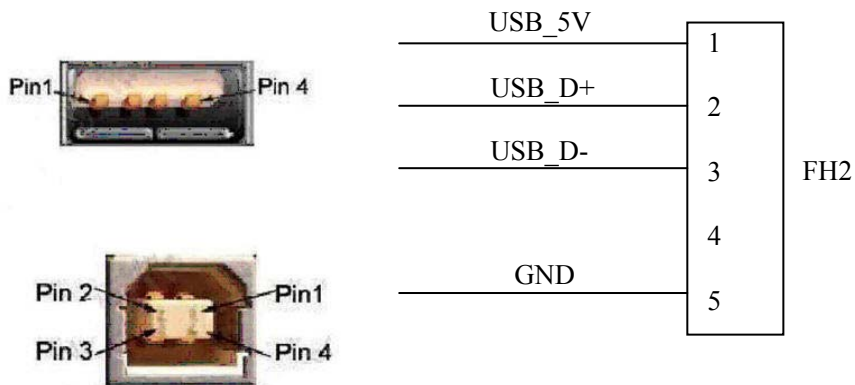
## Mini35 Connections

FH1: RTC interface



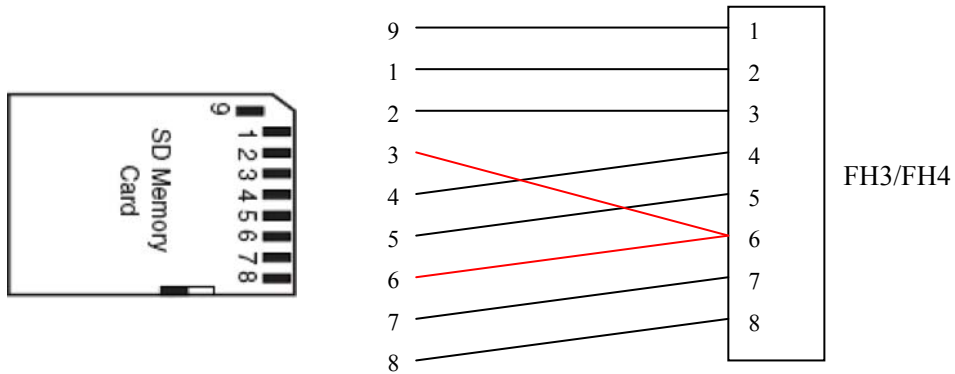
FH2: USB interface

Pin	Name	Corresponding FH2
1	Vcc	USB_5V
2	D-	USB_D-
3	D+	USB_D+
4	GND	GND

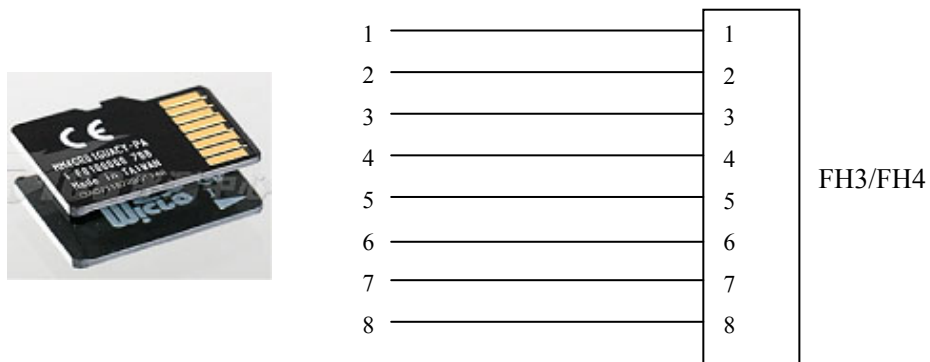


FH3 and FH4: SD card interface

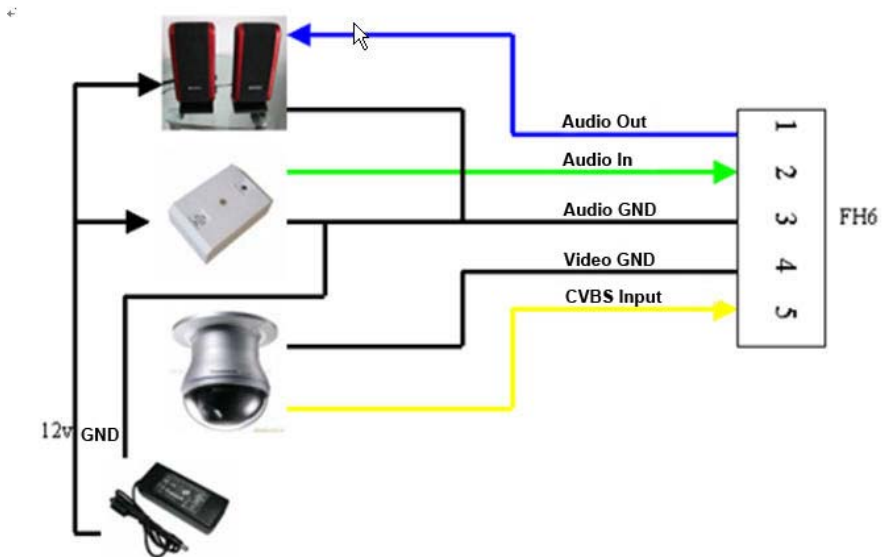
9-PIN SD card:



8-PIN MicroSD card

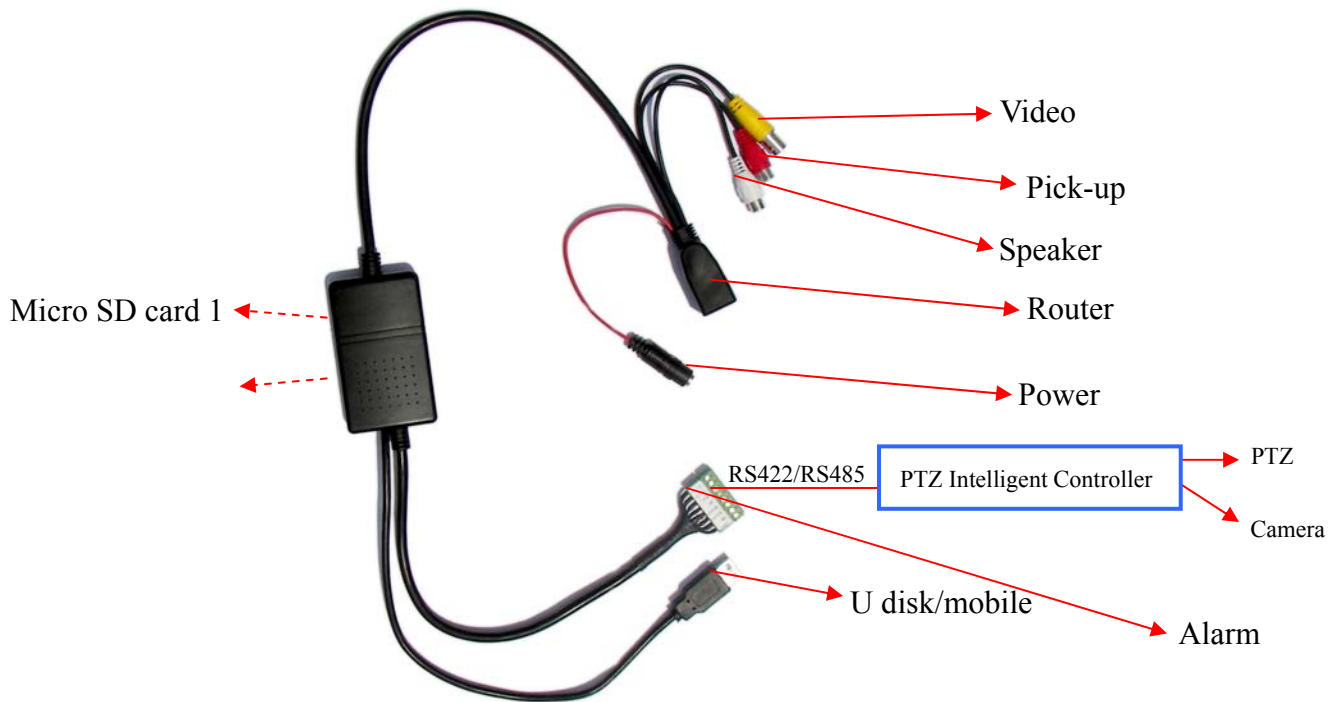


FH6: Video input, audio input/output



Audio output: Load impedance R, power dissipation P,  $P=1000/R$

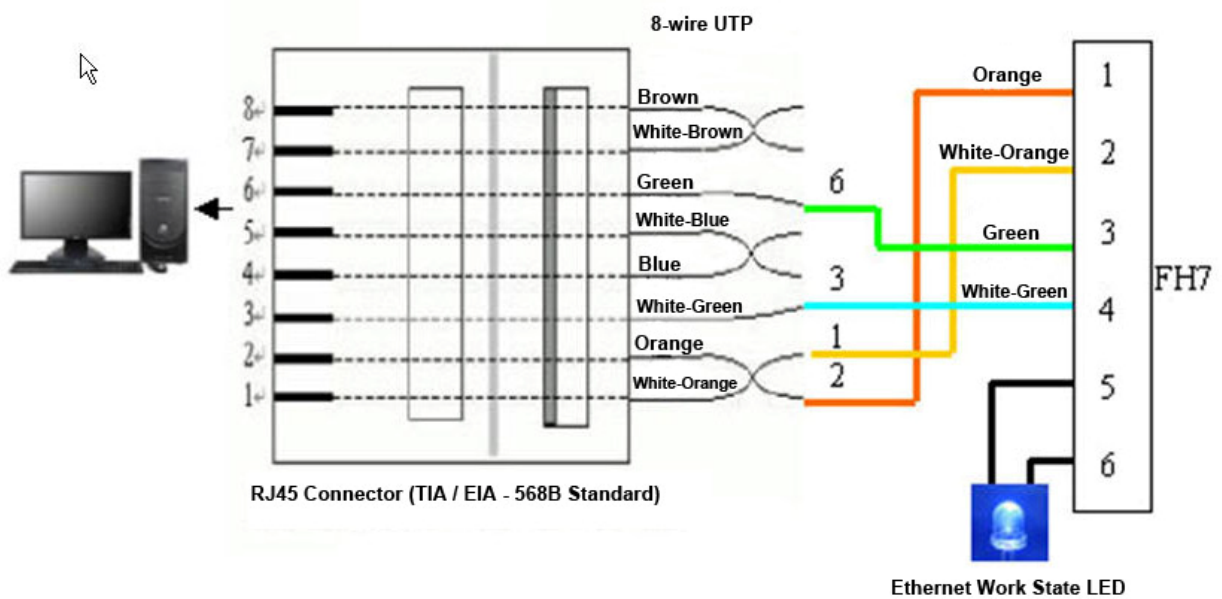
R	P
32 Ω	30mw
16 Ω	62mw



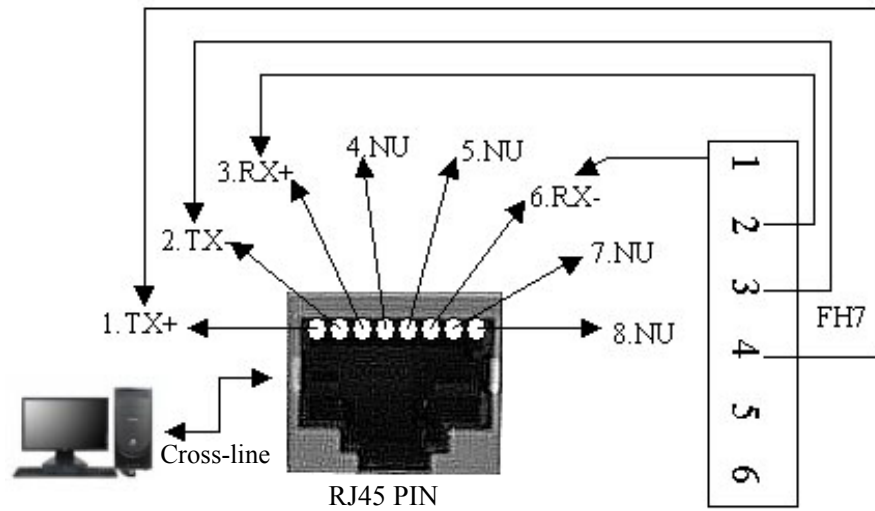
