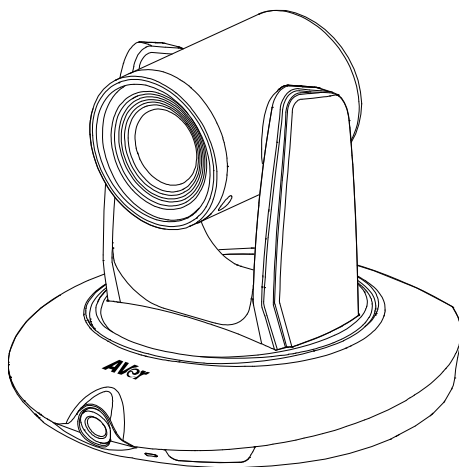




TR530+/TR530/TR320

Control Codes (Updated 6/2/2022)



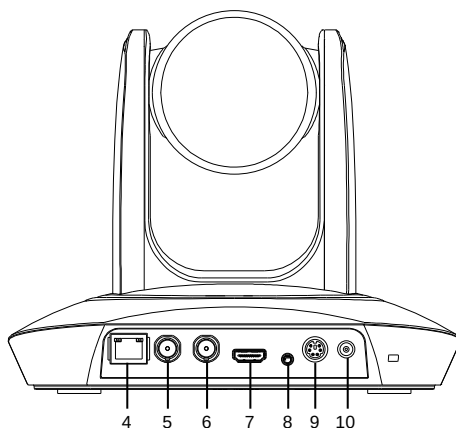
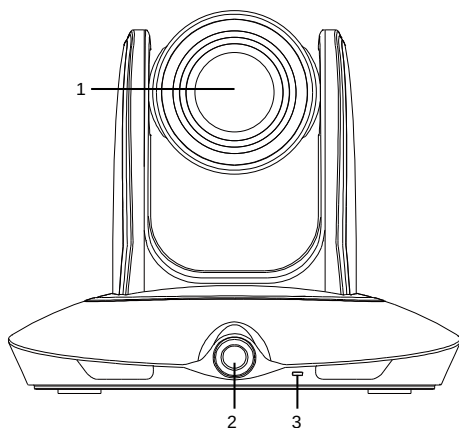
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Product Overview



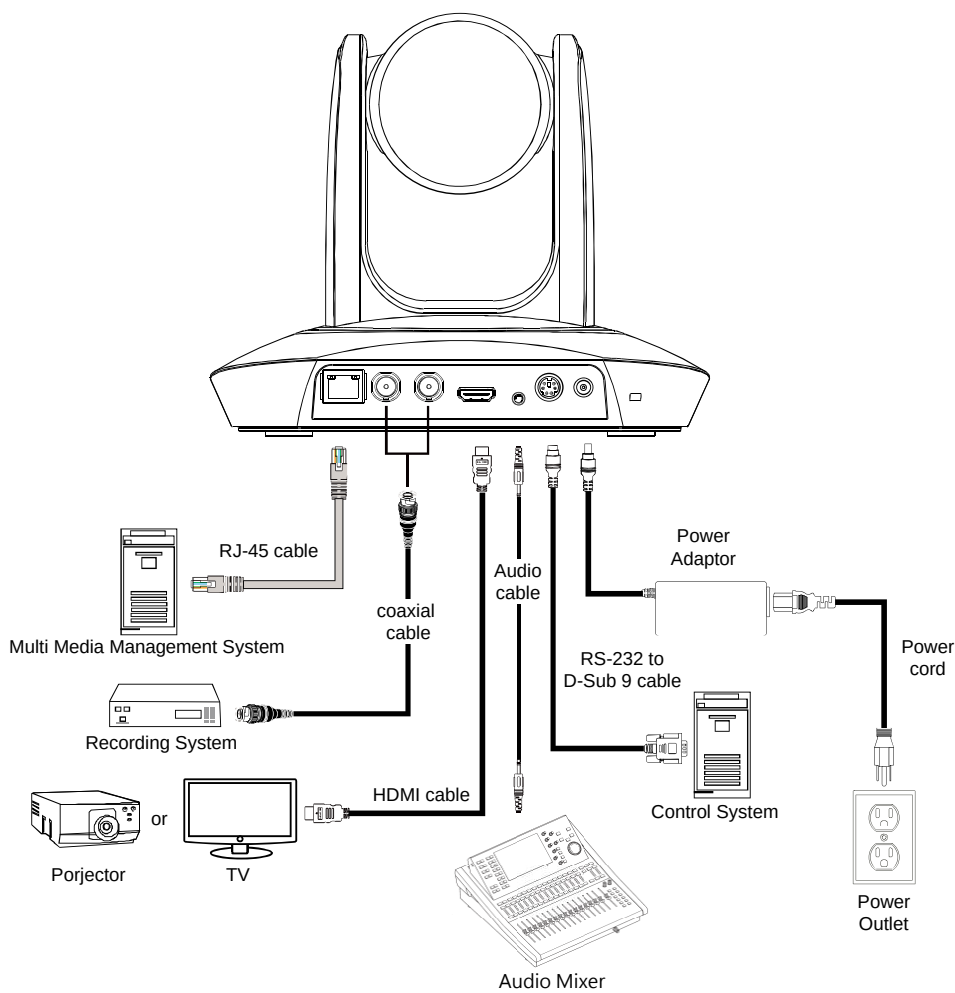
1. PTZ camera
2. Panoramic camera
3. Power indicator
4. RJ-45 port
5. 3G-SDI 2 port(Panoramic view)

