

 说明	
 注意	
 危险	



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TV



•

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-----	-------	----

1

1.1



1	6 1/4-20UNC	11 RS485
2 LED	7 DC 12V	12 3G -SDI
3	8	13 HDMI
4 POWER	9 RS232 IN	14 USB3.0
5	10 RS232 OUT	15 LINE IN

1.2

1.2.1

DC 12V

1.2.2

HOME

 注意

- 1 1# 1#
 - 2 0 0
-

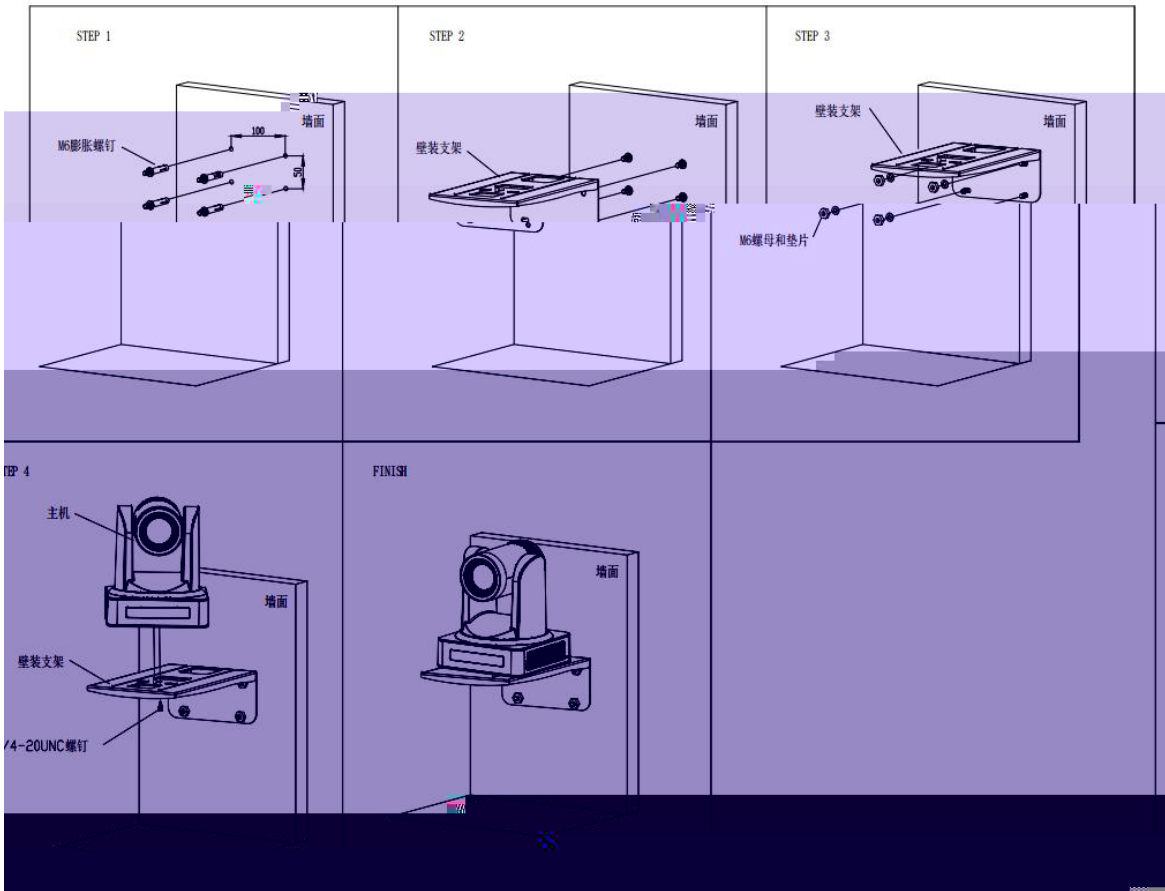
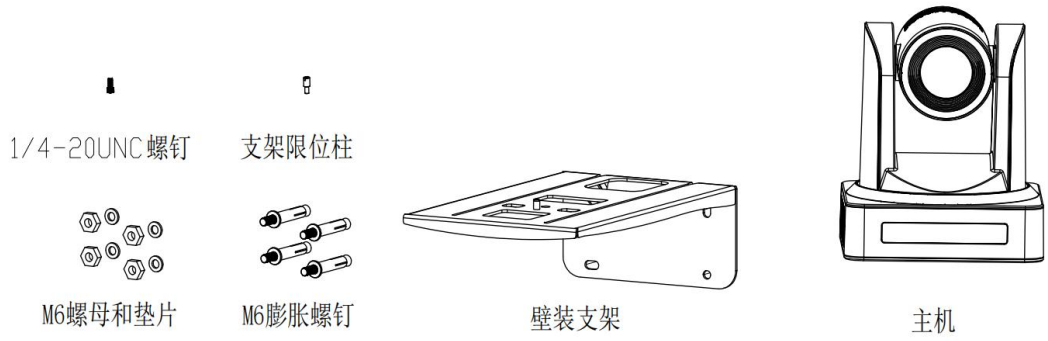
1.3

m" -

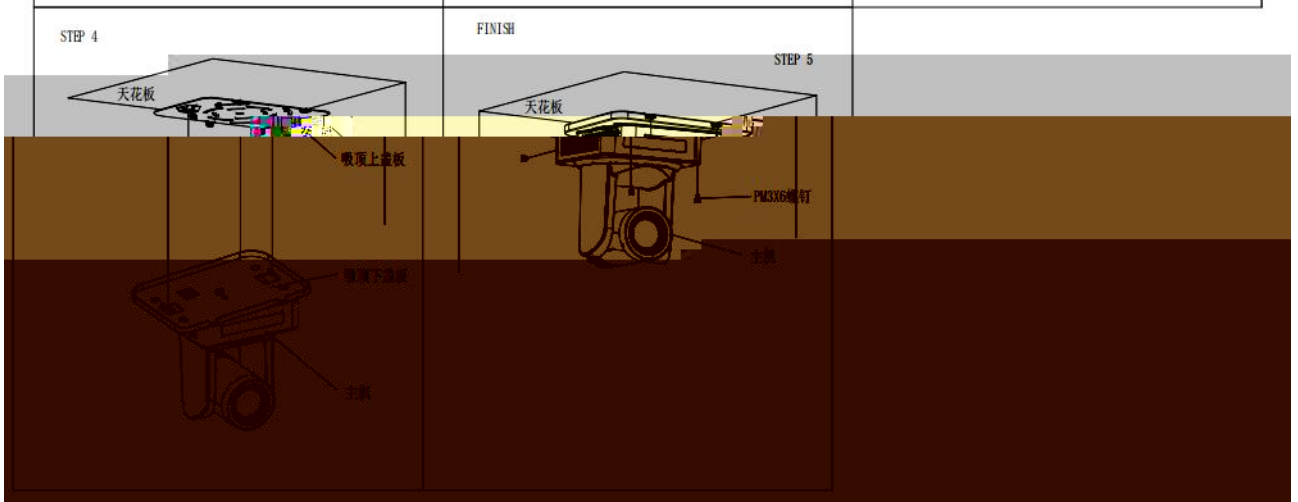
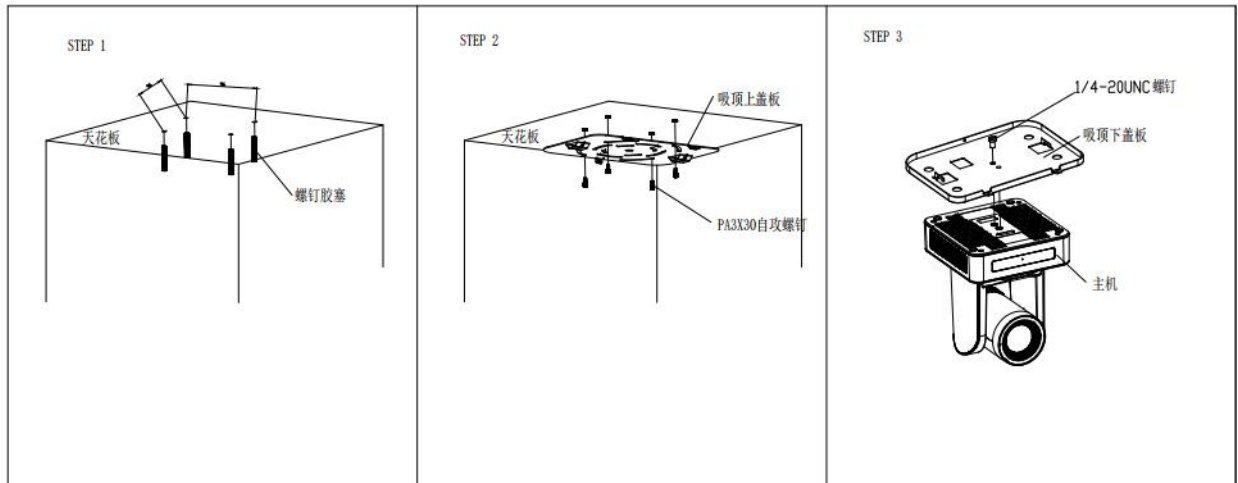
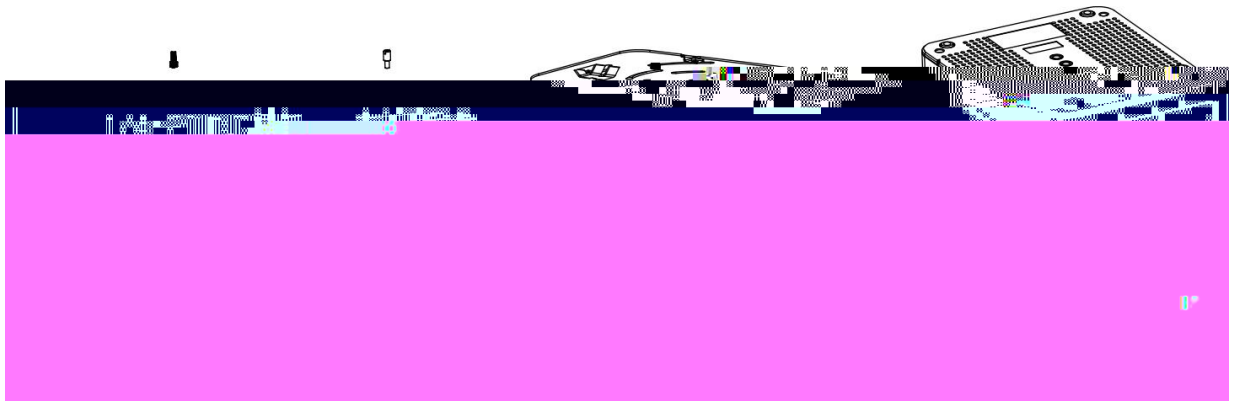
1.4



