

# HD/4K Integrated Camera Interface Specifications

## Compatible model Table

Dec. 1, 2023

Panasonic Connect Co., Ltd.

Camera command

ITEM	Command Control / Response / Confirmation	Data	Data Contents Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
Menu Up	CUP: [Data]	1	Up	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Menu Down	CDW: [Data]	1	Down	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Menu Right	CRT: [Data]	1	Right	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Menu Left	CLT: [Data]	1	Left	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Color Bar	DCB: [Data] OBR: [Data]	0 1	Camera Color Bar	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○
Color Bar Setup	DCS: [Data] OCS: [Data] DCS: [Data]	0 1	0.0% 7.5%	---	---	---	---	---	---	---	---	---	---	---	---	○	○	---	---	---
Menu Down	DDW: [Data]	1h Ah	1step 10step	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	○	supports only 1h(1step)	○	○	○	○	○	○	○	○
Menu Enter	DIT: [data]	1	Enter	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Menu Left	DLT: [Data]	1h Ah	1step 10step	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	○	supports only 1h(1step)	---	---	---	○	○	---	---	---
Menu Cancel	DPG: [Data]	1	Cancel	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Menu Right	DRT: [Data]	1h Ah	1step 10step	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	○	supports only 1h(1step)	---	---	---	○	○	---	---	---
Menu Up	DUP: [Data]	1h Ah	1step 10step	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	supports only 1h(1step)	○	supports only 1h(1step)	○	○	○	○	○	○	○	○
Menu On/Off	DUS: [Data] OUS: [Data]	0 1	Off On	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○
Focus (Far)	HFF: [Data]	---	Move to far	---	---	---	---	---	---	---	---	○	○	○	○	---	---	○	○	
Focus (Near)	HFN: [Data]	---	Move to near	---	---	---	---	---	---	---	---	○	○	○	○	---	---	○	○	
Focus (Stop)	HFS: [Data]	---	Stop focus	---	---	---	---	---	---	---	---	○	○	○	○	---	---	○	○	
Zoom (Tele)	HZT: [Data]	---	Move to tele	---	---	---	---	---	---	---	---	○	○	○	○	---	---	○	○	
Zoom (Stop)	HZS: [Data]	---	Stop zoom	---	---	---	---	---	---	---	---	○	○	○	○	---	---	○	○	
Zoom (Wide)	HZW: [Data]	---	Move to wide	---	---	---	---	---	---	---	---	○	○	○	○	---	---	○	○	
Focus Speed	LFS: [Data]	0 9	Slow Fast	---	---	---	---	---	---	---	---	○	○	○	○	---	---	○	○	
Zoom Speed	LZS: [Data]	0 9	Slow Fast	---	---	---	---	---	---	---	---	○	○	○	○	---	---	○	○	
Focus Mode	OAF: [Data] OAF	0 1	Manual Auto	○ ○	○ ○	○ ○	○ ○	○ ○	---	○ ○	○ ○	---	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	
ABC/ABB SET	OAS: [Data]	---	ABC/ABB Start	○	○	---	○	○	---	○	○	○	○	○	○	○	○	---	---	
White Balance Mode	OAW: [Data] OAW	※ ---	※ ---	※ ---	※ ---	※ ---	※ ---	※ ---	※ ---	※ ---	※ ---	---	※ ---	※ ---	※ ---	※ ---	※ ---	※ ---	※ ---	
Focus Adjust With PTZ	OAZ: [Data] OAZ	0 1	Off On	○ ○	○ ○	○ ○	○ ○	○ ○	---	○ ○	○ ○	---	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	
B Pedestal	OBD: [Data] OBD	00h - 1Eh - 3Ch	-150 - 0 - +150	---	---	---	---	---	---	---	○	---	---	---	---	○	○	---	---	
B Gain	OBI: [Data] OBI	000h - 096h - 12Ch	-150 - 0 - +150	---	---	---	---	---	---	---	○	---	○	○	○	○	○	○	○	
B Gain	OBI: [Data] OBI	000h - 096h - 12Ch	-30 - 0 - +30	UE70series, HE75series, HE70series, HE60, HE50	---	---	---	---	---	---	○	---	○	○	○	○	○	○	○	
B Gain	OBI: [Data] OBI	00h - 1Eh - 3Ch	-30 - 0 - +30	HR140, HE130, HE120	---	---	---	---	---	---	○	---	○	○	○	○	○	○	○	
B Pedestal	OBP: [Data] OBP	000h 096h 12Ch	-150 - 0 - +150	---	---	---	supports only -100~+100	supports only -100~+100	---	supports only -100~+100	supports only -100~+100	---	---	---	---	supports only -100~+100	○	---	---	
Chroma Level	OCC: [Data] OCC	00h - 03h - 06h - 0Dh	-3 - 0 - +3 - 10	---	---	supports only 03h (0) - 0Dh (10)	---	---	---	supports only 03h (0) - 0Dh (10)	---	---	supports only 00h (-3) - 06h (3)	supports only 00h (-3) - 06h (3)	supports only 00h (-3) - 06h (3)	---	supports only 00h (-3) - 06h (3)	supports only 00h (-3) - 06h (3)	supports only 00h (-3) - 06h (3)	
Digital Extender	ODE: [Data] ODE	0 1	Off On	---	---	---	---	---	---	0n mean x1.4	○	○	○	○	○	○	---	---	---	

ITEM	Command Control / Response / Confirmation	Data	Data Contents																	
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
Detail	ODT: [Data] ODT	0	Off	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		1	Low																	
		2	High																	
Error Information	OER OER: [Data]	0	Normal	○	○	---	○	○	---	○	○	---	---	---	---	---	---	○	○	
		1	Fan Error																	
		2	Other Error																	
Flip Status	OFS OFS: [Data]	0	Normal	○	---	---	○	○	---	○	○	---	---	---	---	○	○	---	---	
		1	Flip																	
ND Filter	OFT: [Data] OFT	0	Clear	supports only	UE80 supports	---	supports only	supports only	---	supports only	supports only	---	---	---	---	---	---	---	---	
		1	1/4 ND	0h: Clear	only	0h: Clear	0h: Clear	0h: Clear	0h: Clear	0h: Clear	0h: Clear	0h: Clear	0h: Clear	0h: Clear	0h: Clear	0h: Clear	0h: Clear	0h: Clear	0h: Clear	
		2	1/16 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	1h: 1/4 ND	
		3	1/64 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	2h: 1/16 ND	
Gain Select	OGS: [Data] OGS	01h	Low	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		04h	Mid																	
		08h	High																	
Gain	OGU: [Data] OGU	04h	-2dB	supports only	supports only	supports only	supports only	supports only	supports only	supports only	---	---	---	---	---	---	---	---	---	
		08h	0dB	04 (-2dB) -	08 (0dB) -32 (42dB),	08 (0dB) -32 (42dB),	08 (0dB) -32 (42dB),	08 (0dB) -32 (42dB),	08 (0dB) -32 (42dB),	08 (0dB) -32 (42dB),	08 (0dB) -32 (42dB),	---	---	---	---	---	---	---	---	
		11h	9dB	14 (12dB),	80 (AGC On)	80 (AGC On)	80 (AGC On)	80 (AGC On)	80 (AGC On)	80 (AGC On)	80 (AGC On)	---	---	---	---	---	---	---	---	
		1Ah	18dB	80 (AGC On)																
		38h	48dB																	
		80h	AGC On																	
Horizontal Phase	OHP: [Data] OHP	000h	-206	---	○ (UE80)	---	○	○	---	○	○	---	○	○	○	○	○	○		
		3Fh	+49		--- (UE50, UE40)															
Model Number	O1D O1D: [Data]		Returns model No. by ASCII	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
Request Iris F No.	O1F O1F: [Data]	0Eh (=14)	F1.4	○	○	○	○	○	---	○	○	---	○	○	○	○	○	○		
		1Ch (=28)	F2.8																	
		38h (=56)	F5.6																	
		A0h (=160)	F16																	
		FFh	Close																	
OIS	O1S: [Data] O1S	0	Off	○	supports only	---	○	○	---	○	○	---	○	○	○	○	○	○		
		1	On	0 (Off), 1 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS	0 (OIS (STABLE)), 2 (OIS		
		HR140	HR140																	
		0	Off																	
		1	OIS																	
Synchro Scan	OMS: [Data] OMS	001h	See right	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
		OFFh																		
R Pedestal	ORD: [Data] ORD	00h	-150	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
		1Eh	0																	
		3Ch	+150																	

ITEM	Command / Response / Confirmation	Data	Data Contents																
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50
R Gain	OR6: [Data] OR6 OR6: [Data]	00h	-30																
		1Eh	0																
		3Ch	+30																
R Gain	ORI: [Data] ORI	00h	-150																
		1Eh	0																
		3Ch	150																
R Pedestal	ORP: [Data] ORP	00h	-150				supports only -100~-+100	supports only -100~-+100		supports only -100~-+100	supports only -100~-+100					supports only -100~-+100			
		096h	0																
		12Ch	+150																
Iris Mode	ORS: [Data] ORS	0 1	Manual Auto						supports only 1(Auto)										
Iris Control	ORV: [Data] ORV	000h 3FFh	Close Open																
Linear Table	OSA:00: [Data] OSA:00	0 1	Table A Table B																
Master Black Gamma	OSA:07: [Data] OSA:07	50h	-48				supports only 78h(-8)	supports only 78h(-8)		supports only 78h(-8)									
		80h	0																
		80h	+48				88h(+8)	88h(+8)		88h(+8)									
R Black Gamma	OSA:08: [Data] OSA:08	6Ch	-20																
		71h	-15																
		80h	0																
B Black Gamma	OSA:09: [Data] OSA:09	8Fh	+15																
		94h	+20																
		6Ch	-20																
Gamma SW	OSA:0A: [Data] OSA:0A	0	Off																
		1	On																
		0	Off																
Black Gamma SW	OSA:0B: [Data] OSA:0B	1	On																
		0	Off																
		0	Off																
DRS SW	OSA:0D: [Data] OSA:0D	1	On																
		0	Off																
		0	Off																
Black Stretch Level (@FILM MENU & FILM REC)	OSA:0F: [Data] OSA:0F	0	0																
		1Eh	30																
		0	200%																
Dynamic Level (@FILM MENU & FILM REC)	OSA:10: [Data] OSA:10	1	300%																
		2	400%																
		3	500%																
Flare SW	OSA:11: [Data] OSA:11	4	600%																
		0	Off																
		1	On																
Master Knee Point (@VIDEO MENU)	OSA:20: [Data] OSA:20	22h	70.00%				support only 4Ah(80.00%) - C2h(110.00%)	support only 22h(70.00%) - B6h(107.00%) (1step=0.5%)		support only 22h(70.00%) - B6h(107.00%) (1step=0.5%)	support only 22h(70.00%) - B6h(107.00%) (1step=0.5%)	support only 4Ah(80.00%) - C2h(110.00%)				support only 22h(70.00%) - B6h(107.00%) (1step=0.5%)			
		80h	93.50%																
		B6h	107.00%																
Master Knee Point (@FILM MENU & VIDEO REC)	OSA:21: [Data] OSA:21	C2h	110.00% (1step=0.25%)																
		62h	30%																
		80h	60%																
Master Knee Point (@FILM MENU & VIDEO REC)	OSA:21: [Data] OSA:21	9Eh	90%																
		AFh	107%																
		62h	30%																
Master Knee Point (@FILM MENU & VIDEO REC)	OSA:21: [Data] OSA:21	80h	60%																
		9Eh	90%																
		AFh	107%																

ITEM	Command Control / Response / Confirmation	Data	Data Contents																	
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
R Knee Point	OSA:22:[Data] OSA:22	1Ch - 80h - E4h	-25.00% - 0.00% - +25.00% (1step=0.25%)	○																
B Knee Point	OSA:23:[Data] OSA:23	1Ch - 80h - E4h	-25.00% - 0.00% - +25.00% (1step=0.25%)	○																
Master Knee Slope (@VIDEO MENU)	OSA:24:[Data] OSA:24	00h - 63h - 07h	0 - 99 - 199	○				support only 00h(0) - 63h(99)	support only 00h(0) - 63h(99)		support only 00h(0) - 63h(99)	support only 00h(0) - 63h(99)				support only 00h(0) - 63h(99)				
Master Knee Slope (@FILM MENU & VIDEO REC)	OSA:25:[Data] OSA:25	7Ch - 80h - 85h	150% - 350% - 600% (1step=50%)								supports only 7Ch(150%) - 83h(500%)									
R Knee Slope (@VIDEO MENU)	OSA:26:[Data] OSA:26	10h - 80h - E3h	-99 - 0 - +99	○																
B Knee Slope (@VIDEO MENU)	OSA:27:[Data] OSA:27	10h - 80h - E3h	-99 - 0 - +99	○																
Auto Knee Point (@VIDEO MENU)	OSA:28:[Data] OSA:28	4Ah - 80h - 86h	80.00% - 93.50% - 107.00% (1step=0.25%)																	
Auto Knee Level (@VIDEO MENU)	OSA:29:[Data] OSA:29	7Ch - 85h	100% - 109% (1step=1%)																	
White Clip Level	OSA:2A:[Data] OSA:2A	00h - 13h - UE160 50h - 60h	90% - 109% - UE160 80% - 109%	○	○			○	○		○	○				○				
Knee Mode	OSA:2D:[Data] OSA:2D	0 1 2 3 4 5	Off Manual Auto Low Mid High	supports only 0(Off) 1(Manual) 2(Auto)	supports only 0(Off) 2(Auto)		supports only 0(Off) 1(Manual) 2(Auto)	supports only 0(Off) 1(Manual) 2(Auto)		supports only 0(Off) 1(Manual) 2(Auto)	supports only 0(Off) 1(Manual) 2(Auto)	supports only 0(Off) 1(Manual) 2(Auto)				○				
White Clip	OSA:2E:[Data] OSA:2E	0 1	Off On	○	○			○	○		○	○				○				
Master Detail	OSA:30:[Data] OSA:30	61h - 80h - 9Fh - 61h - 80h - 9Fh	-31 - 0 - +31 - HR140_HE130 0 - +31 - +62	○	○			○	○		○	○				supports only 81h(1)-91h(17) for Detail Level (L)	supports only 81h(1)-91h(17) for Detail Level (L)	supports only 81h(1)-91h(17) for Detail Level (L)	○	supports only 81h(1)-91h(17) for Total Dtail Level (L)
H Detail Level	OSA:31:[Data] OSA:31	00h - 3Fh	0 - 63																	
Detail Gain(+)	OSA:38:[Data] OSA:38	61h - 80h - 9Fh	-31 - 0 - +31	○				○	○											
Detail Gain(-)	OSA:39:[Data] OSA:39	61h - 80h - 9Fh	-31 - 0 - +31	○				○	○											
Detail Source	OSA:3B:[Data] OSA:3B	0 1 2 3 4 5	(G+R)/2 (G+B)/2 (2G+B+R)/4 (3G+R)/4 R G																	
Skin Tone Detail	OSA:40:[Data] OSA:40	0 1	Off On	○	○			○	○											
Skin Get	OSA:41:[Data] OSA:41	0 1 2	Off On Get																	

ITEM	Command Control / Response / Confirmation	Data	Data Contents																		
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50		
Skin Tone Detail I Center (HD)	OSA:45:[Data] OSA:45	00h - FFh	0 - 255	○																	
Skin Tone Detail I Width (HD)	OSA:46:[Data] OSA:46	00h - FFh	0 - 255	○																	
Skin Tone Detail Q Width (HD)	OSA:47:[Data] OSA:47	00h - FFh	0 - 255	○																	
Skin Tone Zebra	OSA:49:[Data] OSA:49	0 1 7Ah -	Off On -6dB -	○																	
Low Gain	OSA:50:[Data] OSA:50	7Ch -	0dB -																		
		80h -	12dB -																		
		86h -	30dB -																		
		88h -	36dB -																		
Mid Gain	OSA:51:[Data] OSA:51	7Ah -	-6dB -																		
		7Ch -	0dB -																		
		80h -	12dB -																		
		86h -	30dB -																		
		88h -	36dB -																		
High Gain	OSA:52:[Data] OSA:52	7Ah -	-6dB -																		
		7Ch -	0dB -																		
		80h -	12dB -																		
		86h -	30dB -																		
		88h -	36dB -																		
Super Gain Memory Select	OSA:60:[Data] OSA:60	0 1 2	S. Gain1 S. Gain2 S. Gain3																		
Frame Mix	OSA:65:[Data] OSA:65	00h 06h 0Ch 12h 18h 1Eh 80h	Off +6dB +12dB +18dB +24dB +30dB Auto	supports only 00h (Off) - 18h (+24dB)	supports only 00h (Off) - 18h (+24dB) . 80h (Auto)	supports only 00h (Off) - 18h (+24dB) . 80h (Auto)	supports only 00h (Off) - 18h (+24dB) . 80h (Auto)	supports only 00h (Off) - 18h (+24dB) . 80h (Auto)		supports only 00h (Off) - 18h (+24dB)	supports only 00h (Off) - 18h (+24dB)	supports only 00h (Off) - 18h (+24dB)	supports only 00h (Off) - 18h (+24dB) . 80h (Auto)	supports only 00h (Off) - 18h (+24dB) . 80h (Auto)	supports only 00h (Off) - 18h (+24dB) . 80h (Auto)	supports only 00h (Off) - 18h (+24dB)	supports only 00h (Off) - 18h (+24dB)	supports only 00h (Off) - 12h (+18dB) . 80h (Auto)	supports only 00h (Off) - 12h (+18dB) . 80h (Auto)		
		58h -	0.15 -		supports only 67h (0.30) - 94h (0.75)		supports only 67h (0.30) - 94h (0.75)	supports only 67h (0.30) - 94h (0.75)		supports only 67h (0.30) - 94h (0.75)	supports only 67h (0.30) - 94h (0.75)					supports only 67h (0.30) - 94h (0.75)					
		0 1 2	Off On On	supports only 0 (Off) . 1 (On)																	
		OSA:85:[Data] OSA:85	0 1	Off On	○																
		OSA:87:[Data] OSA:87	※	※	※	※	※	※	※	※	※	※	※	※	※	※	※	※	※	※	※

ITEM	Command Control / Response / Confirmation	Data	Data Contents Control and Response to control	Data Contents														
				UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60
OSD Status	OSA:88:[Data] OSA:88	0 1	Off On	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Total Dtail Level High	OSA:B1:[Data] OSA:B1	61h - 80h - 9Fh	-31 - 0 - +31	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Audio	OSA:D0:[Data] OSA:D0	0 1	Off On	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Audio Input Type	OSA:D1:[Data] OSA:D1	0 1 2 3 4 5	Mic High Mic Middle Mic Low Line High Line Middle Line Low	○	○ (Mic) 3(Line)	○ (Mic) 3(Line)	○ (Mic) 3(Line)	○ (Mic) 3(Line)	○	○ (Mic) 3(Line)	○	○	○	○	○	○	○	○
Audio Plugin Power	OSA:D2:[Data] OSA:D2	0 1	Off On	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Tally Brightness	OSA:D3:[Data] OSA:D3	0 1 2	Low Mid High	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Audio Line Input Level	OSA:D4:[Data]:[Data2] OSA:D4:[Data]	[Data1] 0 1 [Data2] 0 1 2 UE160 [Data1] 0 1 [Data2] 0 1	[Data1] CH1/CH3 CH2/CH4 [Data2] +4dB 0dB -20dB UE160 [Data1] Input1 Input2 [Data2] +4dB 0dB	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Audio Volume Level	OSA:D5:[Data]:[Data2] OSA:D5:[Data]	[Data1] 0 1 2 3 [Data2] 58h - 80h - 94h	[Data1] CH1 CH2 CH3 CH4 [Data2] -40dB - 0dB - 20dB	[Data1] supports only 0(CH1) 1(CH2) [Data2] supports only 58h(-40dB) - 94(20dB) (step:1dB)	[Data1] supports only 0(CH1) 1(CH2) [Data2] supports only 5Ch(-36dB) - 8C(12dB) (step:3dB)	[Data1] supports only 0(CH1) 1(CH2) [Data2] supports only 5Ch(-36dB) - 8C(12dB) (step:3dB)	[Data1] supports only 0(CH1) 1(CH2) [Data2] supports only 5Ch(-36dB) - 8C(12dB) (step:3dB)	[Data1] supports only 0(CH1) 1(CH2) [Data2] supports only 5Ch(-36dB) - 8C(12dB) (step:3dB)	○	[Data1] supports only 0(CH1) 1(CH2) [Data2] supports only 5Ch(-36dB) - 8C(12dB) (step:3dB)	[Data1] supports only 0(CH1)-3(CH4) [Data2] supports only 58h(-40dB) - 8C(12dB) (step:1dB)	○	○	○	○	○	○	○
Audio Head Room	OSA:D6:[Data] OSA:D6	0 1 2	FS-12dB FS-18dB FS-20dB	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Audio Line CH Select	OSA:D7:[Data] OSA:D7	0 1 2 3	All CH1/CH2 CH3/CH4 None	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
SC Coarse	OSC:[Data] OSC	※	※	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
H Detail Level H	OSD:0A:[Data] OSD:0A	02h - 3Fh	2 - 63	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
V Detail Level H	OSD:0E:[Data] OSD:0E	02h - 1Fh	2 - 31	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
H Detail Level L	OSD:12:[Data] OSD:12	01h - 3Eh	1 - 62	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
V Detail Level L	OSD:16:[Data] OSD:16	01h - 1Eh	1 - 30	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Detail Band	OSD:1E:[Data] OSD:1E	01 - 05	01 - 05	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Noise Suppress /Crisp	OSD:22:[Data] OSD:22	00h - 3Fh	0 - 63	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Level Dependent	OSD:26:[Data] OSD:26	00h - 0Fh	00 - 15	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Matrix(R-G) /Matrix(R-G)_N	OSD:2F:[Data] OSD:2F	00h - 1Fh - 3Eh	-31 - 0 - +31	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Matrix(R-B) /Matrix(R-B)_N	OSD:30:[Data] OSD:30	00h - 1Fh - 3Eh	-31 - 0 - +31	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Matrix(G-R) /Matrix(G-R)_N	OSD:31:[Data] OSD:31	00h - 1Fh - 3Eh	-31 - 0 - +31	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