6. 3G-SDI 1 port(PTZ view)
7. HDMI port(PTZ view)
8. Audio in port*
9. RS-232 port
10. Power jack

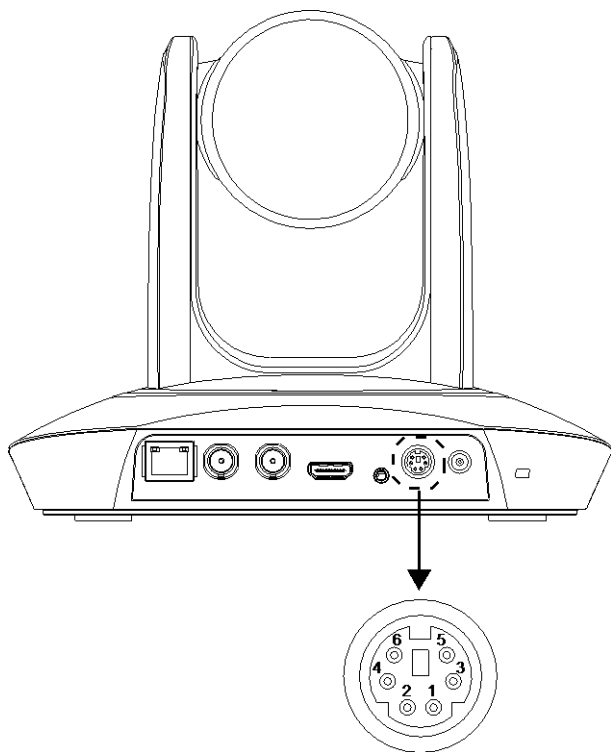
*Audio input level: 1Vrms(max.)

CONNECTIONS

Device Connections



RS232 Pin Definition



DIN6 PIN No.	I/O Type	Description
1	Output	DTR
2	Input	DSR
3	--	Not Connect
4	Output	TXD
5	GND	GND
6	Input	RXD

OSD Tree Map

Camera OSD

Tracking	On
Camera	>
Video Format	>
Preset	>
Advanced Setting	>
Language	>
Profile	>
Factory Default	>
Information	>

Camera Advanced Setting

To adjust RS232 protocol, address and baud rate, select **Advance Setting** from OSD menu. If you need VISCA-over-IP, please make sure it is turned “On” in the menu.

