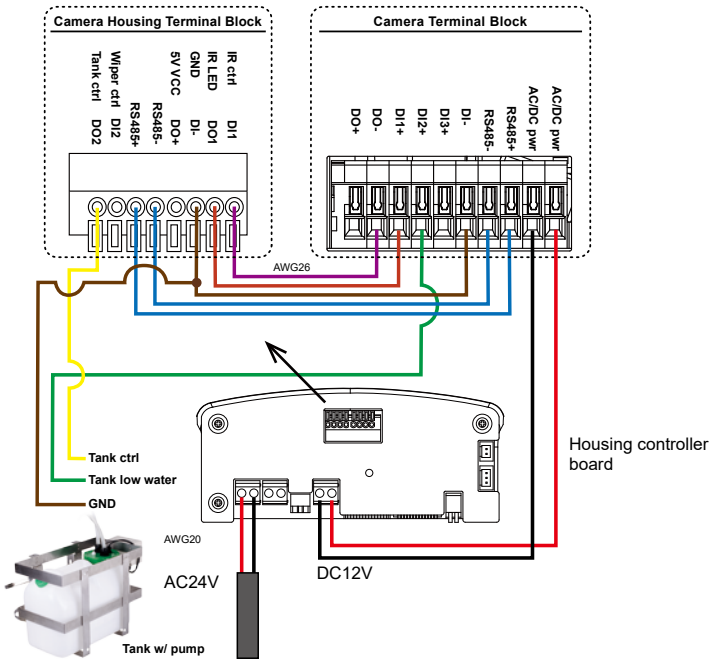
Camera Housing Series

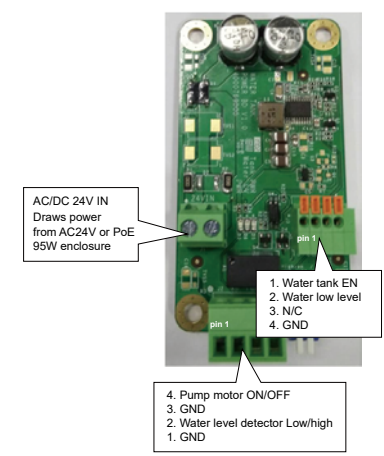
RS485 Configuration Document

Rev. 1.1

RS485 connection diagram

A sample use RS485 connection diagram consisting of a housing with IR illuminators and camera is shown below. Please refer to your camera's documentation if your camera comes with different pinouts.





See drawing on the right for the washer kit control board pinouts.

RS485 Commands

For camera housings that come with IR illuminators, wiper, and washer, commands can be delivered via the RS485 protocol. The RS485 connection uses the Pelco D protocol.

Configuration parameters:

Baud rate	2400
Data bits	8
Parity	None
Stop bit	1

Command format:

Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
Sync	Addr	CMND1	CMND2	DATA1	DATA2	CKSM

Addr range: 0x00 ~ 0xFE. CKSM: check sum is the last 8 bits of the sum of Byte2 through Byte6.

Command Group 1:

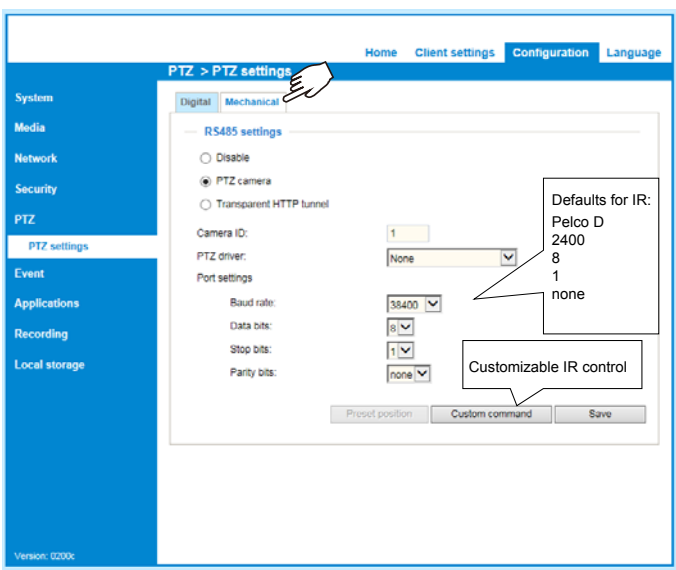
Command Description	Command (hexadecimal, "ox" is ommited)	Note
ValR Lens Stop	FF 01 00 00 00 01	Pelco D - Zoom Stop
VAIR Lens Wide	FF 01 00 40 00 00 41	Pelco D - Zoom Wide
ValR Lens Tele	FF 01 00 20 00 00 21	Pelco D - Zoom Tele
Wiper On	FF 01 00 09 00 01 0B	Pelco D – Aux 1 On
Wiper Off	FF 01 00 0B 00 01 0D	Pelco D – Aux 1 Off
Wiper and Washer On	FF 01 00 09 00 02 0C	Pelco D – Aux 2 On
Wiper and Washer Off	FF 01 00 0B 00 02 0E	Pelco D – Aux 2 Off
IR Led Force On	FF 01 00 09 00 03 0D	Pelco D – Aux 3 On
IR Led Force Off	FF 01 00 0B 00 03 0F	Pelco D – Aux 3 Off

