Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Exposure				
Gain			01 60 00	
	01 60 01 00	0dB		
	01 60 01 01	1dB		
	01 60 01 02	2dB		
	01 60 01 03	3dB		
	01 60 01 04	4dB		
	01 60 01 05	5dB		
	01 60 01 06	6dB		
	01 60 01 07	7dB		
	01 60 01 08	8dB		
	01 60 01 09	9dB		
	01 60 01 0A	10dB		
	01 60 01 0B	11dB		
	01 60 01 0C	12dB		
	01 60 01 0D	13dB		
	01 60 01 0E	14dB		
	01 60 01 0F	15dB		
	01 60 01 10	16dB		
	01 60 01 11	17dB		
	01 60 01 12	18dB		
	01 60 01 13	19dB		
	01 60 01 14	20dB		
	01 60 01 15	21dB		
	01 60 01 16	22dB		
	01 60 01 17	23dB		
	01 60 01 18	24dB		
	01 60 01 40	Auto Low		
	01 60 01 80	Auto Med		
	01 60 01 C0	Auto High		
Shutter			01 61 00	
	01 61 01 00	Step		
	01 61 01 01	Variable see Speed (Shutter=variable)		
	01 61 01 02	Auto		
	01 61 01 03	Off		
Speed (Shutter=step)			01 62 00	
	01 62 01 00	1/30s		
	01 62 01 01	Flickerless		
	01 62 01 02	1/50s		
	01 62 01 03	1/60s		
	01 62 01 04	1/100s		
	01 62 01 05	1/120s		
	01 62 01 06	1/250s		
	01 62 01 07	1/500s		
	01 62 01 08	1/1000s		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Exposure				***continued***
	01 62 01 09	1/2000s		
	01 62 01 0A	1/3000s		
Speed (Shutter=variable)			01 63 00	
	01 63 02 d0 d1	Exposure Time in lines (0x0000..0x0FFF)		
				d0 d1: Min: 0x0007 Max: 0x0318
Image Brightness			01 64 00	
	01 64 01 F6	-10		
	01 64 01 F7	-9		
	01 64 01 F8	-8		
	01 64 01 F9	-7		
	01 64 01 FA	-6		
	01 64 01 FB	-5		
	01 64 01 FC	-4		
	01 64 01 FD	-3		
	01 64 01 FE	-2		
	01 64 01 FF	-1		
	01 64 01 00	0		
	01 64 01 01	+1		
	01 64 01 02	+2		
	01 64 01 03	+3		
	01 64 01 04	+4		
	01 64 01 05	+5		
	01 64 01 06	+6		
	01 64 01 07	+7		
	01 64 01 08	+8		
	01 64 01 09	+9		
	01 64 01 0A	+10		
Back Light Compensation			01 6C 00	
	01 6C 01 00	Off		
	01 6C 01 01	Medium		
	01 6C 01 02	High		
Iris Priority			01 33 00	
	01 33 01 00	Iris Priority Auto		
	01 33 01 01	Iris Priority Manual		
	01 33 01 02	Iris Priority Toggle		
Color				
White Balance			01 65 00	
	01 65 01 00	White Balance AUTO		
	01 65 01 01	White Balance One-Push		
	01 65 01 02	White Balance Manual		
Perform WB				
	01 65 01 10			