Tracking	On	
Camera	>	
Video Format	>	
Advanced Setting	>	
Preset	>	RS232 Protocol VISCA
Language	>	Address(ADDRD) 1
Profile	>	Baud Rate 9600
Factory Default	>	VISCA-over-IP off
Information	>	

VISCA Over IP Setting

VISCA over IP

PORT

Internet protocol	IPv4
Transport protocol	UDP
Port address	52381

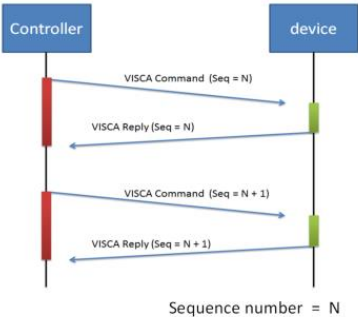
FORMAT

	byte 0	byte 1	byte 2	byte 3	byte 4	byte 5	byte 6	byte 7	byte8	~~~	byte23
func	Payload type		Payload length		Sequence number						Payload (1 to 16 bytes)
data	Value1	Value2	1~16 (0x0001~0x0010)		0X00000000 ~ 0XFFFFFFF						VISCA Packet (see page VISCA)

Payload type

Name	Value1	Value2	Description
VISCA command	0x01	0x00	Stores the VISCA command.
VISCA inquiry	0x01	0x10	Stores the VISCA inquiry.
VISCA reply	0x01	0x11	Stores the reply for the VISCA command or VISCA inquiry

Sequence number



VISCA Command Codes

Command Set	Command	Command Packet	Comments
IF_Clear		8x 01 00 01 FF	x = Cam address
IF_Clear(broadcast)		88 01 00 01 FF	
CAM_Power	On	8x 01 04 00 02 FF	*RS-232 support, over IP not support
	Off	8x 01 04 00 03 FF	
	Stop	8x 01 04 07 00 FF	
CAM_Zoom	Tele(Variable)	8x 01 04 07 2p FF	p=0 (Low) to 7 (High)
	Wide(Variable)	8x 01 04 07 3p FF	
	Direct	8x 01 04 47 0Y 0Y 0Y FF	0xYYYY = zoom pos
	Far(Variable)	8x 01 04 08 2P FF	p=0~F
	Near(Variable)	8x 01 04 08 3P FF	p=0~F
CAM_Focus	Auto Focus	8x 01 04 38 02 FF	
	Manual Focus	8x 01 04 38 03 FF	
	One Push	8x 01 04 18 01 FF	
	Auto	8x 01 04 35 00 FF	Normal Auto
CAM_WB	One Push WB	8x 01 04 35 03 FF	One Push WB mode
	Manual	8x 01 04 35 05 FF	Manual Control mode
	One Push	8x 01 04 10 05 FF	One Push WB Trigger
CAM_RGain	Up	8x 01 04 03 02 FF	Manual Control of R Gain
	Down	8x 01 04 03 03 FF	
CAM_Bgain	Up	8x 01 04 04 02 FF	Manual Control of B Gain
	Down	8x 01 04 04 03 FF	
	Full Auto	8x 01 04 39 00 FF	Automatic Exposure mode
	Manual	8x 01 04 39 03 FF	Manual Control mode
CAM_AE	Shutter Priority	8x 01 04 39 0A FF	Shutter Priority Automatic Exposure mode
	Iris Priority	8x 01 04 39 0B FF	Iris Priority Automatic Exposure mode
	Bright	8x 01 04 39 0D FF	Bright Mode (Manual control)
CAM_Shutter	Up	8x 01 04 0A 02 FF	Shutter Setting
	Down	8x 01 04 0A 03 FF	
CAM_Iris	Up	8x 01 04 0B 02 FF	Iris Setting
	Down	8x 01 04 0B 03 FF	
CAM_Bright	Up	8x 01 04 0D 02 FF	Bright Setting
	Down	8x 01 04 0D 03 FF	
CAM_ExpComp	Up	8x 01 04 0E 02 FF	Exposure Compensation Amount Setting
	Down	8x 01 04 0E 03 FF	
CAM_Backlight	On	8x 01 04 33 02 FF	Back Light Compensation ON/OFF
	Off	8x 01 04 33 03 FF	
	reset	8x 01 04 3F 00 YY FF	
CAM_Preset	set	8x 01 04 3F 01 YY FF	YY = preset num(0~0x7F)
	recall	8x 01 04 3F 02 YY FF	
CAM_Menu	On/Off	8x 01 06 06 10 FF	Display ON/OFF
	Up	8x 01 06 01 VV WW 03 01 FF	VV=pan speed: 0x00~0x0F WW= tilt speed: 0x00~0x0F
	Down	8x 01 06 01 VV WW 03 02 FF	
	Left	8x 01 06 01 VV WW 01 03 FF	
	Right	8x 01 06 01 VV WW 02 03 FF	
	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	
	Home	8x 01 06 04 FF	
	Reset	8x 01 06 05 FF	
	PT_Direct	8x 01 06 02 00 00 0Y 0Y 0Y 0Y 0V 0V 0V FF	0xYYYY = pan position 0xVVVV = tilt position
CAM_Track_ON		8x 01 04 7D 02 00 FF	
CAM_Track_OFF		8x 01 04 7D 03 00 FF	
CAM_Profile_Read		8x 01 04 40 01 YY FF	YY = profile num(0x01~0x05)
CAM_Profile_Save		8x 01 04 40 02 YY FF	
CAM_WOL_ON		8x 01 04 7E 02 00 FF	
CAM_WOL_OFF		8x 01 04 7E 03 00 FF	
CAM_PIP_SET		8x 01 04 7F 01 YY FF	YY = pip num(0x01~0x09)
CAM_PIP_OFF		8x 01 04 7F 02 00 FF	