Command Group 2:

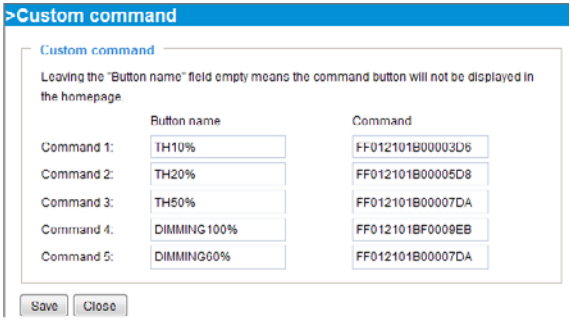
Command Name	Command (hexadecimal, ox is ommited)	Note
Addr configuration	FF 01 00 18 01 dd CKSM	dd: 0x00 ~ 0xFE; for example, when addr is 2, the command looks like FF 01 00 18 01 02 1C
IRMode	FF 01 00 18 02 mm CKSM	mm: IR mode mm=0x02: Light Sensor Auto (Default) mm=0x03: DI Trigger mm=0x04: via RS485 Command (When receiving IR Led Force On / IR Led Force Off command, will switch to using the IR Mode -RS485 Command)

		For example, IRmode_Auto FF 01 00 18 02 02 1D IRmode_DI FF 01 00 18 02 03 1E IRmode_CMD FF 01 00 18 02 04 1F
LightSensorGate	FF 01 00 18 03 LL CKSM	When the IR Mode Light Sensor Auto, the Lux value to turn IR LED can be configured. LL: Lux, changes is made by every10Lux For example: LightSensorGate = 100 FF 01 00 18 03 0A 26 LightSensorGate = 200 FF 01 00 18 03 14 30

The parameters of IR illuminator can be controlled via the RS485 connection. You can enable the connection in **Configuration** > **PTZ** > **Mechanical** window. Select the defaults for the IR illuminator: Pelco D, baud rate - 2400, Data bits - 8, Stop bit - 1, Parity - none.



You can create custom command buttons by entering the Button name and the command itself:



VaIR: The VAIR control include those on the IR Led and VaIR Lens.

There are 3 IR mode commands

IRMode = Light Sensor Auto (Default)
sensor lux reading < LightSensorGate - LED On
sensor lux reading >= (LightSensorGate + 10 Lux) - LED Off

IRMode = DI_1 Trigger (IR triggered on by DI
DI _1 shorted DI –(Low) - LED On
DI_1 open (High) - LED Off

IRMode = controlled by RS485 Command (Pelco D – Aux 3 On/Off)
IR Led Force On - LED On
IR Led Force Off - LED Off

DO_1 as IR Status Feedback
LED On, DO_1 is grounded via MOSFET (DI- connected)
LED Off, DO_1 no input

VaIR Lens Zoom control
Dip Switch
4 configurations using the Dip Switch on the distribution board.

When Lens stops, its last position will be memoried,and when powered on again, lens will move to the previous position. When powered on for the first time, Lens will follow the DIP switch configuration.

Wiper & Wahser control)
DI_2 Trigger:
When DI_2 connected to DI- (Low), wiper and washer operate for 3 times and then stop.

Using RS485 Command –Wiper Only (Pelco D – Aux 1 On/Off)
Wiper On, wiper takes action
Wiper Off, wiper starts one operation and then stops.

RS485 Command –Wiper & Washer (Pelco D – Aux2 On/Off)
Wiper and Washer On, pumps and spray water with wiper action.
Wiper and Washer Off, spraying and wiping starts one operation and then stops.

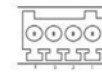
DO2 used for spraying control
DO_2 connected to DI- via MOSFET - starts spraying.
Spraying stops, and the LED turns Off when DO_2 is not triggered.

AXIS Q1604_DIDO-port

Connectors

I/O Connector

4-pin terminal block

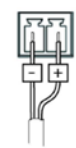


For an example diagram, see *Connection Diagrams on page 67*.

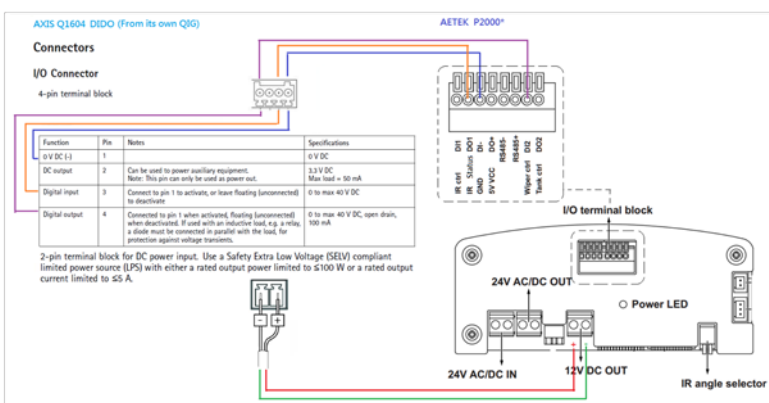
Function	Pin	Notes	Specifications
0 V DC (-)	1		
DC output	2	Can be used to power auxiliary equipment. Note: This pin can only be used as power out.	3.3 V DC Max load = 50 mA
Digital input	3	Connect to pin 1 to activate, or leave floating (unconnected) to deactivate	0 to max 40 V DC
Digital output	4	Connected to pin 1 when activated, floating (unconnected) when deactivated. If used with an inductive load, e.g. a relay, a diode must be connected in parallel with the load, for protection against voltage transients.	0 to max 40 V DC, open drain, 100 mA

