

Command Set	Command	Command packet	Comments
Audio	Audio Enable	8x 01 04 68 0p FF	p: 2=On, 3=Off
Audio	Delay Time	8x 01 04 6A 0p 0q 0r FF	Set AudioDelay Time for Internet Streaming pqr : delay time, range: 001 ~ 1F4 (1 ~ 500)
Audio	Audio In	8x 01 04 6B 0p FF	p: 2=Line In, 3=Mic In
Audio	Encode Sample Rate	8x 01 04 6D 0p FF	Select Audio Encode Sample Rate p: 1=44.1 KHz (AAC), 2=16 KHz (AAC), 3=16 KHz (G.711), 4=8 KHz (G.711)
Audio	Audio Volume	8x 01 04 6E 0p FF	p: 0 ~ A (0 ~ 10)
Audio	Delay Enable	8x 01 04 6F 0p FF	Set AudioDelay On/Off for Internet Streaming p: 2= On, 3= Off
Auto Focus	Zoom Tracking	8x 01 04 38 03 0p FF	p: 2=Off (Curve Tracking), 3=On (Zoom Tracking)
Auto Focus	AF Sensitivity	8x 01 04 58 0p FF	p: 1=High, 2=Middle, 3=Low
Auto Focus	AF Frame	8x 01 04 5C pp FF	p: 1=Auto, 2=Full Frame, 3=Center
Auto Focus	Preset AF	8x 01 04 5E 0p FF	p: 2=On, 3=Off
Auto Focus	Smart AF	8x 01 7E 01 01 0p FF	p: 2=On, 3=Off
Dig-Effect	Mirror	8x 01 04 61 0p FF	p: 2=On, 3=Off
Dig-Effect	Flip	8x 01 04 66 0p FF	p: 2=On, 3=Off
Ethernet	DHCP	8x 01 7C 01 0p FF	p: 2=On, 3=Off
Ethernet	IP Address	8x 01 7C 02 0p 0q 0r 0s 0t 0u 0v 0x FF	address : pq.rs.tu.vx (HEX), pq = 0~255, rs = 0~255, tu = 0~255, vx = 0~255, e.g. 192.168.100.150 => 81 01 7C 02 0C 00 0A 08 06 04 09 06 FF
Ethernet	Subnet Mask	8x 01 7C 03 0p 0q 0r 0s 0t 0u 0v 0x FF	address : pq.rs.tu.vx (HEX), pq = 0~255, rs = 0~255, tu = 0~255, vx = 0~255, e.g. 255.255.255.0 => 81 01 7C 03 0F 0F 0F 0F 0F 0F 00 00 FF
Ethernet	Gateway	8x 01 7C 04 0p 0q 0r 0s 0t 0u 0v 0x FF	address : pq.rs.tu.vx (HEX), pq = 0~255, rs = 0~255, tu = 0~255, vx = 0~255, e.g. 192.168.100.254 => 81 01 7C 04 0C 00 0A 08 06 04 0F 0E FF
Ethernet	DNS	8x 01 7C 05 0p 0q 0r 0s 0t 0u 0v 0x FF	address : pq.rs.tu.vx (HEX), pq = 0~255, rs = 0~255, tu = 0~255, vx = 0~255, e.g. 8.8.8.8 => 81 01 7C 05 00 08 00 08 00 08 00 08 FF
Exposure	Shutter Reset	8x 01 04 0A 00 FF	Reset Shutter Setting to the default value depending on the frame rate of Output Mode (* Available during Shutter Priority/Manual Mode)
Exposure	Shutter Up	8x 01 04 0A 02 FF	Shutter Setting (* Available during Shutter Priority/Manual Mode)
Exposure	Shutter Down	8x 01 04 0A 03 FF	Shutter Setting (* Available during Shutter Priority/Manual Mode)
Exposure	Iris Reset	8x 01 04 0B 00 FF	Reset Iris Setting to 0A (F3.2) value (* Available during Iris Priority/Manual Mode)

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Exposure	Iris Up	8x 01 04 0B 02 FF	Iris Up (* Available during Iris Priority/Manual Mode)
Exposure	Iris Down	8x 01 04 0B 03 FF	Iris Down (* Available during Iris Priority/Manual Mode)
Exposure	Manual Gain Reset	8x 01 04 0C 00 FF	Reset Gain Setting to 0 (0 dB) value (* Available during AE Manual Mode)
Exposure	Manual Gain Up	8x 01 04 0C 02 FF	Gain Setting (* Available during AE Manual Mode)
Exposure	Manual Gain Down	8x 01 04 0C 03 FF	Gain Setting (* Available during AE Manual Mode)