ITEM	Command Control / Response / Confirmation	Data	Data Contents																
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50
Matrix (G-B) /Matrix (G-B)_N	OSD:32: [Data] OSD:32	00h - 1Fh - 3Eh	-31 - 0 - +31	○															
Matrix (B-R) /Matrix (B-R)_N	OSD:33: [Data] OSD:33	00h - 1Fh - 3Eh	-31 - 0 - +31	○															
Matrix (B-G) /Matrix (B-G)_N	OSD:34: [Data] OSD:34	00h - 1Fh - 3Eh	-31 - 0 - +31	○															
Flare R	OSD:35: [Data] OSD:35	9C ~ FF 00 01 ~ 64	-100 ~ -1 0 +1 ~ +100																
Flare G	OSD:36: [Data] OSD:36	9C ~ FF 00 01 ~ 64	-100 ~ -1 0 +1 ~ +100																
Flare B	OSD:37: [Data] OSD:37	9C ~ FF 00 01 ~ 64	-100 ~ -1 0 +1 ~ +100																
DNR	OSD:3A: [Data] OSD:3A	00 01 02  UE160_AK-UB300 00 01 02	Off Low High  UE160_UB300 Off On On	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Picture Level /A Iris Level /Iris Offset	OSD:48: [Data] OSD:48	00h - 32h - 64h  00h - 32h - 64h  00h - 32h - 64h  00h - 64h	UE160, UE100, UE20, HE20, UE4, UE150, HE145, HR140, HE130 -50 - 0 - +50  UE70series, HE75series, HE70series, HE120 -10 - 0 - 10  HE60, HE50 -5 - 0 - 5  UB300 0 - 100	○	○	supports only 2Eh (-4) - 36h (4)	○	○	supports only 2Eh (-4) - 36h (4)	○	○	○	○	○	○	○	○	○	○
Flesh Noise Suppress	OSD:4B: [Data] OSD:4B	00 01 02	Off Low High																
Iris Follow	OSD:4F OSD:4F: [Data]	00h - FFh	Close - Open	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Contrast (Gamma)	OSD:50: [Data] OSD:50	00 01 02  0 - 4	Low Mid High  UE20/HE20/UE4 0 - 4			○			○			○	○	○					
Output Select	OSD:65: [Data] OSD:65	00 01 02	RGB YPbPr Y/C																Y/C is Valid
AGC Max Gain	OSD:69: [Data] OSD:69	01 02 03 04 05 06 07 08	6dB 12dB 18dB 24dB 30dB 36dB 42dB 48dB	supports only 01 (6dB)	supports only 01 (6dB)	supports only 04 (24dB)	supports only 01 (6dB)	supports only 01 (6dB)	supports only 04 (24dB)	supports only 01 (6dB)	supports only 01 (6dB)	supports only 01 (6dB)	supports only 01 (6dB)	supports only 01 (6dB)	supports only 01 (6dB)	supports only 01 (6dB)	supports only 01 (6dB)	supports only 01 (6dB)	supports only 01 (6dB)





ITEM	Command Control / Response / Confirmation	Data	Data Contents																		
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50		
Color Correction Cy Saturation	OSD:92:[Data] OSD:92	01h - 80h - FFh	-127 - 0 - +127	supports only 01h(-127) - FEh(+126)	supports only 41h(-63) - BFh(+63)	---	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	---	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	---	supports only 01h(-127) - FEh(+126)	supports only 61h(-31) - 9Fh(+31)	supports only 61h(-31) - 9Fh(+31)	supports only 61h(-31) - 9Fh(+31)	supports only 41h(-63) - BFh(+63)	○	---	---	
Color Correction Cy Phase	OSD:93:[Data] OSD:93	01h - 80h - FFh	-127 - 0 - +127	supports only 01h(-127) - FEh(+126)	supports only 41h(-63) - BFh(+63)	---	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	---	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	---	○	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	○	---	---	
Color Correction Cy_B Saturation	OSD:94:[Data] OSD:94	01h - 80h - FFh	-127 - 0 - +127	supports only 01h(-127) - FEh(+126)	supports only 41h(-63) - BFh(+63)	---	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	---	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	---	supports only 01h(-127) - FEh(+126)	---	---	---	supports only 41h(-63) - BFh(+63)	○	---	---	
Color Correction Cy_B Phase	OSD:95:[Data] OSD:95	01h - 80h - FFh	-127 - 0 - +127	supports only 01h(-127) - FEh(+126)	supports only 41h(-63) - BFh(+63)	---	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	---	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	---	○	---	---	---	supports only 41h(-63) - BFh(+63)	○	---	---	
Color Correction B Saturation	OSD:96:[Data] OSD:96	01h - 80h - FFh	-127 - 0 - +127	supports only 01h(-127) - FEh(+126)	supports only 41h(-63) - BFh(+63)	---	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	---	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	---	supports only 01h(-127) - FEh(+126)	supports only 61h(-31) - 9Fh(+31)	supports only 61h(-31) - 9Fh(+31)	supports only 61h(-31) - 9Fh(+31)	supports only 41h(-63) - BFh(+63)	○	---	---	
Color Correction B Phase	OSD:97:[Data] OSD:97	01h - 80h - FFh	-127 - 0 - +127	supports only 01h(-127) - FEh(+126)	supports only 41h(-63) - BFh(+63)	---	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	---	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	---	○	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	supports only 41h(-63) - BFh(+63)	○	---	---	
Character Mix Select	OSD:98:[Data]:[Data] 2] OSD:98:[Data]	Data1 0 1 Data2 0 1 2	Output Browser/Video SDI/HDMI, Component Character Mix Select Off On Off By Browser	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	supports only Output 0(Browser/Video), 1(SDI/HDMI, Component) Character Mix Select 2(Off By Browser) is Valid When Output is 1(SDI/HDMI, Component)
Color Correction Mg_R Saturation	OSD:9A:[Data] OSD:9A	41h - 80h - BFh	-63 - 0 - +63	---	○	---	○	○	---	○	○	---	---	---	---	---	---	○	---	---	---
Color Correction Mg_R Phase	OSD:9B:[Data] OSD:9B	41h - 80h - BFh	-63 - 0 - +63	---	○	---	○	○	---	○	○	---	---	---	---	---	---	○	---	---	---
Color Correction R_R_YI Saturation	OSD:9C:[Data] OSD:9C	41h - 80h - BFh	-63 - 0 - +63	---	○	---	○	○	---	○	○	---	---	supports only 61h(-31) - 9Fh(+31)	supports only 61h(-31) - 9Fh(+31)	supports only 61h(-31) - 9Fh(+31)	○	---	---	---	
Color Correction R_R_YI Phase	OSD:9D:[Data] OSD:9D	41h - 80h - BFh	-63 - 0 - +63	---	○	---	○	○	---	○	○	---	---	○	○	○	○	○	---	---	---
Color Correction R_YI_YI Saturation	OSD:9E:[Data] OSD:9E	41h - 80h - BFh	-63 - 0 - +63	---	○	---	○	○	---	○	○	---	---	supports only 61h(-31) - 9Fh(+31)	supports only 61h(-31) - 9Fh(+31)	supports only 61h(-31) - 9Fh(+31)	○	---	---	---	
Color Correction R_YI_YI Phase	OSD:9F:[Data] OSD:9F	41h - 80h - BFh	-63 - 0 - +63	---	○	---	○	○	---	○	○	---	---	○	○	○	○	○	---	---	---
V Detail Level	OSD:A1:[Data] OSD:A1	79h - 80h - 87h	-7 - 0 - 7	---	○	---	○	○	---	○	○	---	---	---	---	---	---	○	---	---	---
Detail Band /Detail Frequency	OSD:A2:[Data] OSD:A2	79h - 80h - 87h	-7 - 0 - 7	---	○	---	○	○	---	○	○	---	---	---	---	---	---	○	---	---	---
Flesh Tone Noise Suppress /Skin Detail Effect	OSD:A3:[Data] OSD:A3	80h - 9Fh	0 - 31	---	○	---	○	○	---	○	○	---	---	---	---	---	---	○	---	---	---
Matrix(R-G)	OSD:A4:[Data] OSD:A4	41h - 80h - BFh	-63 - 0 - 63	---	○	---	○	○	---	○	○	---	---	---	---	---	---	○	---	---	---
Matrix(R-B)	OSD:A5:[Data] OSD:A5	41h - 80h - BFh	-63 - 0 - 63	---	○	---	○	○	---	○	○	---	---	---	---	---	---	○	---	---	---

ITEM	Command Control / Response / Confirmation	Data	Data Contents																	
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
Matrix(G-R)	OSD:A6:[Data] OSD:A6	41h - 80h - BFh	-63 - 0 - 63		○			○	○											
Matrix(G-B)	OSD:A7:[Data] OSD:A7	41h - 80h - BFh	-63 - 0 - 63		○			○	○											
Matrix(B-R)	OSD:A8:[Data] OSD:A8	41h - 80h - BFh	-63 - 0 - 63		○			○	○											
Matrix(B-G)	OSD:A9:[Data] OSD:A9	41h - 80h - BFh	-63 - 0 - 63		○			○	○											
Color Correction Cy_Cy_B Saturation	OSD:AA:[Data] OSD:AA	61h - 80h - 9Fh	-31 - 0 - +31									○	○	○						
Color Correction Cy_Cy_B Phase	OSD:AB:[Data] OSD:AB	41h - 80h - BFh	-63 - 0 - +63									○	○	○						
Color Correction Cy_B_B Saturation	OSD:AC:[Data] OSD:AC	61h - 80h - 9Fh	-31 - 0 - +31									○	○	○						
Color Correction Cy_B_B Phase	OSD:AD:[Data] OSD:AD	41h - 80h - BFh	-63 - 0 - +63									○	○	○						
Chroma Level	OSD:B0:[Data] OSD:B0	00h 1Ch - 80h - A8h - E3h AK-UB300 00h 1Dh - 80h - A8h	Off -100% - 0 - 40% - 99% UB300 -100% -99% - 0 - 40%	supports only 00(Off), 1C(-100%) - A8(40%)	supports only 00(Off), 1D(-99%) - E3(99%)		supports only 00(Off), 1D(-99%) - E3(99%)	supports only 00(Off), 1D(-99%) - E3(99%)		supports only 00(Off), 1D(-99%) - E3(99%)	supports only 00(Off), 1D(-99%) - E3(99%)	○						supports only 00(Off), 1D(-99%) - A8(40%)		
Color Temperature	OSD:B1:[Data] OSD:B1	※	※									※		※	※	※	※			
Night Mode Select	OSD:B2:[Data] OSD:B2	0 1	Manual Auto										○	○	○					
i. Zoom	OSD:B3:[Data] OSD:B3	0 1	Disable Enable	[Zoom Mode] -Opt Zoom OSE:70:0 OSD:B3:0 -i Zoom OSE:70:0 OSD:B3:1 -D Zoom OSE:70:1 OSD:B3:0	[Zoom Mode] -Opt Zoom OSE:70:0 OSD:B3:0 -i Zoom OSE:70:0 OSD:B3:1 -D Zoom OSE:70:1 OSD:B3:0	[Zoom Mode] -Opt Zoom OSE:70:0 OSD:B3:0 -i Zoom OSE:70:0 OSD:B3:1 -D Zoom OSE:70:1 OSD:B3:0	[Zoom Mode] -Opt Zoom OSE:70:0 OSD:B3:0 -i Zoom OSE:70:0 OSD:B3:1 -D Zoom OSE:70:1 OSD:B3:0	[Zoom Mode] -Opt Zoom OSE:70:0 OSD:B3:0 -i Zoom OSE:70:0 OSD:B3:1 -D Zoom OSE:70:1 OSD:B3:0		[Zoom Mode] -Opt Zoom OSE:70:0 OSD:B3:0 -i Zoom OSE:70:0 OSD:B3:1 -D Zoom OSE:70:1 OSD:B3:0			○	○	○					
HDR	OSD:B4:[Data] OSD:B4	0 1 2 3	Off Low Mid High										supports only 0(Off), 1(Low), 3(High)	supports only 0(Off), 1(Low), 3(High)	supports only 0(Off), 1(Low), 3(High)					
Night-Day Level	OSD:B7:[Data] OSD:B7	0 1 2	Low Mid High										○	○	○					
Digital Extender Magnification	OSD:B8:[Data] OSD:B8	0 1 2 3 4	x1.4 x2.0 x4.0 x6.0 x8.0										○	○						

ITEM	Command Control / Response / Confirmation	Data	Data Contents																	
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
Format_SDI	OSD:B9:[Data] OSD:B9	0h 1h 2h 3h 4h 5h 6h 7h 8h 9h Ah Bh Ch Dh Eh 10h 11h 12h 13h 14h 15h 16h	720/60p 720/59.94p 720/50p 1080/60i 1080/59.94i 1080/50i 1080/30psF 1080/29.97psF 1080/25psF 1080/24psF 1080/23.98psF 480/59.94i 480/29.97psF 576/50i 576/25psF 1080/59.94p 1080/50p 480/59.94p 576/50p 1080/29.97p 1080/25p 1080/23.98p									[59.94Hz] supports only 1h (720/59.94p) 4h (1080/59.94i) 7h (1080/29.97psF) 10h (1080/59.94p) 14h (1080/29.97p)	[59.94Hz] supports only 1h (720/59.94p) 4h (1080/59.94i) 7h (1080/29.97psF) 10h (1080/59.94p) 14h (1080/29.97p)							
Color Bar Type	OSD:BA:[Data] OSD:BA	0 1 2 3 4	TYPE2:FULL TYPE1:SMPT TYPE3:ARIB (MULTI) TYPE4:ARIB (UHD MULTI) TYPE5:ARIB (BT.2020)	○	supports only 0 (Type2 (Full BAR/EBU)), 1 (Type1 (SMPT))			supports only 0 (Type2 (Full BAR/EBU)), 1 (Type1 (SMPT))	supports only 0 (Type2 (Full BAR/EBU)), 1 (Type1 (SMPT))			supports only 0 (Type2 (Full BAR/EBU)), 1 (Type1 (SMPT))	supports only 0 (Type2 (Full BAR/EBU)), 1 (Type1 (SMPT))	V1.21+AW-SFU01 supports only 0 (Type2 (Full BAR/EBU)), 1 (Type1 (SMPT))						
ALC	OSD:BB:[Data] OSD:BB	0 1	Off On									○	○	V1.21+AW-SFU01						
Equalize	OSD:BC:[Data] OSD:BC	0 1 2	Off Low Cut Voice									○	○	V1.21+AW-SFU01						
Color Bar Title	OSD:BE:[Data] OSD:BE	0 1	Off On	○								○	○	V1.21+AW-SFU01						
Auto Shutter Limit	OSD:BF:[Data] OSD:BF	0 1 2 3 4 5 6 7	[59.94Hz] [50Hz] Off Off 1/60 1/50 1/100 1/100 1/120 1/125 1/250 1/250 UE160,UE80,UE50,UE40,UR100, UE100,UE150 1/100 1/120 1/250 1/500 1/1000 1/2000	○	supports only 2 (1/100), 3 (1/120), 4 (1/250)			○	supports only 2 (1/100), 3 (1/120), 4 (1/250)			○	○							
Color Correction B_B_Mg Saturation	OSD:C0:[Data] OSD:C0	61h - 80h - 9Fh	-31 - 0 - +31									○	○	○						
Color Correction B_B_Mg Phase	OSD:C1:[Data] OSD:C1	41h - 80h - BFh	-63 - 0 - +63									○	○	○						
Color Correction B_Mg_Mg Saturation	OSD:C2:[Data] OSD:C2	61h - 80h - 9Fh	-31 - 0 - +31									○	○	○						
Color Correction B_Mg_Mg Phase	OSD:C3:[Data] OSD:C3	41h - 80h - BFh	-63 - 0 - +63									○	○	○						
Color Correction Y1_Y1_G Saturation	OSD:C4:[Data] OSD:C4	61h - 80h - 9Fh	-31 - 0 - +31									○	○	○						
Color Correction Y1_Y1_G Phase	OSD:C5:[Data] OSD:C5	41h - 80h - BFh	-63 - 0 - +63									○	○	○						
Color Correction Y1_G Saturation	OSD:C6:[Data] OSD:C6	61h - 80h - 9Fh	-31 - 0 - +31									○	○	○						
Color Correction Y1_G Phase	OSD:C7:[Data] OSD:C7	41h - 80h - BFh	-63 - 0 - +63									○	○	○						
E.DRS Select	OSD:C8:[Data] OSD:C8	0 1 2 3	Off Low Mid High									supports only 0 (Off), 1 (Low), 3 (High)	supports only 0 (Off), 1 (Low), 3 (High)	supports only 0 (Off), 1 (Low), 3 (High)						
D/C Mode (D/C Board)	OSE:20:[Data] OSE:20	0 1 2 3	Side Cut Squeeze Letter Box Link												○	○	○	○		