1.4.1



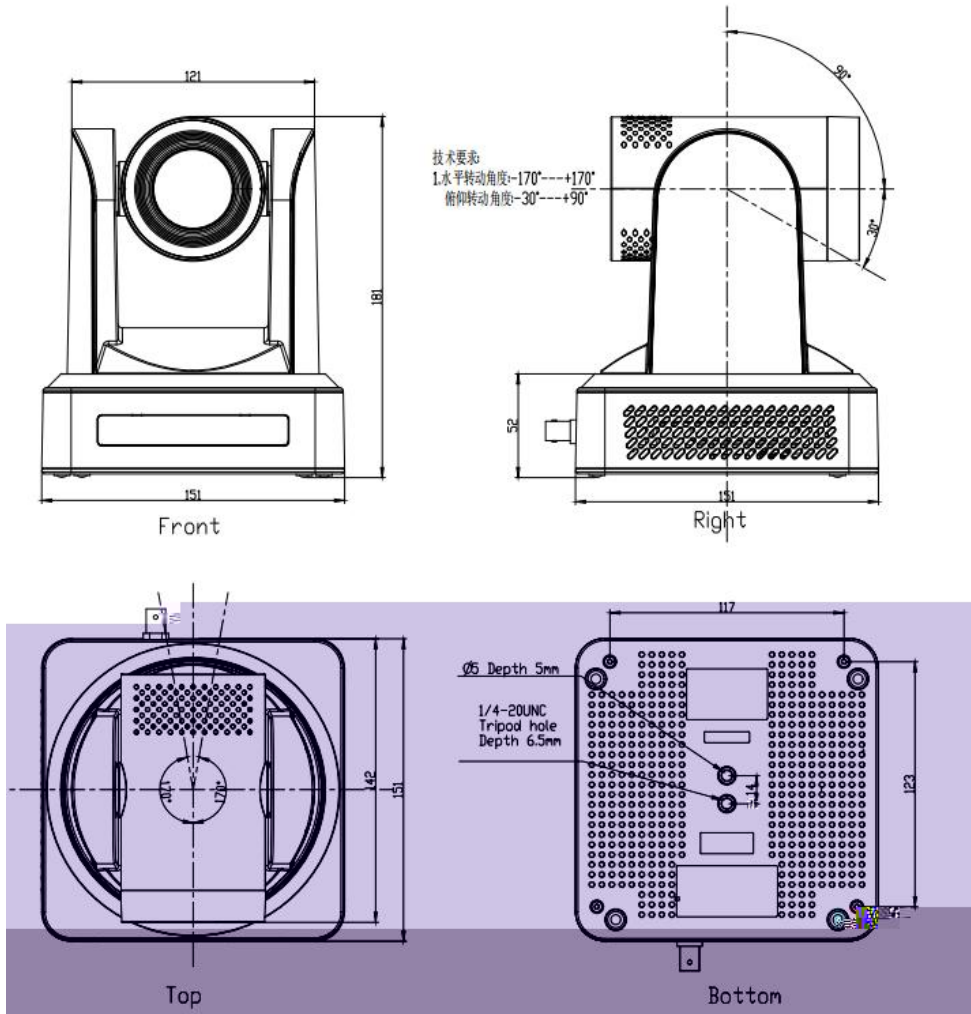
1.4.2



2

2.1

2.1.1



2.1.2

2-1

		1

		1
		1
		1
		USB 3.0
		RS232 1
		1

2.2

ISP

H.265/H.264

- 1920x1080 1/2.8 207 60 /
- 12X 20X 30
-
- 2D 3D CMOS
- 1080P60 HDMI SDI USB LAN POE+ SDI 100
- 1920x1080 H.265/H.264 60 / AAC G.711A
- 48000 AAC G.711A AAC 16000 32000 44100 G.711A 8000
- RTMP ONVIF GB/T28181 RTSP RTMP SRT NDI() RTP VISCA (Wowza FMS)

- AI

- RS485 RS232 RS232

- VISC A PELC O -D PELC O -P

-

- OLED IP

- / 400mW

- 255 (10)

- 2.4G

-

2.3

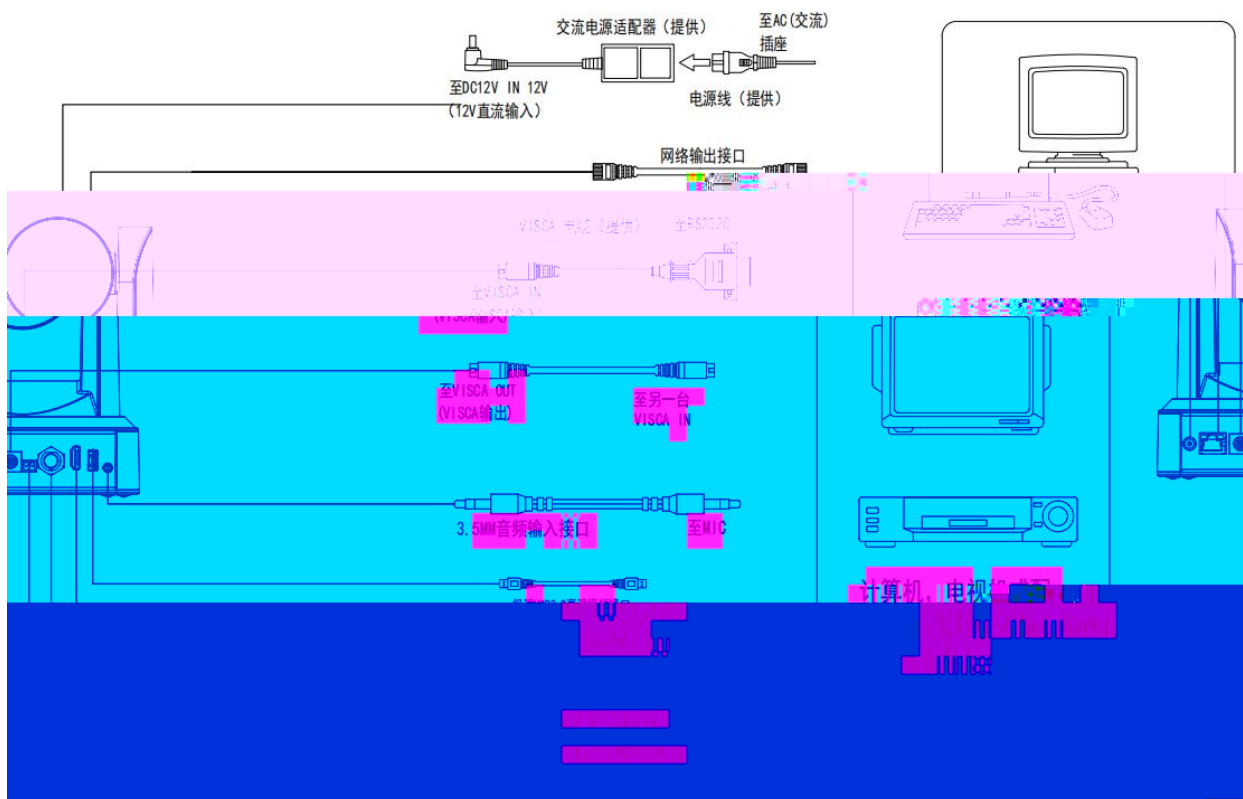
/	12 (G 0)	20 (G 1)	30 (G 2)
	1/2.8 CMOS		
	207 16 9		
	HDMI/SDI/LAN 1080P60/59.94/50/30/29.97/25 720P60/59.94/ 50 USB YUY2/NV12:1920 x 1080/1280 x 720/1024 x 576/800 x 600/800 x 448/640 x 480/640 x 360/480 x 270/320 x 180P30/25/20/15/10/5 H264/H265/MJPG :1920 x 1080/1600 x 896/1280 x 720/1024 x 576/960 x540/800 x600/800 x 448/720 x576/720 x480/640 x480/640 x360/352 x288/320 x240P60/50/30/25/20/15/10/5fps		

	12 f=4.1~49.2mm	20 f=5.05~91.49mm	30 F=5.2~148.4mm
	6.72° 70.4°	3.81° 60.04°	3.29° 58.1°
	F1.8 - F2.68	F1.8 - F2.9	F1.3 - F4.8
	16X		
	0.5Lux(F1.8, A G C O N)		
	2D 3D		
	/ / / 3000K/3500K/4000K/4500K/5000K/5500K/6000K/6500K/7000K		
	/ /		
	/		
	/		
	/		
	/		
	/		
	>50dB		