### VSS35

Above picture shows connection example of each interface of Network Video Server product which using Embest Mini35 module.

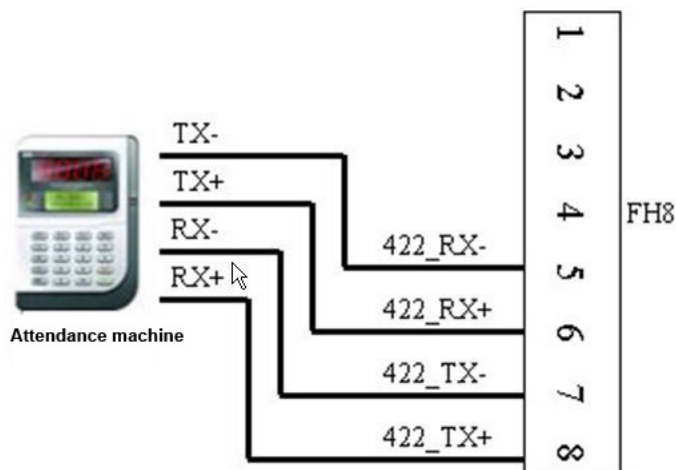
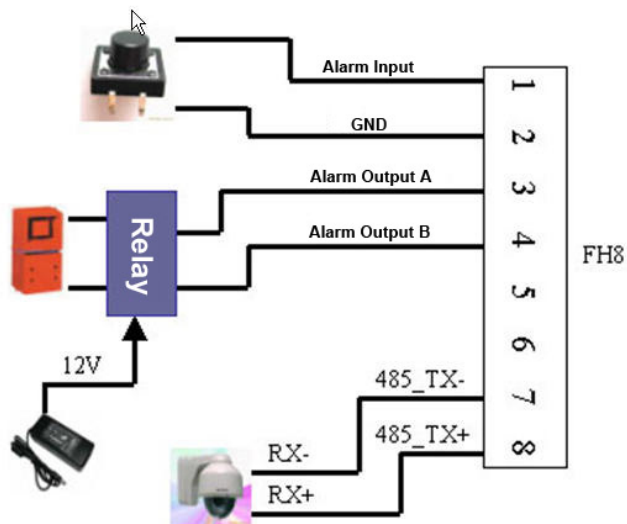
### FH7: Ethernet interface