Power Connector

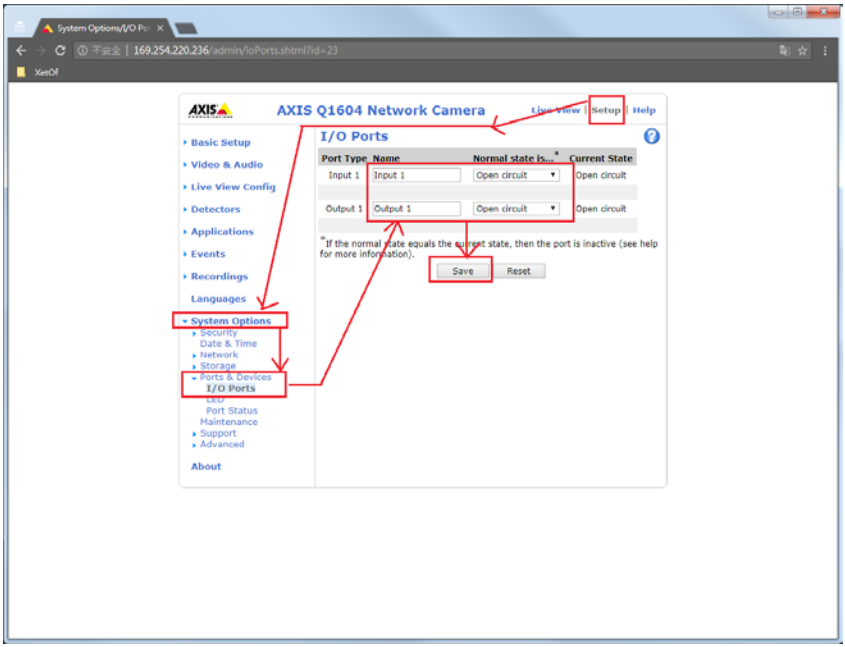
2-pin terminal block for DC power input. Use a Safety Extra Low Voltage (SELV) compliant limited power source (LPS) with either a rated output power limited to ≤100 W or a rated output current limited to ≤5 A.



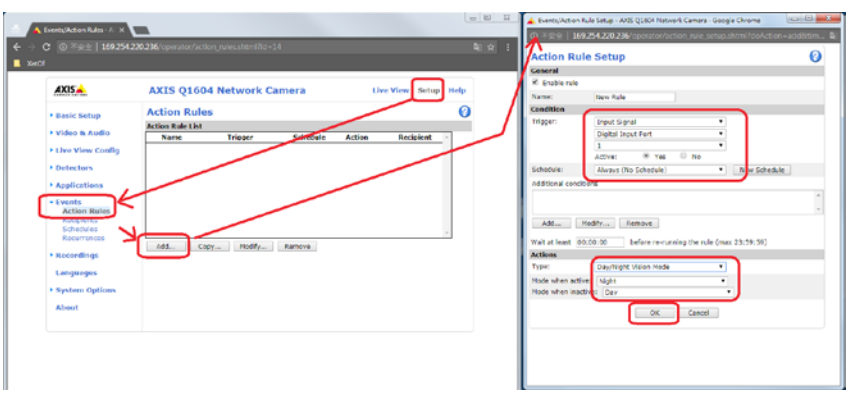
AXIS Q1604 DIDO port to _AETEK Camera housing