	HDMI SDI LAN(POE+) USB3.0 A-IN RS232-IN RS232-O UT RS485 DC 12V
	HDMI SDI LAN USB3.0
	LAN H.264 H.265 USB 3.0 MJPG H264 H.265 YUY2 NV12

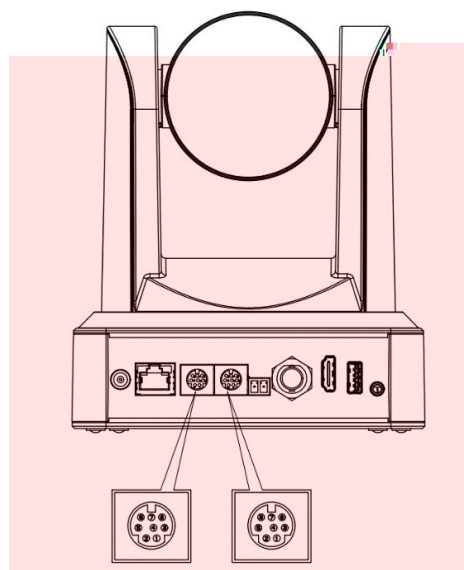
	64-40960
	50Hz: 1fps ~ 50fps 60Hz: 1fps ~ 60fps
	3.5mm
	HDMI LAN USB3.0 SDI
	96Kbps 128Kbps
	AAC G.711A
	100M POE+
	RTSP RTMP ONVIF GB/T28181 SRT NDI() VISCA
	RS232-IN RS232-OUT RS485
	VISCA/Pelco-D/Pelco-P 115200/38400/9600/4800/2400
USB	UVC UAC
	HEC 3800 (DC 12V)
	AC 110V ~ AC 220V DC 12V / 1.5A
	DC 12V ± 10%
	1.2A
	13.8W

	-170° +170°
	-30° +90°
	0.1° /s 60° /s
	0.1° /s 30° /s
	60° /s 30° /s

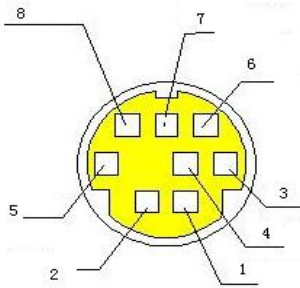
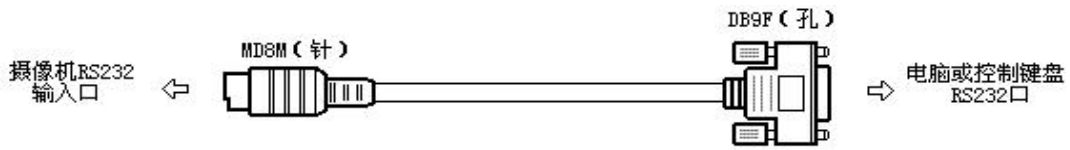


2.4.2 RS-232

1 RS-232



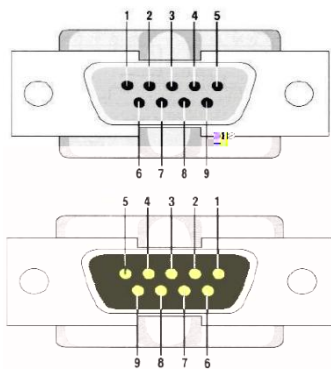
	WindowsDB-9
1.D TR	1.DC D
2.DSR	2.RXD
3.TXD	3.TXD
4.G ND	4.DTR
5.RXD	5.G ND
6.G ND	6.DSR
7.IR OUT	7.RTS
8.NC	8.C TS
	9.RI



NO.		
1	DTR	Data Terminal Ready
2	DSR	Data Set Ready
3	TXD	Transmit Data
4	GND	
5	RXD	Receive Data
6	GND	
7	IR OUT	IR Commander Signal IR
8	NC	No Connection

2 RS-232 Mini-DIN 8-pin

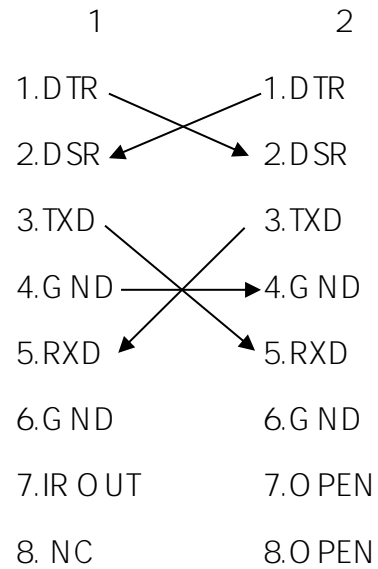
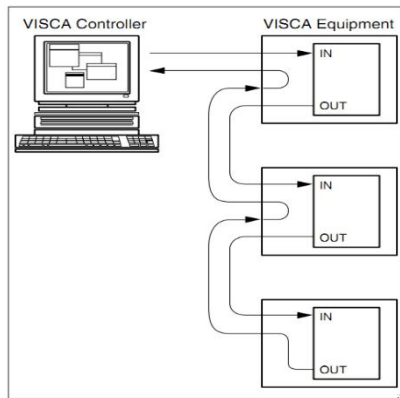
3 RS232(DB9)



NO.		
1	DCD	Data Carrier Detect
2	RXD	Receive Data
3	TXD	Transmit Data
4	DTR	Data Terminal Ready
5	GND	System Ground

6	DSR	Data Set Ready
7	RTS	Request to Send
8	CTS	Clear to Send
9	RI	Ring Indicator

4 VISCA



 注意

RS232

3

3.1

3.1.1

DC 12V

HOME

0

0

3.1.2

1.1

1

192.168.5.163

IP
admin

IP

* #

IP

2 SDI HDMI

3 USB3.0

USB3.0

USB3.0

3.2

()

1

" " + " *"

3 LED

LED

LED

LED

20

+ 0-9

8.

HOME

9.

/

10.

/ OSD

11.

* + + F1 1

* + + F2 2

* + + F3 3

* + + F4 4

12.

+ # +

+ # + 0

1080P60

* + # + 6

+ # + 1

1080P50.94

* + # + 3

+ # + 2

1080P50

* + # + 4

+ # + 3

1080P30

* + # + 9

+ # + 4

1080P29.97

* + # +

+ # + 5

1080P25

+ * +

+ # + 6

720P60

* + # + IP/ /

+ # + 7

720P59.94

+ # + 8

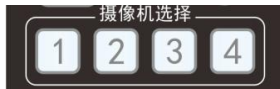
720P50

3.2.2

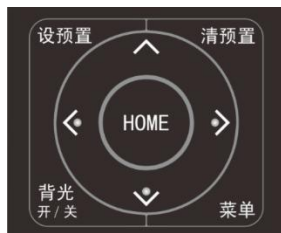
1 " HOME

2 " * + #
+ F1 " * # F1

1

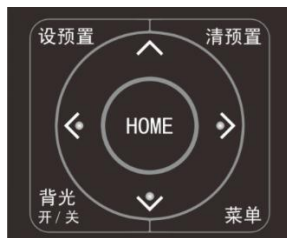


2



3

1 0~9



2 10
0~9

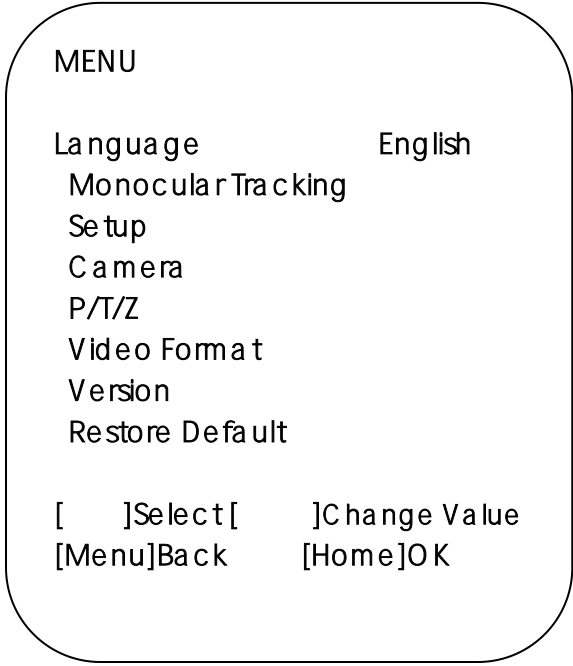
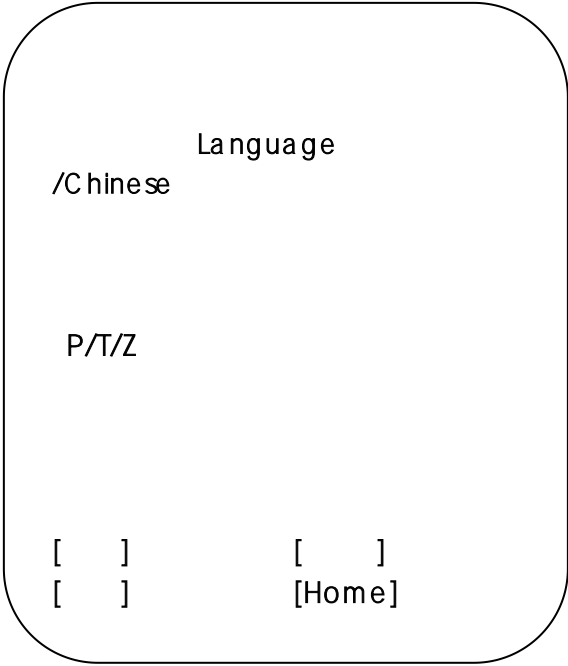
3 0~9

