



RS232 Protocol Function List

Baud Rate 9600
 Data Bits 8
 Parity None
 Stop Bits 1
 Flow Control None
 UART16550 FIFO Disable

■ Write Command

~	X	X	X	X	X		n	CR
Lead Code	Projector ID		Command			space	variable	carriage return
Prefix	00~99 (Default: 00)		000~999				0~9999	suffix

Pass:

Fail:

■ Read Command

~	X	X	X	X	X		n	CR
Lead Code	Projector ID		Command			space	variable	carriage return
Prefix	00~99 (Default: 00)		000~999				0~9999	suffix

Response Format

Pass:

O	k	n
Variable		

Fail:

■ System Automatically Send

I	N	F	O	n
				Variable

Note : There is a <CR> after all ASCII commands. 0D is the HEX code for <CR> in ASCII code

Level 1	Level 2	Level 3	Level 4	Level 5	n value		
Image	Display Mode	[None]					
		Presentation					
		Bright					
		Cinema					
		HDR					
		sRGB					
		DICOM SIM.					
		User					
		3D					
		Blending					
	Off						
	Wall Color	BlackBoard					
		Light Yellow					
		Light Green					
		Light Blue					
		Pink					
		Gray					
	Dynamic Range	HDR	Off				
			Auto				
			Bright				
		HDR Picture Mode	Standard				
		Film					
		Detail					
	Brightness	-					
		-50 ~ 50					
	Contrast	+					
		-					
	Sharpness	-50 ~ 50					
		+					
	Color	1 ~ 15					
	Tint	-50 ~ 50					
	Gamma	Film					
		Video					
		Graphics					
		Standard(2.2)					
		1.8					
		2.0					
		2.4					
	2.6						
	Color Settings	BrilliantColor™	1 ~ 10				
			Warm				
			Standard				
		Color Temperature	Cool				
			Cold				
			Color	R / G / B / C / Y / M / W			
		Color Matching	(R) Saturation	0~199			
			(R) Hue	0~199			
			(R) Gain	0~199			
			(G) Saturation	0~199			
			(G) Hue	0~199			
			(G) Gain	0~199			
			(B) Saturation	0~199			
			(B) Hue	0~199			
			(B) Gain	0~199			
			(C) Saturation	0~199			
			(C) Hue	0~199			
			(C) Gain	0~199			
			(Y) Saturation	0~199			
			(Y) Hue	0~199			
			(Y) Gain	0~199			
			(M) Saturation	0~199			
			(M) Hue	0~199			
			(M) Gain	0~199			
			(W) Red	0~199			
			(W) Green	0~199			
			(W) Blue	0~199			
			Reset				
			RGB Gain/Bias	Red Gain	0~100		
				Green Gain	0~100		
	Blue Gain	0~100					
	Red Bias	0~100					
	Green Bias	0~100					
	Blue Bias	0~100					
	Reset						
	Dynamic Black	Off					
		On					
	Extreme Black	Off					