Inquiry Command	Command Packet	Reply Packet	Comments
CAM_PowerInq	8x 09 04 00 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
CAM_WBModelInq	8x 09 04 35 FF	y0 50 00 FF	Auto
		y0 50 05 FF	Manual
CAM_RGainInq	8x 09 04 43 FF	y0 50 00 00 0p 0q FF	pq: R Gain
CAM_BGainInq	8x 09 04 44 FF	y0 50 00 00 0p 0q FF	pq: B Gain
		y0 50 00 FF	Full Auto
		y0 50 03 FF	Manual
		y0 50 0A FF	Shutter Priority
		y0 50 0B FF	Iris Priority
CAM_AEModelInq	8x 09 04 39 FF	y0 50 0D FF	Bright
		y0 50 00 00 0p 0q FF	pq: Shutter Position
		y0 50 00 00 0p 0q FF	pq: Iris Position
		y0 50 00 00 0p 0q FF	pq: Gain Position
CAM_BrightPosInq	8x 09 04 4D FF	y0 50 00 00 0p 0q FF	pq: Bright Position
CAM_ExpCompPosInq	8x 09 04 4E FF	y0 50 00 00 0p 0q FF	pq: ExpComp Position
CAM_VersionInq	8x 09 00 02 FF		
PT_Pos_Inq	8x 09 06 12 FF	y0 50 0Y 0Y 0Y 0Y 0V 0V 0V 0V FF	0xYYYY = pan position 0xVVVV = tilt position
Zoom_Pos_Inq	8x 09 04 47 FF	y0 50 0Y 0Y 0Y 0Y FF	0xYYYY = zoom pos
Preset Inq	8x 09 04 3F FF	y0 50 pp FF	Return the last preset number which has been operated pp:01 - FF
CAM_FocusModelInq	8x 09 04 38 FF	y0 50 02 FF	Auto Focus
		y0 50 03 FF	Manual Focus
CAM_FocusPosInq	8x 09 04 48 FF	y0 50 0p 0q 0r 0s FF	pqrs: Focus Position
CAM_Tracking status Inq	8x 09 36 69 02 FF	y0 50 02 FF	On
		y0 50 03 FF	Off
		y0 50 01 FF	Wide area
CAM_Tracking mode Inq	8x 09 36 69 01 FF	y0 50 02 FF	Stage
		y0 50 03 FF	Segment
		y0 50 02 FF	On
CAM_OSD MENU	8x 09 7E 04 76 01 FF	y0 50 03 FF	Off
		y0 50 01 FF	BLC1
CAM_BLC mode	8x 09 04 33 FF	y0 50 02 FF	BLC2
		y0 50 03 FF	OFF
Firmware version	8x 09 36 69 04 FF	y0 50 0p 0q 0r 0s 0t 0u 0v 0w FF	fw_ver: p.q.rstu.vw