4



/

5



Language

/

P/T/Z

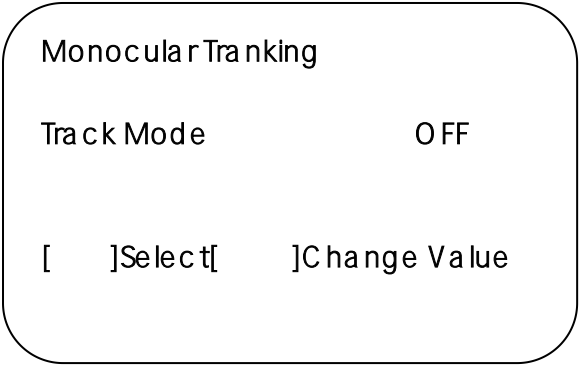
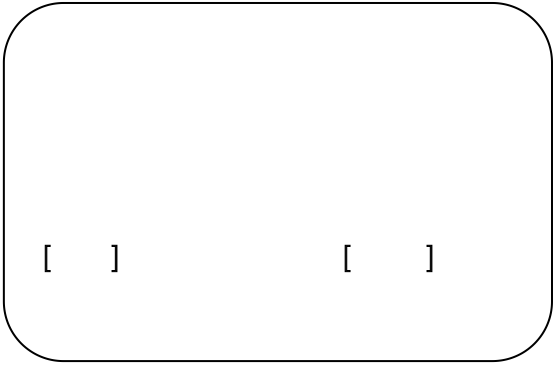
" " " "

[]
[]

[]
[Home] [Home]

3.3.2

HOME



/ / / /

0~5

0

0~60

3.3.3

HOME

VISCA	1
Visca	
PELCO-P	1
PELCO-D	1
	9600
[]	[]
[]	

VISCA /Pelco-P/Pelco-D/

2400/4800/9600/115200

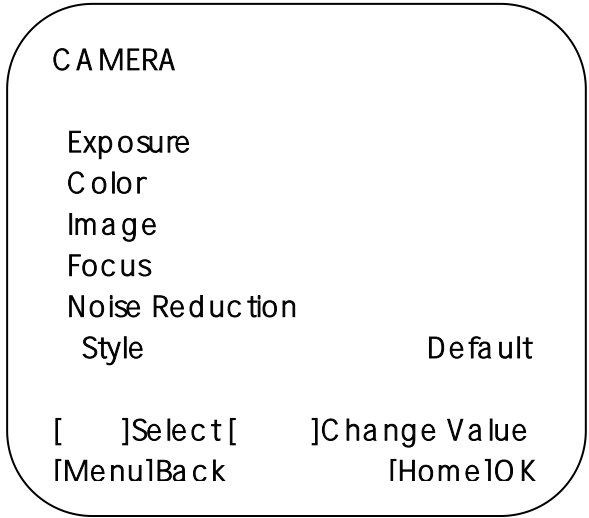
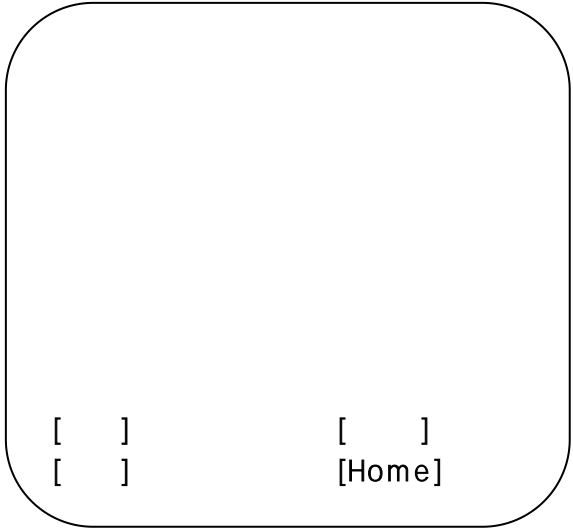
SETUP	
Protocol	Auto
Visca Address	1
Visca Address Fix	OFF
PELCO-P Address	1
PELCO-D Address	1
Baudrate	9600
Auto Filp	ON
[]Select []Change Value	
[Menu]Back	

VISCA =1~7 Pelco-P = 1~255
Pelco-D =1~255

Visca /

3.3.4

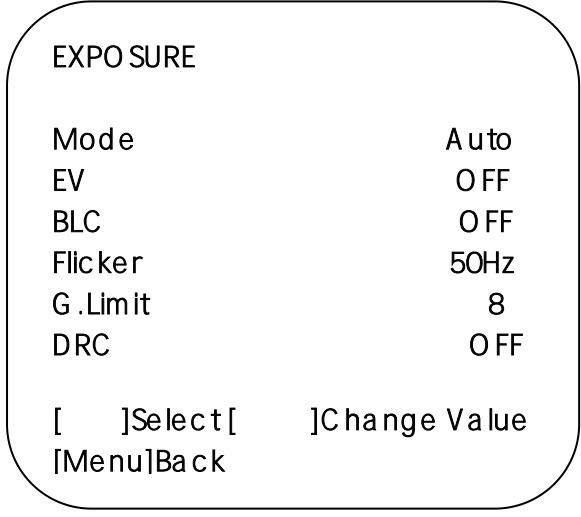
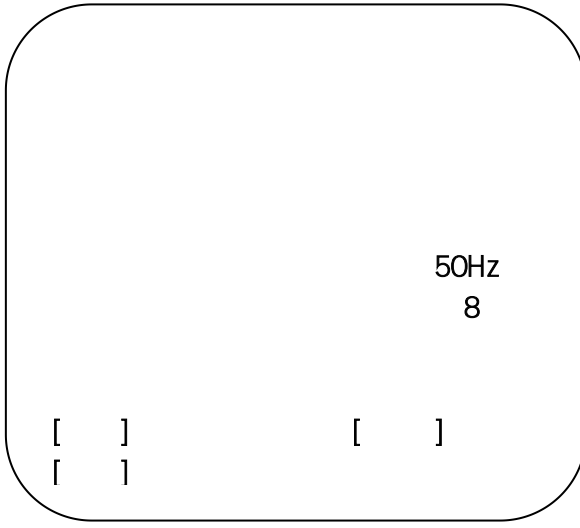
HOME



:
:
:

1

HOME



/
-7~7 " "
/
50Hz 60Hz



0~15

1~8

1/25 1/30 1/50 1/60 1/90 1/100 1/120 1/200 1/250
1/350 1/500 1/1000 1/2000 1/3000 1/4000 1/6000 1/10000

F2.4 F2.0 F1.8 F11.0 F9.6 F8.0 F6.8 F5.6 F4.8 F4.0 F3.4 F2.8

: 0~23

0~20

2

HOME

3

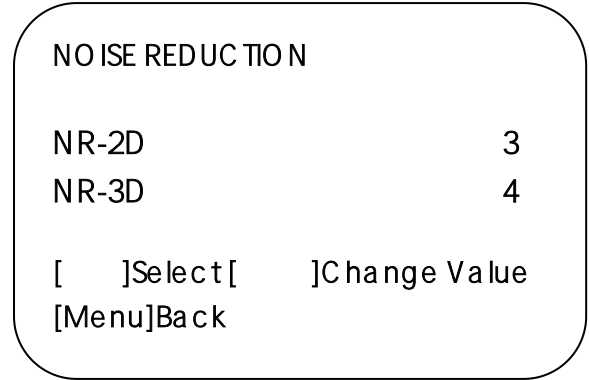
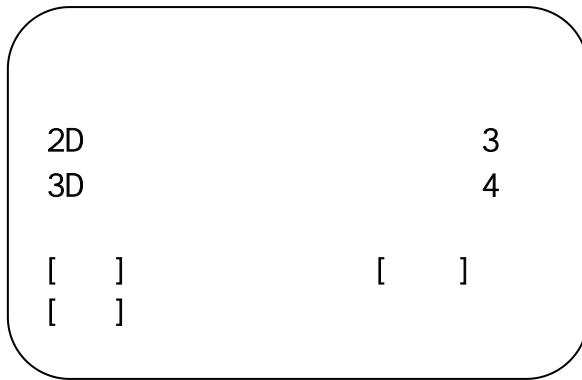
HOME

A diagram of a curved structure, possibly a lens or a part of a machine, with a vertical axis. The diagram is enclosed in a rounded rectangular border. On the left side, there is a vertical axis with a curved line representing the structure's profile. The diagram is divided into several sections by horizontal lines. The following table summarizes the numerical labels and their positions:

Label	Position
7	Top right section
7	Second section from top
6	Third section from top
0.50	Bottom right section
[]	Bottom left section
[]	Bottom right section

5

HOME



2D
1~7

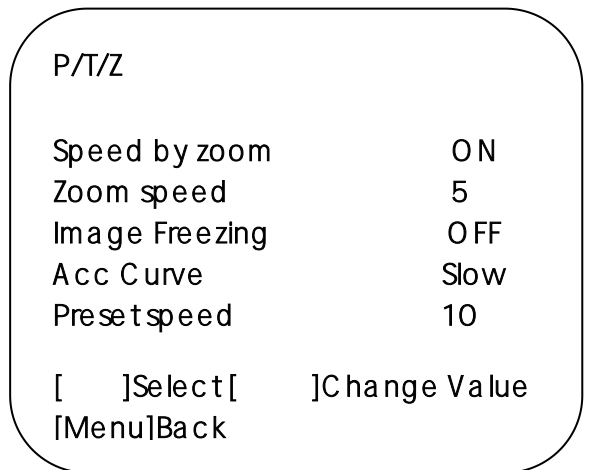
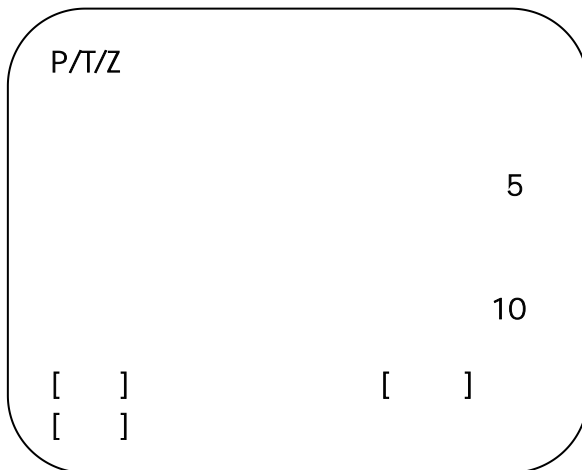
3D
1~7