Write Command						
Command						
CMD	CMD	space	Set Para.			
~	X	X	2	0	~XX20	1
					~XX20	2
					~XX20	3
					~XX20	21
					~XX20	4
					~XX20	13
					~XX20	5
					~XX20	9
					~XX20	19
					~XX506	0
					~XX506	1
					~XX506	7
					~XX506	3
					~XX506	4
					~XX506	5
					~XX506	6
					~XX565	0
					~XX565	1
					~XX566	0
					~XX566	1
					~XX566	2
					~XX566	3
~	X	X	4	6	~XX46	1
~	X	X	2	1	~XX21	-50~50
~	X	X	4	6	~XX46	2
~	X	X	4	7	~XX47	1
~	X	X	2	2	~XX22	-50~50
~	X	X	4	7	~XX47	2
~	X	X	2	3	~XX23	1~15
~	X	X	4	5	~XX45	-50~50
~	X	X	4	4	~XX44	-50~50
~	X	X	3	5	~XX35	1
~	X	X	3	5	~XX35	2
~	X	X	3	5	~XX35	3
~	X	X	3	5	~XX35	4
~	X	X	3	5	~XX35	5
~	X	X	3	5	~XX35	6
~	X	X	3	5	~XX35	12
~	X	X	3	5	~XX35	8
~	X	X	3	4	~XX34	1~10
~	X	X	3	6	~XX36	1
~	X	X	3	6	~XX36	2
~	X	X	3	6	~XX36	3
~	X	X	3	3	~XX333	0~199
~	X	X	3	2	~XX327	0~199
~	X	X	3	9	~XX339	0~199
~	X	X	3	4	~XX334	0~199
~	X	X	3	2	~XX328	0~199
~	X	X	3	4	~XX340	0~199
~	X	X	3	3	~XX335	0~199
~	X	X	3	2	~XX329	0~199
~	X	X	3	4	~XX341	0~199
~	X	X	3	3	~XX336	0~199
~	X	X	3	3	~XX330	0~199
~	X	X	3	4	~XX342	0~199
~	X	X	3	3	~XX337	0~199
~	X	X	3	3	~XX331	0~199
~	X	X	3	4	~XX343	0~199
~	X	X	3	3	~XX338	0~199
~	X	X	3	3	~XX332	0~199
~	X	X	3	4	~XX344	0~199
~	X	X	3	4	~XX345	0~199
~	X	X	3	4	~XX346	0~199
~	X	X	3	4	~XX347	0~199
~	X	X	2	1	~XX215	1
~	X	X	2	4	~XX24	0~100
~	X	X	2	5	~XX25	0~100
~	X	X	2	6	~XX26	0~100
~	X	X	2	7	~XX27	0~100
~	X	X	2	8	~XX28	0~100
~	X	X	2	9	~XX29	0~100
~	X	X	5	1	~XX517	1
					~XX191	0
					~XX191	1
					~XX218	0

Read Command									
Command									
CMD	CMD	space	CMD Value	Pass					
~XX123	~	X	X	1	2	3	1		O k 0
~XX123							1		O k 1
~XX123							1		O k 2
~XX123							1		O k 3
~XX123							1		O k 21
~XX123							1		O k 4
~XX123							1		O k 10
~XX123							1		O k 5
~XX123							1		O k 9
~XX123							1		O k 19
~XX125	~	X	X	1	2	5	1		O k -50~50
~XX126	~	X	X	1	2	6	1		O k -50~50
~XX128	~	X	X	1	2	8	1		O k 0
~XX128	~	X	X	1	2	8	1		O k 1
~XX128	~	X	X	1	2	8	1		O k 2

Note : Some commands are not supported, it depends on models

Level 1	Level 2	Level 3	Level 4	Level 5	n value
Display	Extreme Brack	On			
		Brightness Mode	100%		
	Brightness Mode	Constant Power	80%		
			65%		
			50%		
			Off		
		Constant Luminace	85%		
			80%		
			75%		
	70%				
	Reset				
	Aspect Ratio	4:3			
		16:9			
		16:10			
	Edge Mask	Auto			
		0~10			
	Digital Zoom	Zoom	Zoom Plus		
			-5~25		
	Image shift	Reset	Zoom Minus		
			H+		
	Four Corner	H	-100 ~ 100		
			(Depends on models)		
H-					
		V+			
V		-100 ~ 100			
		(Depends on models)			
top left		H: 0~120			
		V: 0~80			
top right		right +1			
		left +1			
Bottom-left	up +1				
	down +1				
Bottom-right	H: 0~120				
	V: 0~80				
Reset	right +1				
	left +1				
H Keystone	up +1				
	down +1				
V Keystone	H: 0~120				
	V: 0~80				
Warp/Blend Control	right +1				
	left +1				
Apply	up +1				
	down +1				
Save Current	H: 0~120				
	V: 0~80				
Warp/Blend Memory	right +1				
	left +1				
Warp/Blend Cursor Color	up +1				
	down +1				
Warp/Blend Grid Color	1				
	2				
Warp/Blend Background Color	3				
	4				
Warp Calibration	5				
	Green				
Warp/Blend Cursor Color	Magenta				
	Red				
Warp/Blend Grid Color	Cyan				
	Green				
Warp/Blend Background Color	Magenta				
	Red				
Warp Calibration	Cyan				
	None				
Warp Setting	Black				
	2x2				