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Color				*continued*
R Gain (WB=Manual)			01 66 00	Deprecated
	01 66 01 d0	-64..+63 (0x00..0x7F), -191..-64..+63 (0x81..0x00..0x7F)		Deprecated
		d0: -191..-64..+63 (0x81..0x00..0x7F)		Deprecated
B Gain (WB=Manual)			01 67 00	Deprecated
	01 67 01 d0	-64..+63 (0x00..0x7F), -191..-64..+63 (0x81..0x00..0x7F)		Deprecated
		d0: -191..-64..+63 (0x81..0x00..0x7F)		Deprecated
R Gain (WB=Manual)			01 04 00	
	01 04 02 d0 d1	-64..+63 (0xFFC0..0x003F), -191..+63 (0xFF41..0x003F)		
		d0,d1: -191..+63 (0xFF41..0x003F)		
B Gain (WB=Manual)			01 05 00	
	01 05 02 d0 d1	-64..+63 (0xFFC0..0x003F), -191..+63 (0xFF41..0x003F)		
		d0,d1: -191..+63 (0xFF41..0x003F)		
Color Mode			01 6D 00	
	01 6D 01 00	Black/White		
	01 6D 01 01	Presentation		
	01 6D 01 02	Natural		
	01 6D 01 03	Video Conference		
	01 6D 01 04	Manual		
	01 6D 01 05	Black/White Toggle		
Gamma Normal Mode			01 68 00	
	01 68 01 d0	Gamma Level for Normal Mode (0x00..0x03)		
		d0: 0x00..0x03		
Saturation			01 6E 00	
	01 6E 01 d0	0% to 150% in steps of 1% (0x00..0x96) in MANUAL		
		d0: 0 %...150% (0x00..0x96)		
Pos/Neg/Blue			01 54 00	
	01 54 01 00	Positiv On		
	01 54 01 01	Negativ On		
	01 54 01 02	Blue On		
Text Enhancer On/Off			01 85 00	
	01 85 01 00	Text Enhancer Off		
	01 85 01 01	Text Enhancer On		
	01 85 01 02	Text Enhancer Toggle		
Output Control				
Detail			01 53 00	
	01 53 01 00	Off		
	01 53 01 02	Medium		
	01 53 01 03	High		
Resolution DVI(RGB)			01 51 00	
	01 51 01 FF	Off		
	01 51 01 00	Auto		
	01 51 01 01	SVGA/60 (800x600)		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Output Control				*continued*
	01 51 01 04	XGA/60 (1024x768)		
	01 51 01 08	SXGA-/60 (1280x960)		
	01 51 01 0A	SXGA/60 (1280x1024)		
	01 51 01 0D	UXGA/60 (1600x1200)		
	01 51 01 12	SXGA+/60 (1400x1050)		
	01 51 01 14	VGA/60 (640x480)		
	01 51 01 15	720p/50 (1280x720)		
	01 51 01 16	720p/60		
	01 51 01 17	1080p/50 (1920x1080)		
	01 51 01 18	1080p/60		
	01 51 01 1A	WSXGA/60 (1680x1050)		
	01 51 01 1B	WXGA/60 (1366x768)		
	01 51 01 1C	WUXGA/60 (1920x1200)		
	01 51 01 1D	WXGA+/60 (1440x900)		
	01 51 01 1E	WXGA*/60 (1280x800)		
	01 51 01 20	1080p/30		
Test Resolution DVI			01 A8 00	
	01 A8 01 d0	Test Resolution for 10 seconds d0: Resolutions (see above)		
Resolution RGB(Preview)			01 50 00	
	01 50 01 FF	Off		
	01 50 01 00	Auto		
	01 50 01 01	SVGA/60 (800x600)		
	01 50 01 04	XGA/60 (1024x768)		
	01 50 01 08	SXGA-/60 (1280x960)		
	01 50 01 0A	SXGA/60 (1280x1024)		
	01 50 01 0D	UXGA/60 (1600x1200)		
	01 50 01 12	SXGA+/60 (1400x1050)		
	01 50 01 14	VGA/60 (640x480)		
	01 50 01 15	720p/50 (1280x720)		
	01 50 01 16	720p/60		
	01 50 01 17	1080p/50 (1920x1050)		
	01 50 01 18	1080p/60		
	01 50 01 1A	WSXGA/60 (1680x1050)		
	01 50 01 1B	WXGA/60 (1366x768)		
	01 50 01 1C	WUXGA/60 (1920x1200)		
	01 50 01 1D	WXGA+/60 (1440x900)		
	01 50 01 1E	WXGA*/60 (1280x800)		
	01 50 01 20	1080p/30		
Test Resolution RGB			01 A9 00	
	01 A9 01 d0	Test Resolution for 10 seconds d0: Resolutions (see above)		
Preview Output Control			01 5A 00	
	01 5A 01 00	Preview Output is Preview		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Output Control				*continued*
	01 5A 01 01	Preview Output is Regular		
	01 5A 01 02	Preview Output Toggle		
Keystone			01 5C 00	
	01 5C 01 00	Off		
	01 5C 01 01	On		
Freeze On/Off			01 56 00	
	01 56 01 00	Freeze Off		
	01 56 01 01	Freeze On		
	01 56 01 02	Freeze Toggle		
Intern/Extern			01 57 00	
	01 57 01 00	Intern On		
	01 57 01 01	Extern On		
	01 57 01 02	Intern/Extern Toggle		
Picture in Picture			01 5D 00	
	01 5D 01 00	PiP Off		
	01 5D 01 01	PiP On		
	01 5D 01 02	PiP Toggle		
Extern/Freeze Settings				
Extern/Freeze Output			01 59 00	
		Freeze DVI / RGB		Deprecated
	01 59 02 01 00	No		Deprecated
	01 59 02 01 01	Yes		Deprecated
		Freeze RGB / Preview		Deprecated
	01 59 02 00 00	No		Deprecated
	01 59 02 00 01	Yes		Deprecated
		Freeze ETH / USB		Deprecated
	01 59 02 02 00	No,		Deprecated
	01 59 02 02 01	Yes		Deprecated
		Extin DVI / RGB		Deprecated
	01 59 02 05 00	No		Deprecated
	01 59 02 05 01	Yes		Deprecated
		Extin RGB / Preview		Deprecated
	01 59 02 04 00	No		Deprecated
	01 59 02 04 01	Yes		Deprecated
Extern/Freeze Output			01 06 00	
		Freeze DVI / RGB		
	01 06 02 01 00	No		
	01 06 02 01 01	Yes		
		Freeze RGB / Preview		
	01 06 02 00 00	No		
	01 06 02 00 01	Yes		
		Freeze ETH / USB		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Extern/Freeze Settings				*continued*
	01 06 02 02 00	No,		
	01 06 02 02 01	Yes		
		Extin DVI / RGB		
	01 06 02 05 00	No		
	01 06 02 05 01	Yes		
		Extin RGB / Preview		
	01 06 02 04 00	No		
	01 06 02 04 01	Yes		
Preset Control				
Recall Preset			01 40 00	
	01 40 01 00	Power On Preset		
	01 40 01 01	Preset1		
	01 40 01 02	Preset2		
	01 40 01 03	Preset3		
	01 40 01 04	Preset Default		
	01 40 01 E5	Preset Max Wide		
	01 40 01 E6	Preset DIN A4 (ceiling: depending on mounting height)		
	01 40 01 E7	Preset DIN A5 (ceiling: depending on mounting height)		
	01 40 01 E8	Preset DIN A6 (ceiling: depending on mounting height)		
	01 40 01 E9	Preset DIN A7 (ceiling: depending on mounting height)		
	01 40 01 EA	Preset DIN A8 (ceiling: depending on mounting height)		
	01 40 01 EB	Preset Max Tele (No dig Zoom)		
Preset Special Function Key		Preset 1	01 42 00	
	01 42 02 01 00	Preset		
	01 42 02 01 01	Pos_Neg		
	01 42 02 01 02	Pos_Blue		
	01 42 02 01 03	Black_White		
	01 42 02 01 04	WB		
	01 42 02 01 05	Freeze		
	01 42 02 01 06	Image		
	01 42 02 01 07	Onepush_AF		
	01 42 02 01 08	Light_On_Off		
	01 42 02 01 0A	Text		
	01 42 02 01 0C	Image Turn		
	01 42 02 01 0D	Picture in Picture		
		Preset 2		
	01 42 02 02 00	Preset		
	01 42 02 02 01	Pos_Neg		
	01 42 02 02 02	Pos_Blue		
	01 42 02 02 03	Black_White		
	01 42 02 02 04	WB		
	01 42 02 02 05	Freeze		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Preset Control				*continued*
	01 42 02 02 06	Image		
	01 42 02 02 07	Onepush_AF		
	01 42 02 02 08	Light_On_Off		
	01 42 02 02 0A	Text		
	01 42 02 02 0C	Image Turn		
	01 42 02 02 0D	Picture in Picture		
		Preset 3		
	01 42 02 03 00	Preset		
	01 42 02 03 01	Pos_Neg		
	01 42 02 03 02	Pos_Blue		
	01 42 02 03 03	Black_White		
	01 42 02 03 04	WB		
	01 42 02 03 05	Freeze		
	01 42 02 03 06	Image		
	01 42 02 03 07	Onepush_AF		
	01 42 02 03 08	Light_On_Off		
	01 42 02 03 0A	Text		
	01 42 02 03 0C	Image Turn		
	01 42 02 03 0D	Picture in Picture		
Preset Height		Preset0	01 4E 00	
	01 4E 02 00 00	Disabled		
	01 4E 02 00 01	Default		
	01 4E 02 00 03	Auto		
	01 4E 02 00 04	Manual		
		Preset1		
	01 4E 02 01 00	Disabled		
	01 4E 02 01 01	Default		
	01 4E 02 01 03	Auto		
	01 4E 02 01 04	Manual		
		Preset2		
	01 4E 02 02 00	Disabled		
	01 4E 02 02 01	Default		
	01 4E 02 02 03	Auto		
	01 4E 02 02 04	Manual		
		Preset3		
	01 4E 02 03 00	Disabled		
	01 4E 02 03 01	Default		
	01 4E 02 03 03	Auto		
	01 4E 02 03 04	Manual		
Power Control				
Mains-On			01 36 00	
	01 36 01 00	Mains-On Standby		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Power Control				*continued*
	01 36 01 01	Mains-On Power-On		
	01 36 01 02	Mains-On Toggle		
Auto-Power-Off Time			01 37 00	
	01 37 01 FF	Off		
	01 37 01 1E	30min until Auto-Power-Off		
	01 37 01 3C	1h until Auto-Power-Off		
	01 37 01 78	2h until Auto-Power-Off		
	01 37 01 B4	3h until Auto-Power-Off		
	01 37 01 F0	4h until Auto-Power-Off		
Display Logo			01 35 00	
	01 35 01 00	Display Logo Off		
	01 35 01 01	Display Logo On		
	01 35 01 02	Display Logo Toggle		
Power Down Mode			01 39 00	
	01 39 01 00	Normal		
	01 39 01 01	Deep		
	01 39 01 02	Toggle		
PowerOn Preset			01 34 00	
	01 34 01 00	PowerOn Preset Off		
	01 34 01 01	PowerOn Preset On		
	01 34 01 02	PowerOn Preset Toggle		
Store Preset			01 41 00	
	01 41 01 00	Power On Preset		
	01 41 01 01	Preset1		
	01 41 01 02	Preset2		
	01 41 01 03	Preset3		
Power On/Off			01 30 00	
	01 30 01 00	Power Off		
	01 30 01 01	Power On (PowerOn Preset)		
	01 30 01 02	Power Toggle		
Misc. Command				
Digital Zoom			01 29 00	
	01 29 01 00	Digital Zoom Off		
	01 29 01 01	Digital Zoom 2x		
	01 29 01 02	Digital Zoom 4x		
Digital Zoom Warning			01 2A 00	
	01 2A 01 00	Digital Zoom Warning Stop		
	01 2A 01 01	Digital Zoom Warning Message		
	01 2A 01 02	Digital Zoom Warning None		
IR Code			01 81 00	
	01 81 01 1C	Code A		
	01 81 01 1D	Code B		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Misc. Command				*continued*
	01 81 01 1E	Code C		
	01 81 01 1F	Code D		
Erase Memory Behaviour			01 94 00	
	01 94 01 00	Erase Mem. Manual		
	01 94 01 01	Erase Mem. Standby		
	01 94 01 02	Erase Mem. Toggle		
AutoSense ExternIn On/Off			01 58 00	
	01 58 01 00	AutoSense ExternIn Off		
	01 58 01 01	AutoSense ExternIn On		
	01 58 01 02	AutoSense ExternIn Toggle		
Fading			01 8A 00	
	01 8A 01 00	Fading Off		
	01 8A 01 02	Fading Slow		
	01 8A 01 04	Fading Standard		
	01 8A 01 08	Fading Fast		
ImageTurn Rotation			01 84 00	
	01 84 01 00	Cycle		
	01 84 01 01	-90° (clockwise)		
	01 84 01 02	180°		
	01 84 01 03	+90° (counter clockwise)		
Keylock On/Off			01 80 00	
	01 80 01 00	Keylock Off		
	01 80 01 01	Keylock On		
	01 80 01 02	Keylock Toggle		
Image On/Off			01 86 00	
	01 86 01 00	Image Off		
	01 86 01 01	Image On		
	01 86 01 02	Image Toggle		
Debug On/Off			01 88 00	
	01 88 01 00	Debug Off		
	01 88 01 01	Debug On		
Recall Default Settings			01 8F 00	
	01 8F 01 00			
Source			01 9E 00	
	01 9E 01 00	Live		
	01 9E 01 01	Mem		
	01 9E 01 02	USB		
	01 9E 01 03	Extern		
OSD				
Language			01 CC 00	
	01 CC 01 00	English		
	01 CC 01 01	German		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
OSD				*continued*
OSD Level			01 82 00	
	01 82 01 00	Quiet		
	01 82 01 01	Talk		
	01 82 01 02	Verbose		
Transparency			01 C0 00	
	01 C0 01 00	Transparency Off		
	01 C0 01 01	Transparency On		
Selection Bar Color			01 C5 00	
	01 C5 01 00	Black		
	01 C5 01 03	Red		
	01 C5 01 0B	Orange		
	01 C5 01 0C	Green		
	01 C5 01 15	Darkgrey		
	01 C5 01 28	Mint		
	01 C5 01 2A	Grey		
	01 C5 01 2F	Yellow		
	01 C5 01 30	Blue		
	01 C5 01 33	Magenta		
	01 C5 01 3C	Cyan		
	01 C5 01 3F	White		
Selected Text Color			01 C6 00	
	01 C6 01 00	Black		
	01 C6 01 03	Red		
	01 C6 01 0B	Orange		
	01 C6 01 0C	Green		
	01 C6 01 15	Darkgrey		
	01 C6 01 28	Mint		
	01 C6 01 2A	Grey		
	01 C6 01 2F	Yellow		
	01 C6 01 30	Blue		
	01 C6 01 33	Magenta		
	01 C6 01 3C	Cyan		
	01 C6 01 3F	White		
Menu Text Color			01 C7 00	
	01 C7 01 00	Black		
	01 C7 01 03	Red		
	01 C7 01 0B	Orange		
	01 C7 01 0C	Green		
	01 C7 01 15	Darkgrey		
	01 C7 01 28	Mint		
	01 C7 01 2A	Grey		
	01 C7 01 2F	Yellow		
	01 C7 01 30	Blue		
	01 C7 01 33	Magenta		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
OSD				*continued*
	01 C7 01 3C	Cyan		
	01 C7 01 3F	White		
Menu Headline Color			01 C8 00	
	01 C8 01 00	Black		
	01 C8 01 03	Red		
	01 C8 01 0B	Orange		
	01 C8 01 0C	Green		
	01 C8 01 15	Darkgrey		
	01 C8 01 28	Mint		
	01 C8 01 2A	Grey		
	01 C8 01 2F	Yellow		
	01 C8 01 30	Blue		
	01 C8 01 33	Magenta		
	01 C8 01 3C	Cyan		
	01 C8 01 3F	White		
Menu Status Text Color			01 C9 00	
	01 C9 01 00	Black		
	01 C9 01 03	Red		
	01 C9 01 0B	Orange		
	01 C9 01 0C	Green		
	01 C9 01 15	Darkgrey		
	01 C9 01 28	Mint		
	01 C9 01 2A	Grey		
	01 C9 01 2F	Yellow		
	01 C9 01 30	Blue		
	01 C9 01 33	Magenta		
	01 C9 01 3C	Cyan		
	01 C9 01 3F	White		
Size			01 C1 00	
	01 C1 01 00	Size Small		
	01 C1 01 01	Size Large		
Menu Horizontal Position			01 C2 00	
	01 C2 01 d0			
		d0: 0 to 100% in steps of 1% (0x00..0x64)		
Menu Vertikal Position			01 C3 00	
	01 C3 01 d0			
		d0: 0 to 100% in steps of 1% (0x00..0x64)		
Status Position			01 C4 00	
	01 C4 01 00	Status Position Top		
	01 C4 01 01	Status Position Bottom		
Ethernet				
DHCP On/Off			01 70 00	