3.3.5 P/T/Z

P/T/Z

HOME

P/T/Z



1~8

/

1~10

3.3.6

HOME

1080P60	1080P59.94
1080P50	1080P30
1080P29.97	1080P25
720P60	720P59.94
720P50	
[]	
[]	[Home]

[] []
[] [Home]

RESTORE DEFAULT
Restore Default NO
[]Select[]Change Value
[Menu]Back [Home]OK

/ ()



2

1

2 3 4

1

1

4

4.1

Internet



IP 192.168.5.163 IP 5

4 TCP/IPv4 " " Internet " " " " Internet TCP/IP

4 TCP/IPv4 " " " " IP

IP IP IP



IP IP

" " " " " cmd" "

" DOS " ping 192.168.5.26"

4-1

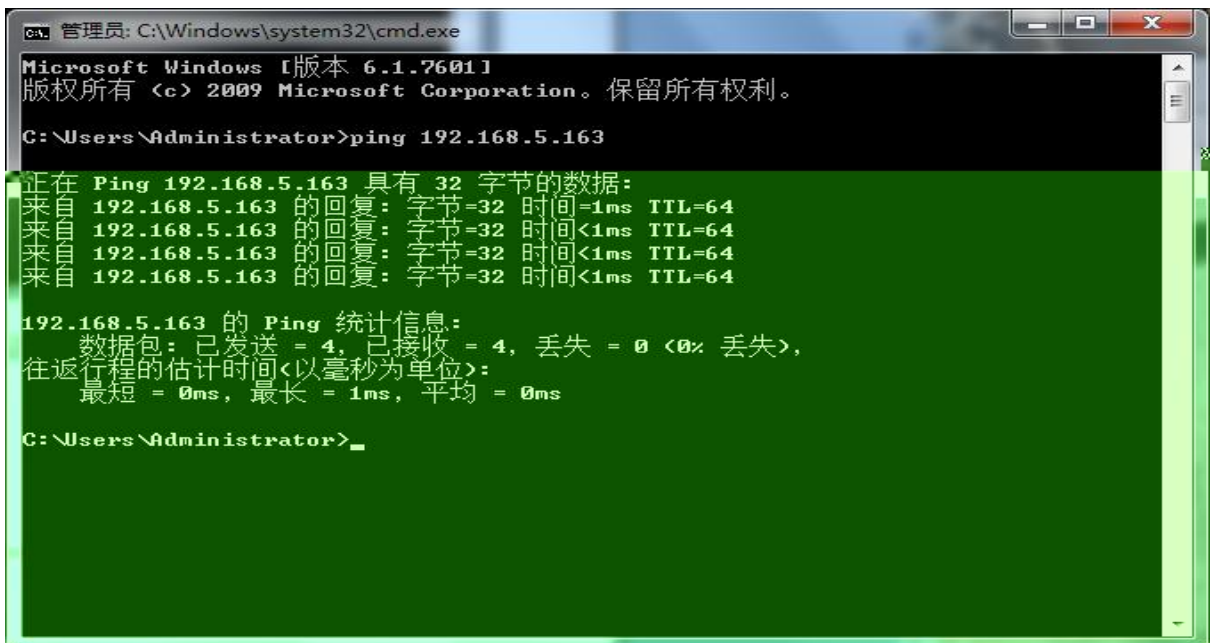


DOS

" ping 192.168.5.163"

IP

4-2





4.2 IE

4.2.1 Web

1

IP 192.168.5.163 Web

admin
user2

user1

Web

IE 360

" | English"

4.2.2

1

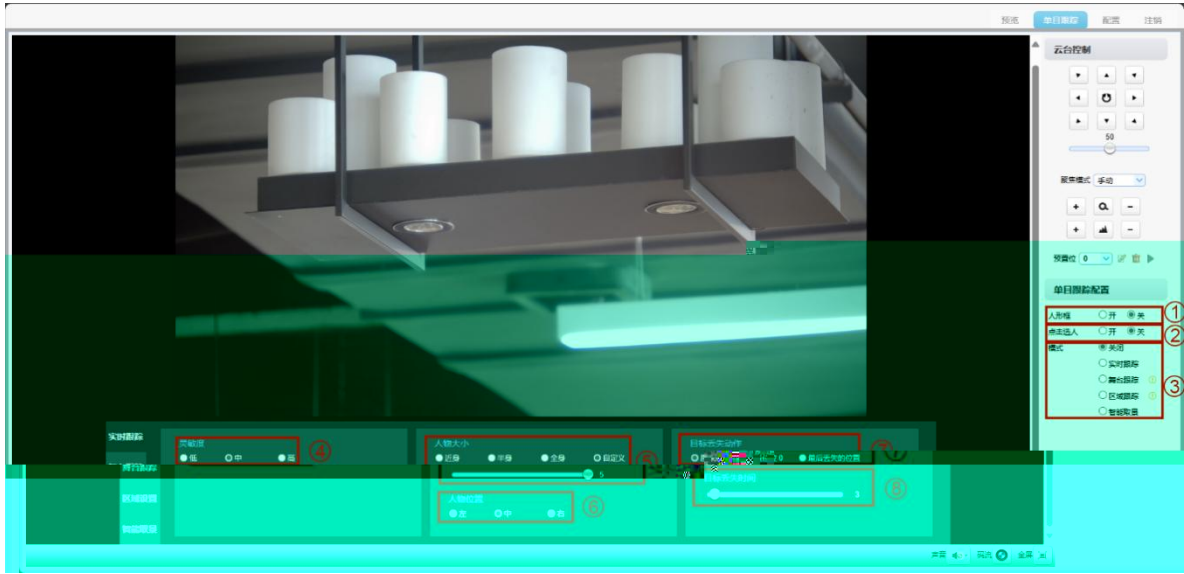
admin

2

user1 user2



4.2.3



/
/

0 ~ 5

0

0 ~ 10

3

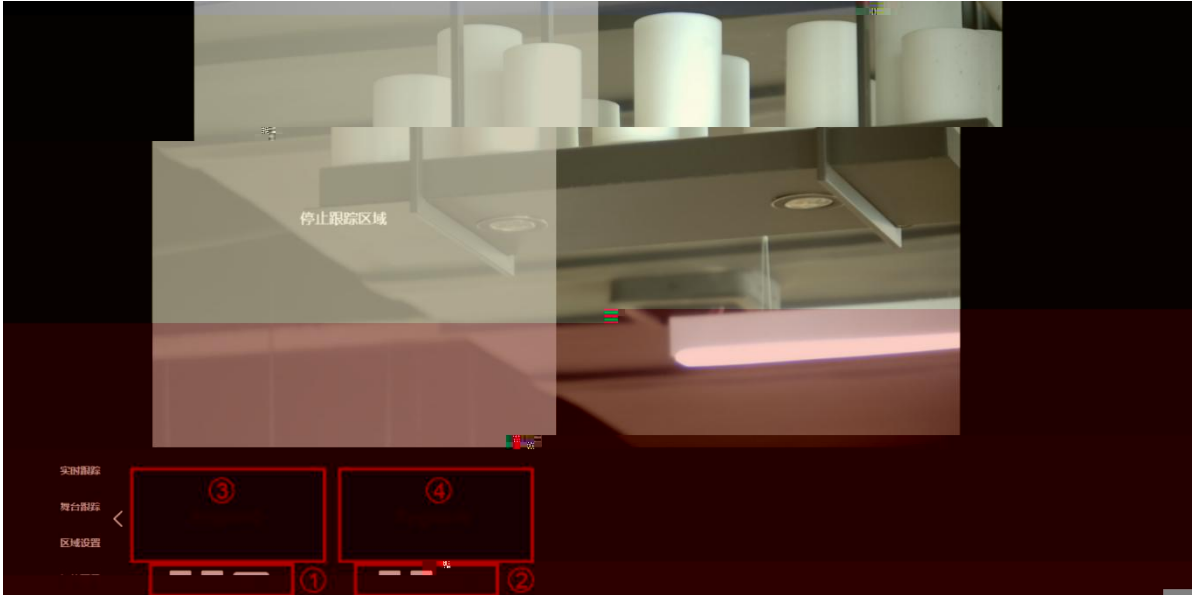
		×			
		×	×		
		×	×		

1.

2. ×

3.

0.8m, 1.5m, 3m



[]



[]



1

1

2



1.

2.

4.2.4

" "

4-1

	DNS
	G B28181

4.2.5

G.711A AAC

16000 32000 44100 48000

G.711A 48000

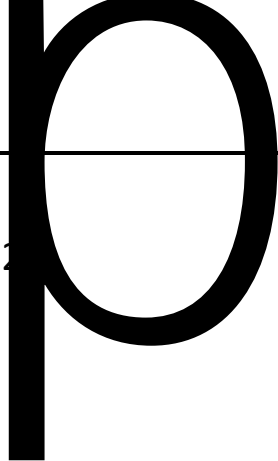
16bits

64kbps 32 48 96 128

4,1-10

" " " "

4.1



.