ITEM	Command Control / Response / Confirmation	Data	Data Contents																
			Control and Response to control																
			UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
Matrix Type /Preset Matrix	OSE:31:[Data] OSE:31	0 1 2 3 4  UE160 0 1 2 3 4	Normal EBU Matrix NTSC Matrix User Professional  UE160 Normal Cinema1 Cinema2 User HD	supports only 0(Normal) 3(User) 4(Professional)		supports only 0(Normal) 3(User) 4(Professional)	supports only 0(Normal) 1(EBU Matrix) 2(NTSC Matrix) 3(User)		supports only 0(Normal) 1(EBU Matrix) 2(NTSC Matrix) 3(User)	supports only 0(Normal) 1(EBU Matrix) 2(NTSC Matrix) 3(User)		supports only 0(Normal) 1(EBU Matrix) 2(NTSC Matrix) 3(User)	supports only 0(Normal) 1(EBU Matrix) 2(NTSC Matrix) 3(User)	supports only 0(Normal) 1(EBU Matrix) 2(NTSC Matrix) 3(User)	supports only 0(Normal) 1(EBU Matrix) 2(NTSC Matrix) 3(User)	supports only 0(Normal) 1(EBU Matrix) 2(NTSC Matrix) 3(User)	supports only 0(Normal) 1(EBU Matrix) 2(NTSC Matrix) 3(User)	supports only 0(Normal) 1(EBU Matrix) 2(NTSC Matrix) 3(User)	
Soft Skin	OSE:32:[Data] OSE:32	0 1 2 3	Off Low Mid High									supports only 0(Off), 1(Low), 3(High)	supports only 0(Off), 1(Low), 3(High)	supports only 0(Off), 1(Low), 3(High)			supports only 0(Off), 1(Low), 3(High)	supports only 0(Off), 1(Low), 3(High)	
DRS	OSE:33:[Data] OSE:33	0 1 2 3  0 1	Off Low Mid High  UE20/HE20/UE4 Off On									supports only 0(Off), 1(Low), 3(High)	supports only 0(Off), 1(Low), 3(High)	supports only 0(Off), 1(Low), 3(High)			supports only 0(Off), 1(Low), 3(High)	supports only 0(Off), 1(Low), 3(High)	
HDMI Video Sampling	OSE:68:[Data] OSE:68	0 1 2 3 4	RGB(NOR) RGB(ENH) YpPr(422) YpPr(444) YpPr(420)	supports only 2(YpPr(422)) 4(YpPr(420))	UE80 supports only 2(YpPr(422)) 4(YpPr(420))		supports only 2(YpPr(422)) 4(YpPr(420))		UE150 supports only 2(YpPr(422)) 4(YpPr(420))							supports only 0(RGB(NOR)) 1(RGB(ENH)) 2(YpPr(422)) 3(YpPr(444))	supports only 0(RGB(NOR)) 1(RGB(ENH)) 2(YpPr(422)) 3(YpPr(444))	supports only 0(RGB(NOR)) 1(RGB(ENH)) 2(YpPr(422)) 3(YpPr(444))	
Push Auto Focus	OSE:69:[Data]	1 0 1	Push Auto Disable Enable	[Zoom Mode] -Opt Zoom OSE:70:0 OSD:B3:0 -i Zoom OSE:70:0 OSD:B3:1 -D Zoom OSE:70:1 OSD:B3:0	[Zoom Mode] -Opt Zoom OSE:70:0 OSD:B3:0 -i Zoom OSE:70:0 OSD:B3:1 -D Zoom OSE:70:1 OSD:B3:0	[Zoom Mode] -Opt Zoom OSE:70:0 OSD:B3:0 -i Zoom OSE:70:0 OSD:B3:1 -D Zoom OSE:70:1 OSD:B3:0	[Zoom Mode] -Opt Zoom OSE:70:0 OSD:B3:0 -i Zoom OSE:70:0 OSD:B3:1 -D Zoom OSE:70:1 OSD:B3:0	[Zoom Mode] -Opt Zoom OSE:70:0 OSD:B3:0 -i Zoom OSE:70:0 OSD:B3:1 -D Zoom OSE:70:1 OSD:B3:0	[Zoom Mode] -Opt Zoom OSE:70:0 OSD:B3:0 -i Zoom OSE:70:0 OSD:B3:1 -D Zoom OSE:70:1 OSD:B3:0										
Digital Zoom	OSE:70:[Data] OSE:70																		
Preset Scope	OSE:71:[Data] OSE:71	0 1 2	Mode A Mode B Mode C																
Gamma Mode	OSE:72:[Data] OSE:72	0 1 2 3 4 5 6 7	Off Normal Cinema  UE100, UE150, HE145, HR140, HE130 HD SD FILMLIKE1 FILMLIKE2 FILMLIKE3 FILM REC VIDEO REC HLG						supports only 0(HD) 2(FILMLIKE1) 3(FILMLIKE2) 4(FILMLIKE3)							supports only 0(HD) 1(SD) 2(FILMLIKE1) 3(FILMLIKE2) 4(FILMLIKE3)			
Back Light Compensation	OSE:73:[Data] OSE:73	0 1	Off On																
Auto F. Mix Max Gain	OSE:74:[Data] OSE:74	00 01 02 03	(Off) 6dB 12dB 18dB																
OSD Off With Tally	OSE:75:[Data] OSE:75	0 1	Off On																
Digital Zoom Magnification	OSE:76:[Data] OSE:76	0100 - 9999	*1.00 - *99.99	supports only 0100(x1.00) 1000(x10.00)	supports only 0100(x1.00) 1000(x10.00)	supports only 0100(x1.00) 0400(x4.00)	supports only 0100(x1.00) 1000(x10.00)	supports only 0100(x1.00) 1000(x10.00)	supports only 0100(x1.00) 1000(x10.00)			supports only 0100(x1.00) 1200(x12.00)	supports only 0100(x1.00) 1200(+12.00)	supports only 0100(x1.00) 1600(x16.00)	supports only 0100(x1.00) 1000(x10.00)	supports only 0100(x1.00) 1000(x10.00)	supports only 0100(x1.00) 1000(x10.00)	supports only 0100(x1.00) 1000(x10.00)	supports only 0100(x1.00) 1000(x10.00)
Frequency	OSE:77:[Data] OSE:77	0 1 2 3 4	59.94Hz 50.00Hz 24.00Hz 23.98Hz 60.00Hz	supports only 0(59.94Hz), 1(50.00Hz), 2(24.98Hz), 3(23.98Hz)	supports only 0(59.94Hz), 1(50.00Hz), 4(60.00Hz)	supports only 0(59.94Hz), 1(50.00Hz), 2(24.98Hz), 3(23.98Hz)	supports only 0(59.94Hz), 1(50.00Hz), 2(24.98Hz), 3(23.98Hz)	supports only 0(59.94Hz), 1(50.00Hz), 4(60.00Hz)	supports only 0(59.94Hz), 1(50.00Hz), 2(24.98Hz), 3(23.98Hz)			supports only 0(59.94Hz), 1(50.00Hz)	supports only 0(59.94Hz), 1(50.00Hz)	supports only 0(59.94Hz), 1(50.00Hz)	supports only 0(59.94Hz), 1(50.00Hz)	supports only 0(59.94Hz), 1(50.00Hz)	supports only 0(59.94Hz), 1(50.00Hz)	supports only 0(59.94Hz), 1(50.00Hz)	
Max Digital Zoom	OSE:7A:[Data] OSE:7A	02 - 18	x2 - x18	supports only 02(x2) 10(x10)	supports only 02(x2) 10(x10)	supports only 02(x2) 03(x3) 04(x4)	supports only 02(x2) 10(x10)	supports only 02(x2) 10(x10)				supports only 02(x2) 10(x10)	supports only 02(x2) 12(x12)	supports only 02(x2) 12(x12)	supports only 02(x2) 16(x16)	supports only 02(x2) 10(x10)	supports only 02(x2) 10(x10)		
OSD Mix /Char	OSE:7B:[Data] OSE:7B	00h 01h 02h 04h 08h 10h 20h 40h 80h	OSD Mix Off SDI On HDMI On Analog On Video On IP/NDI HX On 12G SDI/Optical On MONI/3G SDI/PM On NDI On *bit0:SDI, bit1:HDMI, bit2:Analog, bit3:Video, bit4:IP, bit5:12G SDI/Optical, bit6: MONI, bit7:NDI	UE160 supports only 00(OSD Mix Off) 01(3G SDI On) 02(HDMI On) 10(IP/NDI HX On) 20(12G SDI On) 40(3G SDI/PM On)	UE80 supports only 00(OSD Mix Off) 01(3G SDI On) 02(HDMI On) 10(NDI HX On) 80(NDI On)		UE150 supports only 00(OSD Mix Off) 01(3G SDI On) 02(HDMI On) 10(NDI HX On) 20(12G SDI On) 80(NDI On)		UE150 supports only 00(OSD Mix Off) 01(3G SDI On) 02(HDMI On) 10(IP On) 20(12G SDI/OPTICAL On) 40(MONI On)	supports only 00(OSD Mix Off) 01(SDI On) 10(IP On)	supports only 00(OSD Mix Off) 01(SDI On) 10(IP On)				supports only 00(OSD Mix Off) 01(SDI On) 02(HDMI On) 08(Video On) 10(IP On)	supports only 00(OSD Mix Off) 01(SDI On) 02(HDMI On) 04(Analog On) 08(Video On)			
Preset Digital Extender Enable	OSE:7C:[Data] OSE:7C	0 1	Off On																
Preset Zoom Mode	OSE:7D:[Data] OSE:7D	0 1	MODE A MODE B																

ITEM	Command Control / Response / Confirmation	Data	Data Contents		UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50		
			Control and Response to control																			
Peak Frequency	OSG:30:[Data] OSG:30	00h	0	01h(1) - 08h(8)									[In case HD format] 00h(0) - 1Fh(31) [In case 4K format] 00h(0) - 04h(4)									
		-	-																			
		04h	4																			
V Detail Level	OSG:32:[Data] OSG:32	00h	00																			
		-	-																			
		3Fh	63																			
V Detail Frequency	OSG:35:[Data] OSG:35	00h	0																			
		-	-																			
		04h	4																			
R Gain	OSG:39:[Data] OSG:39	418h	-1000		support only	support only	support only	support only			support only											
		-	-		738h(-200)	7E2h(-30)	738h(-200)	738h(-200)			738h(-200)											
		800h	0		8C8h(200)	81Eh(30)	8C8h(200)	8C8h(200)			8C8h(200)											
B Gain	OSG:3A:[Data] OSG:3A	418h	-1000		support only	support only	support only	support only			support only											
		-	-		738h(-200)	7E2h(-30)	738h(-200)	738h(-200)			738h(-200)											
		800h	0		8C8h(200)	81Eh(30)	8C8h(200)	8C8h(200)			8C8h(200)											
Level Dependent SW	OSG:3E:[Data] OSG:3E	0	Off																			
		1	On																			
Knee Aperture Level	OSG:3F:[Data] OSG:3F	00h	0					supports only	supports only		supports only											
		27h	39					00h(0) - 05h(5)	00h(0) - 05h(5)		00h(0) - 05h(5)											
Detail +Clip	OSG:40:[Data] OSG:40	00h	0																			
		3Fh	63																			
Detail -Clip	OSG:41:[Data] OSG:41	00h	0																			
		3Fh	63																			
Memory Select	OSG:42:[Data] OSG:42	0	A																			
		1	B																			
		2	C																			
H Position	OSG:44:[Data] OSG:44	000h	0																			
		190h	100.00% (0.25% step)																			
V Position	OSG:45:[Data] OSG:45	000h	0																			
		190h	100.00% (0.25% step)																			
Zebra Effect Memory	OSG:47:[Data] OSG:47	0	A																			
		1	B																			
		2	C																			
		3	A+B																			
		4	A+C																			
		5	B+C																			
Skin Tone Effect Memory	OSG:48:[Data] OSG:48	0	A																			
		1	B																			
		2	C																			
		3	A+B																			
		4	A+C																			
		5	B+C																			
Skin Tone Crisp	OSG:49:[Data] OSG:49	41h	-63																			
		-	-																			
		80h	0																			
		-	-																			
		BFh	+63																			
Master Pedestal	OSG:4A:[Data] OSG:4A	1Dh	-99																			
		-	-																			
		80h	0																			
		E3h	99																			
R Pedestal	OSG:4C:[Data] OSG:4C	4E0h	-800																			
		-	-																			
		800h	0																			
		B20h	800																			
G Pedestal	OSG:4D:[Data] OSG:4D	4E0h	-800																			
		-	-																			
		800h	0																			
		B20h	800																			
B Pedestal	OSG:4E:[Data] OSG:4E	4E0h	-800																			
		-	-																			
		800h	0																			
		B20h	800																			
Skin Tone Q Phase	OSG:4F:[Data] OSG:4F	000h	0																			
		167h	359																			
Shutter SW	OSG:59:[Data] OSG:59	0	Off																			
		1	On																			
Shutter Mode	OSG:5A:[Data] OSG:5A	0	Shutter																			
		1	Sync																			
Shutter Speed	OSG:5D:[Data] OSG:5D	※	※										※									

ITEM	Command Control / Response / Confirmation	Data	Data Contents	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
			Control and Response to control																	
Gamma Mode	OSG:86:[Data] OSG:86	0	HD																	
		1	FILMLIKE1																	
		2	FILMLIKE2																	
		3	FILMLIKE3																	
		4 5	FILM REG VIDEO REC																	
Chroma Level SW	OSG:93:[Data] OSG:93	0	Off	○																
		1	On																	
Master Flare	OSG:96:[Data] OSG:96	1Ch	-100																	
		80h	0																	
		- E4h	100																	
Auto Knee Response	OSG:97:[Data] OSG:97	1	1	○			○	○		○		○								
		- 8	8																	
Matrix	OSG:A0:[Data] OSG:A0	0	Off																	
		1	On																	
Color Correct Table	OSG:A4:[Data] OSG:A4	0	A																	
		1	B																	
Matrix (R-G)_N	OSG:A5:N:[Data] OSG:A5:[N P]:[Data] OSG:A5:N	00h	-31																	
		-	-																	
		1Fh	0																	
		- 3Eh	+31																	
Matrix (R-G)_P	OSG:A5:P:[Data] OSG:A5:[N P]:[Data] OSG:A5:P	00h	-31																	
		-	-																	
		1Fh	0																	
		- 3Eh	+31																	
Matrix (R-B)_N	OSG:A6:N:[Data] OSG:A6:[N P]:[Data] OSG:A6:N	00h	-31																	
		-	-																	
		1Fh	0																	
		- 3Eh	+31																	
Matrix (R-B)_P	OSG:A6:P:[Data] OSG:A6:[N P]:[Data] OSG:A6:P	00h	-31																	
		-	-																	
		1Fh	0																	
		- 3Eh	+31																	
Matrix (G-R)_N	OSG:A7:N:[Data] OSG:A7:[N P]:[Data] OSG:A7:N	00h	-31																	
		-	-																	
		1Fh	0																	
		- 3Eh	+31																	
Matrix (G-R)_P	OSG:A7:P:[Data] OSG:A7:[N P]:[Data] OSG:A7:P	00h	-31																	
		-	-																	
		1Fh	0																	
		- 3Eh	+31																	
Matrix (G-B)_N	OSG:A8:N:[Data] OSG:A8:[N P]:[Data] OSG:A8:N	00h	-31																	
		-	-																	
		1Fh	0																	
		- 3Eh	+31																	
Matrix (G-B)_P	OSG:A8:P:[Data] OSG:A8:[N P]:[Data] OSG:A8:P	00h	-31																	
		-	-																	
		1Fh	0																	
		- 3Eh	+31																	
Matrix (B-R)_N	OSG:A9:N:[Data] OSG:A9:[N P]:[Data] OSG:A9:N	00h	-31																	
		-	-																	
		1Fh	0																	
Matrix (B-R)_P	OSG:A9:P:[Data] OSG:A9:[N P]:[Data] OSG:A9:P	-	-																	
		1Fh	0																	
		- 3Eh	+31																	
Matrix (B-G)_N	OSG:AA:N:[Data] OSG:AA:[N P]:[Data] OSG:AA:N	00h	-31																	
		-	-																	
		1Fh	0																	
Matrix (B-G)_P	OSG:AA:P:[Data] OSG:AA:[N P]:[Data] OSG:AA:P	-	-																	
		1Fh	0																	
		- 3Eh	+31																	
Skin Area SW	OSG:B0:[Data] OSG:B0	0	Off																	
		1	On																	
Skin Area Table	OSG:B1:[Data] OSG:B1	0	A																	
		1	B																	
Skin Area Hue	OSG:B2:[Data] OSG:B2	01h	-127																	
		-	-																	
		80h	0																	
Skin Area Tone	OSG:B3:[Data] OSG:B3	-	-																	
		FFh	+127																	
		01h	-127																	
DNR Level	OSG:B5:[Data] OSG:B5	1	1	○																
		-	-																	
		5	5																	
Haze Reduction	OSG:B6:[Data] OSG:B6	0	Off																	
		1	On																	

ITEM	Command Control / Response / Confirmation	Data	Data Contents		UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
			Control and Response to control																		
Haze Reduction Level	OSG:B7:[Data] OSG:B7	1 -	1 -									○	○								
Genlock Input	OSG:CA:[Data] OSG:CA	0 1	BNC DSUB										○								
H Phase-Coarse	OSG:CB:[Data] OSG:CB	3h -	-5 -										○								
H Phase-Fine	OSG:CC:[Data] OSG:CC	8h -	0 -										○								
Shutter	OSH:[Data] OSH	0h 1h 2h 3h 4h 5h 6h 7h 8h 9h Ah Bh Ch Dh Eh Fh	Off 1/50 1/60 1/100 (NTSC) 、 1/120 (PAL) 1/120 (NTSC) 、 1/100 (PAL) 1/250 1/500 1/1000 1/2000 1/4000 1/10000 Synchro-Scan ELC(Auto ND) 1/24 1/25 1/30								※		※	※	※	※	※	※	※	※	※
Crop H/V Position Speed Control	OS1:15:[Data]:[Data2]	[Data1] 01 -	[Data1] Left Max. Speed -	○			○	○			○ (UE150) --- (HE145)		○								
Crop Out	OS1:16:[Data] OS1:16	1 2 3	YI G Mg	○			○	○			○ (UE150) --- (HE145)		○								
Crop Adjust	OS1:17:[Data] OS1:17	1 2 3	YI G Mg	○			○	○			○ (UE150) --- (HE145)		○								
Request Zoom/Focus/Iris Position	OS1:18 OS1:18:[Data]:[Data2]:[Data3]	[Data1] 555h -	[Data1]Zoom Position Wide -										○								
Software Version	OS1:19:[Data] OS1:19:[Data]:[Data2]	0 1 2 3 4 5 6 [Data2] (Ver. String)	[Data1] System Version Cam Main Network ROM Table Cam FPGA AVIO FPGA Option FPGA [Data2] (ex) 01.00-000-00.00										○								
Crop Marker	OS1:1A:[Data] OS1:1A	0 1 2 3 4 5 6 7	Off YI G Mg YI+G YI+Mg G+Mg YI+G+Mg	○			○	○			○ (UE150) --- (HE145)		supports only 1 (YI) 2 (G) 3 (Mg) 4 (YI+G) 5 (YI+Mg) 6 (G+Mg) 7 (YI+G+Mg)								
Crop H Position	OS1:1B:[Data] OS1:1B	738h -	-50% -										○								
Crop V Position	OS1:1C:[Data] OS1:1C	800h -	0% -										○								
Auto Iris Level	OS1:1D:[Data] OS1:1D	00h 64h	0 100										○								
Color Temperature Inc	OS1:1E:[Data]	1h -	Inc 1 -	○	○		○	○			○		supports only 1h (Inc 1)								
Color Temperature Dec	OS1:1F:[Data]	1h -	Dec 1 -	○	○		○	○			○		supports only 1h (Dec 1)								



ITEM	Command Control / Response / Confirmation	Data	Data Contents																	
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
Color Temperature	OS1:20:[Data]:[Data2] OS1:20	[Data1] 00000h - FFFFFh [Data2] 0h 1h 2h	[Data1] OK - 1048575K [Data2] Valid Under Over	[Data1] supports only 007D0h (2000K) - 03A98h (15000K) [Data2] supports only 0(valid)	[Data1] supports only 007D0h (2000K) - 03A98h (15000K) [Data2] supports only 0(valid)		[Data1] supports only 007D0h (2000K) - 03A98h (15000K) [Data2] supports only 0(valid)	[Data1] supports only 007D0h (2000K) - 03A98h (15000K) [Data2] supports only 0(valid)		[Data1] supports only 007D0h (2000K) - 03A98h (15000K) [Data2] supports only 0(valid)		supports only Confirmation Command								
Intelligent	OS1:21:[Data] OS1:21	0 1 2	Off On Lock																	
Intelligent Mode	OS1:22:[Data] OS1:22	0 1	AE AE+ATW																	
Intelligent ND Filter	OS1:23:[Data] OS1:23	0 1 2 3	Through 1/8 1/64 Auto																	
Intelligent AGC Mode	OS1:24:[Data] OS1:24	0 1 2	Normal Sports SN																	
ATW Speed	OS1:25:[Data] OS1:25	0 1 2	Normal Slow Fast																	
ATW Width	OS1:26:[Data] OS1:26	1 2 3 4 5	1 2 3 4 5																	
Super Gain	OS1:28:[Data] OS1:28	0 1	Off On																	
3G SDI	OS1:29:[Data]	0	Level A																	
3G SDI Out	OS1:29	1	Level B																	
Option Device Type	OS1:2A OS1:2A:[Data]	[AK-UB300] 0 1 2 3	[AK-UB300] no option 4K default 12G option TI100 option																	
DC Out	OS1:2B:[Data] OS1:2B	0 1	Off On																	
HDR SW (MAIN)	OS1:2C:[Data] OS1:2C	0 1	Off On																	
Colorimetry	OS1:2D:[Data] OS1:2D	00h 01h	no effect BT_709																	
HDR SW (SD11)	OS1:2E:[Data] OS1:2E	0 1	Off On																	
HDR SW (LAN)	OS1:2F:[Data] OS1:2F	0 1	Off On																	
Shooting Mode	OS1:30:[Data] OS1:30	0 1 UE160 0 1	Normal High Sens. UE160 Normal Low Light																	
HDR SW (SD12)	OS1:31:[Data] OS1:31	0 1	Off On																	
Crop SD12/3G SDI Out	OS1:32:[Data] OS1:32	0 1	Full Crop																	
Crop IP Out	OS1:33:[Data] OS1:33	0 1	Full Crop																	
Master Gamma	OS1:34 OS1:34:[Data]	05DCh - 1194h - 1D4Ch	0.1500 - 0.4500 - 0.7500																	
R Gamma	OS1:35:[Data] OS1:35	35h - 80h - CBh	-75 - 0 - +75																	
B Gamma	OS1:36:[Data] OS1:36	35h - 80h - CBh	-75 - 0 - +75																	
Master Gamma Inc	OS1:37:[Data]	1	Inc																	
Master Gamma Dec	OS1:38:[Data]	1	Dec																	
HLG Mode (HDR Paint)	OS1:39:[Data] OS1:39	0 1	Fix Var																	
SDR Convert Mode (HDR Paint)	OS1:3A:[Data] OS1:3A	0 1	Fix Var																	
HLG Type Select (HDR Paint)	OS1:3B:[Data] OS1:3B	0 1	Normal Stretch																	
Black Gamma SW (HDR Paint)	OS1:3C:[Data] OS1:3C	0 1	Off On																	
Master Black Gamma (HDR Paint)	OS1:3D:[Data] OS1:3D	60h - 80h - A0h	-32 - 0 - +32																	
R Black Gamma (HDR Paint)	OS1:3E:[Data] OS1:3E	60h - 80h - A0h	-32 - 0 - +32																	
B Black Gamma (HDR Paint)	OS1:3F:[Data] OS1:3F	60h - 80h - A0h	-32 - 0 - +32																	
Knee SW (HDR Paint)	OS1:40:[Data] OS1:40	0 1	Off On																	