PELCO P Command Codes

PAN AND TILT COMMANDS		P/T bit(byte4.0) = 0							
		byte 1	byte 2	byte 3	byte 4	byte 5	byte 6	byte 7	byte 8
	func	STX	ADDR	data1	data2	data3	data4	ETX	checksum
	data	0xA0	0~7F	cmd 1	cmd 2	Pan speed	Tilt speed	0xAF	1~7 XOR
							note : speed = 0x00~0x30		
byte3 : command 1									
		bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
		NA	CAM ON	NA	CAM ON/OFF	NA	NA	NA	NA
							note : power off : byte3.6 = 0 & byte3.4 = 1		
byte4: command 2									
		bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
		NA	ZOOM Wide	ZOOM Tele	TILT Down	TILT Up	PAN Left	PAN Right	P/T bit 0(always)
EXTENDED COMMAND SET		P/T bit(byte4.0) = 1							
		byte 1	byte 2	byte 3	byte 4	byte 5	byte 6	byte 7	byte 8
	func	STX	ADDR	data1	data2	data3	data4	ETX	checksum
	Set Preset XX	0xA0	0~7	0x00	0x03	0x00	Preset #	0xAF	1~7 XOR
	Go To Preset XX	0xA0	0~7	0x00	0x07	0x00	Preset #	0xAF	1~7 XOR
	Track ON	0xA0	0~7	0x00	0x65	0x00	0x00	0xAF	1~7 XOR
	Track OFF	0xA0	0~7	0x00	0x67	0x00	0x00	0xAF	1~7 XOR
	WOL ON	0xA0	0~7	0x00	0x69	0x00	0x00	0xAF	1~7 XOR
	WOL OFF	0xA0	0~7	0x00	0x6B	0x00	0x00	0xAF	1~7 XOR
	Read Profile XX	0xA0	0~7	0x00	0x6D	0x00	Profile #	0xAF	1~7 XOR
	Save To Profile XX	0xA0	0~7	0x00	0x6F	0x00	Profile #	0xAF	1~7 XOR
							note : Preset # : 0x01 ~ 0xFF		
							Profile # : 0x01 ~ 0x05		

PELCO D Command Codes

PAN AND TILT COMMANDS			P/T bit(byte4.0) = 0						
		byte 1	byte 2	byte 3	byte 4	byte 5	byte 6	byte 7	
	func	SYNC	ADDR	cmd 1	cmd 2	data1	data2	checksum	
	data	0xFF	1~80	cmd 1	cmd 2	Pan speed	Tilt speed	2~6 SUM	
						note : speed = 0x00~0x30			
byte3 : command 1									
		bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
		SENSE ON	NA	NA	NA	CAM ON/OFF	NA	NA	NA
						note : power off : byte3.7 = 0 & byte3.3 = 1			
byte4: command 2									
		bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
		NA	ZOOM Wide	ZOOM Tele	TILT Down	TILT Up	PAN Left	PAN Right	P/T bit 0(always)
EXTENDED COMMAND SET			P/T bit(byte4.0) = 1						
		byte 1	byte 2	byte 3	byte 4	byte 5	byte 6	byte 7	
	func	SYNC	ADDR	data1	data2	data3	data4	checksum	
	Set Preset XX	0xFF	1~8	0x00	0x03	0x00	Preset #	2~6 SUM	
	Go To Preset XX	0xFF	1~8	0x00	0x07	0x00	Preset #	2~6 SUM	
	Track ON	0xFF	1~8	0x00	0x65	0x00	0x00	2~6 SUM	
	Track OFF	0xFF	1~8	0x00	0x67	0x00	0x00	2~6 SUM	
	WOL ON	0xFF	1~8	0x00	0x69	0x00	0x00	2~6 SUM	
	WOL OFF	0xFF	1~8	0x00	0x6B	0x00	0x00	2~6 SUM	
	Read Profile XX	0xFF	1~8	0x00	0x6D	0x00	Profile #	2~6 SUM	
	Save To Profile XX	0xFF	1~8	0x00	0x6F	0x00	Profile #	2~6 SUM	
						note : Preset # : 0x01 ~ 0xFF			
						Profile # : 0x01 ~ 0x05			