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Ethernet				*continued*
	01 70 01 00	DHCP off		
	01 70 01 01	DHCP on		
IP Address			01 71 00	
	01 71 04 d0 d1 d2 d3	IP Address in hex (0x00 to 0xFF for each octet)		
		d0 d1 d2 d3: 0x00000000..0xFFFFFFFF		
Subnet Mask			01 72 00	
	01 72 04 d0 d1 d2 d3	Subnet Mask in hex (0x00 to 0xFF for each octet)		
		d0 d1 d2 d3: 0x00000000..0xFFFFFFFF		
Gateway IP			01 73 00	
	01 73 04 d0 d1 d2 d3	Gateway IP Address in hex (0x00 to 0xFF for each octet)		
		d0 d1 d2 d3: 0x00000000..0xFFFFFFFF		
Nameserver IP			01 3A 00	
	01 3A 04 d0 d1 d2 d3	Nameserver IP Address in hex (0x00 to 0xFF for each octet)		
		d0 d1 d2 d3: 0x00000000..0xFFFFFFFF		
Network			01 5E 00	
	01 5E 0D d0 .. d12	For setting networksettings in one command.		
		d0: 00=DHCP Off,1=DHCP On d1 d2 d3 d4: IP Address d5 d6 d7 d8: Subnet Mask d9 d10 d11 d12: Gateway IP		
Streaming				
Destination IP Address			01 77 00	
	01 77 04 d0 d1 d2 d3	Multicast IP Address in hex (0x00 to 0xFF for each octet) Valid range: 225.0.0.0..238.255.255.255 Unicast IP Address in hex Valid range: all except multicast		
		d0 d1 d2 d3: 0x00000000..FFFFFFFF		
Streaming Port			01 78 00	
	01 78 02 d0 d1	Port 8800 to 9000 in hex		
		d0 d1: 0x2260..0x2328		
Streaming Mode			01 75 00	
	01 75 01 00	Off		
	01 75 01 01	Auto		
	01 75 01 02	Continuous		
	01 75 01 03	Unicast		
Streaming Resolution			01 79 00	
	01 79 01 00	SXGA- / 720p / WXGA*		
	01 79 01 01	XGA / 576p / XGA*		
	01 79 01 03	VGA / 288p / VGA*		
Streaming Framerate			01 7A 00	
	01 7A 01 00	Low		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Streaming				*continued*
	01 7A 01 01	Medium		
	01 7A 01 02	High		
Unicast			01 5F 00	
	01 5F 01 00	Stop		
	01 5F 01 01	Start		
FTP				
Server IP Address			01 DA 00	
	01 DA 04 d0 d1 d2 d3	FTP Server IP Address in hex (0x00 to 0xFF for each octet) Valid range: 225.0.0.0..238.255.255.255 Unicast IP Address in hex Valid range: all except multicast		
		d0 d1 d2 d3: 0x00000000..FFFFFFFF		
Username			01 DB 00	
	01 DB ab d0 .. dn	ab: Length, max 10 Bytes d0 .. dn: String		
Password			01 DC 00	
	01 DC ab d0 .. dn	ab: Length, max 10 Bytes d0 .. dn: String		
Interval			01 DD 00	
	01 DD 01 00	Off		
	01 DD 01 01	1 min		
	01 DD 01 02	5 min		
	01 DD 01 03	10 min		
	01 DD 01 04	15 min		
	01 DD 01 05	30 min		
	01 DD 01 06	1 h		
Security				
Ethernet Mode		(RS232 and USB only)	01 74 00	
	01 74 01 00	Off		
	01 74 01 01	Image Only		
	01 74 01 02	Control Only		
	01 74 01 03	Image and Control		
	01 74 01 04	FW Update Only		
	01 74 01 05	Image and FW Update		
	01 74 01 06	Control and FW Update		
	01 74 01 07	Image, Control and FW Update		
	01 74 01 08	Auth		
Device Info				
FW Check			01 0C 00	

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Device Info				*continued*
	01 0C 01 00			
Description			01 1A 00	
	01 1A ab d0 .. dn	ab: length, max. 255 Bytes d0 .. dn: String		
Firmware Update				
Firmware Upload Erase Flash			01 B0 00	
	01 B0 01 00	Flash1 (uC,FPGA,NIOS)		
Firmware Upload Data Start			01 B1 00	
	01 B1 04 d0 d1 d2 d3	Length of firmware data		
		d0 d1 d2 d3: 0x00000000..0xFFFFFFFF		
Firmware Upload Data			01 B2 00	
	05 B2 ab cd d0 .. dn	ab cd: Length of bytes of long data block in hex USB max Length = 508 (512-4) ETH max Length = 1440 d0 .. dn: Data		
	01 B2 ab d0 .. dn	ab: Length of bytes of long data block in hex RS232 max Length = 253 (256-3) d0 .. dn: Data		
Firmware Upload Data Stop			01 B3 00	
	01 B3 01 00			
Firmware Downgrade			01 B4 00	
	01 B4 01 00	Command must be issued before uploading old firmware		
Firmware Update Start		Firmware from WV Webpage	01 0E 00	
	01 0E 01 00			
Date/Time				
Time Source			01 44 00	
	01 44 01 00	Internal		
	01 44 01 01	External		
Timeserver IP			01 7C 00	
	01 7C 04 d0 d1 d2 d3	d0 d1 d2 d3: Timeserver IP Address in hex (0x00 to 0xFF for each octet)		
		d0 d1 d2 d3: 0x00000000..0xFFFFFFFF		
Timezone			01 7D 00	
	01 7D 01 00	Pacific/Apia		
	01 7D 01 01	Pacific/Honolulu		
	01 7D 01 02	America/Anchorage		
	01 7D 01 03	America/Los_Angeles		
	01 7D 01 04	America/Tijuana		
	01 7D 01 05	America/Phoenix		
	01 7D 01 06	America/Denver		
	01 7D 01 07	America/Mazatlan		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Date/Time				*continued*
	01 7D 01 08	America/Chicago		
	01 7D 01 09	America/Regina		
	01 7D 01 0A	America/Mexico_City		
	01 7D 01 0B	America/Bogota		
	01 7D 01 0C	America/New_York		
	01 7D 01 0D	America/Caracas		
	01 7D 01 0E	America/Halifax		
	01 7D 01 0F	America/Santiago		
	01 7D 01 10	America/La_Paz		
	01 7D 01 11	America/St_Johns		
	01 7D 01 12	America/Sao_Paulo		
	01 7D 01 13	America/Buenos_Aires		
	01 7D 01 14	America/Montevideo		
	01 7D 01 15	Atlantic/South_Georgia		
	01 7D 01 16	Atlantic/Azores		
	01 7D 01 17	Atlantic/Cape_Verde		
	01 7D 01 18	Africa/Casablanca		
	01 7D 01 19	UTC		
	01 7D 01 1A	Europe/London		
	01 7D 01 1B	Europe/Berlin		
	01 7D 01 1C	Africa/Kinshasa		
	01 7D 01 1D	Europe/Istanbul		
	01 7D 01 1E	Africa/Cairo		
	01 7D 01 1F	Asia/Jerusalem		
	01 7D 01 20	Africa/Johannesburg		
	01 7D 01 21	Europe/Moscow		
	01 7D 01 22	Africa/Nairobi		
	01 7D 01 23	Asia/Baghdad		
	01 7D 01 24	Asia/Tehran		
	01 7D 01 25	Asia/Muscat		
	01 7D 01 26	Asia/Baku		
	01 7D 01 27	Asia/Kabul		
	01 7D 01 28	Asia/Karachi		
	01 7D 01 29	Asia/Kolkata		
	01 7D 01 2A	Asia/Katmandu		
	01 7D 01 2B	Asia/Almaty		
	01 7D 01 2C	Asia/Dhaka		
	01 7D 01 2D	Asia/Rangoon		
	01 7D 01 2E	Asia/Bangkok		
	01 7D 01 2F	Asia/Hong_Kong		
	01 7D 01 30	Asia/Singapore		
	01 7D 01 31	Australia/Perth		
	01 7D 01 32	Asia/Taipei		
	01 7D 01 33	Asia/Tokyo		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Date/Time				*continued*
	01 7D 01 34	Asia/Seoul		
	01 7D 01 35	Australia/Adelaide		
	01 7D 01 36	Australia/Darwin		
	01 7D 01 37	Australia/Sydney		
	01 7D 01 38	Australia/Brisbane		
	01 7D 01 39	Pacific/Noumea		
	01 7D 01 3A	Pacific/Auckland		
	01 7D 01 3B	Pacific/Kwajalein		
Date Format			01 45 00	
	01 45 01 00	DDMMYYYY/24H		
	01 45 01 01	MMDDYYYY/12H		
Date/Time			01 7E 00	
	01 7E 05 d0 .. dn	d0: Year (0..99)(0x00..0x63) d1: Month (1..12)(0x01..0x0C) d2: Day (1..31)(0x01..0x1F) d3: Hour (0..23)(0x00..0x17) d4: Minute (0..59)(0x00..0x3B)		
USB Settings				
Picture Folder			01 D0 00	
	01 D0 ab d0 .. dn	ab: Length, max 10 Bytes d0 .. dn: String		
Picture Number			01 D1 00	
	01 D1 04 d0 d1 d2 d3	Index for pictures: Format WV# d0 .. d3: Number d0 d1 d2 d3: 0x00000000..0xFFFFFFFF		
Load Settings			01 D6 00	
	01 D6 01 00	Off		
	01 D6 01 01	Auto		
	01 D6 01 02	Confirm		
Store Settings			01 D7 00	
	01 D7 01 00			
Height Adjustment				
Height Adjustment			01 2D 00	
	01 2D 01 03	Start Auto Adjustment		
	01 2D 01 04	Start Manual Adjustment		
	01 2D 01 05	Cancel		
	01 2D 01 06	Accept		
Light Mirror Control			01 25 00	
	01 25 02 02 d0	Mirror Up		
		d0: Speed (0..255,0=Stop)		
	01 25 02 04 d0	Mirror Left		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Height Adjustment				*continued*
		d0: Speed (0..255,0=Stop)		
	01 25 02 06 d0	Mirror Right		
		d0: Speed (0..255,0=Stop)		
	01 25 02 08 d0	Mirror Down		
		d0: Speed (0..255,0=Stop)		
Light Focus Control			01 26 00	
	01 26 02 01 d0	Light Focus Near		
		d0: Speed (0=Stop,1=Slow,2=Fast)		
	01 26 02 02 d0	Light Focus Far		
		d0: Speed (0=Stop,1=Slow,2=Fast)		
Extra Menu				
Pixel Calibration			01 8C 00	
	01 8C 01 00			
Noise Suppression			01 87 00	
	01 87 01 00	Off		
	01 87 01 01	On		
Baudrate			01 89 00	
	01 89 01 00	9600 Baud		
	01 89 01 01	19200 Baud		
	01 89 01 02	38400 Baud		
	01 89 01 03	57600 Baud		
	01 89 01 04	115200 Baud		
Image Mirror			01 5B 00	
	01 5B 01 00	Off		
	01 5B 01 01	Horizontal		
	01 5B 01 02	Vertical		
	01 5B 01 03	H+V		
	01 5B 01 04	H Toggle		
	01 5B 01 08	V Toggle		
	01 5B 01 10	H Off		
	01 5B 01 20	V Off		
VGA/Preview Calibration			01 9D 00	
	01 9D 01 d0			
		d0: 85% to 100% in steps of 1% (0x55..0x64)		
Motor Control				
Stop all motors			01 2F 00	
	01 2F 01 00	Iris, Focus, Zoom,Mirror,Vergence		
Zoom Control				
Zoom			01 20 00	
	01 20 01 01	Zoom Wide (Step)(RS232 only)		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Zoom Control				*continued*
	01 20 01 02	Zoom Tele (Step)(RS232 only)		
	01 20 01 11	Start Zoom Wide		
	01 20 01 12	Start Zoom Tele		
	01 20 02 d0 d1	Set zoom position absolutely		
		d0 d1: 0x0000..0x0FFF (Wide..Tele)		
	01 20 03 ab d0 d1	ab: Direction (0x01 Zoom Wide, 0x02 Zoom Tele)		
		d0, d1: Speed (0x01 .. 0x0f, 0x00 Stop)		
		d0, d1: 0x00 .. 0x0f		
Digital Zoom				
Set Digital Zoom			01 28 00	
	01 28 02 d0 d1	Set digital zoom position absolutely		
		d0 d1: 0x0002..0x0FFF (Wide..Tele)		
	01 28 03 ab d0 d1	Memory Zoom Navigation		
		ab: Direction (0x01 Up-Left, 0x02 Up, 0x03 Up-Right, 0x04 Left, 0x06 Right, 0x07 Down-Left, 0x08 Down, 0x09 Down-Right)		
		d0,d1: Speed (0x0001 .. 0x0014, 0x0000 Stop)		
		d0,d1: 0x0000 .. 0x0014		
Focus Control				
Focus			01 21 00	
	01 21 01 01	Focus Far (Step)(RS232 only)		
	01 21 01 02	Focus Near (Step)(RS232 only)		
	01 21 01 11	Start Focus Far		
	01 21 01 12	Start Focus Near		
	01 21 02 d0 d1	Set Focus Position Absolutely		
		d0 d1: 0x0000..0x0FFF (Far..Near)		
	01 21 03 ab d0 d1	ab: Direction (0x01 Focus Far, 0x02 Focus Near)		
		d0, d1: Speed (0x0001 .. 0x000F, 0x0000 Stop)		
		d0, d1: 0x0000 .. 0x000F		
Auto Focus			01 31 00	
	01 31 01 10	One-Push-AF		
Iris Control				
Iris			01 22 00	
	01 22 01 01	Iris Open (Step)(RS232 only)		
	01 22 01 02	Iris Close (Step)(RS232 only)		
	01 22 01 11	Start Iris Open		
	01 22 01 12	Start Iris Close		
	01 22 02 d0 d1	Set Iris Position Absolutely (0x0000..0x0FFF)		
		d0 d1: 0x0000..0x0FFF (Close..Open)		