Exposure	Exposure Comp Reset	8x 01 04 0E 00 FF	Reset Exposure Compensation to 5 value (* Available during ExpComp On)
Exposure	Exposure Comp Up	8x 01 04 0E 02 FF	Exposure Compensation Up (* Available during ExpComp On)
Exposure	Exposure Comp Down	8x 01 04 0E 03 FF	Exposure Compensation Down (* Available during ExpComp On)
Exposure	Spot Light Position	8x 01 04 29 0p 0q 0r 0s FF	pq: X-axis, 00 ~ 06 rs: Y-axis, 00 ~ 04
Exposure	Iris Limit (Max)	8x 01 04 2A 0p FF	p: Iris F number, parameters are in the General Table (* Disabled during AE Manual Mode and IrisPri Mode)
Exposure	Gain Limit	8x 01 04 2C 0p FF	p: 3 ~ F
Exposure	WDR	8x 01 04 2D 0p FF	p: WDR mode, 0 ~ 3
Exposure	Mode	8x 01 04 39 0p FF	p: 0=Full Auto, 3=Manual, A=Shutter Priority, B=Iris Priority
Exposure	Exposure Comp On/Off	8x 01 04 3E 0p FF	p: 2=On, 3=Off (* Disabled during Manual Mode)
Exposure	Shutter Direct	8x 01 04 4A 00 00 0p 0q FF	pq: Shutter Position, 00 ~ 15 (* Available during Shutter Priority/Manual Mode)
Exposure	Iris Direct	8x 01 04 4B 00 00 0p 0q FF	pq: Iris Position, parameters are in the General Table (* Available during Iris Priority/Manual Mode)
Exposure	Manual Gain Direct	8x 01 04 4C 00 00 0p 0q FF	pq: Gain Position, 00 ~ 0A
Exposure	Exposure Comp Direct	8x 01 04 4E 00 00 0p 0q FF	pq: 00 ~ 0A
Exposure	Spot Light	8x 01 04 59 0p FF	p: 2=On, 3=Off
Focus	Stop	8x 01 04 08 00 FF	Available during Manual Focus Mode
Focus	Far (Standard Speed)	8x 01 04 08 02 FF	Available during Manual Focus Mode
Focus	Near (Standard Speed)	8x 01 04 08 03 FF	Available during Manual Focus Mode
Focus	Far Step	8x 01 04 08 04 FF	Available during Manual Focus Mode
Focus	Near Step	8x 01 04 08 05 FF	Available during Manual Focus Mode
Focus	Far (Variable Speed)	8x 01 04 08 2p FF	p: Speed 0 (Low) ~ 7 (High) (* Available during Manual Focus Mode)
Focus	Near (Variable Speed)	8x 01 04 08 3p FF	p: Speed 0 (Low) ~ 7 (High) (* Available during Manual Focus Mode)
Focus	One Push Trigger	8x 01 04 18 01 FF	One Push AF Trigger (* Available during Manual Focus Mode)
Focus	Mode	8x 01 04 38 0p FF	p: 2=Auto Focus, 3=Manual Focus
Focus	Direct	8x 01 04 48 0p 0q 0r 0s FF	pqrs: Focus Position, pqrs parameters are in the General Zoom Focus Table (* Available during Manual Focus Mode)

Command Set	Command	Command packet	Comments
Menu	Left	8x 01 06 01 01 01 01 03 FF	OSD Menu left
Menu	Right	8x 01 06 01 01 01 02 03 FF	OSD Menu right
Menu	Up	8x 01 06 01 01 01 03 01 FF	OSD Menu up
Menu	Down	8x 01 06 01 01 01 03 02 FF	OSD Menu down
Menu	On/Off	8x 01 06 06 pp FF	Turn on/off OSD menu screen pp: 2=On, 3=Off, 10=Toggle
Menu	Enter	8x 01 7E 01 02 00 01 FF	OSD Menu Enter
Picture	Sharpness Reset	8x 01 04 02 00 FF	Reset Sharpness Setting to 7 value
Picture	Sharpness Up	8x 01 04 02 02 FF	Sharpness Up
Picture	Sharpness Down	8x 01 04 02 03 FF	Sharpness Down
Picture	Brightness Reset	8x 01 04 0D 00 FF	Reset Brightness Setting to 7 value