ITEM	Command Control / Response / Confirmation	Data	Data Contents																			
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50			
Knee Point (HDR Paint)	OSJ:41:[Data] OSJ:41	1Ch - 30h - 80h - D0h - F4h	55.00% - 60.00% - 80.00% - 100.00% - 109.00% (1step=0.25%)	support only 30h(60%) - D0(100%)							support only 1Ch(55%) - D0(100%) (1step=1%)											
Knee Slope (HDR Paint)	OSJ:42:[Data] OSJ:42	00h - C7h	0 - 199	○							supports only 00h - 64h	○										
SDR Convert Gain (HDR Paint)	OSJ:43:[Data] OSJ:43	74h - 80h	-12 - 0	supports only 74h(-12) - 78h(-5), 80h(0)																	supports only 74h(-12), 77h(-9), 7Ah(-6), 7Dh(-3), 80h(0)	
SDR Convert Clip (HDR Paint)	OSJ:44:[Data] OSJ:44	0 1 2	Low Mid High																		○	
Error Information	OSJ:46 OSJ:46:[Data]	00000000h 00000001h 00000002h 00000004h 00000008h 00000010h	No Error Fan Error High Temperature Lens Error Pan/Tilt Error Sensor Error  ※bit0:Fan Error, bit1:High Temperature, bit2:Lens Error, bit3:Pan/Tilt Error, bit4:Sensor Error	○	○			○	○													
Auto Iris Speed	OSJ:01:[Data] OSJ:01	0 1 2  UE160 1 2	Slow Normal Fast  UE160 1 2 3	○	○			○	○													
Auto Iris Window	OSJ:02:[Data] OSJ:02	0 1 2  UE160 1 2 3 4 5	Normal1 Normal2 Center  UE160 1 2 3 4 5	○	○			○	○													
Shutter Mode	OSJ:03:[Data] OSJ:03	0h 1h 2h 3h	Off Step Synchro ELC	○	○		supports only 0(Off) 1(Step) 2(Synchro)	○	○		supports only 0(Off) 1(Step)	○										
Shutter Step Inc	OSJ:04:[Data]	01h - 64h	1 - 100	○	○		○	○	○		○											
Shutter Step Dec	OSJ:05:[Data]	01h - 64h	1 - 100	○	○		○	○	○		○											
Shutter Step Value	OSJ:06:[Data] OSJ:06	0001h - 2710 h - 3E80h	1/1 - 1/10000 - 1/16000	supports only 0030h(1/48) - 07D0h(1/2000)	supports only 0018h(1/24) - 2710h(1/10000)	○	supports only 0018h(1/24) - 2710h(1/10000)	supports only 0018h(1/24) - 2710h(1/10000)	○	supports only 0018h(1/24) - 2710h(1/10000)												
Shutter Synchro Inc	OSJ:07:[Data]	01h - 64h	1 - 100	○	○		○	○	○		○											
Shutter Synchro Dec	OSJ:08:[Data]	01h - 64h	1 - 100	○	○		○	○	○		○											
Shutter Synchro Value	OSJ:09:[Data] OSJ:09	00000h - 186A0h	0.0 [Hz] - 10000.0[Hz]	supports only 000F0h(24.0Hz) - 119940(7200.0Hz)	supports only 000F0h(24.0Hz) - 119940(7200.0Hz)	supports only 001F4h(50.0Hz) - 019C8h(660.0Hz)	supports only 000F0h(24.0Hz) - 119940(7200.0Hz)	supports only 000F0h(24.0Hz) - 119940(7200.0Hz)		supports only 000F0h(24.0Hz) - 119940(7200.0Hz)												
Chroma Phase	OSJ:08:[Data] OSJ:08	61h - 80h - 9Fh	-31 0 - +31		○			○	○		○											
AWB Gain Offset	OSJ:0C:[Data] OSJ:0C	0 1	Off On	○	○			○	○		○											
ATW Target R	OSJ:0D:[Data] OSJ:0D	76h - 80h - 8Ah	-10 0 - +10	○	○			○	○		○											
ATW Target B	OSJ:0E:[Data] OSJ:0E	76h - 80h - 8Ah	-10 0 - +10	○	○			○	○		○											
Master Pedestal	OSJ:0F:[Data] OSJ:0F	738h - 800h - 8C8h	-200 0 - +200	○	○		supports only 7F6h(-10) - 80Ah(10)	○	○		○											

ITEM	Command Control / Response / Confirmation	Data	Data Contents																
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50
G Pedestal	OSJ:10: [Data] OSJ:10	032h - 096h - 0FAh	-100 - 0 - +100																
Pedestal Offset	OSJ:11: [Data] OSJ:11	0 1	Off On																
Detail Coring	OSJ:12: [Data] OSJ:12	00h - 3Ch	0 - 60																
Level Depend.	OSJ:13: [Data] OSJ:13	79h - 80h - 87h	-7 - 0 - 7																
Down Convert Detail	OSJ:14: [Data] OSJ:14	0 1	Off On																
Down Convert Master Detail	OSJ:15: [Data] OSJ:15	61h - 80h - 9Fh	-31 - 0 - +31																
Down Convert Detail Coring	OSJ:16: [Data] OSJ:16	00h - 3Ch	0 - 60																
Down Convert V Detail Level	OSJ:17: [Data] OSJ:17	79h - 80h - BFh	-7 - 0 - +63	supports only 00h(00) - BFh(+63) (UE150)															
Down Convert Detail Frequency	OSJ:18: [Data] OSJ:18	7Eh - 80h - 82h	-2 - 0 - +2																
Down Convert Level Depend.	OSJ:19: [Data] OSJ:19	79h - 80h - 87h	-7 - 0 - +7																
Down Convert Knee Ape Level	OSJ:1A: [Data] OSJ:1A	00h 01h 02h 03h 04h 05h	0 1 2 3 4 5																
Black Gamma Range	OSJ:1B: [Data] OSJ:1B	1 2 3	1 2 3																
Color Correction Y1_Y1_G Saturation	OSJ:1C: [Data] OSJ:1C	41h - 80h - BFh	-63 - 0 - 63																
Color Correction Y1_Y1_G Phase	OSJ:1D: [Data] OSJ:1D	41h - 80h - BFh	-63 - 0 - 63																
12G SDI/Optical Out Output Format	OSJ:1E: [Data] OSJ:1E	01h 02h 04h 05h 07h 08h 0Ah 10h 11h 14h 15h 16h 17h 18h 19h 1Ah 1Bh 1Fh 20h 21h 22h 23h	720/59.94p 720/50p 1080/59.94i 1080/50i 1080/29.97PsF 1080/25PsF 1080/23.98PsF 1080/59.94p 1080/50p 1080/29.97p 1080/25p 1080/23.98p (over 59.94i/p)	UE160 doesn't support 07h 1080/29.97PsF 08h 1080/25PsF 0Ah 1080/23.98PsF 16h 1080/23.98p (over 59.94i/p)				UE100 doesn't support 1Fh 2160/60p 20h 1080/60p	UE100 doesn't support 1Fh 2160/60p 20h 1080/60p										
12G SDI/Optical Out HDR Output Select	OSJ:1F: [Data] OSJ:1F	0h 1h 2h	SDR HDR (2020) HDR (709)																
12G SDI/Optical 3G SDI Out	OSJ:20: [Data] OSJ:20	0h 1h	Level A Level B																

ITEM	Command Control / Response / Confirmation	Data	Data Contents																
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50
3G SDI Out Output Format	OSJ:21:[Data] OSJ:21	01h 02h 04h 05h 07h 08h 0Ah 10h 11h 14h 15h 16h 20h 22h 23h	720/59.94p 720/50p 1080/59.94i 1080/50i 1080/29.97PsF 1080/25PsF 1080/23.98PsF 1080/59.94p 1080/50p 1080/29.97p 1080/25p 1080/23.98p (over 59.94i/p)	UE160 doesn't support 07h 1080/29.97PsF 08h 1080/25PsF 0Ah 1080/23.98PsF 16h 1080/23.98p (over 59.94i/p)	UE80 and UE50 don't support 20h 1080/60p  --- (UE40)		UE100 doesn't support 20h 1080/60p	UE100 doesn't support 20h 1080/60p		UE150 and HE145 don't support 20h 1080/60p									
3G SDI Out HDR Output Select	OSJ:22:[Data] OSJ:22	0 1 2	SDR HDR(2020) HDR(709)	○						○									
MONI Out Output Format	OSJ:23:[Data] OSJ:23	01h 02h 04h 05h 07h 08h 0Ah 14h 15h 16h 20h 22h 23h	720/59.94p 720/50p 1080/59.94i 1080/50i 1080/29.97PsF 1080/25PsF 1080/23.98PsF 1080/29.97p 1080/25p 1080/23.98p (over 59.94i/p)	UE160 doesn't support 07h 1080/29.97PsF 08h 1080/25PsF 0Ah 1080/23.98PsF 16h 1080/23.98p (over 59.94i/p)						UE150 doesn't support 20h 1080/60p  --- (HE145)									
MONI Out HDR Output Select	OSJ:24:[Data] OSJ:24	0 1 2	SDR HDR(2020) HDR(709)	○						○ (UE150) --- (HE145)									
HDMI Out Output Format	OSJ:25:[Data] OSJ:25	01h 02h 04h 05h 10h 11h 14h 15h 16h 17h 18h 19h 1Ah 1Bh 1Fh 20h 21h 22h 23h 26h 27h	720/59.94p 720/50p 1080/59.94i 1080/50i 1080/59.94p 1080/50p 1080/29.97p 1080/25p 1080/23.98p (over 59.94i/p) 2160/29.97p 2160/25p 2160/59.94p 2160/50p 2160/23.98p 2160/60p 1080/60p 2160/24p 1080/24p 1080/23.98p 1080/119.88p 1080/100p	UE160 doesn't support 16h 1080/23.98p (over 59.94i/p)	UE80 doesn't support 1Fh 2160/60p 20h 1080/60p 26h 1080/119.88p 27h 1080/100p  UE50 doesn't support 19h 2160/59.94p 1Ah 2160/50p 1Fh 2160/60p 20h 1080/60p 26h 1080/119.88p 27h 1080/100p  UE40 doesn't support 16h 1080/23.98p (over 59.94i/p) 19h 2160/59.94p 1Ah 2160/50p 1Fh 2160/60p 20h 1080/60p 26h 1080/119.88p 27h 1080/100p		UE100 doesn't support 1Fh 2160/60p 20h 1080/60p 26h 1080/119.88p 27h 1080/100p		UE150 doesn't support 1Fh 2160/60p 20h 1080/60p 26h 1080/119.88p 27h 1080/100p  HE145 doesn't support 17h 2160/29.97p 18h 2160/25p 19h 2160/59.94p 1Ah 2160/50p 1Bh 2160/23.98p 1Fh 2160/60p 20h 1080/60p 21h 2160/24p 26h 1080/119.88p 27h 1080/100p										
HDMI Out HDR Output Select	OSJ:26:[Data] OSJ:26	0 1 2	SDR HDR(2020) HDR(709)	○						○									
Color Bar Tone	OSJ:27:[Data] OSJ:27	0 1 2  UE160 0 1	Off Low Normal  UE160 Off On	○	○			○	○	○									
Touch AF	OSJ:28:[Data1]:[Data2] OSJ:28	[Data1] 00h - 64h [Data2] 00h - 64h	[Data1]H Position 0% - 100% [Data2]V Position 0% - 100%	○	○			○	○	○									
Preset Speed Unit	OSJ:29:[Data] OSJ:29	0 1	Speed Table Time	○	○			○	○	○									
Preset Crop	OSJ:2A:[Data] OSJ:2A	0 1	Off On	○				○	○	○ (UE150) --- (HE145)									
Preset Thumbnail Update	OSJ:2B:[Data] OSJ:2B	0 1	Off On	○	○			○	○	○									
Preset Name	OSJ:2C:[Data] OSJ:2C	0 1	Reset Hold	○	○			○	○	○									
P/T Speed Mode	OSJ:2D:[Data] OSJ:2D	0 1 2  0 1 2	UE160 UE100 Normal Fast1 Fast2  UE150 Normal Fast Quick	○	○			○	○	○									
UHD Crop	OSJ:2E:[Data] OSJ:2E	0 1 2	Off Crop(1080) Crop(720)	○				○	○	○ (UE150) --- (HE145)									

ITEM	Command Control / Response / Confirmation	Data	Data Contents																	
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
Crop H Position (Y)	OSJ:2F:[Data] OSJ:2F	000h - 780h - A00h - C00	0 - 1920 - 2560 - 3072	○ (1step=2pix)				○	○											UE150 supports only 000h(0) - A00h(2560) (1step=2pix) - HE145 doesn't support
Crop V Position (Y)	OSJ:30:[Data] OSJ:30	000h - 438h - 5A0h - 6C0	0 - 1080 - 1440 - 1728	○				○	○											UE150 supports only 000h(0) - 5A0h(1440) - HE145 doesn't support
Crop H Position (G)	OSJ:31:[Data] OSJ:31	000h - 780h - A00h - C00	0 - 1920 - 2560 - 3072	○ (1step=2pix)				○	○											UE150 supports only 000h(0) - A00h(2560) (1step=2pix) - HE145 doesn't support
Crop V Position (G)	OSJ:32:[Data] OSJ:32	000h - 438h - 5A0h - 6C0	0 - 1080 - 1440 - 1728	○				○	○											UE150 supports only 000h(0) - 5A0h(1440) - HE145 doesn't support
Crop H Position (Mg)	OSJ:33:[Data] OSJ:33	000h - 780h - A00h - C00	0 - 1920 - 2560 - 3072	○ (1step=2pix)				○	○											UE150 supports only 000h(0) - A00h(2560) (1step=2pix) - HE145 doesn't support
Crop V Position (Mg)	OSJ:34:[Data] OSJ:34	000h - 438h - 5A0h - 6C0	0 - 1080 - 1440 - 1728	○				○	○											UE150 supports only 000h(0) - 6C0h(1728) - HE145 doesn't support
Save Preset Name	OSJ:35:[Data]:[Data2] OSJ:35:[Data]	[Data1] 00 - 99 [Data2] xxxxxxxxxxxx	[Data1] Preset001 - Preset100 [Data2] Preset Name (Fixed 15 Characters)	[Data2] use only follow characters A-Z, a-z, 1-9, Half-Width Space	[Data2] use only follow characters A-Z, a-z, 1-9, Half-Width Space		[Data2] use only follow characters A-Z, a-z, 1-9, Half-Width Space	[Data2] use only follow characters A-Z, a-z, 1-9, Half-Width Space		[Data2] use only follow characters A-Z, a-z, 1-9, Half-Width Space										
Delete Preset Name (Single)	OSJ:36:[Data]	[Data] 00 - 99	[Data] Preset001 - Preset100	○	○		○	○		○										
Delete Preset Name (All)	OSJ:37	-	-	○	○		○	○		○										
Update Preset Thumbnail	OSJ:39:[Data]	[Data] 00 - 99	[Data] Preset001 - Preset100	○	○		○	○		○										
Delete Preset Thumbnail (Single)	OSJ:3A:[Data]	[Data] 00 - 99	[Data] Preset001 - Preset100	○	○		○	○		○										
Delete Preset Thumbnail (All)	OSJ:3B	-	-	○	○		○	○		○										
Preset Name / Preset Thumbnail Counter	OSJ:3C:[Data] OSJ:3C:[Data]:[Data2]	[Data1] 00h 01h 02h 03h 04h 05h 06h 07h 08h 09h 0Ah 0Bh [Data2] 00000000h - FFFFFFFFh	[Data1] Preset 001-009 Preset 010-018 Preset 019-027 Preset 028-036 Preset 037-045 Preset 046-054 Preset 055-063 Preset 064-072 Preset 073-081 Preset 082-090 Preset 091-099 Preset 100 [Data2] 00000000h - FFFFFFFFh	○	○		○	○		○										
Zoom Scale	OSJ:3D OSJ:3D:[Data]	000h - 3E7h	0 - 999	○	○		○	○		○										
Operation Lock	OSJ:3E:[Data]	xxxxxxx	Any Information (40 Characters)	○	○		○	○		○										
Release Operation Lock	OSJ:3F	-	-	○	○		○	○		○										

ITEM	Command / Response / Confirmation	Data	Data Contents															
			Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60
Operation Lock Status	OSJ:40 OSJ:40:[Data1]:[Data2]	[Data1] 0 1 [Data2] xxxxxxx	[Data1] Unlock Lock [Data2] Any Information (40 Characters)	○	○		○	○		○								
External Output 1	OSJ:41:[Data] OSJ:41	0 1 2 3	Off R-Tally G-Tally Y-Tally	○	supports only 0(Off), 1(R-Tally), 2(G-Tally) (UE80, UE50) --- (UE40)			supports only 0(Off), 1(R-Tally), 2(G-Tally)		supports only 0(Off), 1(R-Tally), 2(G-Tally)								
External Output 2	OSJ:42:[Data] OSJ:42	0 1 2 3	Off R-Tally G-Tally Y-Tally	○	supports only 0(Off), 1(R-Tally), 2(G-Tally) (UE80, UE50) --- (UE40)			supports only 0(Off), 1(R-Tally), 2(G-Tally)		supports only 0(Off), 1(R-Tally), 2(G-Tally)								
Power On Position	OSJ:45:[Data] OSJ:45	0 1 2 3	None Standby Home Preset	○	supports only 1(Standby) 2(Home) 3(Preset)		○	supports only 1(Standby) 2(Home) 3(Preset)										
Power On Preset Number	OSJ:46:[Data] OSJ:46	00 - 99	Preset001 - Preset100	○			○											
AWB Color Temperature Inc	OSJ:48:[Data]	1h - Ah	1 - 10	○			○											
AWB Color Temperature Dec	OSJ:49:[Data]	1h - Ah	1 - 10	○			○											
AWB Color Temperature / Color Temp ACH	OSJ:4A:[Data1]:[Data2] OSJ:4A	[Data1] 0070h 03A98h [Data2] 0 1 2	[Data1] 2000K 15000K [Data2] Valid Under Over	○	supports only 0 Valid		○	○ (Query Only)										
AWB R Gain	OSJ:4B:[Data] OSJ:4B	670h - 800h - 990h	-400 - 0 - 400	○			○											
AWB B Gain	OSJ:4C:[Data] OSJ:4C	670h - 800h - 990h	-400 - 0 - 400	○			○											
AWB G Axis	OSJ:4D:[Data] OSJ:4D	670h - 800h - 990h	-400 - 0 - 400	○			○											
Digital Extender	OSJ:4E:[Data] OSJ:4E	0 1 2	Off x1.4 x2.0	○			○											
Adaptive Matrix	OSJ:4F:[Data] OSJ:4F	0 1	Off On	○			○											
Tracking Data Output Serial Out	OSJ:54:[Data] OSJ:54	0 1	Off On	○		○ (UE80)	○		○ (UE150)									
Tracking Data Output IP Out	OSJ:55:[Data] OSJ:55	0 1	Off On	○		○ (UE80)	○		○ (UE150)									
Color Setting	OSJ:56:[Data] OSJ:56	0 1	Normal V-Log	○					○ (UE150)									
12G SDI/Optical Out V-Log Output Select	OSJ:57:[Data] OSJ:57	0 1	V-Log V-709	○					○ (UE150)									
3G SDI Out V-Log Output Select	OSJ:58:[Data] OSJ:58	0 1	V-Log V-709	○					○ (UE150)									
MONI Out V-Log Output Select	OSJ:59:[Data] OSJ:59	0 1	V-Log V-709	○					○ (UE150)									
HDMI Out V-Log Output Select	OSJ:5A:[Data] OSJ:5A	0 1	V-Log V-709	○					○ (UE150)									
Preset Iris	OSJ:5B:[Data] OSJ:5B	0 1	Off On	○			○		○									
Camera Title	OSJ:5C:[Data] OSJ:5C	xxxxxxx	Camera Title (Fixed 40 Characters : ASCII CODE)	○			○		○									
Crop H/V Position Speed Control (Y)	OSJ:5D:[Data1]:[Data2]	[Data1] 01 - 50 - 99 [Data2] 01 - 50 - 99	Left Max. Speed - Stop - Right Max. Speed [Data2] Down Max. Speed - Stop - UP Max. Speed	○			○		○ (UE150)									

ITEM	Command Control / Response / Confirmation	Data	Data Contents Control and Response to control	Data Contents															
				UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50
Crop H/V Position Speed Control (G)	OSJ:5E:[Data1]:[Data2]	[Data1] 01 - 50 - 99 [Data2] 01 - 50 - 99	[Data1] Left Max. Speed - Stop - Right Max. Speed [Data2] Down Max. Speed - Stop - UP Max. Speed	○			○	○			○ (UE150) --- (HE145)								
Crop H/V Position Speed Control (Mg)	OSJ:5F:[Data1]:[Data2]	[Data1] 01 - 50 - 99 [Data2] 01 - 50 - 99	[Data1] Left Max. Speed - Stop - Right Max. Speed [Data2] Down Max. Speed - Stop - UP Max. Speed	○			○	○			○ (UE150) --- (HE145)								
Get Crop H/V Position (Y1, G, Mg)	OSJ:60:[Data1]:[Data2]:[Data3]:[Data4]:[Data5]:[Data6] OSJ:60	[Data1] 000h - C00h [Data2] 000h - 6C0h [Data3] 000h - C00h [Data4] 000h - 6C0h [Data5] 000h - C00h [Data6] 000h - 6C0h	[Data1] H Position (Y1) 0 - 3072 [Data2] V Position (Y1) 0 - 1728 [Data3] H Position (G) 0 - 3072 [Data4] V Position (G) 0 - 1728 [Data5] H Position (Mg) 0 - 3072 [Data6] V Position (Mg) 0 - 1728	○			○	○			UE150 [Data1, 3, 5] H Position (Y1, G, Mg) supports only 000h(0) - A00 (2560) [Data2, 4, 6] V Position (Y1, G, Mg) supports only 000h(0) - 5A0 (1440) HE145 doesn't support								
Slow Shutter	OSJ:80:[Data] OSJ:80	0 1	Off On			○			○										
Mirror	OSJ:81:[Data] OSJ:81	0 1	Off On						○										
Language	OSJ:82:[Data] OSJ:82	0 1 2	English Japanese Chinese			○			○										
LDC	OSJ:84:[Data] OSJ:84	0 1	Off On						○										
Manual Iris Close Limit	OSJ:90:[Data] OSJ:90	0 1	Off On		○		○	○											
Crop AF	OSJ:91:[Data] OSJ:91	0 1	Off On	○			○	○											
Crop Zoom	OSJ:92:[Data] OSJ:92	0 1	Off On	○			○	○											
Crop NDI Out	OSJ:93:[Data] OSJ:93	0 1	Full Crop	○			○	○											
Crop IP Out2	OSJ:94:[Data] OSJ:94	0 1	Full Crop	○			○	○											
Crop Zoom Ratio (Y1)	OSJ:98:[Data] OSJ:98	02EE0h - 0C350h	120.00% - 500.00%	○			○	○											
Crop Zoom Ratio (G)	OSJ:99:[Data] OSJ:99	02EE0h - 0C350h	120.00% - 500.00%	○			○	○											
Crop Zoom Ratio (Mg)	OSJ:9A:[Data] OSJ:9A	02EE0h - 0C350h	120.00% - 500.00%	○			○	○											
Crop Zoom Ratio (Y1/G/Mg)	OSJ:9B:[Data1]:[Data2]:[Data3] OSJ:9B	[Data1] 02EE0h - 0C350h [Data2] 02EE0h - 0C350h [Data3] 02EE0h - 0C350h	[Data1] Zoom Ratio (Y1) 120.00% - 500.00% [Data2] Zoom Ratio (G) 120.00% - 500.00% [Data3] Zoom Ratio (Mg) 120.00% - 500.00%	○			○	○											
Crop Zoom Ratio Speed Control	OSJ:9C:[Data] OSJ:9C	01 - 49 - 50 - 51 - 99	Wide Max. Speed - Wide Min. Speed - Stop - Tele Min. Speed - Tele Max. Speed	○			○	○											
Crop Zoom Ratio Speed Control (Y1)	OSJ:9D:[Data] OSJ:9D	01 - 49 - 50 - 51 - 99	Wide Max. Speed - Wide Min. Speed - Stop - Tele Min. Speed - Tele Max. Speed	○			○	○											