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Iris Control				*continued*
	01 22 03 ab d0 d1	ab: Direction (0x01 Iris Open, 0x02 Iris Close) d0, d1: Speed (0x0001 normal spd, 0x0002 full Spd, 0x0000		
		d0, d1: 0x0000..0x0002		
Auto Iris			01 32 00	
	01 32 01 00	Auto Iris Off		
	01 32 01 01	Auto Iris On		
	01 32 01 02	Auto Iris Toggle		
Light Control				
Light, Lightbox On/Off			01 A0 00	
	01 A0 01 00	Light Off, LB Off		
	01 A0 01 01	Light On, LB Off		
	01 A0 01 10	Light Toggle (Light->[LB]->SB->Off)		
	01 A0 01 12	Light Toggle (Light On/Off)		
ImageTurn Command				
Image Turn On/Off			01 83 00	
	01 83 01 00	Image Turn Off		
	01 83 01 02	Image Turn Toggle		
Unit Menu Control				
Menu On/Off			01 98 00	
	01 98 01 00	Menu Off		
	01 98 01 01	Menu On (Unlock menu first)		
	01 98 01 02	Menu Toggle		
Unlock Menu			01 9A 00	
	01 9A 01 00			
Unlock Extra Menu			01 9B 00	
	01 9B 01 00			
Menu Control			01 99 00	
	01 99 01 02	Function Up		
	01 99 01 08	Function Down		
	01 99 01 04	Data Left		
	01 99 01 06	Data Right		
	01 99 01 05	Enter		
	01 99 01 01	Backward (navigation of 3x3 USB mode only)		
	01 99 01 03	Forward (navigation of 3x3 USB mode only)		
	01 99 01 10	Help		
	01 99 01 90	Menu Item Reset		
Image Storing Cmd				
Memory Off			01 90 00	

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Image Storing Cmd				*continued*
	01 90 01 00			
Memory Recall			01 91 00	
	01 91 01 01	Recall Memory1		
	01 91 01 02	Recall Memory2		
	01 91 01 03	Recall Memory3		
	01 91 01 04	Recall Memory4		
	01 91 01 05	Recall Memory5		
	01 91 01 06	Recall Memory6		
	01 91 01 07	Recall Memory7		
	01 91 01 08	Recall Memory8		
	01 91 01 09	Recall Memory9		
Memory Store			01 92 00	
	01 92 01 01	Store Memory1		
	01 92 01 02	Store Memory2		
	01 92 01 03	Store Memory3		
	01 92 01 04	Store Memory4		
	01 92 01 05	Store Memory5		
	01 92 01 06	Store Memory6		
	01 92 01 07	Store Memory7		
	01 92 01 08	Store Memory8		
	01 92 01 09	Store Memory9		
	01 92 01 10	Auto Snapshot		
	01 92 01 20	Erase Memory		
View/ShowAll On/Off			01 93 00	
	01 93 01 00	ShowAll Off		
	01 93 01 01	ShowAll On		
	01 93 01 02	ShowAll Toggle		
Snapshot			01 95 00	
	01 95 01 00	Store Picture to Mem/USB		
	01 95 01 01	Overwrite		
	01 95 01 02	Send picture as email (with settings from webinterface)		
	01 95 01 03	Send picture to FTP server (with settings from OSD)		
Authentication				
Login			01 D4 00	
	01 D4 24 d0 .. dn	MD5 (SessionID, Username, Password, IP) + Username + IP Strings are padded with 0's MD5=16Bytes,Username=16Bytes,IP=4Bytes Padding for calculateing MD5: SessionID=4Bytes,Username=16Bytes,Password=10Bytes,IP=4Bytes		
SIP Login				

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Authentication				*continued*
	01 1D 01 00	Single IP Authentication Request	01 1D 01 01	Device busy
			01 1D 08 d0..dn	Auth Request
				d0..d2: Color 1 (RGB)
				d3..d5: Color 2 (RGB)
				d6: Pattern (number)
				d7: Timeout (max sequence time)
	01 1D 01 01	SIP Logout	01 1D 00	
Logout			01 D5 00	
	01 D5 01 00			

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Exposure				
Gain	00 60 00			
			00 60 01 00	0dB
			00 60 01 01	1dB
			00 60 01 02	2dB
			00 60 01 03	3dB
			00 60 01 04	4dB
			00 60 01 05	5dB
			00 60 01 06	6dB
			00 60 01 07	7dB
			00 60 01 08	8dB
			00 60 01 09	9dB
			00 60 01 0A	10dB
			00 60 01 0B	11dB
			00 60 01 0C	12dB
			00 60 01 0D	13dB
			00 60 01 0E	14dB
			00 60 01 0F	15dB
			00 60 01 10	16dB
			00 60 01 11	17dB
			00 60 01 12	18dB
			00 60 01 13	19dB
			00 60 01 14	20dB
			00 60 01 15	21dB
			00 60 01 16	22dB
			00 60 01 17	23dB
			00 60 01 18	24dB
			00 60 01 40	Auto Low
			00 60 01 80	Auto Med
			00 60 01 C0	Auto High
Shutter	00 61 00			
			00 61 01 00	Step
			00 61 01 01	Variable see Speed (Shutter=variable)
			00 61 01 02	Auto
			00 61 01 03	Off
Speed (Shutter=step)	00 62 00			
			00 62 01 00	1/30s
			00 62 01 01	Flickerless
			00 62 01 02	1/50s
			00 62 01 03	1/60s
			00 62 01 04	1/100s
			00 62 01 05	1/120s
			00 62 01 06	1/250s
			00 62 01 07	1/500s
			00 62 01 08	1/1000s

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
				continued
			00 62 01 09	1/2000s
			00 62 01 0A	1/3000s
Speed (Shutter=variable)	00 63 00			
			00 63 02 d0 d1	d0 d1: Exposure time in lines
				d0 d1: Min: 0x0007 Max: 0x0318
Iris Priority	00 33 00			
			00 33 01 00	Auto
			00 33 01 01	Manual
Image Brightness	00 64 00			
			00 64 01 F6	-10
			00 64 01 F7	-9
			00 64 01 F8	-8
			00 64 01 F9	-7
			00 64 01 FA	-6
			00 64 01 FB	-5
			00 64 01 FC	-4
			00 64 01 FD	-3
			00 64 01 FE	-2
			00 64 01 FF	-1
			00 64 01 00	0
			00 64 01 01	+1
			00 64 01 02	+2
			00 64 01 03	+3
			00 64 01 04	+4
			00 64 01 05	+5
			00 64 01 06	+6
			00 64 01 07	+7
			00 64 01 08	+8
			00 64 01 09	+9
			00 64 01 0A	+10
Back Light Compensation	00 6C 00			
			00 6C 01 00	Off
			00 6C 01 01	Medium
			00 6C 01 02	High
Color				
White Balance	00 65 00			
			00 65 01 00	Auto
			00 65 01 01	OPWB
			00 65 01 02	Manual
R Gain (WB=Manual)	00 66 00	Deprecated		
		Deprecated	00 66 01 d0	
		Deprecated		d0: -191..-64..+63 (0x81..0x00..0x7F)
B Gain (WB=Manual)	00 67 00	Deprecated		
		Deprecated	00 67 01 d0	