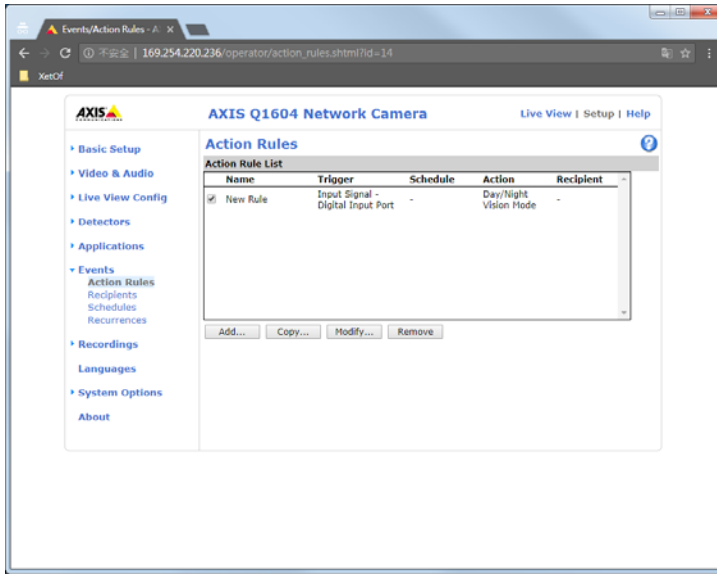
AXIS Q1604_DIDO_Setting



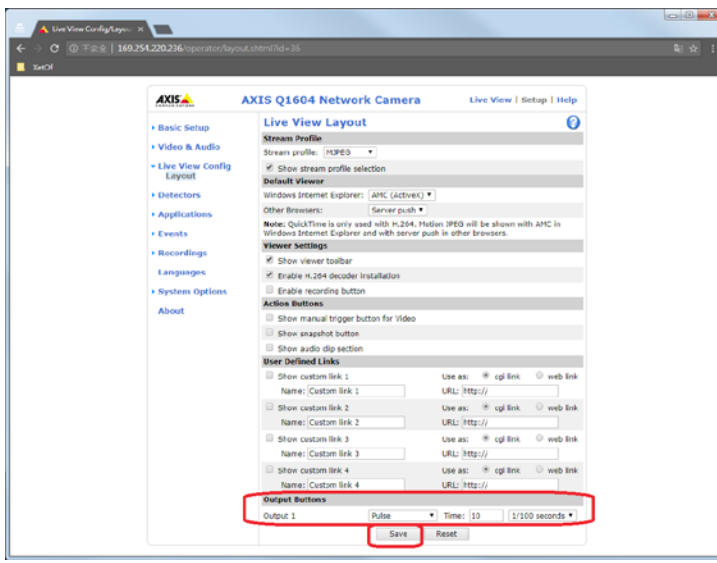
AXIS Q1604_IRStatus-TriggerDayNight(ICR)



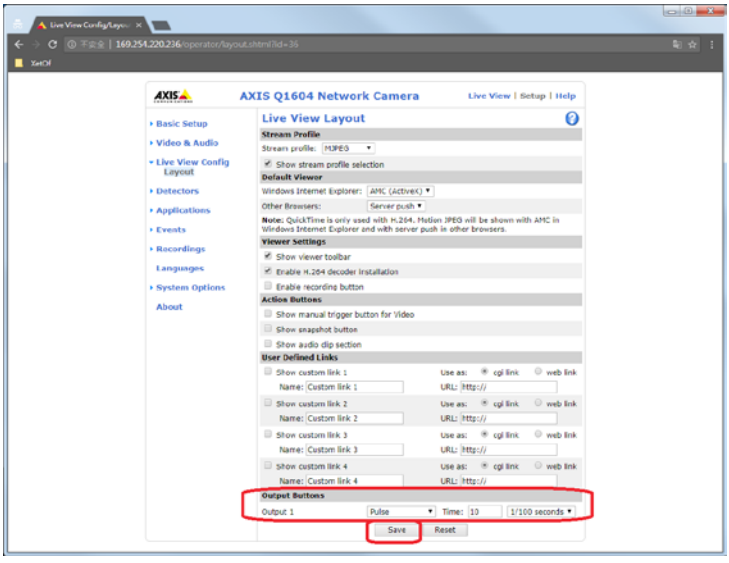
AXIS Q1604_IRStatus-TriggerDayNight(ICR)_2



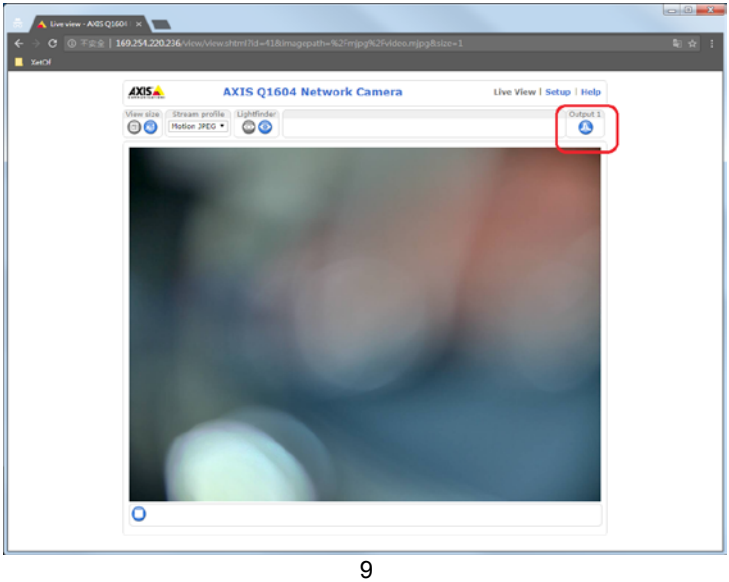
AXIS Q1604_IRStatus-TriggerDayNight(ICR)_3