Write Command					
Command					
CMD	CMD	space	Set Para.		
~	XX218		1		
~	XX326		0		
~	XX326		4		
~	XX326		7		
~	XX326		10		
~	XX522		0		
~	XX522		3		
~	XX522		4		
~	XX522		5		
~	XX522		6		
~	XX60		1		
~	XX60		2		
~	XX60		3		
~	XX60		7		
~	XX61		0~10		
~	XX05		1		
~	XX62		-5~25		
~	XX06		1		
~	XX540		2		
~	XX63		-100~100		
~	XX540		1		
~	XX541		2		
~	XX64		-100~100		
~	XX541		1		
~	XX581		0~120		
~	XX582		0~80		
~	XX59		1		
~	XX59		2		
~	XX59		3		
~	XX59		4		
~	XX583		0~120		
~	XX584		0~80		
~	XX59		5		
~	XX59		6		
~	XX59		7		
~	XX59		8		
~	XX585		0~120		
~	XX586		0~80		
~	XX59		9		
~	XX59		10		
~	XX59		11		
~	XX59		12		
~	XX587		0~120		
~	XX588		0~80		
~	XX59		13		
~	XX59		14		
~	XX59		15		
~	XX59		16		
~	XX516		1		
~	XX65		-40~40		
~	XX66		-40~40		
~	XX142		0		
~	XX142		1		
~	XX147		1		
~	XX147		2		
~	XX147		3		
~	XX147		4		
~	XX147		5		
~	XX141		1		
~	XX141		2		
~	XX141		3		
~	XX141		4		
~	XX141		5		

Read Command					
Command					
CMD	CMD	space	CMD Value	Pass	
~	XX246		1		O k 0
~	XX246		1		O k 4
~	XX246		1		O k 7
~	XX246		1		O k 10
~	XX242		1		O k 0
~	XX242		1		O k 3
~	XX242		1		O k 4
~	XX242		1		O k 5
~	XX242		1		O k 6
~	XX127		1		O k 1
~	XX127		1		O k 2
~	XX127		1		O k 3
~	XX127		1		O k 7
~	XX543		1		O k -100~100
~	XX543		2		O k -100~100
~	XX543		4		O k -40~40
~	XX543		3		O k -40~40
~	XX132		1		O k 0
~	XX132		1		O k 1
~	XX137		1		O k 1
~	XX137		1		O k 2
~	XX137		1		O k 3
~	XX137		1		O k 4
~	XX137		1		O k 5

Note : Some commands are not supported, it depends on models

Level 1	Level 2	Level 3	Level 4	Level 5	n value	
	3D Frame Delay	1ST Frame				
	Reset	0~200				
Audio	Mute	Off				
	Volume	0~100				
Setup	Projection Mode	Front				
		Rear				
		Ceiling-top				
		Rear-top				
	Screen Type	16:9				
		4:3				
	Filter Settings	Filter Usage Hours				
		Filter Reminder	Off			
			300hr			
			500hr			
800hr						
1000hr						
Filter Reset						
Lens Settings	Lens Function	Lock				
		Unlock				
	Lens Shift	Up				
		Down				
		Left				
	Right					
	Lens Calibration	Yes				
	Zoom	+				
	-					
	Focus	+				
-						
Lens Memory	Apply Position	1~5				
	Save Current Position	1~5				
	Reset	Yes				
Test Pattern	Green Grid					
	Magenta Grid					
	White Grid					
	White					
	Off					
High Altitude	Off					
On						
Display Mode Lock	Off					
On						
Keypad Lock	Off					
On						
Display	Display Mode					
	Brightness Mode					
	Power Mode (Standby)	Eco.				
		Active				
		Communication				
Hardware	High Altitude					
	Filter Usage Hours					
	Projection Hours					
System Temperature						
Input Source	Main Source	Source				
		Resolution	00x00			
		Refresh Rate	00Hz			
	Color Depth					
	Sub Source	Source				
		Resolution	00x00			
Refresh Rate		00Hz				
Color Depth						
Network	LAN Control	LAN Status	Connected			
		Disconnected				
		IP Address				
		Gateway				
		DNS				
MAC Address						
About	Regulatory					
	Serial Number					
	FW Version	System				
LAN						
MCU						