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Color				***continued***
		Deprecated		d0: -191..-64..+63 (0x81..0x00..0x7F)
R Gain (WB=Manual)	00 04 00			
			00 04 02 d0 d1	
				d0,d1: -191..+63 (0xFF41..0x003F)
B Gain (WB=Manual)	00 05 00			
			00 05 02 d0 d1	
				d0,d1: -191..+63 (0xFF41..0x003F)
Text Enhancer	00 85 00			
			00 85 01 00	Off
			00 85 01 01	On
Color Mode	00 6D 00			
			00 6D 01 00	Black/White
			00 6D 01 01	Presentation
			00 6D 01 02	Natural
			00 6D 01 03	Video Conference
			00 6D 01 04	Manual
Gamma Normal Mode	00 68 00			
			00 68 01 d0	d0: Gamma Curves
				d0: 0x00..0x03
Saturation	00 6E 00			
			00 6E 01 d0	d0: Saturation in percent
				d0: 0 %...150% (0x00..0x96)
Pos/Neg/Blue	00 54 00			
			00 54 01 00	Pos
			00 54 01 01	Neg
			00 54 01 02	Blue
Output Control				
Detail	00 53 00			
			00 53 01 00	Off
			00 53 01 02	Medium
			00 53 01 03	High
Resolution DVI(RGB)	00 51 00			
			00 51 01 FF	Off
			00 51 01 00	Auto
			00 51 01 01	SVGA/60 (800x600)
			00 51 01 04	XGA/60 (1024x768)
			00 51 01 08	SXGA-/60 (1280x960)
			00 51 01 0A	SXGA/60 (1280x1024)
			00 51 01 0D	UXGA/60 (1600x1200)
			00 51 01 12	SXGA+/60 (1400x1050)
			00 51 01 14	VGA/60 (640x480)
			00 51 01 15	720p/50 (1280x720)

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Output Control				*continued*
			00 51 01 16	720p/60
			00 51 01 17	1080p/50 (1920x1050)
			00 51 01 18	1080p/60
			00 51 01 1A	WSXGA/60 (1680x1050)
			00 51 01 1B	WXGA/60 (1366x768)
			00 51 01 1C	WUXGA/60 (1920x1200)
			00 51 01 1D	WXGA+/60 (1440x900)
			00 51 01 1E	WXGA*/60 (1280x800)
			00 51 01 20	1080p/30
RGB(Preview) Resolution	00 50 00			
			00 50 01 FF	Off
			00 50 01 00	Auto
			00 50 01 01	SVGA/60 (800x600)
			00 50 01 04	XGA/60 (1024x768)
			00 50 01 08	SXGA-/60 (1280x960)
			00 50 01 0A	SXGA/60 (1280x1024)
			00 50 01 0D	UXGA/60 (1600x1200)
			00 50 01 12	SXGA+/60 (1400x1050)
			00 50 01 14	VGA/60 (640x480)
			00 50 01 15	720p/50 (1280x720)
			00 50 01 16	720p/60
			00 50 01 17	1080p/50 (1920x1050)
			00 50 01 18	1080p/60
			00 50 01 1A	WSXGA/60 (1680x1050)
			00 50 01 1B	WXGA/60 (1366x768)
			00 50 01 1C	WUXGA/60 (1920x1200)
			00 50 01 1D	WXGA+/60 (1440x900)
			00 50 01 1E	WXGA*/60 (1280x800)
			00 50 01 20	1080p/30
Preview Output	00 5A 00			
			00 5A 01 00	Preview
			00 5A 01 01	Regular
Keystone	00 5C 00			
			00 5C 01 00	Off
			00 5C 01 01	On
Freeze	00 56 00			
			00 56 01 00	Off
			00 56 01 01	On
Ext/Int	00 57 00			
			00 57 01 00	Intern
			00 57 01 01	Extern
Picture in Picture	00 5D 00			
			00 5D 01 00	PiP Off
			00 5D 01 01	Pip On

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Output Control				*continued*
ResInfo DVI	00 55 00			
			00 55 ab d0..dn	DVI Resolution String (eg 1280x960/60Hz or Resolution in AUTO)
ResInfo RGB	00 52 00			
			00 52 ab d0..dn	RGB Resolution String (eg 1280x960/60Hz)
Extern/Freeze Settings				
Extern/Freeze Output	00 59 00	Deprecated		
			00 59 07 d0 d1 d2 d3 d4 d5 d6	d0: Freeze RGB / Preview 00=No, 01=Yes, 02=N/A d1: Freeze DVI / RGB 00=No, 01=Yes, 02=N/A d2: Freeze ETH / USB 00=No, 01=Yes, 02=N/A d3: Freeze LCD 00=No, 01=Yes, 02=N/A d4: Ext In RGB / Preview 00=No, 01=Yes, 02=N/A d5: Ext In DVI / RGB 00=No, 01=Yes, 02=N/A d6: Ext In LCD 00=No, 01=Yes, 02=N/A
Extern/Freeze Output	00 06 01 01	Freeze DVI / RGB		
			00 06 02 01 00	No
			00 06 02 01 01	Yes
			00 06 02 01 02	N/A
	00 06 01 00	Freeze RGB / Preview		
			00 06 02 00 00	No
			00 06 02 00 01	Yes
			00 06 02 00 02	N/A
	00 06 01 02	Freeze ETH / USB		
			00 06 02 02 00	No
			00 06 02 02 01	Yes
			00 06 02 02 02	N/A
	00 06 01 03	Freeze LCD		
			00 06 02 03 00	No
			00 06 02 03 01	Yes
			00 06 02 03 02	N/A
	00 06 01 05	Extin DVI / RGB		
			00 06 02 05 00	No
			00 06 02 05 01	Yes
			00 06 02 05 02	N/A
	00 06 01 04	Extin RGB / Preview		
			00 06 02 04 00	No
			00 06 02 04 01	Yes
			00 06 02 04 02	N/A
	00 06 01 06	Extin LCD		
			00 06 02 06 00	No
			00 06 02 06 01	Yes
			00 06 02 06 02	N/A

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Preset Control				
Preset Special Function Key	00 42 01 01	Preset1		
			00 42 02 01 00	Preset
			00 42 02 01 01	Pos_Neg
			00 42 02 01 02	Pos_Blue
			00 42 02 01 03	Black_White
			00 42 02 01 04	WB
			00 42 02 01 05	Freeze
			00 42 02 01 06	Image
			00 42 02 01 07	Onepush_AF
			00 42 02 01 08	Light_On_Off
			00 42 02 01 0A	Text
			00 42 02 01 0C	Image Turn
			00 42 02 01 0D	Picture in Picture
	00 42 01 02	Preset2		
			00 42 02 02 00	Preset
			00 42 02 02 01	Pos_Neg
			00 42 02 02 02	Pos_Blue
			00 42 02 02 03	Black_White
			00 42 02 02 04	WB
			00 42 02 02 05	Freeze
			00 42 02 02 06	Image
			00 42 02 02 07	Onepush_AF
			00 42 02 02 08	Light_On_Off
			00 42 02 02 0A	Text
			00 42 02 02 0C	Image Turn
			00 42 02 02 0D	Picture in Picture
	00 42 01 03	Preset3		
			00 42 02 03 00	Preset
			00 42 02 03 01	Pos_Neg
			00 42 02 03 02	Pos_Blue
			00 42 02 03 03	Black_White
			00 42 02 03 04	WB
			00 42 02 03 05	Freeze
			00 42 02 03 06	Image
			00 42 02 03 07	Onepush_AF
			00 42 02 03 08	Light_On_Off
			00 42 02 03 0A	Text
			00 42 02 03 0C	Image Turn
			00 42 02 03 0D	Picture in Picture
List of SFK functions	00 43 00			
			00 43 ab d0 .. dn	ab: Length of variable list of supported functions. d0 .. dn: List Preset is excluded , because always present.

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Preset Control				*continued*
				01=Pos_Neg
				02=Pos_Blue
				03=Black_White
				04=Whitebalance
				05=Freeze
				06=Image
				07=Onepush_AF
				08=Light_On_Off
				0A=Text
				0C=Image Turn
				0D=Picture in Picture
Preset Height	00 4E 01 01	Preset1		
			00 4E 02 01 00	Disabled
			00 4E 02 01 01	Default
			00 4E 02 01 02	Set
	00 4E 01 02	Preset2		
			00 4E 02 02 00	Disabled
			00 4E 02 02 01	Default
			00 4E 02 02 02	Set
	00 4E 01 03	Preset3		
			00 4E 02 03 00	Disabled
			00 4E 02 03 01	Default
			00 4E 02 03 02	Set
Power Control				
Power On Preset	00 34 00			
			00 34 01 00	Off
			00 34 01 01	On
Display Logo	00 35 00			
			00 35 01 00	Off
			00 35 01 01	On
Mains-On	00 36 00			
			00 36 01 00	Standby
			00 36 01 01	Power-On
Auto-Power-Off Time	00 37 00			
			00 37 01 FF	Off
			00 37 01 1E	30min until Auto-Power-Off
			00 37 01 3C	1h until Auto-Power-Off
			00 37 01 78	2h until Auto-Power-Off
			00 37 01 B4	3h until Auto-Power-Off
			00 37 01 F0	4h until Auto-Power-Off
Power Down Mode	00 39 00			
			00 39 01 00	Normal

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Power Control				*continued*
			00 39 01 01	Deep
Power	00 30 00			
			00 30 01 00	Off
			00 30 01 01	On
Misc. Command				
Fading	00 8A 00			
			00 8A 01 00	Off
			00 8A 01 02	Slow
			00 8A 01 04	Standard
			00 8A 01 08	Fast
IR Code	00 81 00			
			00 81 01 1C	Code A
			00 81 01 1D	Code B
			00 81 01 1E	Code C
			00 81 01 1F	Code D
Erase Memory	00 94 00			
			00 94 01 00	Manually
			00 94 01 01	Standby
Autosense Ext/Int	00 58 00			
			00 58 01 00	Off (Stays on extern)
			00 58 01 01	On (Switch to intern if no external signal)
ImageTurn Rotation	00 84 00			
			00 84 01 00	Cycle
			00 84 01 01	-90°
			00 84 01 02	180°
			00 84 01 03	90°
Digital Zoom Mode	00 29 00			
			00 29 01 00	Off
			00 29 01 01	2x
			00 29 01 02	4x
Digital Zoom Warning	00 2A 00			
			00 2A 01 00	Stop
			00 2A 01 01	Message
			00 2A 01 02	None
Keylock	00 80 00			
			00 80 01 00	Off
			00 80 01 01	On
Image	00 86 00			
			00 86 01 00	Off
			00 86 01 01	On
Debug	00 88 00			
			00 88 01 00	Debug Off