Picture	Brightness Up	8x 01 04 0D 02 FF	Brightness Up
Picture	Brightness Down	8x 01 04 0D 03 FF	Brightness Down
Picture	Image Mode	8x 01 04 3F 04 0p FF	p: 0=Default, 1=Custom
Picture	Image Mode Load	8x 01 04 3F 05 0p FF	p: 0=Load Image mode - default to Custom (* Available during Image Mode = Custom mode)
Picture	Sharpness Direct	8x 01 04 42 00 00 0p 0q FF	pp: 00 ~ 0E
Picture	Saturation	8x 01 04 49 00 00 0p 0q FF	pp: 00 ~ 0F (* Available during Image Mode = Custom mode)
Picture	Brightness Direct	8x 01 04 4D 00 00 0p 0q FF	pp: 00 ~ 0F (* Available during Image Mode = Custom mode)
Picture	Hue	8x 01 04 4F 00 00 0p 0q FF	pp: 00 ~ 0F (* Available during Image Mode = Custom mode)
Picture	2D NR	8x 01 04 53 0p FF	p: 0=Off, 1=Level 1, 2=Level 2, 3=Level 3
Picture	3D NR	8x 01 04 54 0p FF	p: 0=Off, 1=Low, 2=Type, 3=Max
Picture	Gamma	8x 01 04 5B 0p FF	p: 0 ~ 3 (* Available during Image Mode = Custom mode)
Picture	Picture Effect	8x 01 04 63 0p FF	p: 0=Off, 2=Neg, 4=B&W
Power	On/Standby	8x 01 04 00 0p FF	p: 2=On, 3=Standby
Preset	Reset	8x 01 04 3F 00 pp FF	pp: Memory Number 0x00 ~ 0x7F (* Preset address range : 0 ~ 127)
Preset	Set	8x 01 04 3F 01 pp FF	pp: Memory Number 0x00 ~ 0x7F (* Preset address range : 0 ~ 127)
Preset	Recall	8x 01 04 3F 02 pp FF	pp: Memory Number 0x00 ~ 0x7F (* Preset address range : 0 ~ 127)
Preset	Reset	8x 01 04 3F 10 pp FF	pp: Memory Number 0x00 ~ 0x7F (* Preset address range: 128 ~ 255)
Preset	Set	8x 01 04 3F 11 pp FF	pp: Memory Number 0x00 ~ 0x7F (* Preset address range: 128 ~ 255)
Preset	Recall	8x 01 04 3F 12 pp FF	pp: Memory Number 0x00 ~ 0x7F (* Preset address range: 128 ~ 255)

Command Set	Command	Command packet	Comments
System	Prompt	8x 01 04 07 00 0p FF	p: 2=On, 3=Off
System	Baud Rate	8x 01 04 24 00 00 0p FF	p: 0=9600 bps, 1=38400 bps
System	Factory Reset (Soft)	8x 01 04 3F 03 00 FF	Reset camera setting
System	Factory Reset (Hard)	8x 01 04 3F 03 01 FF	Reset camera and network setting
System	Initial Position	8x 01 04 75 6A 0p FF	p: 0=Last MEM, 1=1st Preset
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 02=QFHD 4K(3840 x 2160) - 59.94p
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 03=QFHD 4K(3840 x 2160) - 50p
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 05=QFHD 4K(3840 x 2160) - 29.97p
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 06=QFHD 4K(3840 x 2160) - 25p
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 08=FHD 1080P(1920 x 1080) - 59.94p
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 09=FHD 1080P(1920 x 1080) - 50p
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 0B=FHD 1080P(1920 x 1080) - 29.97p
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 0C=FHD 1080P(1920 x 1080) - 25p
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 0E=HD 720P(1280 x 720) - 59.94p
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 0F=HD 720P(1280 x 720) - 50p