Write Command					
Command					
CMD	CMD	space	Set Para.		
~ X X 2 3 0	~XX236		1		
~ X X 2 3 3	~XX233		0~200		
~ X X 2 3 4	~XX234		1		
~ X X 8 0	~XX80		0		
~ X X 8 0	~XX80		1		
~ X X 8 1	~XX81		0~100		
~ X X 7 1	~XX71		1		
~ X X 7 1	~XX71		2		
~ X X 7 1	~XX71		3		
~ X X 7 1	~XX71		4		
~ X X 9 0	~XX90		0		
~ X X 9 0	~XX90		1		
~ X X 9 0	~XX90		3		
~ X X 3 2 2	~XX322		0		
~ X X 3 2 2	~XX322		1		
~ X X 3 2 2	~XX322		2		
~ X X 3 2 2	~XX322		3		
~ X X 3 2 2	~XX322		4		
~ X X 3 2 3	~XX323		1		
~ X X 3 4 9	~XX349		1		
~ X X 3 4 9	~XX349		2		
~ X X 8 4	~XX84		3		
~ X X 8 4	~XX84		4		
~ X X 8 4	~XX84		5		
~ X X 8 4	~XX84		6		
~ X X 5 2 5	~XX525		1		
~ X X 3 0 7	~XX307		1		
~ X X 3 0 7	~XX307		2		
~ X X 3 0 8	~XX308		1		
~ X X 3 0 8	~XX308		2		
~ X X 3 5 9	~XX359		1~5		
~ X X 3 6 0	~XX360		1~5		
~ X X 3 6 1	~XX361		1		
~ X X 1 9 5	~XX195		3		
~ X X 1 9 5	~XX195		4		
~ X X 1 9 5	~XX195		1		
~ X X 1 9 5	~XX195		2		
~ X X 1 9 5	~XX195		0		
~ X X 1 0 1	~XX101		0		
~ X X 1 0 1	~XX101		1		
~ X X 3 4 8	~XX348		0		
~ X X 3 4 8	~XX348		1		
~ X X 1 0 3	~XX103		0		
~ X X 1 0 3	~XX103		1		