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Misc. Command				*continued*
			00 88 01 01	Debug On
Source	00 9E 00			
			00 9E 01 00	Live
			00 9E 01 01	Mem
			00 9E 01 02	USB
			00 9E 01 03	Extern
OSD				
OSD Level	00 82 00			
			00 82 01 00	Quiet
			00 82 01 01	Talk
			00 82 01 02	Verbose
Transparency	00 C0 00			
			00 C0 01 00	Transparency Off
			00 C0 01 01	Transparency On
Size	00 C1 00			
			00 C1 01 00	Size Small
			00 C1 01 01	Size Large
Menu Horizontal Position	00 C2 00			
			00 C2 01 d0	
				d0: 0 to 100% in steps of 1% (0x00..0x64)
Menu Vertical Position	00 C3 00			
			00 C3 01 d0	
				d0: 0 to 100% in steps of 1% (0x00..0x64)
Status Position	00 C4 00			
			00 C4 01 00	Status Position Top
			00 C4 01 01	Status Position Bottom
Selection Bar Color	00 C5 00			
			00 C5 01 00	Black
			00 C5 01 03	Red
			00 C5 01 0B	Orange
			00 C5 01 0C	Green
			00 C5 01 15	Darkgrey
			00 C5 01 28	Mint
			00 C5 01 2A	Grey
			00 C5 01 2F	Yellow
			00 C5 01 30	Blue
			00 C5 01 33	Magenta
			00 C5 01 3C	Cyan
			00 C5 01 3F	White
Selected Text Color	00 C6 00			
			00 C6 01 00	Black
			00 C6 01 03	Red

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
OSD				*continued*
			00 C6 01 0B	Orange
			00 C6 01 0C	Green
			00 C6 01 15	Darkgrey
			00 C6 01 28	Mint
			00 C6 01 2A	Grey
			00 C6 01 2F	Yellow
			00 C6 01 30	Blue
			00 C6 01 33	Magenta
			00 C6 01 3C	Cyan
			00 C6 01 3F	White
Menu Text Color	00 C7 00			
			00 C7 01 00	Black
			00 C7 01 03	Red
			00 C7 01 0B	Orange
			00 C7 01 0C	Green
			00 C7 01 15	Darkgrey
			00 C7 01 28	Mint
			00 C7 01 2A	Grey
			00 C7 01 2F	Yellow
			00 C7 01 30	Blue
			00 C7 01 33	Magenta
			00 C7 01 3C	Cyan
			00 C7 01 3F	White
Menu Headline Color	00 C8 00			
			00 C8 01 00	Black
			00 C8 01 03	Red
			00 C8 01 0B	Orange
			00 C8 01 0C	Green
			00 C8 01 15	Darkgrey
			00 C8 01 28	Mint
			00 C8 01 2A	Grey
			00 C8 01 2F	Yellow
			00 C8 01 30	Blue
			00 C8 01 33	Magenta
			00 C8 01 3C	Cyan
			00 C8 01 3F	White
Menu Status Text Color	00 C9 00			
			00 C9 01 00	Black
			00 C9 01 03	Red
			00 C9 01 0B	Orange
			00 C9 01 0C	Green
			00 C9 01 15	Darkgrey
			00 C9 01 28	Mint
			00 C9 01 2A	Grey

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
OSD				*continued*
			00 C9 01 2F	Yellow
			00 C9 01 30	Blue
			00 C9 01 33	Magenta
			00 C9 01 3C	Cyan
			00 C9 01 3F	White
OSD Layout Supported	00 CD 00			
			00 CD 01 01	Supported. If not supported, Error 2 (Invalid Cmd) is reported
OSD Layout	00 CA 00			
			02 01 CA ab cd ef gh d0 .. dn	ab cd ef gh: Length d0..dn: XML File
Language	00 CC 00			
			00 CC 01 00	English
			00 CC 01 01	German
Ethernet				
DHCP	00 70 00			
			00 70 01 00	Off
			00 70 01 01	On
IP Address	00 71 00			
			00 71 04 d0 d1 d2 d3	
				d0 d1 d2 d3: IP Address in hex (0x00 to 0xFF for each packet)
Subnet Mask	00 72 00			
			00 72 04 d0 d1 d2 d3	
				d0 d1 d2 d3: Subnet Mask in hex (0x00 to 0xFF for each packet)
Gateway IP	00 73 00			
			00 73 04 d0 d1 d2 d3	
				d0 d1 d2 d3: Gateway IP Address in hex (0x00 to 0xFF for each packet)
Nameserver IP	00 3A 00			
			00 3A 04 d0 d1 d2 d3	
				d0 d1 d2 d3: Nameserver IP Address in hex (0x00 to 0xFF for each packet)
MAC	00 69 00			
			00 69 11 d0 .. dn	MAC Address d0 .. dn: String Example: "00:0C:92:BC:61:2B"
DHCP State	00 6F 00			
			00 6F 01 00	Off
			00 6F 01 01	Failed
			00 6F 01 02	Trying
			00 6F 01 03	Ok

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Ethernet				*continued*
			00 6F 01 04	Unknown
Streaming				
Multicast IP Address	00 77 00			
			00 77 04 d0 d1 d2 d3	
				d0 d1 d2 d3: Multicast IP Address in hex (0x00 to 0xFF for each packet)Valid range: 225.0.0.0..238.255.255.255
Streaming Port	00 78 00			
			00 78 02 d0 d1	
				d0 d1: Port 8800 to 9000 in hex (0x2260..0x2328)
Streaming Mode	00 75 00			
			00 75 01 00	Off
			00 75 01 01	Auto
			00 75 01 02	Continuous
			00 75 01 03	Unicast
Streaming Resolution	00 79 00			
			00 79 01 00	SXGA- / 720p / WXGA*
			00 79 01 01	XGA / 576p / XGA*
			00 79 01 03	VGA / 288p / VGA*
Streaming Framerate	00 7A 00			
			00 7A 01 00	Low
			00 7A 01 01	Medium
			00 7A 01 02	High
			00 7B ab d0 .. dn	ab: Length, max 224 Bytes d0..dn: Data16*14Byte:Name (8Bytes), Width (2Bytes), Height (2Bytes), ID (2Bytes) Example: "SXGA-　", 0x0500, 0x03C0, 0x0000
FTP				
Server IP Address	00 DA 00			
			00 DA 04 d0 d1 d2 d3	
				d0 d1 d2 d3: FTP Server IP Address in hex (0x00 to 0xFF for each packet)
Username	00 DB 00			
			00 DB ab d0 .. dn	ab: Length, max 10 Bytes d0 .. dn: String
Password	00 DC 00			
			00 DC ab d0 .. dn	ab: Length, max 10 Bytes d0 .. dn: String "**********"
Interval	00 DD 00			
			00 DD 01 00	Off
			00 DD 01 01	1 min
			00 DD 01 02	5 min

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
FTP				*continued*
			00 DD 01 03	10 min
			00 DD 01 04	15 min
			00 DD 01 05	30 min
			00 DD 01 06	1 h
Security				
Ethernet Mode	00 74 00			

			00 74 01 d0	d0: Data
				  Bit0: IMG 0=Image Blocked,1=Image Allowed
				  Bit1: CTRL 0=Control Blocked,1=Control Allowed
				  Bit2: FW 0=Firmware Update Blocked,1=Firmware Upload Allowed
				  Bit3: AUTH 0=Authentication Off,1=Authentication On

Device Info				
Model	00 11 00			
			00 11 ab d0 .. dn	ab: Length, max 255 Bytes d0 .. dn: String"VZ9P","VZ9P-3","VZ-C12-II","VZ-C12-3","VZ-C32","EYE-12","SCB-12","VZ-C32-3","VZ-P18","VZ-P38", "VZ3"
Model Display	00 3F 00			
			00 3F ab d0 .. dn	ab: Length, max 255 Bytes d0 .. dn: String"VZ-9plus-3"
Serialnumber	00 12 00			
			00 12 04 d0 d1 d2 d3	
				d0 d1 d2 d3: 0x00000000..0xFFFFFFFF
Version	00 13 00			
			00 13 ab d0 .. dn	ab: Length d0 .. dn: StringExample: "V1.10a"
Adjuster	00 14 00			
			00 14 ab d0 .. dn	ab: Length, max 255 Bytes d0 .. dn: String Example: "MSc"
Production Date	00 15 00			
			00 15 02 d0 d1	d0: week d1: year
RC Features	00 16 00			
			00 16 08 d0 d1 d2 d3 d4 d5 d6 d7	8 Bytes: to specify the available functions on the remote control
				d0: Byte0
				Bit7:Zoom
				Bit6:Iris
				Bit4:Focus
				Bit2:Power
				Bit1:Light
				Bit0:ExtIn

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Device Info				***continued***
				d1: Byte1
				Bit7:Text
				Bit6:WB
				Bit4:Image
				Bit3:ImageTurn
				Bit2:Freeze
				d2: Byte2
				Bit7:Preset1
				Bit6:Preset2
				Bit5:Preset3
				d3: Byte3
				Bit6:Memory1
				Bit5:Memory2
				Bit4:Memory3
				Bit3:Memory4
				Bit2:Memory5
				Bit1:Memory6
				Bit0:Memory7
				d4: Byte4
				Bit7:Memory8
				Bit6:Memory9
				Bit5:ShowAll
				Bit3:OnePushAF
				Bit2:Snapshot
				d5: Byte5
				Bit7:Not Used (FWUpdate)
		Picture transfer possible while in Dig Zoom		Bit6:Not Used (PT_dZoom)
		Picture transfer possible while in Img Turn		Bit5:Not Used (PT_ImageTurn)
				d6: Byte6:
				Bit7:PiP
				Bit6:VZ
				Bit5:Mem
				Bit4:USB
				d7: Byte7:
				Bit7:Mem/USB Navigation(Pos1,End,Left,Right,Ok)
Resolution Table	00 17 00			Table of Resolutions available for single picture transfer
			00 17 ab d0 .. dn	ab: Length, max 224 Bytes d0 .. dn:16*14Byte:Name (8Bytes), Width (2Bytes), Height (2Bytes), ID (2Bytes) Example: "SXGA- ", 0x0500, 0x03C0, 0x0000
Buildnumber	00 1C 00			
			00 1C 0E d0 .. dn	d0 .. dn: String Example: "20091028140601"