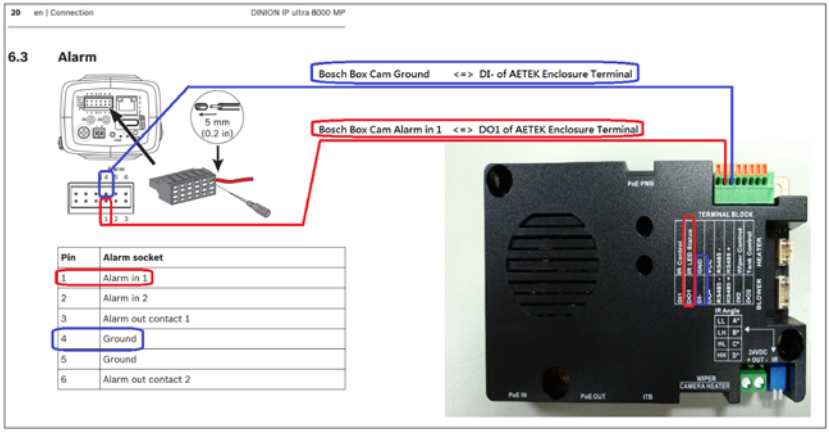
AXIS Q1604_DO_CtrlWiper_01



AXIS Q1604_DO_CtrlWiper_02

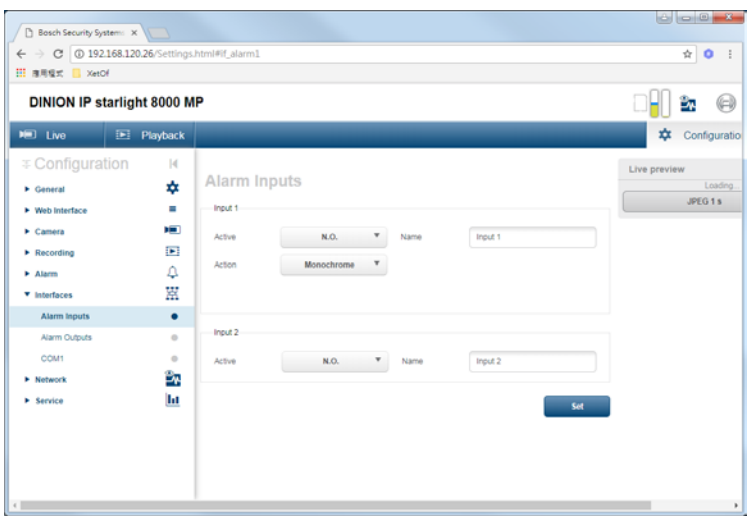


BOSCH DINION IP starlight 8000MP_AlarmIn01_DN_0

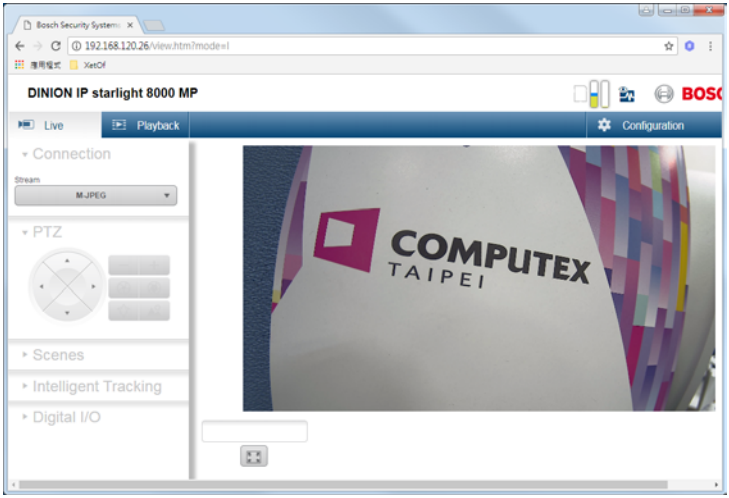


Pin	Alarm socket
1	Alarm in 1
2	Alarm in 2
3	Alarm out contact 1
4	Ground
5	Ground
6	Alarm out contact 2

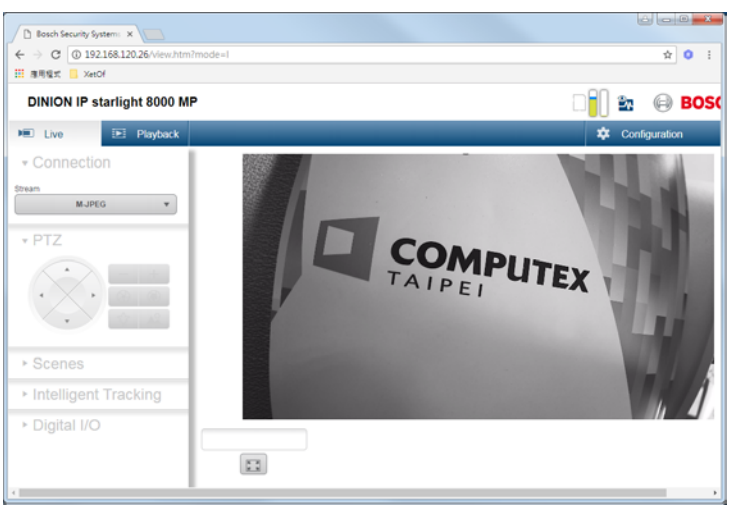
BOSCH DINION IP starlight 8000MP_AlarmIn01_DN_1