Read Command					
Command					
CMD	CMD	space	CMD Value	Pass	
~XX356	~ X X 3 5 6		1		O k 0
~XX356	~ X X 3 5 6		1		O k 1
~XX129	~ X X 1 2 9		1		O k 0
~XX129	~ X X 1 2 9		1		O k 1
~XX129	~ X X 1 2 9		1		O k 2
~XX129	~ X X 1 2 9		1		O k 3
~XX321	~ X X 3 2 1		1		O k nnnn (nnnn=hour digits)
~XX123	~ X X 1 2 3		1		* Check "Display Mode" read above
~XX241	~ X X 2 4 1		1		O k a=5 Constant Power
~XX150	~ X X 1 5 0		16		O k a=6 Constant Luminance
~XX150	~ X X 1 5 0		16		O k 0
~XX150	~ X X 1 5 0		16		O k 1
~XX150	~ X X 1 5 0		16		O k 3
~XX150	~ X X 1 5 0		22		O k a=1 On
~XX150	~ X X 1 5 0		22		O k a=0 Off
~XX321	~ X X 3 2 1		1		O k nnnn
~XX150	~ X X 1 5 0		21		O k nnnnnn(e.g. 00100)
~XX352	~ X X 3 5 2		1		O k nnn..nn (e.g. Ok48)
~XX121	~ X X 1 2 1		1		* Check "Input Source" read above
~XX150	~ X X 1 5 0		4		O k nnnnnnnnnn
~XX150	~ X X 1 5 0		19		O k (e.g. Ok1920x1080)
~XX156	~ X X 1 5 6		1		O k nnnnn
~XX156	~ X X 1 5 6		1		O k (e.g. Ok60Hz)
~XX156	~ X X 1 5 6		1		O k nbit nnn
~XX156	~ X X 1 5 6		1		O k (e.g. 8bit RGB)
~XX150	~ X X 1 5 0		9		O k nnn..nn (e.g. OkHDMI)
~XX150	~ X X 1 5 0		10		O k nnn..nn (e.g. Ok1920x1080)
~XX150	~ X X 1 5 0		14		O k nnn..nn
~XX156	~ X X 1 5 6		2		O k nbit nnn
~XX156	~ X X 1 5 6		2		O k (e.g. 8bit RGB)
~XX87	~ X X 8 7		1		O k 1
~XX87	~ X X 8 7		1		O k 0
~XX87	~ X X 8 7		3		O k nnn..nnn..nnn..nnn
~XX87	~ X X 8 7		4		O k nnn..nnn..nnn..nnn
~XX87	~ X X 8 7		5		O k nnn..nnn..nnn..nnn
~XX555	~ X X 5 5 5		1		O k nn:nn:nn:nn:nn
~XX151	~ X X 1 5 1		3		O k nnnnnnnn
~XX353	~ X X 3 5 3		1		O k nnnnnnnnnnnnnnnn
~XX122	~ X X 1 2 2		1		O k nnnnnnn (Software Version)
~XX357	~ X X 3 5 7		1		O k nnnnnnn (LAN FW version)
~XX357	~ X X 3 5 7		2		O k nnn (MCU FW version)

Note : Some commands are not supported, it depends on models

Level 1	Level 2	Level 3	Level 4	Level 5	n value
		Reset OSD			
	Reset	Reset to Default			
		Reset to Default with password	Cancel / Yes		
		Off			
	Direct Power On	On			
		Off			
	Signal Power On	On			
		Off			
	Auto Power Off (min)	0 ~ 180 (5 min increments)			
		0 ~ 990 (30 min increments)			
	Sleep Timer (min)	Always On	No Yes		
		Active			
	Power Mode (Standby)	Eco. Communication			
		Off			
	12V Trigger	On			
		Off			
		IR Function	Off All On All		
		-			
		Remote Code	00~99 +		
	Remote Settings	Use1 (F1)	Functions please refer to UM		1.Brightness 2.Contrast 3.Color Matching 4.Color Temp 5.Gamma 6.Projection 7.Lens shift
		User2 (F2)	Functions please refer to UM		
		User3 (F3)	Functions please refer to UM		
	Projector ID	00~99			
	HDBaset Control	RS232	Off On		

Write Command						
Command						
CMD	CMD	space	Set Para.			
~ X X 5 4 6	~XX546		1			
~ X X 1 1 2	~XX112		1			
~ X X 1 0 5	~XX105		1~nnnn			
~ X X 1 1 3	~XX113		0			
~ X X 1 0 6	~XX106		0~180			
~ X X 1 0 7	~XX107		000~990			
~ X X 5 0 7	~XX507		0			
~ X X 1 1 4	~XX114		1			
~ X X 1 1 4	~XX114		0			
~ X X 1 1 4	~XX114		3			
~ X X 1 9 2	~XX192		0			
~ X X 1 1 1	~XX111		1			
~ X X 4 8	~XX48		1			
~ X X 3 5 0	~XX350		00~99			
~ X X 4 8	~XX48		2			
~ X X 1 1 7	~XX117		1~7			
~ X X 1 1 8	~XX118		1~7			
~ X X 1 1 9	~XX119		1~7			
~ X X 7 9	~XX79		00~99			
~ X X 9 7	~XX97		0			
~ X X 9 7	~XX97		1			

Read Command									
Command									
CMD	CMD	space	CMD Value	Pass					
~XX150	~ X X 1 5 0		16						O k 1
~XX150	~ X X 1 5 0		16						O k 0
~XX150	~ X X 1 5 0		16						O k 3
~XX558	~ X X 5 5 8		1						O k 00~99