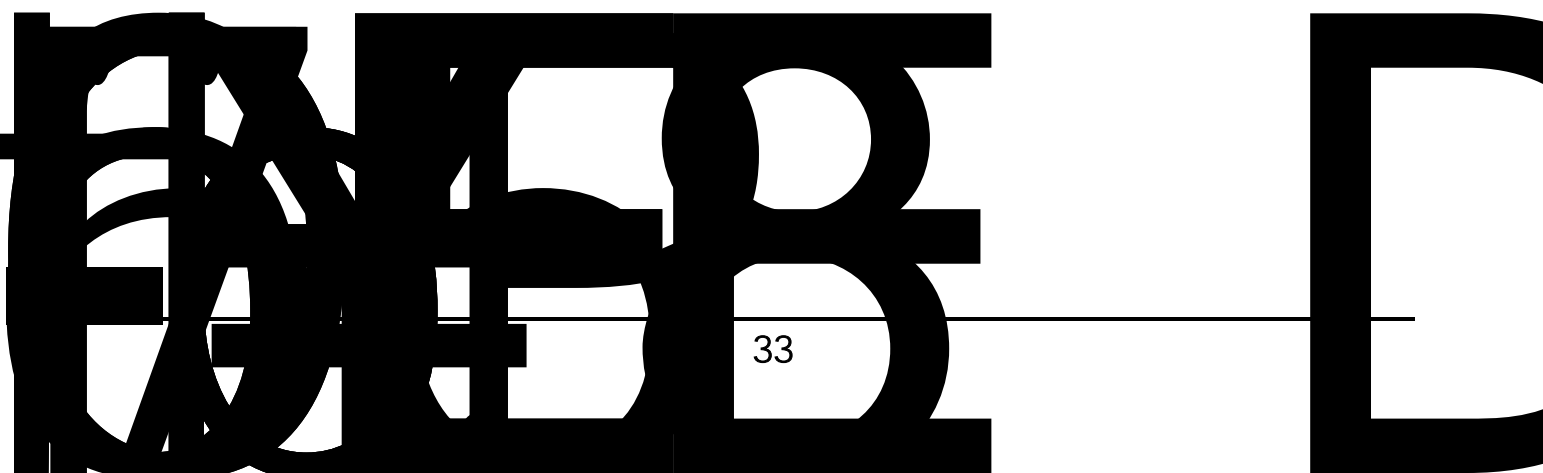
/ H.264 H.265 MJPEG

Profile	Profile	HP	BP	MP				
					1920*1080	1280*720		
640*480		320*180	320*240	640*360	640*480	1280*720	1920*1080	

/

I

	Kb/s		4096Kb/s	64-40960Kb/s	
	512Kb/s	64-40960Kb/s			
F/S		/	25F/S	5-60F/S	5-30
F/S		/	75	1-150 o	1-150
	QP	θ*	ω..	QP	20,10-51
	rtsp	rtm p			





" " " "
 3 RTP /
 / /
 RTP TS UDP TC P
 224.1.2.3
 4000 4002 /
 0~65535

; rtp://224.1.2.3:4000
 udp://@224.1.2.3:4000 tcp://@224.1.2.3:4002

4
A

B

0 -7~7
 / 50Hz
 60Hz / 8 0~15
 6 0~20
 1~8
 1/100 1/25 1/30
 1/50 1/60 1/90 1/100 1/120 1/200 1/250 1/350 1/500 1/1000 1/2000
 1/3000 1/4000 1/6000 1/10000



F9.6 F8.0 F6.8 F5.6 F4.8 F4.0 F3.4 F2.8 F2.4 F2.0 F1.8 F1.8 Close F11

11 0~23

C

2400K~7100K

" "

0 -10~10

0 -10~10

100% 60% 70% 80% 90% 100% 110% 120%
 130% 140% 150% 160% 170% 180% 190% 200%

7 0~14

56 0~255

158 0~255

D

7 0~14

7 0~14

6 0~15

0.50 0.45 0.48 0.50 0.55 0.63

1 8

E	2D	3D	
2D	2D		3 1~8
3D	3D		4 1~8

F



● a b c d e f

5

” ”

CAMERA 1

1970/01/01 05:36:00

” ” ” ”

6

48 28-200

48 28-200

” ” ” ”

7

1080P60	1080P59.94	1080P50	1080P30	1080P29.97	1080P25	720P60
720P59.94	720P50					

” ” ” ”

4.2.7

1

			3000	0-65535
Web	Web		80	0-65535
Onvif	Onvif		2000	0-65535
Soap	Soap	1936	0-65535	
Rtmp	Rtmp	1935	0-65535	
Rtsp	Rtsp		554	0-65535
Visca	Visca		1259	0-65535
Https	Https		443	0-65535
WebSocket	Visca		8088	0-65535

" " " "

RTSP	rtsp://	IP	:554/live/av0	av0	av1
RTMP	rtmp://	IP	:1935/live/av0	av0	av1

2

DHCP		IP	
IP	IP		192.168.5.163



● IP web

255.255.255.0

0.0.0.0

" " " " IP

IP

3 DNS

DNS DNS 0.0.0.0

DNS DNS 0.0.0.0

" " " "

4 G B28181

G B28181

:

3600 5-65535

60 1-65535

ID:34020000001 320000001

IPC

12345678

SIP 5060 0-65535

G B28181 IP

SIP 5060 0-65535

ID 34020000002000000001

" " " "

5 SRT

SRT SRT 9000 0-65535

SRT SRT

SRT SRT 0 16 24 32

" " " "



6 RTMP

RTMP		RTMP		
"	"	"	RTMP	"

7 RTSP

RTSP		RTSP		
RTSP	RTSP			
"	"	"	RTSP	"

4.2.8

1

		CAMERA 1
ID	ID	1
"	"	"

2

	YYYY-MM-DD	- -	MM-DD-YYYY	- -
DD-MM-YYYY	- -			
	/' / ' / ' / ' /			

	24	12		
NTP		NTP		
	NTP		NTP	1
2-10				
NTP		NTP		NTP
time.nits.gov				
NTP	NTP	NTP		123

•

" " " "

NTP

" "

3

1

2

admin

1

user1

2

user2

admin

1

user1

2

user2

" " " "



•

4

" ..."

" "



•

a

b

c

*# 6

a

IP

5



“ ” “ ” “ ” “ ” “ ” “ ”
“ ”
6
“ ” “ ” “ ” “ ” “ ” “ ”

4.2.9

“ ” “ ” “ ” “ ” “ ” “ ” “ ”



5

	RS232/RS485	VISC A IN
RS232		
	2400/4800/9600/115200	/
	1	
	8	
	1	
	0	0

5.1 VISC A

5.1.1 VISC A

		VISC A	
Ttacking Mode	Direct	8x 0A 01 32 00 00 02 Op FF	Op: 0: 1: 2: 3: 4:
	Ttacking Mode Inq	8x 09 01 32 FF	y0 50 Op FF Op:0-4
Ttacking Sensitivity ()	Direct	8x 01 0B 00 02 Op FF	Op: 0: 1: 2:
	Ttacking Sensitivity Inq	8x 09 0B 00 02 FF	y0 50 Op FF Op:0-2
Ttacking	Direct	8x 01 0B 02 01	Op: 0: 1: 2:

Figure size ()		Op FF	3:
	Ttacking Figure size	8x 09 0B 02 01 FF	y0 50 Op FF Op:0-3
Ttacking_Figure size Custom level ()	Direct	8x 01 0B 02 02 Op FF	Op: 0: 1: 2:
	Ttacking Figure size Custom level Inq	8x 09 0B 02 02 FF	y0 50 Op FF Op:0-2
Ttacking Lost target action ()	Direct	8x 01 0B 00 04 Op FF	Op: 0: home 1: 0 2:
	Ttacking Lost target action Inq	8x 09 0B 00 04 FF	y0 50 Op FF Op:0-2
Ttacking Target lost time ()	Direct	8x 01 0B 00 03 Op FF	Op: 0-60
	Ttacking Target lost time Inq	8x 09 0B 00 03 FF	y0 50 Op FF Op:0-60

5.1.2

Ack/Completion Message		
ACK	z0 41 FF	Returned when the command is accepted.
Completion	z0 51 FF	Returned when the command has been executed.

z = + 8

Error Messages		
Syntax Error	z0 60 02 FF	Returned when the command format is

		different or when a command with illegal command parameters is accepted.
Command Buffer Full	z0 60 03 FF	Indicates that two sockets are already being used (executing two commands) and the command could not be accepted when received.
Command Canceled	z0 6y 04 FF(y: Socket No.)	Returned when a command which is being executed in a socket specified by the cancel command is canceled. The completion message for the command is not returned.
No Socket	z0 6y 05 FF(y: Socket No.)	Returned when no command is executed in a socket specified by the cancel command, or when an invalid socket number is specified.
Command Not Executable	z0 6y 41 FF(y: Execution command Socket No. Inquiry command: 0)	Returned when a command cannot be executed due to current conditions. For example, when commands controlling the focus manually are received during auto focus.