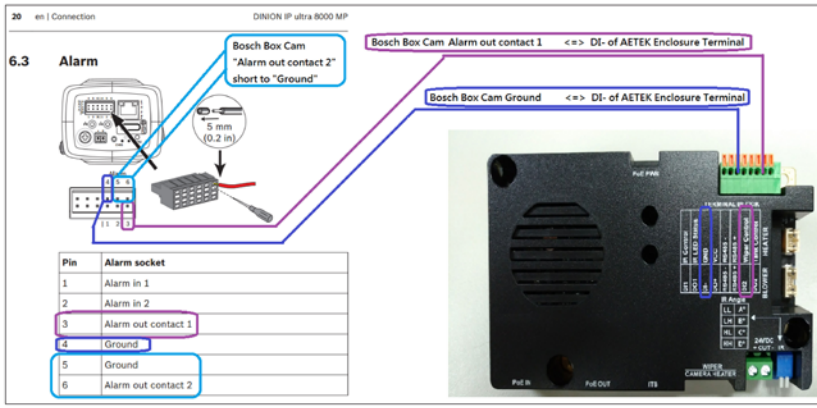
BOSCH DINION IP starlight 8000MP_AlarmIn01_DN_2



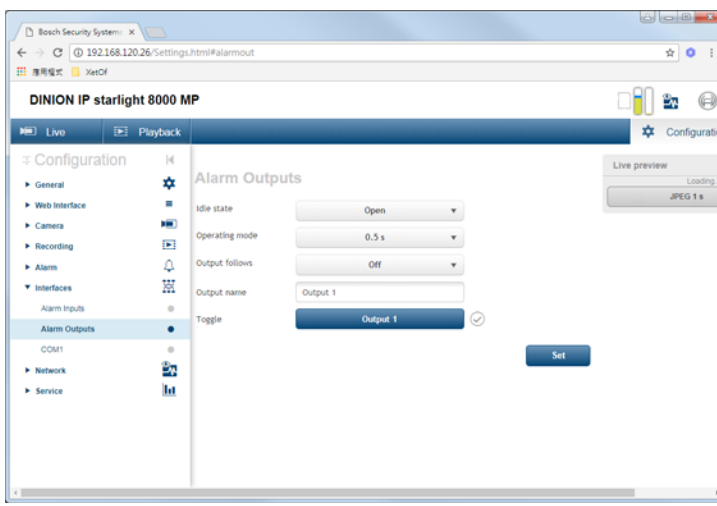
BOSCH DINION IP starlight 8000MP_AlarmIn01_DN_3



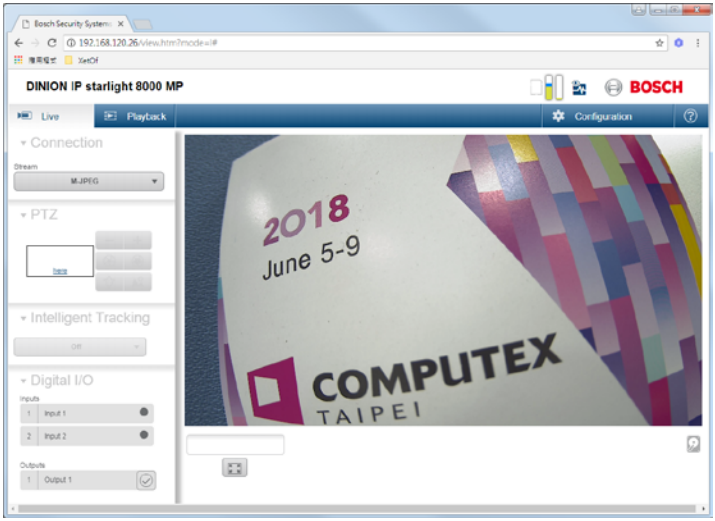
BOSCH DINION IP starlight 8000MP_AlarmOut_Wiper_0



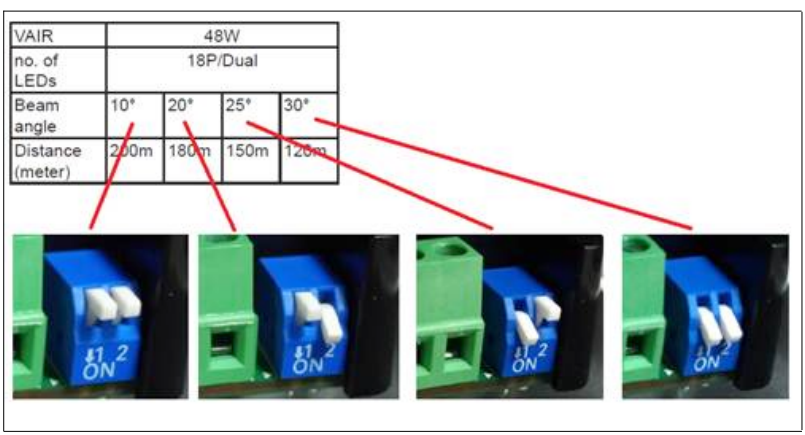
BOSCH DINION IP starlight 8000MP_AlarmOut_Wiper_1