Note : Some commands are not supported, it depends on models

Level 1	Level 2	Level 3	Level 4	Level 5	n value
Other Items					
Power Off					
Power On					
Power On with password					
Restart					
Re-Sync					
AV Mute	Off				
	On				
Mute	Off				
	On				
Freeze	Unfreeze				
	Freeze				
3D Sync Out	To Emitter				
	To Next Projector				
3D Frame Delay	0~200				
System Auto Send	Standby Mode				
	Warming up				
	Cooling Down				
	Out of Range				
	Over Temperature				
	Color Wheel Unexpected Stop				
	FAN 1 Lock				
	FAN 2 Lock				
	FAN 3 Lock				
	FAN 4 Lock				
	FAN 5 Lock				
	FAN 6 Lock				
	FAN 7 Lock				
	LAN fail then restart				
	LD NTC (1) Over Temperature				
	LD NTC (2) Over Temperature				
	High Ambient Temperature				
System Ready					
Model Name	Optoma WUXGA				
Software Version					
LAN FW version					
Fan Speed	Fan 1 Speed	0000~9999			
	Fan 2 Speed	0000~9999			
	Fan 3 Speed	0000~9999			
	Fan 4 Speed	0000~9999			
	Fan 5 Speed	0000~9999			
	Fan 6 Speed	0000~9999			
	Fan 7 Speed	0000~9999			
System Temperature					
Information	Info String				a = Power Status b = Lamp Hour c = Input Source d = Firmware Version 848 ver. = A05.25 DDP ver. = A19 MCU ver. = A15 LAN ver. = A02/1.80 e = Display mode
	Native Resolution				
	Main Source				
	- Resolution				
	- Signal Format				
	- Vert Refresh				
	Sub Source				
	- Resolution				
	- Signal Format				
	- Vert Refresh				
Standby Power Mode	Active				
	Eco.				
	Communication				
DHCP	Off				
	On				
System Temperature					
Refresh rate					
Display message on the OSD					

Remote Control Simulation

Power					
Power Off					
Up					
Left					
Enter (for projection MENU)					
Right					
Down					

Write Command			
Command			
CMD	CMD	space	Set Para.
~ X X 0 0	~XX00		0
~ X X 0 0	~XX00		1
~ X X 0 0	~XX00		1~nnnn
~ X X 0 1	~XX00		3
~ X X 0 1	~XX01		1
~ X X 0 2	~XX02		0
~ X X 0 2	~XX02		1
~ X X 0 3	~XX03		0
~ X X 0 3	~XX03		1
~ X X 0 4	~XX04		0
~ X X 0 4	~XX04		1
	~XX232		0
	~XX232		1
	~XX233		0~200

Read Command					
Command					
CMD	CMD	space	CMD Value	Pass	
~ X X 1 2 4	~XX124		1	O	k 0
~ X X 1 2 4	~XX124		1	O	k 1
~ X X 3 5 5	~XX355		1	O	k 0
~ X X 3 5 5	~XX355		1	O	k 1
~ X X 3 5 6	~XX356		1	O	k 0
~ X X 3 5 6	~XX356		1	O	k 1

~ X X 0 0	~XX00		0
~ X X 0 0	~XX00		1
~ X X 0 0	~XX00		1~nnnn
~ X X 0 1	~XX00		3
~ X X 0 1	~XX01		1
~ X X 0 2	~XX02		0
~ X X 0 2	~XX02		1
~ X X 0 3	~XX03		0
~ X X 0 3	~XX03		1
~ X X 0 4	~XX04		0
~ X X 0 4	~XX04		1
	~XX232		0
	~XX232		1
	~XX233		0~200