ITEM	Command Control / Response / Confirmation	Data	Data Contents		Model Support																
			Control and Response to control	Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
Crop Zoom Ratio Speed Control (G)	OSJ:9E:[Data] OSJ:9E	01	Wide Max. Speed	○																	
		49	Wide Min. Speed																		
		50	Stop																		
		51	Tele Min. Speed																		
		99	Tele Max. Speed																		
Crop Zoom Ratio Speed Control (Mg)	OSJ:9F:[Data] OSJ:9F	01	Wide Max. Speed	○																	
		49	Wide Min. Speed																		
		50	Stop																		
		51	Tele Min. Speed																		
		99	Tele Max. Speed																		
Crop H/V Position Speed Control (Y1/G/Mg)	OSJ:A0:[Data1]:[Data2]:[Data3]:[Data4]:[Data5]:[Data6]	[Data1] 01 - 50 - 99	[Data1] (Y1) Left Max. Speed - Stop - Right Max. Speed	○							○ (UE150) --- (HE145)										
		[Data2] 01 - 50 - 99	[Data2] (Y1) Down Max. Speed - Stop - UP Max. Speed																		
		[Data3] 01 - 50 - 99	[Data3] (G) Left Max. Speed - Stop - Right Max. Speed																		
		[Data4] 01 - 50 - 99	[Data4] (G) Down Max. Speed - Stop - UP Max. Speed																		
		[Data5] 01 - 50 - 99	[Data5] (Mg) Left Max. Speed - Stop - Right Max. Speed																		
		[Data6] 01 - 50 - 99	[Data6] (Mg) Down Max. Speed - Stop - UP Max. Speed																		
Crop Zoom Ratio Speed Control (Y1/G/Mg)	OSJ:A1:[Data1]:[Data2]:[Data3]	[Data1] 01	[Data1] (Y1) Wide Max. Speed	○																	
		49	Wide Min. Speed																		
		50	Stop																		
		51	Tele Min. Speed																		
		99	Tele Max. Speed																		
		[Data2] 01	[Data2] (G) Wide Max. Speed																		
		49	Wide Min. Speed																		
		50	Stop																		
		51	Tele Min. Speed																		
		99	Tele Max. Speed																		
P/T Acceleration	OSJ:A2:[Data] OSJ:A2	0 1	Manual Auto	○	○ (UE80) --- (UE50, UE40)																
P/T Rise S-Curve	OSJ:A3:[Data] OSJ:A3	00h 1Eh	0 30	○	○ (UE80) --- (UE50, UE40)																
P/T Fall S-Curve	OSJ:A4:[Data] OSJ:A4	00h 1Eh	0 30	○	○ (UE80) --- (UE50, UE40)																
P/T Rise Acceleration	OSJ:A5:[Data] OSJ:A5	01h FFh	1 255	○	○ (UE80) --- (UE50, UE40)																
P/T Fall Acceleration	OSJ:A6:[Data] OSJ:A6	01h FFh	1 255	○	○ (UE80) --- (UE50, UE40)																
Privacy Mode	OSJ:A7:[Data] OSJ:A7	0 1	Off On	○	○																
Preset Acceleration	OSJ:A8:[Data] OSJ:A8	0 1	Manual Auto	○	○ (UE80) --- (UE50, UE40)																
Preset Rise S-Curve	OSJ:A9:[Data] OSJ:A9	00h 1Eh	0 30	○	○ (UE80) --- (UE50, UE40)																
Preset Fall S-Curve	OSJ:AA:[Data] OSJ:AA	00h 1Eh	0 30	○	○ (UE80) --- (UE50, UE40)																
Preset Rise Acceleration	OSJ:AB:[Data] OSJ:AB	01h FFh	1 255	○	○ (UE80) --- (UE50, UE40)																
Preset Fall Acceleration	OSJ:AC:[Data] OSJ:AC	01h FFh	1 255	○	○ (UE80) --- (UE50, UE40)																
Preset Rise Ramp Time	OSJ:AD:[Data] OSJ:AD	01h 64h	0.1s 10.0s	○	○ (UE80) --- (UE50, UE40)																
Preset Fall Ramp Time	OSJ:AE:[Data] OSJ:AE	01h 64h	0.1s 10.0s	○	○ (UE80) --- (UE50, UE40)																
Crop H Position	OSJ:AF:[Data] OSJ:AF	000h C00h	0 3072	○	(1step=2pix)																
Crop V Position	OSJ:B0:[Data] OSJ:B0	000h 6C0h	0 1728	○																	
Crop Zoom Ratio	OSJ:B1:[Data] OSJ:B1	02EE0h 0C350h	120.00% 500.00%	○																	
Auto Iris Close Limit	OSJ:C0:[Data] OSJ:C0	0 1 2 3	Off F8 F7 F5.6	○																	
Tracking Data Output Invert Pan/Tilt Axis	OSJ:C1:[Data] OSJ:C1	0 1	Off On	○	○ (UE80) --- (UE50, UE40)																



ITEM	Command Control / Response / Confirmation	Data	Data Contents Control and Response to control	Data Contents														
				UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60
Crop Position/Crop Zoom Position Speed Control (YL/G/MG)	OSJ:C2:[Data1]:[Data2]:[Data3]:[Data4]:[Data5]:[Data6]:[Data7]:[Data8]:[Data9]	[Data1] 01 - 50 - 99 [Data2] 01 - 50 - 99 [Data3] 01 - 50 - 99 [Data4] 01 - 50 - 99 [Data5] 01 - 50 - 99 [Data6] 01 - 50 - 99 [Data7] 01 - 50 - 99 [Data8] 01 - 50 - 99 [Data9] 01 - 50 - 99	[Data1] YL H Crop Position Left Max. speed - Stop - Right Max. speed - UP Max. speed [Data2] YL V Crop Position Down Max. speed - Stop - UP Max. speed [Data3] G H Crop Position Left Max. speed - Stop - Right Max. speed [Data4] G V Crop Position Down Max. speed - Stop - UP Max. speed [Data5] MG H Crop Position Left Max. speed - Stop - Right Max. speed [Data6] MG V Crop Position Down Max. speed - Stop - UP Max. speed [Data7] YL Crop Zoom Position Wide Max. speed - Stop - Tele Max. speed [Data8] G Crop Zoom Position Wide Max. speed - Stop - Tele Max. speed [Data9] MG Crop Zoom Position Wide Max. speed - Stop - Tele Max. speed	○			○	○										
Request Crop Position/Crop Zoom Position	OSJ:C3:[Data] OSJ:C3	[Data1] 000h - 000h [Data2] 000h - 600h [Data3] 000h - 000h [Data4] 000h - 600h [Data5] 000h - 000h [Data6] 000h - 600h [Data7] 02EE0h - 0C350h [Data8] 02EE0h - 0C350h [Data9] 02EE0h - 0C350h	[Data1] H Position (YL) 0 - 3072 [Data2] V Position (YL) 0 - 1728 [Data3] H Position (G) 0 - 3072 [Data4] V Position (G) 0 - 1728 [Data5] H Position (MG) 0 - 3072 [Data6] V Position (MG) 0 - 1728 [Data7] Zoom Ratio (YL) 120.00% - 500.00% [Data8] Zoom Ratio (G) 120.00% - 500.00% [Data9] Zoom Ratio (MG) 120.00% - 500.00%	○			○	○										
Spotlight COMP.	OSJ:D0:[Data] OSJ:D0	0 1	Off On	---	○													
Flicker Suppression	OSJ:D1:[Data] OSJ:D1	0 1	Off On	---	○													
ND Filter Status	OSJ:D2:[Data] OSJ:D2	0 1 2 3	Through 1/4 ND 1/16 ND 1/64 ND	---	○ (UE80) --- (UE50, UE40)		○											
USB Mode	OSJ:D3:[Data] OSJ:D3	0 1	Off On	---	○ (UE80) ○ (UE50, UE40)													
USB Auto Active	OSJ:D4:[Data] OSJ:D4	0 1	Off On	---	○ (UE80) ○ (UE50, UE40)													
Preset Shutter	OSJ:D5:[Data] OSJ:D5	0 1	Off On	○	○		○											
Scene Copy	OSJ:D6:[Data1][Data2] OSJ:D6	[Data1] 1 2 3 4 [Data2] 1 2 3 4	[Data1] Scene (From) Scene1 Scene2 Scene3 Full Auto [Data2] Scene (To) Scene1 Scene2 Scene3 Full Auto	---	○			6:31										
Gamma Mode	OSJ:D7:[Data] OSJ:D7	00 01 02 03 04	HD Normal Cinema1 Cinema2 Still Like	supports only 00 (HD), 01 (Normal), 02 (Cinema1), 03 (Cinema2)	○		○											
AF Sensitivity	OSJ:D8:[Data] OSJ:D8	0 1	Normal Stable	○	○		○											
Tally LED Limit R	OSJ:D9:[Data] OSJ:D9	0 1	Unlimited Limited	○	○			○		○								
Tally LED Limit G	OSJ:DA:[Data] OSJ:DA	0 1	Unlimited Limited	○	○			○		○								
Tally LED Limit B	OSJ:DB:[Data] OSJ:DB	0 1	Unlimited Limited	---	○ (UE80) ○ (UE50, UE40)													
USB Auto Standby	OSJ:DC:[Data] OSJ:DC	0 1	Off On	---	○ (UE80) ○ (UE50, UE40)													
Video Conference Mode	OSJ:F3:[Data] OSJ:F3	0 1	Off On	---	○ (UE80) ○ (UE50, UE40)													
Tracking Data Output Camera ID	OSJ:F4:[Data] OSJ:F4	00h FFh	0x00 0xFF	○			○	○		○ (UE150) --- (HE145)								
SFP+ Mode	OSL:00:[Data] OSL:00	0 1 2	Off 12G OUTPUT ST2110/NW IF ST2110 JPEG XS	○														
V-LOG Paint SW	OSL:01:[Data] OSL:01	0 1	Off On	○														
Gamut	OSL:02:[Data] OSL:02	0 1	Normal Wide G2	○														
Level Gauge	OSL:03:[Data] OSL:03	0 1	Off On	○														
Tally Guard	OSL:04:[Data] OSL:04	0 1	Off On	○														
Tally Led Limit Y	OSL:05:[Data] OSL:05	0 1	Unlimited Limited	○														
Sync Ref Signal	OSL:08:[Data] OSL:08	0 1	BBS/TR1-LEVEL SYNC PTP	○														

ITEM	Command Control / Response / Confirmation	Data	Data Contents		UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
			Control and Response to control																		
Sync Gen-Lock H Phase-Coarse	OSL:09:[Data] OSL:09	7Bh - 80h - 85h	-5 - 0 - 5																		
Sync Gen-Lock H Phase-Fine	OSL:0A:[Data] OSL:0A	1Ch - 80h - E4h	-100 - 0 - 100																		
Bar ID Brightness	OSL:0B:[Data] OSL:0B	00h - 64h	0% - 100%																		
Bar ID ID1 Position V	OSL:0C:[Data] OSL:0C	0 - 5	0 - 5																		
Bar ID ID1 Position H	OSL:0D:[Data] OSL:0D	0h - Fh	0h - Fh																		
Bar ID ID1	OSL:0E:[Data] OSL:0E	xxxxxxx (32 DATA in ASCII CODE)	BAR ID (FIXED 16 CHARACTORS)																		
Bar ID ID2 Position V	OSL:0F:[Data] OSL:0F	0 - 5	0 - 5																		
Bar ID ID2 Position H	OSL:10:[Data] OSL:10	0h - Fh	0h - Fh																		
Bar ID ID2	OSL:11:[Data] OSL:11	xxxxxxx (32 DATA in ASCII CODE)	BAR ID (FIXED 16 CHARACTORS)																		
Bar ID Offset V	OSL:12:[Data] OSL:12	00h - 59h	0 - 89																		
Bar Id Offset H	OSL:13:[Data] OSL:13	00h - 4Fh	0 - 79																		
12G SDI Out/SFP+ Output Item	OSL:14:[Data] OSL:14	0 1	Menu Only Status																		
3G SDI Out1 Output Item	OSL:15:[Data] OSL:15	0 1	Menu Only Status																		
3G SDI Out2/PM Output Select	OSL:17:[Data] OSL:17	0 1	Cam Return																		
3G SDI Out2/PM Output Item	OSL:18:[Data] OSL:18	0 1	Menu Only Status																		
3G SDI Out2/PM 3G SDI	OSL:1A:[Data] OSL:1A	0 1	Level-A Level-B																		
Return ID	OSL:1B:[Data] OSL:1B	xxxxxxx (10 DATA in ASCII CODE)	RETURN ID (FIXED 5 CHARACTORS)																		
Audio Input Setting Input Select	OSL:1C:[Data] OSL:1C	[Data1] 0 1 [Data2] 0 1 2	[Data1] Input1 Input2 [Data2] Line Mic Mic+48V (Mic+Power)																		
Audio Input Setting Mic Gain	OSL:1D:[Data] OSL:1D	[Data1] 0 1 [Data2] 0 1	[Data1] Input1 Input2 [Data2] 60dB 40dB																		
Audio Output Setting Ch Select	OSL:1E:[Data] OSL:1E	0 1 2	Input1/Input2 Input1 Input2																		
NDI Format Select	OSL:21:[Data] OSL:21	01h 02h 10h 11h 14h 15h 17h 18h 19h 1Ah 1Bh 1Fh 20h 21h 22h 23h	720/59.94p 720/50p 1080/59.94p 1080/50p 1080/29.97p 1080/25p 2160/29.97p 2160/25p 2160/59.94p 2160/50p 2160/23.98p 2160/60p 1080/60p 2160/24p 1080/24p 1080/23.98p																		
IP(H.264/H.265) Output Item	OSL:23:[Data] OSL:23	0 1	Menu Only Status																		
Gain	OSL:25:[Data] OSL:25	02h - 08h - 14h	-6dB - 0dB - 12dB																		
AGC	OSL:26:[Data] OSL:26	0 1	Off On																		
Frame Mix SW	OSL:27:[Data] OSL:27	0 1	Off On																		
Frame Mix	OSL:28:[Data] OSL:28	06h 0Ch 12h 18h	+6dB +12dB +18dB +24dB																		
Iris Peak Ratio	OSL:29:[Data] OSL:29	00h - 64h	0 - 100																		
ATW	OSL:2A:[Data] OSL:2A	0 1	Off On																		
White Balance Mode	OSL:2B:[Data] OSL:2B	0 1 2 3 4	AWB A AWB B PRESET 3200K PRESET 5600K VAR																		

ITEM	Command / Response / Confirmation	Data	Data Contents		UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
			Control and Response to control																		
Shockless WB SW	OSL:2C:[Data] OSL:2C	0 1	Off On	○																	
Shockless WB Speed	OSL:2D:[Data] OSL:2D	1 -	1 -	○																	
Auto Shutter	OSL:2E:[Data] OSL:2E	5 0	5 Off On	○																	
Color Temp Bch	OSL:2F:[Data1]:[Data2] OSL:2F	[Data1] 0070h 03A98h [Data2] 0	[Data1] 2000K - 15000K [Data2] Valid	○																	
Color Temp Bch Inc	OSL:30:[Data]	1h -	1 -	○																	
Color Temp Bch Dec	OSL:31:[Data]	Ah 1h -	10 1 -	○																	
Color Temp R Gain Bch	OSL:32:[Data] OSL:32	670h -	-400 0 -	○																	
Color Temp B Gain Bch	OSL:33:[Data] OSL:33	800h -	0 -	○																	
Color Temp G Axis Bch	OSL:34:[Data] OSL:34	670h -	-400 0 -	○																	
G Gain Rel Control Switch	OSL:35:[Data] OSL:35	0 1	Off On	○																	
RGB Gain Preset R Gain	OSL:36:[Data] OSL:36	418h -	-1000 0 -	○																	
RGB Gain Preset G Gain	OSL:37:[Data] OSL:37	800h -	0 -	○																	
RGB Gain Preset B Gain	OSL:38:[Data] OSL:38	418h -	-1000 0 -	○																	
RGB Gain R Gain Ach	OSL:39:[Data] OSL:39	800h -	0 -	○																	
RGB Gain G Gain Ach	OSL:3A:[Data] OSL:3A	418h -	-1000 0 -	○																	
RGB Gain B Gain Ach	OSL:3B:[Data] OSL:3B	800h -	0 -	○																	
RGB Gain R Gain Bch	OSL:3C:[Data] OSL:3C	418h -	-1000 0 -	○																	
RGB Gain G Gain Bch	OSL:3D:[Data] OSL:3D	800h -	0 -	○																	
RGB Gain B Gain Bch	OSL:3E:[Data] OSL:3E	418h -	-1000 0 -	○																	
RGB Gain Gain Offset Bch	OSL:3F:[Data] OSL:3F	0 1	Off On	○																	
Master Flare	OSL:40:[Data] OSL:40	738h -	-200 0 -	○																	
R Flare	OSL:41:[Data] OSL:41	800h -	0 -	○																	

ITEM	Command Control / Response / Confirmation	Data	Data Contents		UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50			
			Control and Response to control																				
G Flare	OSL:42:[Data] OSL:42	73h	-200	○																			
		-	-	○																			
		800h	0	○																			
B Flare	OSL:43:[Data] OSL:43	800h	0	○																			
		-	-	○																			
		808h	200	○																			
Initial Gamma	OSL:44:[Data] OSL:44	8h	4.0	○																			
		9h	4.5	○																			
		Ah	5.0	○																			
Knee	OSL:45:[Data] OSL:45	0	Off	○																			
		1	On	○																			
Knee Mode	OSL:46:[Data] OSL:46	0	Manual	○																			
		1	Auto	○																			
R White Clip Level	OSL:47:[Data] OSL:47	71h	-15%	○																			
		-	-	○																			
		80h	0%	○																			
B White Clip Level	OSL:48:[Data] OSL:48	-	-	○																			
		80h	0%	○																			
		8Fh	15%	○																			
HI-Color	OSL:49:[Data] OSL:49	0	Off	○																			
		1	On	○																			
HI-Color Level	OSL:4A:[Data] OSL:4A	01h	1	○																			
		-	-	○																			
		20h	32	○																			
DRS Effect Depth	OSL:4B:[Data] OSL:4B	1	1	○																			
		5	5	○																			
Detail Knee	OSL:4C:[Data] OSL:4C	00h	00	○																			
		0Fh	15	○																			
Dark Detail SW	OSL:4D:[Data] OSL:4D	0	Off	○																			
		1	On	○																			
Dark Detail	OSL:4E:[Data] OSL:4E	0	0	○																			
		7	7	○																			
Down Convert Chroma Level SW	OSL:4F:[Data] OSL:4F	0	Off	○																			
		1	On	○																			
Down Convert Chroma Level	OSL:50:[Data] OSL:50	1Ch	-100%	○																			
		-	-	○																			
		80h	0%	○																			
Down Convert H Detail Level	OSL:51:[Data] OSL:51	-	-	○																			
		80h	00	○																			
		8Fh	63	○																			
Down Convert Detail Peak Frequency	OSL:52:[Data] OSL:52	07Ch	12.4MHz	○																			
		173h	37.1MHz	○																			
Down Convert V Detail Frequency	OSL:53:[Data] OSL:53	00h	00	○																			
		1Fh	31	○																			
Down Convert Detail Crisp	OSL:54:[Data] OSL:54	80h	00	○																			
		8Fh	63	○																			
Down Convert Detail Clip(+)	OSL:57:[Data] OSL:57	80h	00	○																			
		8Fh	63	○																			
Down Convert Detail Clip(-)	OSL:58:[Data] OSL:58	80h	00	○																			
		8Fh	63	○																			
Down Convert Detail Knee Aperture Level	OSL:5A:[Data] OSL:5A	00h	0	○																			
		27h	39	○																			
Down Convert Detail Knee	OSL:5B:[Data] OSL:5B	00h	00	○																			
		0Fh	15	○																			
Down Convert Detail Level	OSL:5C:[Data] OSL:5C	0	Off	○																			
		1	On	○																			
Down Convert Detail Level Dependent	OSL:5D:[Data] OSL:5D	00h	00	○																			
		0Fh	15	○																			
Down Convert Dark Detail SW	OSL:5E:[Data] OSL:5E	0	Off	○																			
		1	On	○																			
Down Convert Dark Detail	OSL:5F:[Data] OSL:5F	0	0	○																			
		7	7	○																			
Down Convert Skin Tone Detail	OSL:60:[Data] OSL:60	0	Off	○																			
		1	On	○																			
Down Convert Skin Tone Detail Zebra	OSL:61:[Data] OSL:61	0	A	○																			
		1	B	○																			
Down Convert Skin Tone Detail Zebra Effect Memory	OSL:62:[Data] OSL:62	2	C	○																			
		3	A+B	○																			
		4	A+C	○																			
		5	B+C	○																			
		6	A+B+C	○																			
Down Convert Skin Tone Effect Memory	OSL:63:[Data] OSL:63	0	A	○																			
		1	B	○																			
		2	C	○																			
		3	A+B	○																			
		4	A+C	○																			
Down Convert Skin Tone Crisp	OSL:64:[Data] OSL:64	80h	0	○																			
		88h	8	○																			