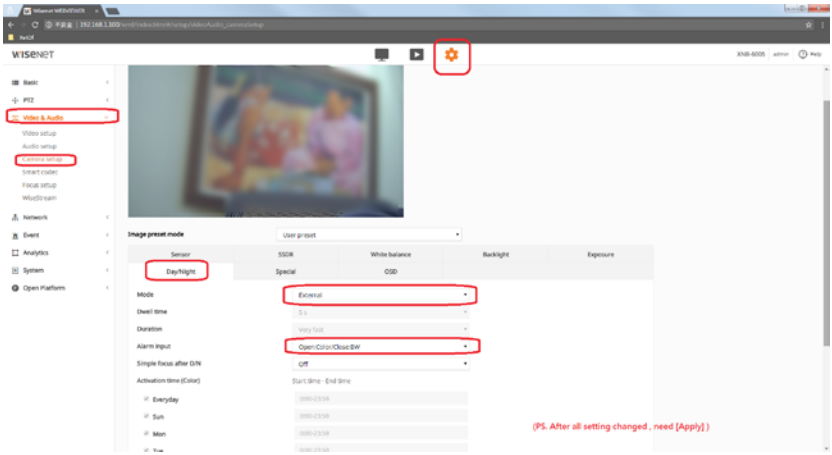
BOSCH DINION IP starlight 8000MP_AlarmOut_Wiper_2



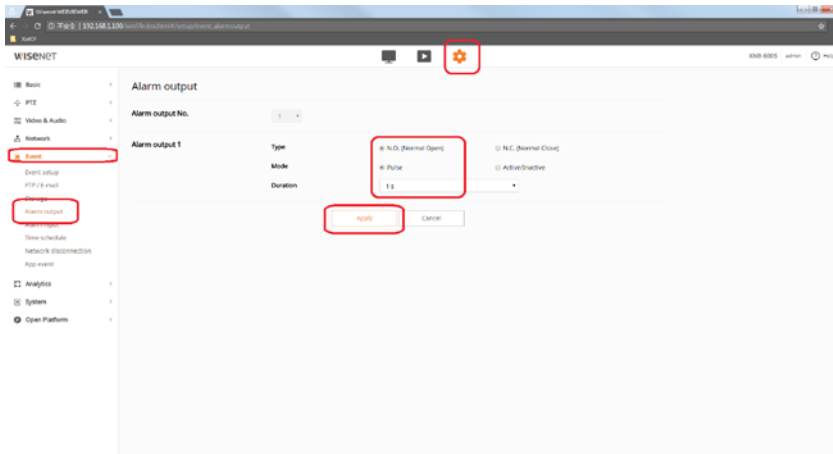
BOSCH DINION VaIR-ZoombyDIP-switch



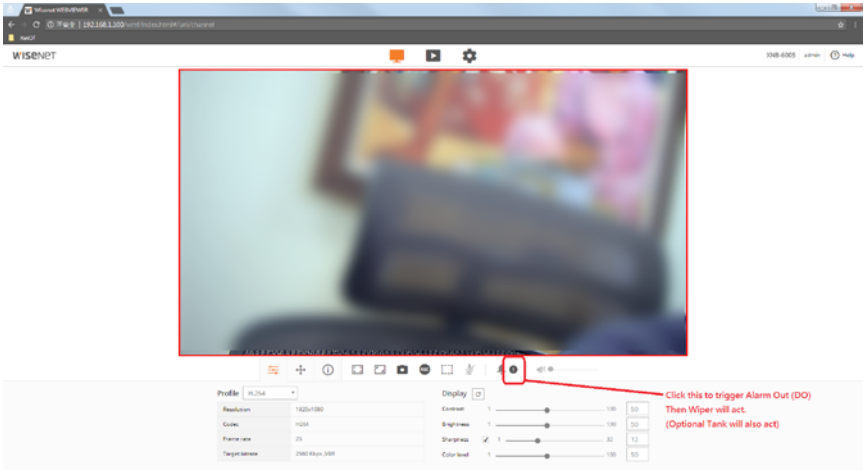
Hanwha Box Camera_DayNight_Setting



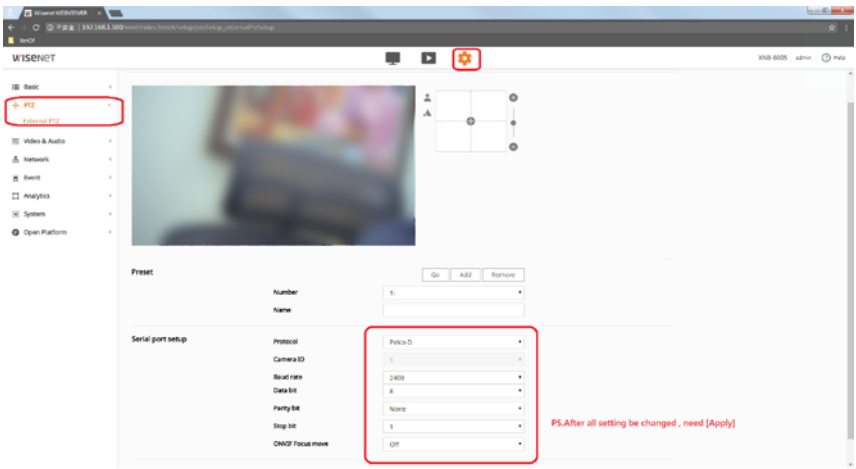
Hanwha Box Camera_DoToWiperTank_Setting_1