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 11=HD 720P(1280 x 720) - 29.97p
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 12=HD 720P(1280 x 720) - 25p
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 15=FHD 1080i(1920 x 1080) - 59.94i
System	Output Mode	8x 01 06 35 0p 0q FF	pq: 16=FHD 1080i(1920 x 1080) - 50i
System	Motionless Preset	8x 01 07 01 0p FF	p: 2=On, 3=Off
System	Lamp	8x 01 7E 01 0A 00 0p FF	p: 2=Enable, 3=Disable
System	CMMD Mode	8x 01 7E 01 0A 04 0p FF	p: 2=Link, 3=Normal
System	RTMP On/Off	8x 01 7E 7E 0p FF	p: 0=Off, 1=On
System	Write Camera ID	8x 01 CE aa bb cc dd ee ff gg hh ii jj kk ll FF	aa bb cc dd ee ff gg hh ii jj kk ll : Camera ID (ASCII)
White Balance	Manual Red Reset	8x 01 04 03 00 FF	Reset R Gain Setting to 40 (64) value (* Available during WB Manual mode)
White Balance	Manual Red Up	8x 01 04 03 02 FF	R Gain Up (* Available during WB Manual mode)
White Balance	Manual Red Down	8x 01 04 03 03 FF	R Gain Down (* Available during WB Manual mode)
White Balance	Manual Blue Reset	8x 01 04 04 00 FF	Reset B Gain Setting to 40 (64) value (* Available during WB Manual mode)
White Balance	Manual Blue Up	8x 01 04 04 02 FF	B Gain Up (* Available during WB Manual mode)
White Balance	Manual Blue Down	8x 01 04 04 03 FF	B Gain Down (* Available during WB Manual mode)
White Balance	One Push Trigger	8x 01 04 10 05 FF	One Push WB Trigger (* Available during One Push WB Mode)
White Balance	Mode	8x 01 04 35 0p FF	p: 0=Auto, 1=Indoor, 2=Outdoor, 3=One Push WB, 4=ATW, 5=Manual, 6=3000K, 7=4300K, 8=5000K, 9=6500K, A=8000K, C=Sodium Lamp

Command Set	Command	Command packet	Comments
White Balance	Manual Red Direct	8x 01 04 43 00 00 0p 0q FF	pq: 00 ~ 80 (0 ~ 128)
White Balance	Manual Blue Direct	8x 01 04 44 00 00 0p 0q FF	pq: 00 ~ 80 (0 ~ 128)
Zoom	Stop	8x 01 04 07 00 FF	
Zoom	Tele (Standard Speed)	8x 01 04 07 02 FF	
Zoom	Wide (Standard Speed)	8x 01 04 07 03 FF	
Zoom	Tele Step	8x 01 04 07 04 FF	
Zoom	Wide Step	8x 01 04 07 05 FF	
Zoom	Tele (Variable Speed)	8x 01 04 07 2p FF	p=0 (Low) ~ 7 (High)
Zoom	Wide (Variable Speed)	8x 01 04 07 3p FF	p=0 (Low) ~ 7 (High)
Zoom	Digital Zoom Limit	8x 01 04 26 0p FF	p: 0 (x1) ~ B (x12)
Zoom	Direct (Variable Speed)	8x 01 04 47 0p 0q 0r 0s 0t FF	pqrs: Zoom Position, Min. 0000h Max. 4000h (In D-Zoom Limit = x1) Max. 7AC0h (In D-Zoom Limit = x2 ~ 12x) t: Zoom Speed, 0 (Low) ~ 7 (High)
Zoom	Direct (Standard Speed)	8x 01 04 47 0p 0q 0r 0s FF	pqrs: Zoom Position, Min. 0000h Max. 4000h (In D-Zoom Limit = x1) Max. 7AC0h (In D-Zoom Limit = x2 ~ 12x)
Zoom Focus	Direct (Variable Speed)	8x 01 04 47 0p 0q 0r 0s 0t 0u 0v 0w 0x FF	pqrs: Zoom Position, 0x0000 ~ 0x4000 tuvw: Focus Position, 0x0000 ~ FocusMaxValue x: Speed, 0 ~ 7 (* Available during Manual Focus Mode)
Zoom Focus	Direct (Standard Speed)	8x 01 04 47 0p 0q 0r 0s 0t 0u 0v 0w FF	pqrs: Zoom Position, 0x0000 ~ 0x4000 tuvw: Focus Position, 0x0000 ~ FocusMaxValue (* Available during Manual Focus Mode)