ITEM	Command Control / Response / Confirmation	Data	Data Contents		UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50		
			Control and Response to control																			
Down Convert Skin Tone Detail I Center	OSL:65:[Data] OSL:65	00h - FFh	0 - 255	○																		
Down Convert Skin Tone Detail I Width	OSL:66:[Data] OSL:66	00h - FFh	0 - 255	○																		
Down Convert Skin Tone Detail Q Width	OSL:67:[Data] OSL:67	00h - 7Fh	0 - 127	○																		
Down Convert Skin Tone Detail Q Phase	OSL:68:[Data] OSL:68	000h - 167h	0 - 359	○																		
Skin Tone Detail Memory Select	OSL:69:[Data] OSL:69	0 1 2	A B C	○																		
Zebra Effect Memory	OSL:6A:[Data] OSL:6A	0 1 2 3 4 5 6	A B C A+B A+C B+C A+B+C	○																		
Linear Matrix	OSL:6C:[Data] OSL:6C	0 1	Off On	○																		
Color Correct Table	OSL:6E:[Data] OSL:6E	0 1	A B	○																		
Matrix(R-G)_P	OSL:6F:[Data] OSL:6F	00h - 1Fh - 3Eh	-31 - 0 - +31	○																		
Matrix(R-B)_P	OSL:70:[Data] OSL:70	00h - 1Fh - 3Eh	-31 - 0 - +31	○																		
Matrix(G-R)_P	OSL:71:[Data] OSL:71	00h - 1Fh - 3Eh	-31 - 0 - +31	○																		
Matrix(G-B)_P	OSL:72:[Data] OSL:72	00h - 1Fh - 3Eh	-31 - 0 - +31	○																		
Matrix(B-R)_P	OSL:73:[Data] OSL:73	00h - 1Fh - 3Eh	-31 - 0 - +31	○																		
Matrix(B-G)_P	OSL:74:[Data] OSL:74	00h - 1Fh - 3Eh	-31 - 0 - +31	○																		
HDR Paint SDR Convert Point	OSL:88:[Data] OSL:88	00h - 64h	0 - 100	○																		
HDR Paint SDR Convert Slope	OSL:89:[Data] OSL:89	00h - 7Fh - 1Ch	0 - 127 - -100	○																		
HDR Paint SDR Convert Black Offset	OSL:8A:[Data] OSL:8A	80h - E4h	0 - +100	○																		
O. I. S.	OSL:8B:[Data] OSL:8B	0 1	Off On	○																		
O. I. S. Mode	OSL:8C:[Data] OSL:8C	1 2 3 4	O. I. S (STABLE) O. I. S (PAN/TILT) HYBRID (STABLE) HYBRID (PAN/TILT)	○																		
WFM Mode	OSL:8D:[Data] OSL:8D	0 1 2	OFF ON(Y) ON(Y/Pb/Pr)	○																		
WFM Position	OSL:8E:[Data] OSL:8E	0 1 2 3	UR BR BL UL	○																		
Scene File Load	OSL:8F:[Data] OSL:8F	0 1 8	OFF Scene1 - Scene8	○																		
Scene File Store	OSL:90:[Data]	1 - 8	Scene1 - Scene8	○																		
Scene File File Name	OSL:91:[Data1]:[Data2] OSL:91:[Data1]	[Data1] 1 - 8 [Data2] xxxxxxx (30 DATA in ASCII CODE)	[Data1] Scene1 - Scene8 [Data2] SCENE FILE NAME (FIXED 15 CHARACTORS)	○																		
User File Load	OSL:92:[Data]	1 - 3	User1 - User3	○																		
User File Store	OSL:93:[Data]	1 - 3	User1 - User3	○																		

ITEM	Command / Response / Confirmation	Data	Data Contents		UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
			Control and Response to control	Response to control																	
User File Name	OSL:94:[Data1]:[Data2] OSL:94:[Data1]	[Data1] 1 - 3 [Data2] xxxxxxxx (30 DATA in ASCII CODE)	[Data1] User1 - User3 [Data2] SCENE FILE NAME (FIXED 15 CHARACTORS)	○																	
System Version	OSL:99 OSL:99:[Data]	VXX.XX-XXX-XX.XX	VXX.XX-XXX-XX.XX Ex) V01.00-000-00.00	○																	
White Shading Correct	OSL:9B:[Data] OSL:9B	0 1	Off On	○																	
White Shading W H Saw R	OSL:9C:[Data] OSL:9C	1Ch - 80h - E4h	-100 - 0 - +100	○																	
White Shading W H Saw G	OSL:9D:[Data] OSL:9D	1Ch - 80h - E4h	-100 - 0 - +100	○																	
White Shading W H Saw B	OSL:9E:[Data] OSL:9E	1Ch - 80h - E4h	-100 - 0 - +100	○																	
White Shading W H Para R	OSL:9F:[Data] OSL:9F	1Ch - 80h - E4h	-100 - 0 - +100	○																	
White Shading W H Para G	OSL:A0:[Data] OSL:A0	1Ch - 80h - E4h	-100 - 0 - +100	○																	
White Shading W H Para B	OSL:A1:[Data] OSL:A1	1Ch - 80h - E4h	-100 - 0 - +100	○																	
White Shading W V Saw R	OSL:A2:[Data] OSL:A2	1Ch - 80h - E4h	-100 - 0 - +100	○																	
White Shading W V Saw G	OSL:A3:[Data] OSL:A3	1Ch - 80h - E4h	-100 - 0 - +100	○																	
White Shading W V Saw B	OSL:A4:[Data] OSL:A4	1Ch - 80h - E4h	-100 - 0 - +100	○																	
White Shading W V Para R	OSL:A5:[Data] OSL:A5	1Ch - 80h - E4h	-100 - 0 - +100	○																	
White Shading W V Para G	OSL:A6:[Data] OSL:A6	1Ch - 80h - E4h	-100 - 0 - +100	○																	
White Shading W V Para B	OSL:A7:[Data] OSL:A7	1Ch - 80h - E4h	-100 - 0 - +100	○																	
ST2110 Main Video Tx Format	OSL:AA:[Data] OSL:AA	01h 02h 04h 05h 10h 11h 14h 15h 20h 22h 23h FFh	720/59.94p 720/50p 1080/59.94i 1080/50i 1080/59.94p 1080/50p 1080/29.97p 1080/25p 1080/60p 1080/24p 1080/23.98p DISABLE(query only)	○																	
ST2110 Crop Video Tx Format	OSL:AC OSL:AC:[Data]	01h 02h 04h 05h 10h 11h 14h 15h 20h 22h 23h FFh	720/59.94p 720/50p 1080/59.94i 1080/50i 1080/59.94p 1080/50p 1080/29.97p 1080/25p 1080/60p 1080/24p 1080/23.98p DISABLE(query only)	○																	

ITEM	Command Control / Response / Confirmation	Data	Data Contents		UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
			Control and Response to control																		
ST2110 Monitor Video Tx Format	OSL:AD OSL:AD:[Data]	01h 02h 04h 05h 10h 11h 14h 15h 20h 22h 23h FFh	720/59.94p 720/50p 1080/59.94i 1080/50i 1080/59.94p 1080/50p 1080/29.97p 1080/25p 1080/60p 1080/24p 1080/23.98p DISABLE(query only)																		
Camera Number	OSL:AE:[Data] OSL:AE	01 - 99	1 - 99																		
Level Gauge Request Inclination	OSL:AF OSL:AF:[Data1]:[Data2]:[Data3]:[Data4]	[Data1] 1Dh - 80h - E3h [Data2] 1Dh - 80h - E3h [Data3] 1Dh - 80h - E3h [Data4] 1Dh - 80h - E3h	[Data1] -9.9° (Left Down) - 0.0° - 9.9° (Left Up) [Data2] -9.9° (Right Down) - 0.0° - 9.9° (Right Up) [Data3] -9.9° (Front Down) - 0.0° - 9.9° (Front Up) [Data4] -9.9° (Back Down) - 0.0° - 9.9° (Back Up)																		
Chroma Level	OSL:B0:[Data] OSL:B0	1Ch - 80h - A8h	-100% - 0 - 40																		
Down Convert Skin Tone Detail Memory Select	OSL:B1:[Data] OSL:B1	0 1 2	A B G																		
Request Matrix (R/G/B/CY/MG/YL)	OSL:B2 OSL:B2:[Data1]:[Data2]:[Data3]:[Data4]:[Data5]:[Data6]:[Data7]:[Data8]:[Data9]:[Data10]:[Data11]:[Data12]	[Data1]R-X 701h-8FFh [Data2]R-Y 701h-8FFh [Data3]G-X 701h-8FFh [Data4]G-Y 701h-8FFh [Data5]B-X 701h-8FFh [Data6]B-Y 701h-8FFh [Data7]CY-X 701h-8FFh [Data8]CY-Y 701h-8FFh [Data9]MG-X 701h-8FFh [Data10]MG-Y 701h-8FFh [Data11]YL-X 701h-8FFh [Data12]YL-Y 701h-8FFh	[Data1]R-X -255~255 [Data2]R-Y -255~255 [Data3]G-X -255~255 [Data4]G-Y -255~255 [Data5]B-X -255~255 [Data6]B-Y -255~255 [Data7]CY-X -255~255 [Data8]CY-Y -255~255 [Data9]MG-X -255~255 [Data10]MG-Y -255~255 [Data11]YL-X -255~255 [Data12]YL-Y -255~255																		
Status Indicator Return Select	OSL:B3:[Data] OSL:B3	0 1	Off On																		
ST2110 Ret Video Rx Format	OSL:B4 OSL:B4:[Data]	04h 05h 10h 11h 14h 15h 20h 22h 23h FFh	1080/59.94i 1080/50i 1080/59.94p 1080/50p 1080/29.97p 1080/25p 1080/60p 1080/24p 1080/23.98p DISABLE(query only)																		
D.I.S.S Mode	OSL:B5 OSL:B5:[Data]	0 1	Off On																		
Auto Tracking Mode	OSL:B6 OSL:B6:[Data]	0 1	Off On																		
Angle	OSL:B7 OSL:B7:[Data]	0 1 2	Off Full Body Upper Body																		
Target Marker	OSL:B8 OSL:B8:[Data]	0 1	Off On																		
Tracking Status	OSL:BB OSL:BB:[Data]	0 1	Not Tracking Tracking Lost																		
Tracking Start/Stop	OSL:BC OSL:BC:[Data]	0 1	Stop Start																		
Tracking Auto Start	OSL:BD OSL:BD:[Data]	0 1	Disable Enable																		
Mask Top	OSL:BE OSL:BE:[Data]	000h - 438h	0 (Mask L) - 1080																		
Mask Bottom	OSL:BF OSL:BF:[Data]	000h - 438h	0 (Mask L) - 1080																		
Mask Left	OSL:CO OSL:CO:[Data]	000h - 780h	0 (Mask L) - 1920																		

ITEM	Command Control / Response / Confirmation	Data	Data Contents Control and Response to control	Data Contents														
				UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60
Mask Right	OSL:C1 OSL:C1:[Data]	000h - 780h	0 (Mask&L) - 1920	---	○	---	---	---	---	---	---	---	---	---	---	---	---	---
Home Position	OSL:C2 OSL:C2:[Data]	000h - 780h	Preset1 Preset2 Preset3 None Wide	---	○	---	---	---	---	---	---	---	---	---	---	---	---	---
Focus Guide	OSL:C3 OSL:C3:[Data]	0 1 [Data1]	Off On [Data1] H POS.	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Focus Guide Position	OSL:C4 OSL:C4:[Data][Data2]	00h - 64h [Data2] 00h - 64h	0% - 100% [Data2] V POS. 0% - 100%	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Focus Guide Status (Web UI)	OSL:C5 OSL:C5:[Data]	80h - 85h FEh FFh	0 (IN FOCUS) - 5 (FAR) FOCUS GUIDE OFF NOT MEASURABLE	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Focus Guide Status (Detail)	OSL:C6 OSL:C6:[Data]	62h - 80h - 9Eh FEh FFh	-30 (NEAR) - 0 (IN FOCUS) - 30 (FAR) FOCUS GUIDE OFF NOT MEASURABLE	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SYNC STATUS (GEN-LOCK / PTP)	OSL:C7 OSL:C7:[Data]	0 1	NO SYNC SYNC	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ST2110 JPEG XS TX VIDEO SELECT	OSL:C8 OSL:C8:[Data]	0 1	MAIN CROP	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ST2110 MAIN VIDEO JPEG XS TX FORMAT	OSL:C9 OSL:C9:[Data]	10h 11h 14h 15h 17h 18h 19h 1Ah 1Bh 1Fh 20h 21h 22h 23h FFh	1080/59.94p 1080/50p 1080/29.97p 1080/25p 2160/29.97p 2160/25p 2160/59.94p 2160/50p 2160/23.98p 2160/60p 1080/60p 2160/24p 1080/24p 1080/23.98p DISABLE(query only)	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ST2110 CROP VIDEO JPEG XS TX FORMAT	OSL:CA OSL:CA:[Data]	10h 11h 14h 15h 20h 22h 23h FFh	1080/59.94p 1080/50p 1080/29.97p 1080/25p 1080/60p 1080/24p 1080/23.98p DISABLE(query only)	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ST2110 RET VIDEO JPEG XS RX FORMAT	OSL:CB OSL:CB:[Data]	04h 05h 10h 11h 14h 15h 20h 22h 23h FFh	1080/59.94i 1080/50i 1080/59.94p 1080/50p 1080/29.97p 1080/25p 1080/60p 1080/24p 1080/23.98p DISABLE(query only)	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---
AUTO IRIS WINDOW POSITION	OSL:CD OSL:CD:[Data1]:[Data2]:[Data3]:[Data4]	0 1 [Data1] 00h - 08h [Data2] 00h - 04h [Data3] 00h - 08h [Data4] 00h - 04h	Off On [Data1]UPPER LEFT (H) 0 - 8 [Data2]UPPER LEFT (V) 0 - 4 [Data3]BOTTOM RIGHT (H) 0 - 8 [Data4]BOTTOM RIGHT (V) 0 - 4	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---
PRESET PTZ SYNC MODE	OSL:CE OSL:CE:[Data1]	0 1	Off On	○	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC Fine	OSN:[Data] OSN	000h 001h 002h - 200h - 3FFh	-511 -511 -511 - 0 - +511	---	---	---	---	---	---	---	---	---	---	---	---	---	○	○
Software Version (System Version)	OSV OSV:[Data]		Software Version	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○



ITEM	Command / Response / Confirmation	Data	Data Contents Control and Response to control	UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UB300	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
T Pedestal	OTD: [Data] OTD	00h - 1Eh - 3Ch	-10 - 0 - +10  HR140, HE130, HE120 -150 - 0 - 150																	
		00h - 1Eh - 3Ch	-150 - 0 - +150  UE70series, HE75series, HE70series, HE60, HE50 -10 - 0 - 10																	
T Pedestal	OTP: [Data] OTP	000h - 096h - 12Ch	-150 - 0 - +150																	
Serial Com. Protocol	OVP:02: [Data] OVP:02	0 1	Panasonic Standard																	
Serial Connector Select	OVP:03: [Data] OVP:03	0 1	RS422 RS232C																	
Serial Baud Rate	OVP:04: [Data] OVP:04	0 1 2	9600bps 38400bps 115200bps																	
Serial Camera Address	OVP:05: [Data] OVP:05	0 1 2 3 4 5 6 7	Auto 1 2 3 4 5 6 7																	
AWC/AWB SET	OVS		AWC/AWB Start																	
R-Tally Control	TLR: [Data] QLR OLR: [Data]	0 1	Off On																	
G-Tally Control	TLG: [Data] QLG OLG: [Data]	0 1	Off On																	
Y-Tally Control	TLY: [Data] QLY OLY: [Data]	0 1	Off On																	
Scene File	XSF: [Data] OSF OSF: [Data]	※	※	※	※	※	※	※	※	※	※	※	※	※	※	※	※	※	※	※

PT command

ITEM	Command Control Confirmation Response	Data	Data Contents															
				UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50
P/T Absolute Position Control	#APC[Data1][Data2] #APC aPC[Data1][Data2]	[Data1] 0000h - 8000h - FFFFh [Data2] 0000h - 8000h - FFFFh	[Data1]Pan Position CCW Limit - Center - CW Limit [Data2]Tilt Position UP Limit - Center - DOWN Limit	supports only Pan 2D09(CCW Limit) -D2F5(CW Limit) Tilt 1C71(UP Limit) -8E38(DOWN Limit)	supports only Pan 2D09(CCW Limit) -D2F5(CW Limit) Tilt 1C71(UP Limit) -8E38(DOWN Limit)	supports only Pan 2F69(CCW Limit) -D097(CW Limit) Tilt 5555(UP Limit) -8E38(DOWN Limit)	supports only Pan 2D09(CCW Limit) -D2F5(CW Limit) Tilt 1C71(UP Limit) -8E38(DOWN Limit)	supports only Pan 2D09(CCW Limit) -D2F5(CW Limit) Tilt 1C71(UP Limit) -8E38(DOWN Limit)	supports only Pan 8000(Center) Tilt 8000(Center)	supports only Pan 2D09(CCW Limit) -D2F5(CW Limit) Tilt 1C71(UP Limit) -8E38(DOWN Limit)	supports only Pan 2D09(CCW Limit) -D2F5(CW Limit) Tilt 1C71(UP Limit) -8E38(DOWN Limit)	supports only Pan 2D09(CCW Limit) -D2F5(CW Limit) Tilt 5555(UP Limit) -8E38(DOWN Limit)	supports only Pan 2D09(CCW Limit) -D2F5(CW Limit) Tilt 5555(UP Limit) -8E38(DOWN Limit)	supports only Pan 2D09(CCW Limit) -D2F5(CW Limit) Tilt 1C71(UP Limit) -8E38(DOWN Limit)	supports only Pan 2D09(CCW Limit) -D2F5(CW Limit) Tilt 1C71(UP Limit) -8E38(DOWN Limit)	supports only Pan 2D09(CCW Limit) -D2F5(CW Limit) Tilt 5555(UP Limit) -8E38(DOWN Limit)	supports only Pan 2D09(CCW Limit) -D2F5(CW Limit) Tilt 5555(UP Limit) -8E38(DOWN Limit)	
P/T Absolute Position Control with Speed	#APS[Data1][Data2][Data3][Data4] aPS[Data1][Data2][Data3][Data4]	[Data1] 0000h - 8000h - FFFFh [Data2] 0000h - 8000h - FFFFh [Data3] 00h - 1Dh [Data4] 0 1 2	[Data1]Pan Position CCW Limit - Center - CW Limit [Data2]Tilt Position UP Limit - Center - DOWN Limit [Data3]Preset Speed 1 - 30 [Data4]Preset Speed Table Slow Fast Fast	○	○	---	○	○	---	○	○	○	○	○	○	---	---	---
Focus Position Control	#AXF[Data] #AXF axf[Data]	555h - FFFh	Near - Far	○	○	○	○	○	○	supports only 555	○	○	○	○	○	○	○	○
Iris Control	#AXI[Data] axi[Data]	555h - FFFh	Iris Close - Iris Open	○	○	○	○	○	○	supports only 555	○	○	○	○	○	○	○	○
Zoom Position Control	#AXZ[Data] #AXZ axz[Data]	555h - FFFh	Wide - Tele	○	○	○	○	○	○	supports only 555	○	○	○	○	○	○	○	○
Delete Preset Memory	#C[Data] s[Data]	00 - 99	Preset001 - Preset100	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Focus Mode	#D1[Data] #D1 d1[Data]	0 1	Manual Auto	○	○	○	○	○	○	---	○	○	○	○	○	○	○	○
Iris Mode	#D3[Data] #D3 d3[Data]	0 1	Manual Auto	○	○	○	○	○	○	---	○	○	○	○	○	○	○	○
Day/Night	#D6[Data] #D6 d6[Data]	0 1	Day Night	○	○ (UE80) --- (UE50, UE40)	---	○	○	○	---	○	○	○	○	○	---	○	○
Defroster Control	#D7[Data] #D7 d7[Data]	0 1	Off(Auto) On	---	---	---	○	---	---	---	0 : Auto 1 : On	---	---	---	---	---	---	
Wiper Control	#D8[Data] #D8 d8[Data]	0 1	Off On	---	---	---	○	---	---	---	0 : Off 1 : Fast	---	---	---	---	---	---	
Heater/Fan Control	#D9[Data] #D9 d9[Data]	0 1	Off(Auto) On	---	---	---	○	---	---	---	(Heater) 0 : Auto 1 : On	---	---	---	---	---	---	
R-Tally Control	#DA[Data] #DA dA[Data]	0 1	Off On	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Defroster Status	#DS #DS dS[Data]	0 1	Off On	---	---	---	○	---	---	---	○	---	---	---	---	---	---	
Focus Speed Control	#F[Data] #F fS[Data]	01 - 49 50 51 - 99	Near Max. Speed - Near Min. Speed Stop Far Min. Speed - Far Max. Speed	○	○	○	○	○	○	---	○	○	○	○	○	○	○	○
Fan	#FAN[Data] #FAN fAN[Data]	0 1 2 3	Auto High Mid Low	○	○ (UE80) --- (UE50, UE40)	---	Supports only 0(Auto) 1(On)	○	---	○	Supports only 0(Auto) 1(On)	---	---	---	---	---	---	
Fan2	#FA2[Data] #FA2 fA2[Data]	0 1 2 3	Auto High Mid Low	○	---	---	Supports only 0(Auto) 1(On)	---	---	○	---	---	---	---	---	---	---	
Flip Detect Angle	#FDA[Data] #FDA fDA[Data]	3Ch - 78h	60deg - 120deg	○	---	---	○	○	---	○	---	---	---	○	○	---	---	
Fan Status1	#FS1 #FS1 fS1[Data]	0 1 2	Off On Error	○	○ (UE80) --- (UE50, UE40)	---	○	○	---	---	Supports only 0(Off), 1(On)	---	---	---	---	---	---	
Fan Status2	#FS2 #FS2 fS2[Data]	0 1 2	Off On Error	○	---	---	○	---	---	○	Supports only 0(Off), 1(On)	---	---	---	---	---	---	