5.1.3

AddressSet	Broadcast	88 30 0p FF	p Address setting
CAM _Power	On	8x 01 04 00 02 FF	Power ON/OFF
	Off	8x 01 04 00 03 FF	
CAM_Zoom	Stop	8x 01 04 07 00 FF	
	Tele (Standard)	8x 01 04 07 02 FF	
	Wide (Standard)	8x 01 04 07 03 FF	

	Tele(Variable)	8x 01 04 07 2p FF	p = 0(low) - 15(high)
	Wide(Variable)	8x 01 04 07 3p FF	p = 0(low) - 7(high)
	Direct	8x 01 04 47 Op Oq Or Os FF	p qrs: Zoom Position
CAM_Focus	Stop	8x 01 04 08 00 FF	
	Far(Standard)	8x 01 04 08 02 FF	
	Near(Standard)	8x 01 04 08 03 FF	
	Far(Variable)	8x 01 04 08 2p FF	p = 0(low) - 7(high)
	Near(Variable)	8x 01 04 08 3p FF	
	Direct	8x 01 04 48 Op Oq Or Os FF	p qrs: Focus Position
	Auto Focus	8x 01 04 38 02 FF	
	Manual Focus	8x 01 04 38 03 FF	
	One Push mode	8x 01 04 38 04 FF	
	One Push Triger	8x 01 04 18 01 FF	One Push Triger
CAM_Zoom Focus	Direct	8x 01 04 47 Op Oq Or Os Ot Ou Ov Ow FF	p qrs: Zoom Position tuvw: Focus Position
CAM_AF Sensitivity	High	8x 01 04 58 01 FF	Focus sensitivity Setting
	Normal	8x 01 04 58 02 FF	
	Low	8x 01 04 58 03 FF	
CAM_AF Zone	Front	8x 01 04 AA 00 FF	Focus Region Setting
	Be ting	8x 01 04 AA 01 FF	
	Me e ting	8x 01 04 AA 02 FF	
	Educa tion	8x 01 04 AA 03 FF	
	Moving	8x 01 04 AA 04 FF	

	Middle	8x 01 04 A A 05 FF	
CAM_WB	Auto	8x 01 04 35 00 FF	
	3000K	8x 01 04 35 01 FF	
	4000k	8x 01 04 35 02 FF	
	One Push mode	8x 01 04 35 03 FF	
	5000k	8x 01 04 35 04 FF	
	Manual	8x 01 04 35 05 FF	
	6500k	8x 01 04 35 06 FF	
	3500K	8x 01 04 35 07 FF	
	4500K	8x 01 04 35 08 FF	
	5500K	8x 01 04 35 09 FF	
	6000K	8x 01 04 35 0A FF	
	7000K	8x 01 04 35 0B FF	
	One Push Trigger	8x 01 04 10 05 FF	One Push WB Trigger(Enabled during One Push WB mode)
CAM_AWB Sensitivity	Low	8x 01 04 A 9 00 FF	WB Sensitivity Setting
	Normal	8x 01 04 A 9 01 FF	
	High	8x 01 04 A 9 02 FF	
CAM_RGain	Reset	8x 01 04 03 00 FF	Manual Control of R Gain
	Up	8x 01 04 03 02 FF	
	Down	8x 01 04 03 03 FF	
	Direct	8x 01 04 43 00 00 Op Oq FF	pq: R Gain
CAM_Bgain	Reset	8x 01 04 04 00 FF	Manual Control of B Gain
	Up	8x 01 04 04 02 FF	

	Down	8x 01 04 04 03 FF	
	Direct	8x 01 04 44 00 00 Op Oq FF	pq: B G a in
C A M _ A E	Full Auto	8x 01 04 39 00 FF	A u t o m a t i c E x p o s u r e m o d e
	Manual	8x 01 04 39 03 FF	M a n u a l C o n t r o l m o d e
	Shutter priority	8x 01 04 39 0A FF	S h u t t e r P r i o r i t y A u t o m a t i c E x p o s u r e m o d e
	Iris priority	8x 01 04 39 0B FF	I r i s P r i o r i t y A u t o m a t i c E x p o s u r e m o d e
	Bright	8x 01 04 39 0D FF	B r i g h t m o d e
C A M _ S h u t t e r	Reset	8x 01 04 0A 00 FF	S h u t t e r S e t t i n g
	Up	8x 01 04 0A 02 FF	
	Down	8x 01 04 0A 03 FF	
	Direct	8x 01 04 4A 00 00 Op Oq FF	pq: S h u t t e r P o s i t i o n
C A M _ I r i s	Reset	8x 01 04 0B 00 FF	I r i s S e t t i n g
	Up	8x 01 04 0B 02 FF	
	Down	8x 01 04 0B 03 FF	
	Direct	8x 01 04 4B 00 00 Op Oq FF	pq: I r i s P o s i t i o n
C A M _ G a i n L i m i t	Reset	8x 01 04 0C 00 FF	G a i n L i m i t S e t t i n g
	Up	8x 01 04 0C 02 FF	
	Down	8x 01 04 0C 03 FF	
	G a i n L i m i t	8x 01 04 2C Op FF	p: G a i n P o s i t i o n
C A M _ B r i g h t	Reset	8x 01 04 0D 00 FF	B r i g h t S e t t i n g

	Up	8x 01 04 0D 02 FF	pq: Bright Positon
	Down	8x 01 04 0D 03 FF	
	Direct	8x 01 04 4D 00 00 Op Oq FF	
CAM_ExpC omp	On	8x 01 04 3E 02 FF	Exposure Compensation ON/OFF
	Off	8x 01 04 3E 03 FF	
	Reset	8x 01 04 0E 00 FF	Exposure Compensation Amount Setting
	Up	8x 01 04 0E 02 FF	
	Down	8x 01 04 0E 03 FF	
	Direct	8x 01 04 4E 00 00 Op Oq FF	pq: ExpComp Position
CAM_Back Light	On	8x 01 04 33 02 FF	Back Light
	Off	8x 01 04 33 03 FF	Compensation
CAM_WDRS trength	Reset	8x 01 04 21 00 FF	WDR Level Setting
	Up	8x 01 04 21 02 FF	
	Down	8x 01 04 21 03 FF	
	Direct	8x 01 04 51 00 00 00 Op FF	p: WDR Level Positon
CAM_NR	2D	8x 01 04 53 Op FF	P=0-7 0:OFF
	3D	8x 01 04 54 Op FF	P=0-8 0:OFF
CAM_Gam ma		8x 01 04 5B Op FF	p = 0- 4 0:Default 1:0.45 2:0.50 3:0.55 4:0.63
CAM_Low-Li ghtMode	ON	8x 01 04 2D 01 FF	Low-Light Mode Setting
	OFF	8x 01 04 2D 00 FF	

CAM_Gain		8x 01 04 4C 00 00 Op Oq FF	pq 0-20
CAM Prese tSpee d		8x 01 01 Op FF	p 1-10
	OFF	8x 01 04 23 00 FF	OFF
CAM_Flicker	50HZ	8x 01 04 23 01 FF	50HZ
	60HZ	8x 01 04 23 02 FF	60HZ
	Reset	8x 01 04 02 00 FF	
CAM_Apert ure	Up	8x 01 04 02 02 FF	Aperture Control
	Down	8x 01 04 02 03 FF	
	Direct	8x 01 04 42 00 00 Op Oq FF	pq: Aperture Gain
CAM_Pic tur e effect	B&W-Mode	8x 01 04 63 04 FF	Pic ture effe ct Se tting
	OFF	8x 01 04 63 00 FF	
	Reset	8x 01 04 3F 00 pq FF	pq: Memory Number(=0 to 254) Corresponds to 0 to 9 on the Remote Commander
CAM_Mem ory	Se t	8x 01 04 3F 01 pq FF	
	Recall	8x 01 04 3F 02 pq FF	
CAM_LR_Re verse	On	8x 01 04 61 02 FF	Image Flip Horizontal ON/OFF
	Off	8x 01 04 61 03 FF	
CAM_Pic tur eFlip	On	8x 01 04 66 02 FF	Image Flip Vertical ON/OFF
	Off	8x 01 04 66 03 FF	
CAM_Color Sa tura tion	Direct	8x 01 04 49 00 00 00 Op FF	P=0-E 0:3

5: 6:12
 7: 8:1
 10:1
 11:100% 12:100%
 13:190% 14:200%

CAM_IDWrite		8x 01 04 22 0p 0q Or 0s FF	pqr: Camera ID (=0000 to FFFF)
IR_Receive	ON OFF	8x 01 06 08 02 FF 8x 01 06 08 03 FF	IR(remote commander)receive On/Off
CAM_Setting Reset	Reset	8x 01 04 A 0 10 FF	Reset Factory Setting
CAM_Brightness	Direct	8x 01 04 A 1 00 00 Op Oq FF	pq: Brightness Position
CAM_Contrast	Direct	8x 01 04 A 2 00 00 Op Oq FF	pq: Contrast Position
CAM_Flip	OFF	8x 01 04 A 4 00 FF	Single Command For Video Flip
	Flip-H	8x 01 04 A 4 01 FF	
	Flip-V	8x 01 04 A 4 02 FF	
CAM_Video System	Flip-HV	8x 01 04 A 4 03 FF	P: 0~E Video format
	Set	8x 01 06 35 00 Op FF	
	Camera video system		
	Up	8x 01 06 01 VV WW 03 01 FF	VV:

Pan_tiltDrive

	Right	8x 01 06 01 VV WW 02 03 FF	ZZZZ: Tilt Position
	Upleft	8x 01 06 01 VV WW 01 01 FF	
	Upright	8x 01 06 01 VV WW 02 01 FF	
	DownLeft	8x 01 06 01 VV WW 01 02 FF	
	DownRight	8x 01 06 01 VV WW 02 02 FF	
	Stop	8x 01 06 01 VV WW 03 03 FF	
	Absolute Position	8x 01 06 02 VV WW 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	
	Relative Position	8x 01 06 03 VV WW 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	
	Home	8x 01 06 04 FF	
	Reset	8x 01 06 05 FF	
Pan-tiltLimitSet	Set	8x 01 06 07 00 OW 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	W:1 UpRight 0:DownLeft YYYY: Pan Limit Position(TBD) ZZZZ: Tilt Limit Position(TBD)
	Clear	8x 01 06 07 01 OW 07 0F 0F 0F 07 0F 0F 0F FF	