Use a RJ45 socket and then use cross cable to connect with PC.



FH8: RS485/RS422 interface, I/O alarm



Alarm output between A and B:

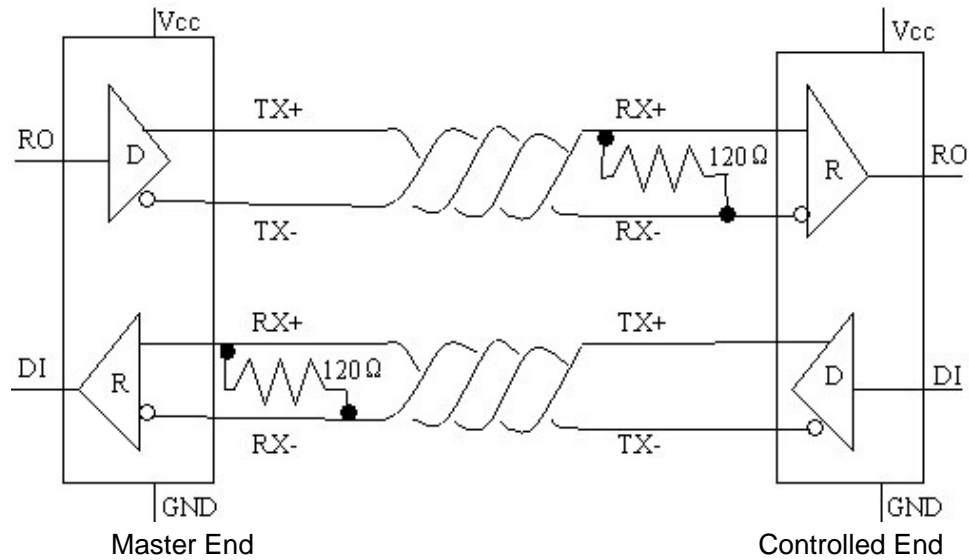
Maximum Voltage: 350V (AC), Maximum Current: 0.12A (AC)

Impedance when AB connected:  $R \leq 35\Omega$ , disconnected current between AB  $\leq 1\mu A$

When input alarm signal is high, alarm output A is disconnected with alarm output B;

When input alarm signal is low, alarm output A and B are connected.

RS422 interface parameters:

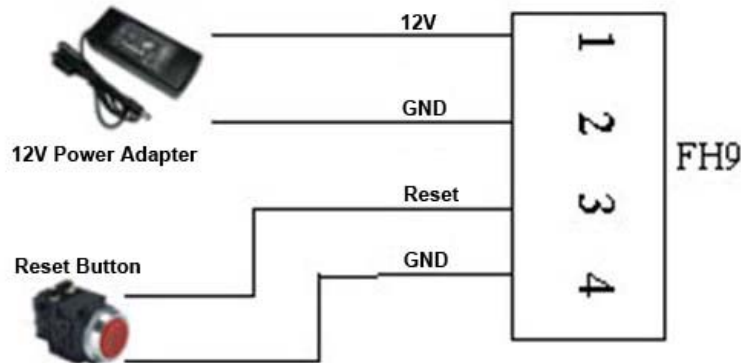


RS422 terminal matching impedance 100~120Ω (Shown as above)

Cable standard

Cable spec	RS-422	Standard
1.25mm	1200m	UL
0.75mm	1000m	UL
0.3mm	700m	UL

FH9: Power interface



## Ordering information

Order No.	Mini35T	Mini35S
Item	Mini35T Network Video Module	Mini35S Network Video Module
Difference	With RS422/RS485 interface and the Alarm interface	No RS422/RS485 interface and Alarm interface
Price	Please contact Embest for detailed information.	



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