ITEM	Command Control Confirmation Response	Data	Data Contents															
				UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50
Request Focus Position	#GF gf[Data]	555h - FFFh - "---"	Near - Far - @Power Off	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Request Iris Position	#GI gi[Data1][Data2]	[Data1] 555h - FFFh - "---" [Data2] 0 1	[Data1] Close - Open - @Power Off [Data2] Manual Iris Auto Iris	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Request Zoom Position	#GZ gz[Data]	555h - FFFh - "---"	Wide - Tele - @Power Off	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
P/T Absolute Position Control with Speed and acceleration (PT Independent Control)	#HAC[Data1][Data2][Data3][Data4][Data5][Data6][Data7][Data8] hAC[Data1][Data2][Data3][Data4][Data5][Data6][Data7][Data8]	[Data1] 0000h - FFFF [Data2] 0000h - FFFFh [Data3] 00h 01h - FFh [Data4] 00h 01h - FFh [Data5] 01h - FFh [Data6] 01h - FFh [Data7] 01h - FFh [Data8] 01h - FFh	[Data1] Pan Position CCW Limit - CW Limit [Data2] Tilt Position UP Limit - DOWN Limit [Data3] Pan Speed 0(stop) 1(minimum speed) - 255(max speed) [Data4] Tilt Speed 0(stop) 1(minimum speed) - 255(max speed) [Data5]Pan Rise Acceleration 1(minimum acceleration) - 255(max acceleration) [Data6]Tilt Rise Acceleration 1(minimum acceleration) - 255(max acceleration) [Data7]Pan Fall Acceleration 1(minimum acceleration) - 255(max acceleration) [Data8]Tilt Fall Acceleration 1(minimum acceleration) - 255(max acceleration)	---	○	---	---	---	---	---	---	---	---	---	---	---	---	---
Pan Speed Control (High precision)	#HP[Data] hP[Data]	7F00h - 8000h - 8100h	-256 : Left Max. Speed - 0 : Stop - +256 : Right Max. Speed	○	○	---	○	○	---	○	---	---	---	---	---	---	---	---
P/T Speed Control (High precision)	#HPT[Data1][Data2] hPT[Data1][Data2]	[Data1] 7F00h - 8000h - 8100h [Data2] 7F00h - 8000h - 8100h	[Data1] -256 : Left Max. Speed - 0 : Stop - +256 : Right Max. Speed [Data2] -256 : Down Max. Speed - 0 : Stop - +256 : Up Max. Speed	○	○	---	○	○	---	○	---	---	---	---	---	---	---	---
Heater Status	#HS hS[Data]	0 1	Off On	---	---	---	○	---	---	---	○	---	---	---	---	---	---	---
Tilt Speed Control (High precision)	#HT[Data] hT[Data]	7F00h - 8000h - 8100h	-256 : Down Max. Speed - 0 : Stop - +256 : Up Max. Speed	○	○	---	○	○	---	○	---	---	---	---	---	---	---	---
Iris Control	#I[Data] iC[Data]	01 - 99	Iris Close - Iris Open	○	○	○	○	○	---	○	○	○	○	○	○	○	○	○
Install Positon	#INS[Data] iNS[Data]	0 1	Desktop Hanging	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Limitation Control (toggle)	#L[Data] l[Data]	Controller -> P/T 1 2 3 4 P/T -> Controller 0	Tilt Up Tilt Down Pan Left Pan Right  Release Set	○	○	---	○	○	---	○	○	○	○	○	○	○	○	○

ITEM	Command Control Confirmation Response	Data	Data Contents															
				UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50
Limitation Control	#LC[Data1][Data2] #LC[Data1] IC[Data1][Data2]	[Data1] 1 2 3 4	[Data1] Tilt Up Tilt Down Pan Left Pan Right															
		[Data2] 0 1	[Data2] Release Set															
Status Lamp	#LMP[Data] #LMP IMP[Data]	0 1	Disable Enable															
Lens Position Information Control	#LPC[Data] #LPC IPC[Data]	0 1	Off On															
Lens Position Information	#LPI IP[Data1][Data2][Data3]	[Data1] 555h - FFFh [Data2] 555h - FFFh [Data3] 555h - FFFh	[Data1]Zoom Position Wide - Tele [Data2]Focus Position Near - Far [Data3]Iris Position Close - Open															
Save Preset Memory	#M[Data] s[Data]	00 - 99	Preset001 - Preset100															
Power On / Standby	#O p[Data]	0 1 3	Power Off Power On Starting(※)															
Pan Speed Control	#P[Data] pS[Data]	01 - 50 - 99	Left Max. Speed - Stop - Right Max. Speed															
Preset Entry Confirmation	#PE[Data1] pE[Data1]	[Data1] 00h 01h 02h - [Data2] 000000000h - FFFFFFFFh - (bit0) 0 1 (bit1) 0 1 - (39bit) 0 1	[Data1] Preset 001~040 Preset 041~080 Preset 081~100 - [Data2] - Preset No.(Data1*40 + 1) No Entry Entry Preset No.(Data1*40 + 2) No Entry Entry - Preset No.(Data1*40 + 40) No Entry Entry															
Freeze During Preset	#PRF[Data] #PRF pRF[Data]	0 1	Off On															
Preset Speed Table	#PST[Data] #PST pST[Data]	0 1 2	Slow Mid Fast	supports only 0(Slow) 2(Fast)	supports only 0(Slow) 2(Fast)	supports only 0(Slow) 2(Fast)	supports only 0(Slow) 2(Fast)	supports only 0(Slow) 2(Fast)	---	supports only 0(Slow) 2(Fast)	supports only 0(Slow) 2(Fast)	supports only 0(Slow) 2(Fast)	supports only 0(Slow) 2(Fast)	supports only 0(Slow) 2(Fast)	---	---	---	---
Get Pan/Tilt/Zoom/Focus/Iris	#PTD pTD[Data1][Data2][Data3][Data4][Data5]	[Data1] 0000h - FFFh [Data2] 0000h - FFFh [Data3] 000h - 3E7h [Data4] 00h - 63h [Data5] 00h - FEh FFh	[Data1] (Pan) 0000h - FFFh [Data2] (Tilt) 0000h - FFFh [Data3] (Zoom) 0 - 999 [Data4] (Focus) 0 - 99 [Data5] (Iris) F0.0 - F25.4 CLOSE															

ITEM	Command Control Confirmation Response	Data	Data Contents																
				UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
Get Gain/ColorTemp/ Shutter/ND	#PTG pTG[Data1][Data2][Data3][D ata4][Data5][Data6]	[Data1] 02h - 11h - 1Ah - 32h - 80h [Data2] 00000h - 3A98h [Data3] 0h 1h 2h 3h [Data4] 0001h - 2710 h [Data5] 00000h - 186A0h [Data6] 0 1 2 3	[Data1] (Gain) -6dB - 9dB - 18dB - 42dB - AGC On [Data2] OK - 15000K [Data3] (Shutter Mode) Off Step Syncro ELC [Data4] (Shutter Step) 1/1 - 1/10000 [Data5] (Shutter Synchro) 0.0 [Hz] - 10000.0[Hz] [Data6] (ND) Throgh 1/4 ND 1/16 ND 1/64 ND	[Data1]Gain supports only 02h(-6dB) - 14h(12dB)	○			○											
P/T Speed Control	#PTS[Data1][Data2] pTS[Data1][Data2]	[Data1] 01 - 50 - 99 [Data2] 01 - 50 - 99	[Data1] Left Max. Speed - Stop - Right Max. Speed [Data2] Down Max. Speed - Stop - UP Max. Speed		○	○		○				○	○	○	○	○	○	○	○
Get Pan/Tilt/Zoom/Focus/ Iris	#PTV pTV[Data1][Data2][Data3][D ata4][Data5]	[Data1] 0000h - 8000h - FFFFh [Data2] 0000h - 8000h - FFFFh [Data3] 555h - FFFh [Data4] 555h - FFFh [Data5] 555h - FFFh	[Data1] (Pan) ccwLimit - Center - cwLimit [Data2] (Tilt) UpLimit - Center - DownLimit [Data3] (Zoom) Wide - Tele [Data4] (Focus) Near - Far [Data5] (Iris) Close - Open		○	○		○											
Preset completion notification	q[Data]	00 - 99	Preset001 - Preset100		○	○		○				○	○	○	○	○	○	○	○
Software Version	#QSV[Data1] qSV[Data1][Data2][Data3] [Data4][Data5][data6]	※	※	---	※	---	※	※	---	※	※	※	※	※	※	※	※	※	※
Recall Preset Memory	#R[Data] s[Data]	00 - 99	Preset001 - Preset100		○	○		○				○	○	○	○	○	○	○	○
Latest Error Information	#RER rER[Data]	※	※	※	※	---	※	※	---	※	※	※	※	※	※	※	※	※	※
IR ID / Wireless ID	#RID[Data] rID[Data]	0 1 2 3	CAM1 CAM2 CAM3 CAM4		○	--- (UE80) ○ (UE50, UE40)						○	○	○					
P/T Relative Position Control	#RPC[Data1][Data2] rPC[Data1][Data2]	[Data1] 0000h - 8000h - FFFFh [Data2] 0000h - 8000h - FFFFh	[Data1]Pan Position CCW Limit - Center - CW Limit [Data2]Tilt Position UP Limit - Center - DOWN Limit		○	○		○				○	○	○	○	○	○	○	○

ITEM	Command Control Confirmation Response	Data	Data Contents																
				UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UE70series	HE75series	HE70series	HE130	HE120	HE60	HE50	
P/T Relative Position Control with Speed	#RPS[Data1][Data2][Data3][Data4] rPS[Data1][Data2][Data3][Data4]	[Data1] 0000h - 8000h - FFFFh [Data2] 0000h - 8000h - FFFFh [Data3] 00h - 1Dh [Data4] 0 1 2	[Data1]Pan Position CCW Limit - Center - CW Limit [Data2]Tilt Position UP Limit - Center - DOWN Limit [Data3]Preset Speed 1 - 30 [Data4]Preset Speed Table Slow Mid Fast	○	○	---	○	○	---	○	○	○	○	○	○	○	○	○	○
Resolution Control	#RZL[Data] rZL[Data]	0 1 2 3	640x360 320x180 1280x720 1920x1080	○	○	---	○	○	---	○	○	○	○	○	○	○	○	○	○
Request Latest Recall Preset No.	#S s[Data]	00 - 99	Preset 1 - Preset 100	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Smart Picture Flip	#SPF[Data] sPF[Data]	0 1	Off Auto	○	---	---	○	○	---	○	○	○	○	○	○	○	○	○	○
Speed With Zoom Position	#SWZ[Data] sWZ[Data]	0 1	Off On	○	○	○	○	○	---	○	○	○	○	○	○	○	○	○	○
Tilt Speed Control	#T[Data] tS[Data]	01 - 50 - 99	Down Max. Speed - Stop - UP Max. Speed	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Tally Information	#TAA tAA[Data1][Data2][Data3][Data4][Data5][Data6][Data7][Data8][Data9]	[Data1] 0 1 [Data2] 0 1 [Data3] 0 1 [Data4] 0 1 [Data5] 0 1 [Data6] 0 1 [Data7] 0 1 [Data8] 0 1 [Data9] 0 1	[Data1] Red Tally Off Red Tally On [Data2] Wired Red Tally In Off Wired Red Tally In On [Data3] Command Red Tally In Off Command Red Tally In On [Data4] Green Tally Off Green Tally On [Data5] Wired Green Tally In Off Wired Green Tally In On [Data6] Command Green Tally In Off Command Green Tally In On [Data7] Yellow Tally Off Yellow Tally On [Data8] Wired Yellow Tally In Off Wired Yellow Tally In On [Data9] Command Yellow Tally In Off Command Yellow Tally In On	[Data5],[Data8];unused	[Data5],[Data7],[Data8],[Data9];unused	[Data2],[Data4],[Data5],[Data6],[Data7],[Data8],[Data9];unused	[Data5],[Data7],[Data8],[Data9];unused	[Data5],[Data7],[Data8],[Data9];unused	[Data2],[Data4],[Data5],[Data6],[Data7],[Data8],[Data9];unused	[Data5],[Data7],[Data8],[Data9];unused	---	---	---	---	---	---	---	---	---
Tally Enable	#TAE[Data] tAE[Data]	0 1	Disable Enable	○	○	○	supports only 1(Enable)	○	○	○	○	○	○	○	○	○	○	○	○

ITEM	Command Control Confirmation Response	Data	Data Contents														
				UE160	UE80/UE50/UE40	UE20/HE20	UR100	UE100	UE4	UE150/HE145	HR140	UE70series	HE75series	HE70series	HE130	HE120	HE60
Preset Speed	#UPVS[Data] #UPVS uPVS[Data]	[Preset Speed Unit : 0 (SpeedTable)]	[Preset Speed Unit : 0 (SpeedTable)]	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		275h 300h 325h 350h 375h 400h 425h 450h 475h 500h 525h 550h 575h 600h 625h 650h 675h 700h 725h 750h 775h 800h 825h 850h 875h 900h 925h 950h 975h 999h	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		[Preset Speed Unit : 1 (Time)]	[Preset Speed Unit : 1 (Time)]														
		001h - 063h	01 - 99														
Washer	#WAS[Data] #WAS wAS[Data]	0 1	Off On	---	---	---	○	---	---	---	○	---	---	---	---	---	---
Wiper	#WIP[Data] #WIP wIP[Data]	0 1 2	Off Fast Slow	---	---	---	○	---	---	---	○	---	---	---	---	---	---
Wireless Control	#WLC[Data] #WLC wLC[Data]	0 1	Disable Enable	○	○	○	---	○	○	○	---	○	○	○	○	○	○
Washer P/T Position Reset	#WPR wPR	---	---	---	---	---	○	---	---	---	○	---	---	---	---	---	---
Washer P/T Position	#WPT wPT	---	---	---	---	---	○	---	---	---	○	---	---	---	---	---	---
Zoom Speed Control	#Z[Data] zS[Data]	01 -	Wide Max. Speed -	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		49 50 51 - 99	Wide Min. Speed Stop Tele Min. Speed - Tele Max. Speed														

## ※Details

### ▼OSH

Parameters vary depending on model and System Format

HR140, HE130		UE70series, HE42series, HE40series, HE60, HE50	HE120
(59.94p/59.94i)	F(1/30)	0(OFF),	0(OFF),
0(OFF)	(23.98p)	3(1/100 NTSC)	3(1/100 NTSC)
3(1/100)	0(OFF)	(1/120 PAL),	(1/120 PAL),
4(1/120)	2(1/60)	5(1/250)	5(1/250)
5(1/250)	4(1/120)	-	-
-	5(1/250)	B(Synchro-Scan)	C(ELC)
C(ELC)	-		
	D(1/24)		
(29.97p)	(50p/50i)		
0(OFF)	0(OFF)		
2(1/60)	2(1/60)		
4(1/120)	3(1/120)		
5(1/250)	5(1/250)		
-	-		
C(ELC)	C(ELC)		
	(25p)		
	0(OFF)		
	2(1/60)		
	3(1/120)		
	5(1/250)		
	-		
	C(ELC)		
	E(1/25)		



▼OSA:87

Parameters vary depending on model

UE160	UE80, UR100, UE100, UE150	UE50	UE40	HE145
[59.94Hz] 01h(720/59.94p) 10h(1080/59.94p) 14h(1080/29.97p) 17h(2160/29.97p) 19h(2160/59.94p) 26h(1080/119.88p)	[59.94Hz] 01h(720/59.94p) 04h(1080/59.94i) 07h(1080/29.97psF) 10h(1080/59.94p) 14h(1080/29.97p) 16h(1080/23.98p (over 59.94i/p) ) 17h(2160/29.97p) 19h(2160/59.94p)	[59.94Hz] 01h(720/59.94p) 04h(1080/59.94i) 07h(1080/29.97psF) 10h(1080/59.94p) 14h(1080/29.97p) 16h(1080/23.98p (over 59.94i/p) ) 17h(2160/29.97p)	[59.94Hz] 01h(720/59.94p) 04h(1080/59.94i) 10h(1080/59.94p) 14h(1080/29.97p) 17h(2160/29.97p)	[59.94Hz] 01h(720/59.94p) 04h(1080/59.94i) 07h(1080/29.97psF) 10h(1080/59.94p) 14h(1080/29.97p) 16h(1080/23.98p (over 59.94i/p) )
[50Hz] 02h(720/50p) 11h(1080/50p) 15h(1080/25p) 18h(2160/25p) 1Ah(2160/50p) 27h(1080/100p)	[50Hz] 02h(720/50p) 05h(1080/50i) 08h(1080/25psF) 11h(1080/50p) 15h(1080/25p) 18h(2160/25p) 1Ah(2160/50p)	[50Hz] 02h(720/50p) 05h(1080/50i) 08h(1080/25psF) 11h(1080/50p) 15h(1080/25p) 18h(2160/25p)	[50Hz] 02h(720/50p) 05h(1080/50i) 11h(1080/50p) 15h(1080/25p) 18h(2160/25p)	[50Hz] 02h(720/50p) 05h(1080/50i) 08h(1080/25psF) 11h(1080/50p) 15h(1080/25p)
[24Hz] 21h(2160/24p) 22h(1080/24p)	[24Hz] 11h(1080/50p) 15h(1080/25p) 18h(2160/25p) 1Ah(2160/50p)	[24Hz] 11h(1080/50p) 15h(1080/25p) 18h(2160/25p)	[24Hz] 21h(2160/24p) 22h(1080/24p)	[24Hz] 22h(1080/24p)
[23.98Hz] 1Bh(2160/23.98p) 23h(1080/23.98p)	[24Hz] 21h(2160/24p) 22h(1080/24p)	[24Hz] 21h(2160/24p) 22h(1080/24p)	[23.98Hz] 1Bh(2160/23.98p) 23h(1080/23.98p)	[23.98Hz] 0Ah(1080/23.98psF) 23h(1080/23.98p)
[60.00Hz] 20h(1080/60p)	[23.98Hz] 0Ah(1080/23.98psF) 1Bh(2160/23.98p) 23h(1080/23.98p)	[23.98Hz] 0Ah(1080/23.98psF) 1Bh(2160/23.98p) 23h(1080/23.98p)		

▼ OSA:87 (Continued)

Parameters vary depending on model

UE20	HE20	UE4	HR140	UB300	UE70series	HE40Series
[59.94Hz] 1h (720/59.94p) 4h (1080/59.94i) 10h (1080/59.94p) 14h (1080/29.97p) 17h (2160/29.97p)	[59.94Hz] 1h (720/59.94p) 4h (1080/59.94i) 10h (1080/59.94p) 14h (1080/29.97p)	[59.94Hz] 1h (720/59.94p) 10h (1080/59.94p) 14h (1080/29.97p) 17h (2160/29.97p)	[59.94Hz] 1h (720/59.94p) 4h (1080/59.94i) 7h (1080/29.97psF) Ah (1080/23.98psF) 10h (1080/59.95p) 14h (1080/29.97p) 16h (1080/23.98p)	[59.94Hz] 00h (720/60p) 01h (720/59.94p) 04h (1080/59.94i) 07h (1080/29.97psF) 0Ah (1080/23.98psF) 10h (1080/59.94p) 16h (1080/23.98p) 17h (2160/29.97p) 19h (2160/59.94p) 1Bh (2160/23.98p) 1Ch (2160/29.97psF) 1Eh (2160/23.98psF) 20h (1080/60p) 44h (1080/59.94i CROP) 50h (1080/59.94p CROP)	[59.94Hz] 1h (720/59.94p) 4h (1080/59.94i) 7h (1080/29.97psF) 10h (1080/59.94p) 14h (1080/29.97p) 17h (2160/29.97p) 80h (Auto)	=== HDMI Model === [59.94Hz] 1h (720/59.94p) 4h (1080/59.94i) 7h (1080/29.97psF) 10h (1080/59.95p) 14h (1080/29.97p) 80h (Auto)
[50Hz] 2h (720/50p) 5h (1080/50i) 11h (1808/50p) 15h (1080/25p) 18h (2160/25p)	[50Hz] 2h (720/50p) 5h (1080/50i) 11h (1808/50p) 15h (1080/25p)	[50Hz] 2h (720/50p) 11h (1808/50p) 15h (1080/25p) 18h (2160/25p)	[50Hz] 2h (720/50p) 5h (1080/50i) 8h (1080/25psF) 11h (1080/50p) 15h (1080/25p)	[50Hz] 1Bh (2160/23.98p) 1Ch (2160/29.97psF) 1Eh (2160/23.98psF) 20h (1080/60p) 44h (1080/59.94i CROP) 50h (1080/59.94p CROP)	[50Hz] 2h (720/50p) 5h (1080/50i) 8h (1080/25psF) 11h (1080/50p) 15h (1080/25p) 18h (2160/25p) 80h (Auto)	[50Hz] 2h (720/50p) 5h (1080/50i) 8h (1080/25psF) 11h (1080/50p) 15h (1080/25p) 80h (Auto)
[60Hz] 0h (720/60p) 3h (1080/60i) 20h (1080/60p) 24h (2160/30p) 25h (1080/30p)	[60Hz] 0h (720/60p) 3h (1080/60i) 20h (1080/60p) 25h (1080/30p)	[60Hz] 0h (720/60p) 20h (1080/60p) 24h (2160/30p) 25h (1080/30p)	[60Hz] 11h (1080/50p) 15h (1080/25p)	[50Hz] 02h (720/50p) 05h (1080/50i) 08h (1080/25psF) 11h (1080/50p) 18h (2160/25p) 1Ah (2160/50p) 1Dh (2160/25psF) 45h (1080/50i CROP) 51h (1080/50p CROP)	[50Hz] 2h (720/50p) 5h (1080/50i) 8h (1080/25psF) 11h (1080/50p) 15h (1080/25p) 80h (Auto)	=== SDI Model === [59.94Hz] 1h (720/59.94p) 4h (1080/59.94i) 7h (1080/29.97psF) 14h (1080/29.97p)
					HE42series	
					[59.94Hz] 1h (720/59.94p) 4h (1080/59.94i) 7h (1080/29.97psF) 10h (1080/59.94p) 14h (1080/29.97p) 80h (Auto)	[50Hz] 2h (720/50p) 5h (1080/50i) 8h (1080/25psF) 15h (1080/25p)