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Device Info				*continued*
Description	00 1A 00			
			00 1A ab d0 .. dn	ab: Length, max. 255 bytes d0 .. dn: String
Firmware Update				
Firmware Server Version	00 0F 00			
			00 0F ab d0 .. dn	ab: Length d0 .. dn: String Example: "V1.10a" "-------" in case of no connection
Firmware Update Status	00 0D 00			
			00 0D 01 00	Checking
			00 0D 01 01	No Connection
			00 0D 01 02	Out Of Date
			00 0D 01 03	Up To Date
Firmware Upload Erase Flash	00 B0 00			
			00 B0 01 d0	100% to 0% firmware to be erased. State of firmware erasing, counts from 100 down to 00% = Flash erased
				d0: 0x64..0x00
Date/Time				
Time Source	00 44 00			
			00 44 01 00	Internal
			00 44 01 01	External
Timeserver IP	00 7C 00			
			00 7C 04 d0 d1 d2 d3	
				Timeserver IP Address in hex (0x00 to 0xFF for each octet)
Timezone	00 7D 00			
			00 7D 01 00	Pacific/Apia
			00 7D 01 01	Pacific/Honolulu
			00 7D 01 02	America/Anchorage
			00 7D 01 03	America/Los_Angeles
			00 7D 01 04	America/Tijuana
			00 7D 01 05	America/Phoenix
			00 7D 01 06	America/Denver
			00 7D 01 07	America/Mazatlan
			00 7D 01 08	America/Chicago
			00 7D 01 09	America/Regina
			00 7D 01 0A	America/Mexico_City
			00 7D 01 0B	America/Bogota
			00 7D 01 0C	America/New_York
			00 7D 01 0D	America/Caracas
			00 7D 01 0E	America/Halifax

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Date/Time				*continued*
			00 7D 01 0F	America/Santiago
			00 7D 01 10	America/La_Paz
			00 7D 01 11	America/St_Johns
			00 7D 01 12	America/Sao_Paulo
			00 7D 01 13	America/Buenos_Aires
			00 7D 01 14	America/Montevideo
			00 7D 01 15	Atlantic/South_Georgia
			00 7D 01 16	Atlantic/Azores
			00 7D 01 17	Atlantic/Cape_Verde
			00 7D 01 18	Africa/Casablanca
			00 7D 01 19	UTC
			00 7D 01 1A	Europe/London
			00 7D 01 1B	Europe/Berlin
			00 7D 01 1C	Africa/Kinshasa
			00 7D 01 1D	Europe/Istanbul
			00 7D 01 1E	Africa/Cairo
			00 7D 01 1F	Asia/Jerusalem
			00 7D 01 20	Africa/Johannesburg
			00 7D 01 21	Europe/Moscow
			00 7D 01 22	Africa/Nairobi
			00 7D 01 23	Asia/Baghdad
			00 7D 01 24	Asia/Tehran
			00 7D 01 25	Asia/Muscat
			00 7D 01 26	Asia/Baku
			00 7D 01 27	Asia/Kabul
			00 7D 01 28	Asia/Karachi
			00 7D 01 29	Asia/Kolkata
			00 7D 01 2A	Asia/Katmandu
			00 7D 01 2B	Asia/Almaty
			00 7D 01 2C	Asia/Dhaka
			00 7D 01 2D	Asia/Rangoon
			00 7D 01 2E	Asia/Bangkok
			00 7D 01 2F	Asia/Hong_Kong
			00 7D 01 30	Asia/Singapore
			00 7D 01 31	Australia/Perth
			00 7D 01 32	Asia/Taipei
			00 7D 01 33	Asia/Tokyo
			00 7D 01 34	Asia/Seoul
			00 7D 01 35	Australia/Adeleide
			00 7D 01 36	Australia/Darwin
			00 7D 01 37	Australia/Sydney
			00 7D 01 38	Australia/Brisbane
			00 7D 01 39	Pacific/Noumea
			00 7D 01 3A	Pacific/Auckland

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Date/Time				*continued*
			00 7D 01 3B	Pacific/Kwajalein
Date Format	00 45 00			
			00 45 01 00	DDMMYYYY/24H
			00 45 01 01	MMDDYYYY/12H
Date/Time	00 7E 00			
			00 7E 05 d0 .. dn	d0: Year (0..99 without century)(0x00..0x63) d1: Month (1..12)(0x01..0x0C) d2: Day (1..31)(0x01..1F) d3: Hour (0..23)(0x00..0x17) d4: Minute (0..59)(0x00..3B)
USB Settings				
Picture Folder	00 D0 00			
			00 D0 ab d0 .. dn	ab: Length, max 10 Bytes d0 .. dn: String
Picture Number	00 D1 00			
			00 D1 04 d0 d1 d2 d3	
				d0 d1 d2 d3: 0x00000000..0x000F423F
Picture Format	00 D2 00			
			00 D2 01 00	Bmp
			00 D2 01 01	Jpg
Load Settings	00 D6 00			
			00 D6 01 00	Off
			00 D6 01 01	Auto
			00 D6 01 02	Confirm
USB Stick Mounted	00 CB 00			
			00 CB 01 00	Not Mounted
			00 CB 01 01	Mounted
Height Adjustment				
Heightadjustment	00 2D 00			
			00 2D 01 00	Stop
			00 2D 01 01	Running
			00 2D 01 02	Center Light Field
			00 2D 01 03	Adjust Camera Focus
			00 2D 01 04	Adjust Light Focus
			00 2D 01 05	Done
Heightadjustment Time Left	00 2E 00			
			00 2E 01 d0	d0: Time in seconds
Extra Menu				
Baudrate	00 89 00			
			00 89 01 00	9600 Baud

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Extra Menu				*continued*
			00 89 01 01	19200 Baud
			00 89 01 02	38400 Baud
			00 89 01 03	57600 Baud
			00 89 01 04	115200 Baud
Image Mirror	00 5B 00			
			00 5B 01 00	Off
			00 5B 01 01	Horizontal
			00 5B 01 02	Vertical
			00 5B 01 03	H+V
Noise Suppression	00 87 00			
			00 87 01 00	Off
			00 87 01 01	On
VGA/Preview Calibration	00 9D 00			
			00 9D 01 d0	
				d0: 85% to 100% in steps of 1% (0x55..0x64)
Zoom Control				
Zoom Position	00 20 00			
			00 20 02 d0 d1	d0 d1: Position
				d0 d1: 0x0000..0x0FFF (Wide..Tele)
Digital Zoom				
Digital Zoom Position	00 28 00			
			00 28 02 d0 d1	d0 d1: Position
				d0 d1: 0x0000..0x0FFF (Wide..Tele)
Focus Control				
Focus Position	00 21 00			
			00 21 02 d0 d1	d0 d1: Position
				d0 d1: 0x0000..0x0FFF (Far..Near)
AF	00 31 00			
			00 31 01 00	Off
Iris Control				
Iris Position	00 22 00			
			00 22 02 d0 d1	d0 d1: Position
				d0 d1: 0x0000..0x0FFF (Close..Open)
Auto Iris	00 32 00			
			00 32 01 00	Off
			00 32 01 01	On

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Light Control				
Light	00 A0 00			
			00 A0 01 00	Off
			00 A0 01 01	Light On, LB Off
Lamp 1 Hours	00 A3 00			
			00 A3 02 d0 d1	d0 d1: in hours (hex)
				d0 d1: 0x0000..0xFFFF
ImageTurn Command				
Image Turn	00 83 00			
			00 83 01 00	0°
			00 83 01 01	-90°
			00 83 01 02	180°
			00 83 01 03	90°
VZ Menu Control				
Menu	00 98 00			
			00 98 01 00	Off
			00 98 01 01	Standard Menu
			00 98 01 02	Extra Menu
			00 98 01 03	View Menu
Menu Standard Unlock	00 9A 00			
			00 9A 01 00	Off
			00 9A 01 01	On
Menu Extra Unlock	00 9B 00			
			00 9B 01 00	Off
			00 9B 01 01	On
Command Check	00 9C 00			
			00 9C 01 00	Ok
			00 9C 01 01	Invalid Operation (a command in the past was ignored due to an invalid state, see key_and_function matrix)
Image Storing Cmd				
ShowAll				
	00 93 00		00 93 01 00	Off
			00 93 01 01	On
			00 93 01 02	ViewModeSingle (Single Picture Selected While in ViewMode)
Picture Transfer				
Picture Header	00 B8 01 d0			

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Picture Transfer				*continued*

		d0: Byte0
		  Bit7: Motion, 0=Still Image, 1=Countinuous
		  Bit6: Format, 0=BMP, 1=JPG
		  Bit5,4: Quality, 0=Best, 1=Good, 2=Average, 3=Low
		  Bit3..0: Index, Index of Restable (Note: not ID), 0 indexed Position of the 14 byte field within the 16 entries.
		The ModeByte supports automatic aspect ratio switching. In the request only the index for 4:3 aspect ratio needs to be sent, the Modebyte in the reply contains the index of the selected aspect ratio.
			00 B8 14 d0 .. dn	d0 .. dn: Data
				d0,1: Width
				d2,3: Height
				d4: Flags
				d5: ModeByte
				d6,7,8,9: Maximum Blocklength
				d10: Extended Byte
				  Bit7: 0=4:3 or 16:9,1=16:10
				  Bit6: 0=No light supported or light off; 1=Light on
				  Bit5: 0=Not triggered images in trigger mode, 1=Triggered image in trigger mode
				  Bit4: 0=Normal (live) mode, 1=Extern trigger mode
				  Bit3: 0=Reserved (deprecated:Digital zoom off, 1=Digital zoom on)
				  Bit2: 0=4:3,1=16:9 or 16:10
				  Bit1..0: Detail (00=Off, 01=Low, 10=Medium, 11=High)
				d11: 0x00
				d12,13,14,15: DMA Size (V1:JPG: Size of image including header, BMP: Size of image excluding header.V2: Size in bytes including header)
				d16,17: Memory Page
				d18,19: Out Offset (Line Offset for BMP 16:9;1Line=image width * 3/96)

Get Picture Block (V1:USB only. V2:deprecated)	00 B9 0A d0 d1 d2 d3 d4 d5 d6 d7 d8 d9			
		d0: Flags of Picture Header d1: Mode Byte of Picture Header d2 d3 d4 d5: Offset from image start (BMP: in lines; JPG: in Bytes) d6 d7 d8 d9: Block length	00 B9 01 00	
			00 B9 01 01	Ok Failed
Get Picture Block2 (V1: ETH only. V2: ETH and USB)	00 BA 16 d0 .. dn			