5.1.4

CAM_PowerInq	8x 09 04 00 FF	y0 50 02 FF	On
		y0 50 03 FF	Off(Standby)
CAM_ZoomPosInq	8x 09 04 47 FF	y0 50 0p 0q 0r 0s FF	pqrs: Zoom Position
CAM_FocusAFModeInq	8x 09 04 38 FF	y0 50 02 FF	Auto Focus
		y0 50 03 FF	Manual Focus
		y0 50 04 FF	One Push mode
CAM_FocusPosInq	8x 09 04 48 FF	y0 50 0p 0q 0r 0s FF	pqrs: Focus Position
CAM_AFSensitivityInq	8x 09 04 58 FF	y0 50 01 FF	High
		y0 50 02 FF	Normal
		y0 50 03 FF	Low
CAM_AFZoneInq	8x 09 04 AA FF	y0 50 00 FF	Front
		y0 50 01 FF	Betting
		y0 50 02 FF	Meeting
		y0 50 03 FF	Education
		y0 50 04 FF	Moving
		y0 50 05 FF	Middle
CAM_WBModeInq	8x 09 04 35 FF	y0 50 00 FF	Auto
		y0 50 01 FF	3000K
		y0 50 02 FF	4000K
		y0 50 03 FF	One Push Mode
		y0 50 04 FF	5000K
		y0 50 05 FF	Manual
		y0 50 00 FF	6500K

		y0 50 06 FF	6500K
		y0 50 07 FF	3500K
		y0 50 08 FF	4500K
		y0 50 09 FF	5500K
		y0 50 0A FF	6000K
		y0 50 0B FF	7000K
C A M_A W B S e n s i t i v i t y I n q	8x 09 04 A 9 FF	y0 50 00 FF	Low
		y0 50 01 FF	Normal
		y0 50 02 FF	High
C A M_R G a i n I n q	8x 09 04 43 FF	y0 50 00 00 0p 0q FF	pq: R G a i n
C A M_B G a i n I n q	8x 09 04 44 FF	y0 50 00 00 0p 0q FF	pq: B G a i n
C A M_A E M o d e I n q	8x 09 04 39 FF	y0 50 00 FF	Full A u t o
		y0 50 03 FF	M a n u a l
		y0 50 0A FF	S h u t t e r p r i o r i t y
		y0 50 0B FF	I r i s p r i o r i t y
		y0 50 0D FF	B r i g h t
C A M_S h u t t e r P o s I n q	8x 09 04 4A FF	y0 50 00 00 0p 0q FF	pq: S h u t t e r P o s i t i o n
C A M_I r i s P o s I n q	8x 09 04 4B FF	y0 50 00 00 0p 0q FF	pq: I r i s P o s i t i o n
C A M_G a i n L i m i t I n q	8x 09 04 2C FF	y0 50 0p FF	p: G a i n P o s i t i o n
C A M_ B r i g h t P o s I n q	8x 09 04 4D FF	y0 50 00 00 0p 0q FF	pq: B r i g h t P o s i t i o n
C A M_ E x p C o	8x 09 04 3E FF	y0 50 02 FF	O n

mpModeInq		y0 50 03 FF	O ff
C A M_ExpC o mpPosInq	8x 09 04 4E FF	y0 50 00 00 0p 0q FF	pq: ExpC omp Position
C A M_Ba cklig htModeInq	8x 09 04 33 FF	y0 50 02 FF	O n
		y0 50 03 FF	O ff
C A M_WDRStr eng thInq	8x 09 04 51 FF	y0 50 00 00 00 0p FF	p: WDR Streng th
C A M_NRLev el(2D) Inq	8x 09 04 53 FF	y0 50 0p FF	P: 2DNRL evel
C A M_NRLev el(3D) Inq	8x 09 04 54 FF	y0 50 0p FF	P:3D NRLevel
C A M_Flicker ModeInq	8x 09 04 55 FF	y0 50 0p FF	p: Flicker Se ttings(0: O FF, 1: 50Hz, 2:60Hz)
C A M_Apertu reInq	8x 09 04 42 FF	y0 50 00 00 0p 0q FF	pq: Aperture G ain
C A M_Pic ture Effec tMode In q	8x 09 04 63 FF	y0 50 00 FF	O ff
		y0 50 04 FF	B&W
C A M_Memor yInq	8x 09 04 3F FF	y0 50 0p FF	p: Memory number last opera ted.
SYS_MenuMo deInq	8x 09 06 06 FF	y0 50 02 FF	O n
		y0 50 03 FF	O ff
C A M_LR_Rev erseInq	8x 09 04 61 FF	y0 50 02 FF	O n
		y0 50 03 FF	O ff
C A M_Pic ture FlipInq	8x 09 04 66 FF	y0 50 02 FF	O n
		y0 50 03 FF	O ff
C A M_C olorS atura tionInq	8x 09 04 49 FF	y0 50 00 00 00 0p FF	p: C olorG ain se tting Oh (60%) to Eh (130%)

C A M_IDInq	8x 09 04 22 FF	y0 50 0p FF	p: Camera ID
IR_ReceiveInq	8x 09 06 08 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
C A M_Brightn essInq	8x 09 04 A 1 FF	y0 50 00 00 0p 0q FF	pq: Brightness Position
C A M_C ontra stInq	8x 09 04 A 2 FF	y0 50 00 00 0p 0q FF	pq: Contrast Position
C A M_FlipInq	8x 09 04 A 4 FF	y0 50 00 FF	Off
		y0 50 01 FF	Flip -H
		y0 50 02 FF	Flip -V
		y0 50 03 FF	Flip -HV
C A M_G a m m a Inq	8x 09 04 5B FF	y0 50 0p FF	p: Gamma setting
C A M_Version Inq	8x 09 00 02 FF	y0 50 ab cd mn pq rs tu vw FF	ab cd : vender ID (0220) mn pq : model ID rs tu ARM Version vw reserve
Vide oSystem I nq	8x 09 06 23 FF	y0 50 0p FF	P: 0~E Video format 0:1080P60 1:1080P50 2:1080i60 3:1080i50 4:1080P30 5:1080P25

			6: 720P60 7: 720P50 8 1080P59.94 9 1080i59.94 A 1080P29.97 B 720P59.9
Pan-tiltMaxSpeedInq	8x 09 06 11 FF	y0 50 ww zz FF	ww: Pan Max Speed zz: Tilt Max Speed
Pan-tiltPosInq	8x 09 06 12 FF	y0 50 0w 0w 0w 0w 0z 0z 0z 0z FF	www: Pan Position zzzz: Tilt Position

x

y = x + 8

5.2 Pelco-D

Function	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
Up	0xFF	Address	0x00	0x08	Pan Speed	Tilt Speed	SUM
Down	0xFF	Address	0x00	0x10	Pan Speed	Tilt Speed	SUM
Left	0xFF	Address	0x00	0x04	Pan Speed	Tilt Speed	SUM
Right	0xFF	Address	0x00	0x02	Pan Speed	Tilt Speed	SUM
Upleft	0xFF	Address	0x00	0x0C	Pan Speed	Tilt Speed	SUM
Upright	0xFF	Address	0x00	0x0A	Pan Speed	Tilt Speed	SUM
DownLeft	0xFF	Address	0x00	0x14	Pan Speed	Tilt Speed	SUM

5.3 Pelco-P

Function	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
Up	0xA0	Address	0x00	0x08	Pan Speed	Tilt Speed	0xAF	XOR
Down	0xA0	Address	0x00	0x10	Pan Speed	Tilt Speed	0xAF	XOR
Left	0xA0	Address	0x00	0x04	Pan Speed	Tilt Speed	0xAF	XOR
Right	0xA0	Address	0x00	0x02	Pan Speed	Tilt Speed	0xAF	XOR
Up left	0xA0	Address	0x00	0x0C	Pan Speed	Tilt Speed	0xAF	XOR
Upright	0xA0	Address	0x00	0x0A	Pan Speed	Tilt Speed	0xAF	XOR
DownLeft	0xA0	Address	0x00	0x14	Pan Speed	Tilt Speed	0xAF	XOR
DownRight	0xA0	Address	0x00	0x12	Pan Speed	Tilt Speed	0xAF	XOR
Zoom In	0xA0	Address	0x00	0x20	0x00	0x00	0xAF	XOR
Zoom Out	0xA0	Address	0x00	0x40	0x00	0x00	0xAF	XOR
Stop	0xA0	Address	0x00	0x00	0x00	0x00	0xAF	XOR
FocusFar	0xA0	Address	0x01	0x00	0x00	0x00	0xAF	XOR
FocusNear	0xA0	Address	0x02	0x00	0x00	0x00	0xAF	XOR
SetPreset	0xA0	Address	0x00	0x03	0x00	Preset ID	0xAF	XOR
ClearPreset	0xA0	Address	0x00	0x05	0x00	Preset ID	0xAF	XOR
CallPreset	0xA0	Address	0x00	0x07	0x00	Preset	0xAF	XOR

						ID		
Query Pan Position	0xA0	Address	0x00	0x51	0x00	0x00	0xAF	XOR
Query Pan Position Response	0xA0	Address	0x00	0x59	Value High Byte	Value Low Byte	0xAF	XOR
Query Tilt Position	0xA0	Address	0x00	0x53	0x00	0x00	0xAF	XOR
Query Tilt Position Response	0xA0	Address	0x00	0x5B	Value High Byte	Value Low Byte	0xAF	XOR
Query Zoom Position	0xA0	Address	0x00	0x55	0x00	0x00	0xAF	XOR
Query Zoom Position Response	0xA0	Address	0x00	0x5D	Value High Byte	Value Low Byte	0xAF	XOR

6

6.1

1

2

3

6.2

1

a

b

c

2

3

a

b

4

a

1

1

b

c

30s

5

a

b

c

6

a

b

c

IP

d

" " " " " cmd" " "

DOS

" ping 192.168.5.163"

6-1