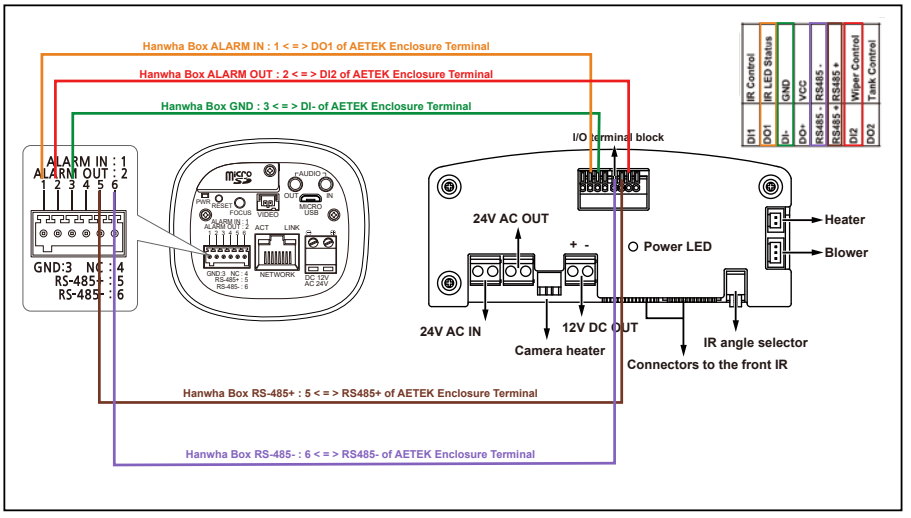
Hanwha Box Camera_DoToWiperTank_Setting_2



Hanwha Box Camera_VaIR-Zoom byRs485_Setting_1

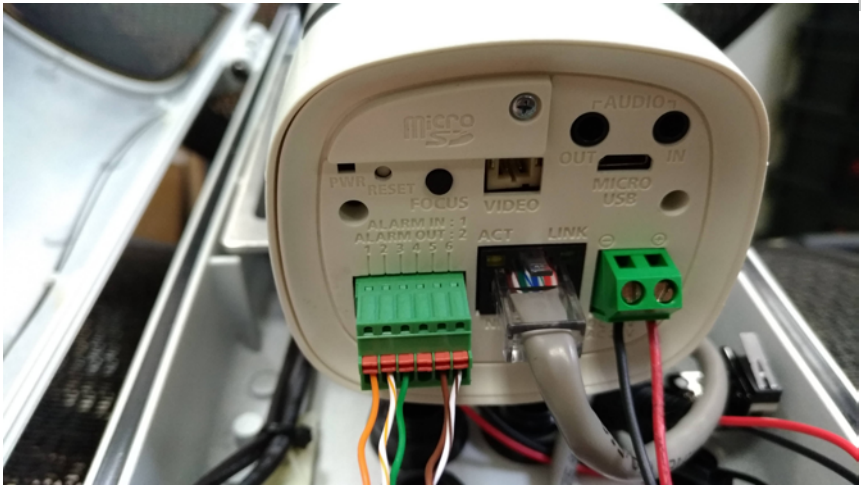


Hanwha Box Camera_Wiring_0

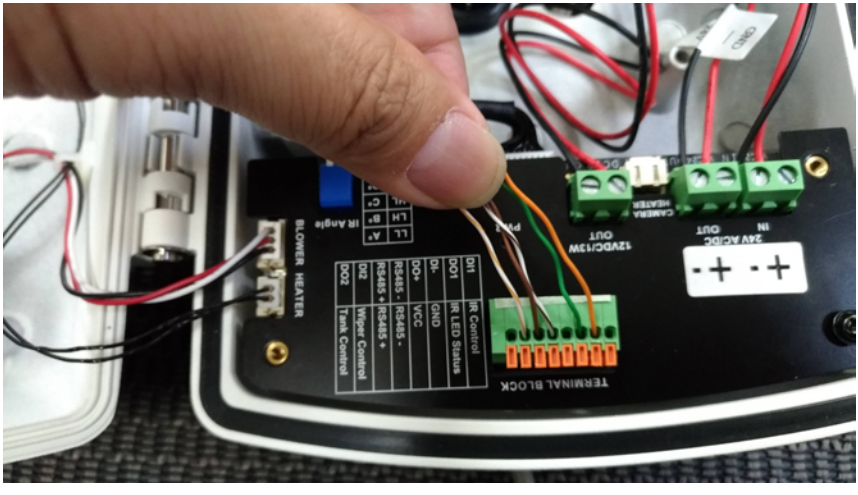


Hanwha Box Camera_Wiring_1

Hanwha Box Camera_Wiring_2



Hanwha Box Camera_Wiring_3



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