▼OSA:87(Continued)

Parameters vary depending on model

HE120	HE60	HE50
<p>[59.94Hz]</p> <p>1h(720/59.94p) 4h(1080/59.94i) 8h(480/59.94i) 10h(1080/59.94p) 12h(480/59.94p)</p> <p>[50Hz]</p> <p>2h(720/50p) 5h(1080/50i) Dh(576/50i) 11h(1808/50p) 13h(576/50p)</p>	<p>[H Model/59.94Hz]</p> <p>1h(720/59.94p) 4h(1080/59.94i) 8h(480/59.94i) 10h(1080/59.94p) 12h(480/59.94p)</p> <p>[H Model/50Hz]</p> <p>2h(720/50p) 5h(1080/50i) Dh(576/50i) 11h(1808/50p) 8h(1080/25psf) 13h(576/50p)</p> <p>[S Model/59.94Hz]</p> <p>1h(720/59.94p) 4h(1080/59.94i) 8h(480/59.94i)</p> <p>[S Model/50Hz]</p> <p>2h(720/50p) 5h(1080/50i) Dh(576/50i)</p>	<p>[N Model]</p> <p>1h(720/59.94p) 4h(1080/59.94i) 8h(480/59.94i)</p> <p>[E, MC Model]</p> <p>2h(720/50p) 5h(1080/50i) Dh(576/50i)</p> <p>[H Model/59.94Hz]</p> <p>1h(720/59.94p) 4h(1080/59.94i) 8h(480/59.94i) 10h(1080/59.94p) 7h(1080/29.97psF)</p> <p>[H Model/50Hz]</p> <p>2h(720/50p) 5h(1080/50i) Dh(576/50i) 11h(1808/50p) 8h(1080/25psf)</p> <p>[S Model/59.94Hz]</p> <p>1h(720/59.94p) 4h(1080/59.94i) 8h(480/59.94i) 7h(1080/29.97psF)</p> <p>[S Model/50Hz]</p> <p>2h(720/50p) 5h(1080/50i) Dh(576/50i) 8h(1080/25psf)</p>
HE130		
<p>[59.94Hz]</p> <p>1h(720/59.94p) 4h(1080/59.94i) 7h(1080/29.97psF) Ah(1080/23.98psF) 10h(1080/59.95p) 12h(480/59.94p) 14h(1080/29.97p) 16h(1080/23.98p)</p> <p>[50Hz]</p> <p>2h(720/50p) 5h(1080/50i) 8h(1080/25psF) 11h(1080/50p) 13h(576/50p) 15h(1080/25p)</p>		

▼OSD:B1

Parameters vary depending on model

HR140, HE130		UE70series, HE42series, HE40series	
[Data]	Data Contents	[Data]	Data Contents
000h - 078h	2000K,2010K,2020K,2040K,2050K,2070K,2080K,2090K,2110K,2120K,2140K,2150K,2170K, 2180K,2200K,2210K,2230K,2240K,2260K,2280K,2300K,2310K,2330K,2340K,2360K,2380K, 2400K,2420K,2440K,2460K,2480K,2500K,2520K,2540K,2560K,2600K,2620K,2640K,2680K, 2700K,2720K,2740K,2780K,2800K,2820K,2850K,2870K,2920K,2950K,2970K,3000K,3020K, 3070K,3100K,3120K,3150K,3200K,3250K,3270K,3330K,3360K,3420K,3450K,3510K,3570K, 3600K,3660K,3720K,3780K,3840K,3870K,3930K,3990K,4050K,4110K,4170K,4240K,4320K, 4360K,4440K,4520K,4600K,4680K,4760K,4840K,4920K,5000K,5100K,5200K,5300K,5400K, 5500K,5600K,5750K,5850K,6000K,6150K,6300K,6450K,6650K,6800K,7000K,7150K,7400K, 7600K,7800K,8100K,8300K,8600K,8900K,9200K,9600K,10000K,10500K,11000K,11500K, 12000K,12500K,13000K,14000K,15000K	000h 001h - 04A 04B	2400K 2500K - 9800K 9900K (100K step)

▼OSG:5D

Parameters vary depending on System Frequency

UB300			
59.94p/59.94i	50p/50i	29.97p/23.98p	25p
04h(1/100)	02h(1/60)	00h(1/48)	00h(1/48)
05h(1/120)	04h(1/100)	01h(1/50)	01h(1/50)
06h(1/125)	06h(1/125)	02h(1/60)	02h(1/60)
07h(1/250)	07h(1/250)	03h(1/96)	03h(1/96)
08h(1/500)	08h(1/500)	04h(1/100)	04h(1/100)
09h(1/1000)	09h(1/1000)	05h(1/120)	06h(1/125)
0Ah(1/1500)	0Ah(1/1500)	06h(1/125)	07h(1/250)
0Bh(1/2000)	0Bh(1/2000)	07h(1/250)	08h(1/500)
0Ch(1/180.0deg)	0Ch(1/180.0deg)	08h(1/500)	09h(1/1000)
0Dh(1/172.8deg)	0Dh(1/172.8deg)	09h(1/1000)	0Ah(1/1500)
0Eh(1/144.0deg)	0Eh(1/144.0deg)	0Ah(1/1500)	0Bh(1/2000)
0Fh(1/120.0deg)	0Fh(1/120.0deg)	0Bh(1/2000)	0Ch(1/180.0deg)
10h(1/90.0deg)	10h(1/90.0deg)	0Ch(1/180.0deg)	0Dh(1/172.8deg)
11h(1/45.0deg)	11h(1/45.0deg)	0Dh(1/172.8deg)	0Eh(1/144.0deg)
		0Eh(1/144.0deg)	0Fh(1/120.0deg)
		0Fh(1/120.0deg)	10h(1/90.0deg)
		10h(1/90.0deg)	11h(1/45.0deg)
		11h(1/45.0deg)	

▼OAW

Parameter meaning var between control command and response for confirmation command

Control		Confirmation	
0	ATW	0	ATW
1	AWC A	1	---
2	AWC B	2	AWC A
3	ATW	3	AWC B
4	Preset 3200K	4	Preset 3200K
5	Preset 5600K	5	Preset 5600K
6	Preset 4500K	6	Preset 4500K
7	Preset 6000K	7	Preset 6000K
8	Preset 2800K	8	Preset 2800K
9	Var	9	Var

Parameters vary depending on model

		UE160, UE80, UE50, UE40, UR100, UE100, UE150, HE145, HR140, UE70series, HE42series, HE40series, HE130, HE120	UE20/HE20/UE4	HE60/HE50
Control	0	ATW	ATW	ATW
	1	AWC A	AWC A	AWC A
	2	AWC B	AWC B	AWC B
	3	ATW	ATW	ATW
	4	Preset 3200K	Preset 3200K	---
	5	Preset 5600K	Preset 5600K	---
	6	---	---	---
	7	---	---	---
	8	---	---	---
	9	Var	---	---
Confirmation	0	ATW	ATW	ATW
	1	---	---	---
	2	AWC A	AWC A	AWC A
	3	AWC B	AWC B	AWC B
	4	Preset 3200K	Preset 3200K	---
	5	Preset 5600K	Preset 5600K	---
	6	---	---	---
	7	---	---	---
	8	---	---	---
	9	Var	---	---

▼OSC

Parameter meaning var between control command and response for confirmation command

Control		Confirmation	
1	2( 90deg)	1	---
2	3(180deg)	2	1( 0deg)
3	4(270deg)	3	2( 90deg)
4	1( 0deg)	4	3(180deg)
5	---	5	4(270deg)

▼#QSV

Parameters vary depending on model

UE80	UE50	UE40	UR100	UE100	UE150, HE145	HR140
[Data1] Servo CPU	[Data1] Servo CPU	[Data1] Servo CPU	[Data1] Servo CPU	[Data1] Servo CPU	[Data1] Servo CPU	[Data1] Servo CPU
Camera CPU	Camera CPU	Camera CPU	Camera CPU	Camera CPU	Camera CPU	CameraMain CPU
ZYNQ Network	reserve	reserve	ZYNQ Network	ZYNQ Network	COM FPGA	COM FPGA
Main/Network CPU	Main/Network CPU	Main/Network CPU	Main/Network CPU	Main/Network CPU	Main/Network CPU	Network CPU
ZYNQ Logic	AVIO FPGA	reserve	ZYNQ Logic	ZYNQ Logic	AVIO FPGA	AVIO FPGA
reserve	reserve	reserve	reserve	ZYNQ R5T	Interface CPU	Interface CPU
Lens CPU	Lens CPU	Lens CPU	Lens CPU	Lens CPU	Lens CPU	Lens FPGA
reserve	reserve	reserve	ZYNQ R5R	ZYNQ R5R	Interface EEPROM	Interface EEPROM
ZYNQ Enc	reserve	reserve	ZYNQ Enc	ZYNQ Enc	reserved	reserve
BE EEPROM	BE EEPROM	BE EEPROM	BE EEPROM	BE EEPROM	BE EEPROM	reserve
[Data2]	[Data2]	[Data2]	[Data2]	[Data2]	[Data2]	[Data2]
MAJOR VERSION	MAJOR VERSION	MAJOR VERSION	Major Version	Major Version	Major Version	Major Version
[Data3]	[Data3]	[Data3]	[Data3]	[Data3]	[Data3]	[Data3]
MINOR VERSION	MINOR VERSION	MINOR VERSION	Minor Version	Minor Version	Minor Version	Minor Version
[Data4]	[Data4]	[Data4]	[Data4]	[Data4]	[Data4]	[Data4]
(Debug Build)	(Debug Build)	(Debug Build)	(Debug Build)	(Debug Build)	(Debug Build)	(Debug Build)
(Release Build)	(Release Build)	(Release Build)	(Release Build)	(Release Build)	(Release Build)	(Release Build)
[Data5]	[Data5]	[Data5]	[Data5]	[Data5]	[Data5]	[Data5]
(REVISION)	(REVISION)	(REVISION)	(REVISION)	(REVISION)	(REVISION)	(REVISION)
[data6]	[data6]	[data6]	[data6]	[data6]	[data6]	[data6]
NTSC	NTSC	NTSC	NTSC	NTSC	NTSC	NTSC
PAL	PAL	PAL	PAL	PAL	PAL	PAL

▼#QSV(Continued)

Parameters vary depending on model

UE70, HE75, HE70series	HE130	HE120	HE60	HE50
[Data1]	[Data1]	[Data1]	[Data1]	[Data1]
Servo CPU	Servo CPU	Servo CPU	Pan Tilt CPU	Pan Tilt CPU
Cam CPU	CameraMain CPU	CameraMain CPU	Camera CPU	Camera CPU
FPGA	COM FPGA	Frontend FPGA	Camera FPGA	Camera FPGA
BE CPU	Network CPU	Network CPU	Network CPU	Network CPU
reserve	AVIO FPGA	Backend FPGA	OUT FPGA	Out FPGA
Interface CPU	Interface CPU	Interface CPU	reserve	reserve
reserve	Lens FPGA	Lens FPGA	reserve	reserve
Interface EEPROM	Interface EEPROM	Interface EEPROM	reserve	reserve
reserve	reserve	Camera EEPROM	Camera EEPROM	reserve
reserve	reserve	Lens EEPROM	reserve	reserve
[Data2]	[Data2]	[Data2]	[Data2]	[Data2]
00	Major Version	Major Version	Major Version	Major Version
[Data3]	[Data3]	[Data3]	[Data3]	[Data3]
Version	Minor Version	Minor Version	Minor Version	Minor Version
[Data4]	[Data4]	[Data4]	[Data4]	[Data4]
L	(Debug Build)	(Debug Build)	(Debug Build)	(Debug Build)
	(Release Build)	(Release Build)	(Release Build)	(Release Build)
[Data5]	[Data5]	[Data5]	[Data5]	[Data5]
00	(Revision)	(Revision)	(Revision)	(Revision)
[data6]	[data6]	[data6]	[data6]	[data6]
NTSC	NTSC	NTSC	NTSC	NTSC
PAL	PAL	PAL	PAL	PAL
			Other	Other

▼#RER

The content of the error varies depending on the model

UE160	UE80, UE50, E40	UE100	UE150, HE145
00h No Error	00h No Error	03h Motor Driver Error	00h Normal
03h Motor Driver Error	03h Motor Driver Error	21h System Error	03h Motor Driver Error
21h System Error	21h System Error	22h Spec Limit Over	04h Pan Sensor Error
22h Spec Limit Over	22h Spec Limit Over	24h NET Life-monitoring Error	05h Tilt Sensor Error
25h BE Life-monitoring Error	24h NET Life-monitoring Error	29h CAM Life-monitoring Error	06h Controller RX Over run Error
30h NET Life-monitoring Error	25h BE Life-monitoring Error	31h Fan1 error	07h Controller RX Framing Error
31h Fan1 error	29h CAM Life-monitoring Error	33h High Temp	08h Network RX Over run Error
32h Fan2 error	31h Fan1 error(UE80)	36h Low Temp	09h Network RX Framing Error
33h High Temp	33h High Temp	40h Temp Sensor Error	17h Controller RX Command Buffer Overflow
36h Low Temp	36h Low Temp	41h Lens Initialize Error	19h Network RX Command Buffer Overflow
40h Temp Sensor Error	40h Temp Sensor Error	42h PT. Initialize Error	21h System Error
41h Lens Initialize Error	41h Lens Initialize Error	43h PoE++ Software auth. Timeout	22h Spec Limit Over
42h PT. Initialize Error	42h PT. Initialize Error	50h MR Level Error	23h FPGA Config Error
43h PoE++ Software auth. Timeout	43h PoE++ Software auth. Timeout (UE80)	52h MR Offset Error	24h NET Life-monitoring Error
50h MR Level Error	45h PoE+ Software auth. Timeout (UE50/UE40)	57h Gyro Error	25h BE Life-monitoring Error
52h MR Offset Error	47h USB Streaming Error (UE50/UE40)	58h PT. Initialize Error	26h IF/BE UART Buffer Overflow
55h PT. Gear Error	50h MR Level Error		27h IF/BE UART Framing Error
57h Gyro Error	52h MR Offset Error	UR100	28h IF/BE UART Buffer Overflow
58h PT. Initialize Error	57h Gyro Error	03h Motor Driver Error	29h CAM Life-monitoring Error
60h Update Firmware Error	58h PT. Initialize Error	21h System Error	31h Fan1 error
61h Update Hardware Error		22h Spec Limit Over	32h Fan2 error
62h Update Error		24h NET Life-monitoring Error	33h High Temp
63h Update Fan Error		25h BE Life-monitoring Error	36h Low Temp
		29h CAM Life-monitoring Error	40h Temp Sensor Error
		31h Fan1 error	41h Lens Initialize Error
		32h Fan2 error	42h PT. Initialize Error
		33h High Temp	50h:MR Level Error
		36h Low Temp	52h:MR Offset Error
		39h Wiper Error	53h:Origin Offset Error
		40h Temp Sensor Error	54h:Angle MR Sensor Error
		41h Lens Initialize Error	55h:PT. Gear Error
		42h PT. Initialize Error	56h:Motor Disconnect Error
		43h PoE++ Software auth. Timeout	
		50h MR Level Error	
		52h MR Offset Error	
		57h Gyro Error	
		58h PT. Initialize Error	



▼#RER(Continued)

The content of the error varies depending on the model

HR140	UE70series, HE42 Series, HE40 Series	HE120	HE50
00h: Normal	00h Normal(No Error)	00h: Normal	00h: Normal
03h: Motor Driver Error	03h Motor Driver Error	03h: Motor Driver Error	03h: Motor Driver Error
04h: Pan Sensor Error	04h Pan Sensor Error	04h: Pan Sensor Error	04h: Pan Sensor Error
05h: Tilt Sensor Error	05h Tilt Sensor Error	05h: Tilt Sensor Error	05h: Tilt Sensor Error
06h: Controller RX Over run Error	06h IF/FPGA UART Over run Error	06h: Controller RX Over run Error	06h: Controller RX Over run Error
07h: Controller RX Framing Error	07h IF/FPGA UART Framing Error	07h: Controller RX Framing Error	07h: Controller RX Framing Error
08h: Network RX Over run Error	08h IF/NET UART Over run Error	08h: Network RX Over run Error	08h: Network RX Over run Error
09h: Network RX Framing Error	09h IF/NET UART Framing Error	09h: Network RX Framing Error	09h: Network RX Framing Error
17h: Controller RX Command Buffer Overflow	17h IF/FPGA UART Buffer Overflow	17h: Controller RX Command Buffer Overflow	17h: Controller RX Command Buffer Overflow
19h: Network RX Command Buffer Overflow	19h IF/NET UART Buffer Overflow	19h: Network RX Command Buffer Overflow	19h: Network RX Command Buffer Overflow
21h: System Error	21h System Error(IF/SERVO Error)	21h: System Error	21h: System Error
22h: Spec Limit Over	22h PT Limit Over	22h: Spec Limit Over	22h: Spec Limit Over
23h: FPGA Config Error	24h NET Life-monitoring Error	23h: FPGA Config Error	23h: FPGA Config Error
25h: CAMERA communication Error	25h BE Life-monitoring Error	24h: Network communication Error	24h: Network communication Error
26h: CAMERA RX Over run Error	26h IF/BE UART Buffer Overflow	25h: Lens Initialize Error	30h: Lvds_Adjustmet_NG
27h: CAMERA RX Framing Error	27h IF/BE UART Framing Error		31h: Bar_Signal_Check_NG
28h: CAMERA RX Command Buffer Overflow	28h IF/BE UART Buffer Overflow		
31h: Fan1 Error	29h CAM Life-monitoring Error		
32h: Fan2 Error			
33h: High Temp			
36h: Low Temp			
39h: Wiper Error			
40h: Temp Sensor Error			
41h: Lens Initialize Error			
42h: PT. Initialize Error			
50h: MR Level Error			
51h: GYRO Initial Error			
52h: MR Offset Error			
53h: Origin Offset Error			
		HE130	HE60
		00h: Normal	00h: Normal
		03h: Motor Driver Error	03h: Motor Driver Error
		04h: Pan Sensor Error	04h: Pan Sensor Error
		05h: Tilt Sensor Error	05h: Tilt Sensor Error
		06h: Controller RX Over run Error	06h: Controller RX Over run Error
		07h: Controller RX Framing Error	07h: Controller RX Framing Error
		08h: Network RX Over run Error	08h: Network RX Over run Error
		09h: Network RX Framing Error	09h: Network RX Framing Error
		17h: Controller RX Command Buffer Overflow	17h: Controller RX Command Buffer Overflow
		19h: Network RX Command Buffer Overflow	19h: Network RX Command Buffer Overflow
		21h: System Error	21h: System Error
		22h: Spec Limit Over	22h: Spec Limit Over
		23h: FPGA Config Error	23h: FPGA Config Error
		25h: CAMERA communication Error	24h: Network communication Error
		26h: CAMERA RX Over run Error	30h: Lvds_Adjustmet_NG
		27h: CAMERA RX Framing Error	31h: Bar_Signal_Check_NG
		28h: CAMERA RX Command Buffer Overflow	32h: H_Sync_Check_NG
			33h: HDMI_Check_NG

▼XSF

Parameter meaning var between control command and response for confirmation command

UE160

Control		Confirmation	
0	---	0	Scene1
1	Scene1	1	Scene2
2	Scene2	2	Scene3
3	Scene3	3	Scene4
4	Scene4	4	Scene5
5	Scene5	5	Scene6
6	Scene6	6	Scene7
7	Scene7	7	Scene8
8	Scene8	8	OFF
9	OFF	9	---

UE80, UE50, UE40, UR100, UE100, UE150, HE145, HR140, UE70series, HE42series, HE40series, HE130, HE120, HE60, HE50

Control		Confirmation	
0	---	0	Scene1(Manual1)
1	Scene1(Manual1)	1	Scene2(Manual2)
2	Scene2(Manual2)	2	Scene3(Manual3)
3	Scene3(Manual3)	3	Scene4(FullAuto)
4	Scene4(FullAuto)	4	---

UE4

Control		Confirmation	
0	---	0	Full Auto
1	Full Auto	1	Shutter Priority
2	Shutter Priority	2	Manual
3	Manual	3	---

UB300

Control		Confirmation	
0	---	0	current
1	current	1	Scene1
2	Scene1	2	Scene2
3	Scene2	3	Scene3
4	Scene3	4	Scene4
5	Scene4	5	Scene5
6	Scene5	6	Scene6
7	Scene6	7	Scene7
8	Scene7	8	Scene8
9	Scene8	9	---

UE20/HE20

Control		Confirmation	
0	---	0	Scene1
1	Scene1	1	Scene2
2	Scene2	2	Full Auto
3	Full Auto	3	---

▼#0

Parameter meaning var between control command and response for confirmation command

Control		Confirmation	
0	Power Off	0	Power Off
1	Power On	1	Power On
3	---	3	Starting