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Picture Transfer				*continued*
		d0: Flags (from Picture Header) d1: Mode Byte (from Picture Header) d2 d3 d4 d5: Offset from image start (V1:JPG: in bytes,BMP:in lines.V2: in bytes) d6 d7 d8 d9: Block length (in bytes) d10 d11: Width (from Picture Header) d12 d13: Height (from Picture Header) d14 d15 d16 d17: Total Size (DMA Size from Picture Header) d18 d19: Memory Page (from Picture Header) d20 d21: Out Offset (from Picture Header)	02 01 BA ab cd ef gh d0 .. dn	ab cd ef gh: Length d0 .. dn: Data
Authentication				
SessionID (ETH only)	00 D3 00			
			00 D3 04 d0 d1 d2 d3	Session ID Randomnumber
				d0 d1 d2 d3: 0x00000000..0xFFFFFFFF
SIP Login (ETH only)	00 1D 00			
			00 1D 01 d0	d0: Status
				Bit2: SIP Access Bit1(0=Somebody has SIP,1=Nobody has SIP,2=I have SIP)
				Bit1: SIP Access Bit0
				Bit0: Logged in
Block Inquiry				
Positions(deprecated)	00 10 01 00			
		Byte3=Blocknumber	00 10 10 d0 .. dn	Deprecated because blocknumber is missing in reply
				d0..dn: Data
				d0,1: Zoom Position
				d2,3: Digital Zoom Position
				d4,5: Focus Position
				d6,7: Iris position
				d8,9: Mirror Position
				d10,11: Mirror X Position
				d12,13: Mirror Y Position
				d14,15: Light Focus Position
Flags and Unit Information(deprecated)	00 10 01 01			
		Byte3=Blocknumber	00 10 13 d0 .. dn	Deprecated because blocknumber is missing in reply
				d0..dn: Data
				d0:
				Bit7: Power, 0=Off,1=On

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Block Inquiry				***continued***
				Bit6: Top Light, 0=Off,1=On
				Bit5: Light Box, 0=Disabled,1=Enabled
				Bit4: Slide Box, 0=Disabled,1=Enabled
				Bit3: Auto Focus, 0=Off,1=On
				Bit2: Auto Iris, 0=Off,1=On
				Bit1: Text Enhancer, 0=Off,1=On
				Bit0: Extern/Intern 0=Extern,1=Intern
				d1:
				Bit7: Freeze, 0=Off,1=On
				Bit6: Image, 0=Off,1=On
				Bit5: Show All/View, 0=Off,1=On
				Bit4: Keylock, 0=Off,1=On
				Bit3: Lamp Blown, 0=Ok,1=Blown
				Bit2: Lamp2 Blown, 0=Ok,1=Blown
				Bit1: Lamp1 Blown, 0=Ok,1=Blown
				Bit0: OSD Menu, 0=Off,1=On
				d2:
				Bit7,6,5,4: Color Mode,
				0=Black/White,1=Presentation,2=Natural,3=Manual
				Bit3,2: Pos/Neg/Blue, 0=Positive,1=Negative,2=Blue
				Bit1,0: Image Turn, 0=Off,1=-90,2=180,3=+90
				d3:
				Bit7,6: Macro
				Bit5,4,3,2: Arm
				Bit1,0: Not Used
				d4: Not Used
				d5: Ethernet Mode
				d6: Resolution DVI
				d7: Resolution RGB
				d8,9,10,11: Serialnumber
				d12,13,14,15,16,17,18: Version
Positions	00 10 01 02			
		Byte3=Blocknumber	00 10 11 02 d0 .. dn	0x02: Blocknumber
				d0..dn: Data, same as blk# 0C but only 17 bytes length
Positions2	00 10 01 0D			
		Byte3=Blocknumber	00 10 81 0D d0 .. dn	0x0D: Blocknumber
				d0..dn: Data
				d0,1: Zoom Position
				d2,3: Digital Zoom Position
				d4,5: Focus Position
				d6,7: Iris Position
				d8,9: Mirror Position
				d10,11: Mirror X Position (not used)
				d12,13: Mirror Y Position (not used)

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Block Inquiry				*continued*
				d14,15: Light Focus Position (not used)
				d16,17: Vergence
				d18...d127: Not Used
Flags and Unit Information	00 10 01 03			
		Byte3=Blocknumber	00 10 18 03 d0 .. dn	0x03: Blocknumber
				d0..dn: Data, same as blk# 0B but only 24 bytes length
Flags and Unit Information2	00 10 01 0B			
		Byte3=Blocknumber	00 10 81 0B d0 .. dn	0x0B: Blocknumber
				d0..dn: Data
				d0:
				Bit7: Power, 0=Off,1=On
				Bit6: Top Light, 0=Off,1=On
				Bit5: Light Box, 0=Disabled,1=Enabled
				Bit4: Slide Box, 0=Disabled,1=Enabled
				Bit3: Auto Focus, 0=Off,1=On
				Bit2: Auto Iris, 0=Off,1=On
				Bit1: Text Enhancer, 0=Off,1=On
				Bit0: Extern/Intern 1=Extern,0=Intern
				d1:
				Bit7: Freeze, 0=Off,1=On
				Bit6: Image, 0=Off,1=On
				Bit5: Show All/View, 0=Off,1=On
				Bit4: Keylock, 0=Off,1=On
				Bit3: Lamp Blown, 0=Ok,1=Blown
				Bit2: Lamp2 Blown, 0=Ok,1=Blown
				Bit1: Lamp1 Blown, 0=Ok,1=Blown
				Bit0: OSD Menu, 0=Off,1=On
				d2:
				Bit7,6,5,4: Color Mode,
				0=Black/White,1=Presentation,2=Natural,3=Manual
				Bit3,2: Pos/Neg/Blue, 0=Positive,1=Negative,2=Blue
				Bit1,0: Image Turn, 0=Off,1=-90,2=180,3=+90
				d3:
				Bit7,6: Macro
				Bit5,4,3,2: Arm
				Bit1,0: Not Used
				d4:
				Bit7: Not Used
				Bit6: Not Used
				Bit5: Not Used
				Bit4: Not Used
				Bit3: FrameNumber Bit3 (1..9)
				Bit2: FrameNumber Bit2
				Bit1: FrameNumber Bit1

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Block Inquiry				*continued*
				Bit0: FrameNumber Bit0
				d5: Ethernet Mode
				d6: Resolution DVI Legacy
				d7: Resolution RGB Legacy
				d8,9,10,11: Serialnumber
				d12,13,14,15,16,17,18: Version
				d19:
				Bit7: Memory Page Bit3 (0=Live, 1..9=Memory 1..9)
				Bit6: Memory Page Bit2
				Bit5: Memory Page Bit1
				Bit4: Memory Page Bit0
				Bit3: Memory Zoom
				Bit2: Picture in Picture
				Bit1: MenuMode Bit1 (00=off, 01=standard, 10=extra, 11=view)
				Bit0: MenuMode Bit0
				d20:
				Bit7: State Bit1 (00=Live,01=Mem,10=USB,11=MemSinglePic)
				Bit6: State Bit0
				Bit5: Standby Mode (0=Normal,1=Deep)
				Bit4: 1x1, 1=On
				Bit3: USB or Mem, 1=On, 0=Live/Extern
				Bit2: Slide Show
				Bit1: Aspectratio Bit1 (00=4:3,01=16:9,10=16:10)
				Bit0: Aspectratio Bit0
				d21: HDTV Mask Position
				d22: Not Used
				d23: Status Number HB
				d24: Status Number LB
				d25:
				Bit7..2: Status Time
				Bit1..0: Status Level
				d26: Status Timestamp HB
				d27: Status Timestamp LB
				d28...d35: Status Substring (d35=0, if str > 7 d34='.')
				d36...d39: Resolution Main
				d40...d43: Resolution Aux
				d44:
				Bit7: Not Used
				Bit6: Not Used
				Bit5: Not Used
				Bit4: Not Used
				Bit3: Not Used
				Bit2: Streaming Active (1=Active,0=Inactive)
				Bit1: Streaming Off (0=Any,1=Off)

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Block Inquiry				*continued*
				Bit0: 2D/3D(0=2D,1=3D)
				d45...d48: Operating Hours
				d49...d52: Standby Hours
				d53...d56: Lamp1 Hours
				d57...d60: Lamp2 Hours
				d61...d64: Feature Pack Bits
				d61:
				Bit31: Feature Pack Valid (1=Enabled,0=Disabled)
				Bit24 - Bit30: Not Used
				d62:
				Bit16 - Bit23: Not Used
				d63:
				Bit7: Not Used
				Bit6: Not Used
				Bit5: Not Used
				Bit4: Not Used
				Bit3: Not Used
				Bit2: Not Used
				Bit1: Feature Demo
				Bit0: Feature vConnect
				d64:
				Bit7: Feature WLAN
				Bit6: Feature Streaming
				Bit5: Feature PiP
				Bit4: Feature IR Remote
				Bit3: Feature Internal Memory
				Bit2: Feature USB Host
				Bit1: Feature Fading
				Bit0: Feature 60FPS
				d65:
				Bit7: Recording Bit1 (0=Idle,1=Recording,3=Pause)
				Bit6: Recording Bit0
				Bit5: Video Playback Bit1 (0=Idle,1=Playing,3=Pause)
				Bit4: Video Playback Bit0
				Bit0..3: Source (0=Live,1=Mem,2=USB,3=Ext,4=Ext2,5=Net)
				d66:
				Bit7: Not Used
				Bit6: Not Used
				Bit5: Not Used
				Bit4: Not Used
				Bit3: Not Used
				Bit2: Not Used
				Bit1: Not Used
				Bit0: Mute

Function / Command Description	Command Packet	Comment	Reply Packet	Comment
Block Inquiry				*continued*
				d67...d127: Not Used
Menu Ethernet	00 10 01 06			
		Byte3=Blocknumber	00 10 17 06 d0 .. dn	0x06: Blocknumber
				d0..dn: Data, same as blk# 0C but only 22 bytes length
Menu Ethernet2	00 10 01 0C			
		Byte3=Blocknumber	00 10 81 0C d0 .. dn	0x0C: Blocknumber
				d0..dn: Data
				d0:
				Bit7..5: Not Used
				Bit4..1: Ethernet Mode
				Bit0: DHCP
				d1: Not Used (Streaming Reso in Blk 0x06)
				d2:
				Bit7..4: Streaming Framerate
				Bit3..0: Streaming Mode
				d3: Not Used
				d4..7: IP Address
				d8..11: Subnet IP Address
				d12..15: Gateway IP Address
				d16..19: Multicast IP Address
				d20,21: Multicast Port
				d22..d25: Streaming Resolution
				d26: Streaming Format
				d27..30: Nameserver IP Address