~ X X 1 2 4	~XX124		1	O	k 0
~ X X 1 2 4	~XX124		1	O	k 1
~ X X 3 5 5	~XX355		1	O	k 0
~ X X 3 5 5	~XX355		1	O	k 1
~ X X 3 5 6	~XX356		1	O	k 0
~ X X 3 5 6	~XX356		1	O	k 1
~ X X 1 5 1	~XX151		1	O	k 5
~ X X 1 2 2	~XX122		1	O	k nnnnnn (Software Version)
~ X X 3 5 7	~XX357		1	O	k nnnnnnn (LAN FW version)
~ X X 3 5 1	~XX351		1	O	k 0000~9999
~ X X 3 5 1	~XX351		2	O	k 0000~9999
~ X X 3 5 1	~XX351		3	O	k 0000~9999
~ X X 3 5 1	~XX351		4	O	k 0000~9999
~ X X 3 5 1	~XX351		5	O	k 0000~9999
~ X X 3 5 1	~XX351		6	O	k 0000~9999
~ X X 3 5 1	~XX351		7	O	k 0000~9999
~ X X 3 5 2	~XX352		1	O	k 0000~9999
~ X X 1 5 0	~XX150		1	O	k abbbbccddddee
~ X X 1 5 0	~XX150		2	O	k nnn..nn (e.g. Ok1920x1080)
~ X X 1 5 0	~XX150		3	O	k nnn..nn (e.g. OkHDMI)
~ X X 1 5 0	~XX150		4	O	k nnn..nn (e.g. Ok1920x1080)
~ X X 1 5 0	~XX150		5	O	k nnn..nn
~ X X 1 5 0	~XX150		8	O	k nnn..nn
~ X X 1 5 0	~XX150		9	O	k nnn..nn
~ X X 1 5 0	~XX150		10	O	k nnn..nn (e.g. Ok1920x1080)
~ X X 1 5 0	~XX150		11	O	k nnn..nn (e.g. OkHDMI)
~ X X 1 5 0	~XX150		14	O	k nnn..nn
~ X X 1 5 0	~XX150		16	O	k 1
~ X X 1 5 0	~XX150		16	O	k 0
~ X X 1 5 0	~XX150		16	O	k 3
~ X X 1 5 0	~XX150		17	O	k 0
~ X X 1 5 0	~XX150		17	O	k 1
~ X X 1 5 0	~XX150		18	O	k nnn..nn (e.g. Ok48)
~ X X 1 5 0	~XX150		19	O	k nnn..nn (e.g. Ok60Hz)
~ X X 2 1 0	~XX210		nn...n (30 characters)		

~ X X 1 4 0	~XX140		1
~ X X 1 4 0	~XX140		2
~ X X 1 4 0	~XX140		10
~ X X 1 4 0	~XX140		11
~ X X 1 4 0	~XX140		12
~ X X 1 4 0	~XX140		13
~ X X 1 4 0	~XX140		14

~ X X 1 4 0	~XX140		1
~ X X 1 4 0	~XX140		2
~ X X 1 4 0	~XX140		10
~ X X 1 4 0	~XX140		11
~ X X 1 4 0	~XX140		12
~ X X 1 4 0	~XX140		13
~ X X 1 4 0	~XX140		14

Note : Some commands are not supported, it depends on models

Note *1
~xx150

Power	Light Source Life					Input Source		Firmware Version				Display Mode	
a	b	b	b	b	b	c	c	d	d	d	d	e	e
a=0 Power Off a=1 Power On	Light Source Life = nnnn Calucalte by each mode formula					cc=00 None cc=01 DVI cc=02 VGA1 cc=03 VGA2 cc=04 S-Video cc=05 Video cc=06 BNC cc=07 HDMI1 cc=08 HDMI2 cc=09 Wireless cc=10 Compnent cc=11 Flash drive cc=12 Network Display(Presenter) cc=13 USB Display cc=14 HDMI3 cc=15 DisplayPort cc=16 HDBaseT cc=17 Multimedia		#	#	#	#	ee=00 None ee=01 Presentation (Old: Cinema) ee=02 Bright ee=03 Cinema (Old: Movie/Photo) ee=04 sRGB\Reference\Standard ee=05 User(1) ee=06 User2 ee=07 Blackboard ee=08 Classroom ee=09 3D ee=10 DICOM SIM. ee=11 Film ee=12 Game ee=13 Cinema ee=14 Vivid ee=15 ISF Day ee=16 ISF Night ee=17 ISF 3D ee=18 2D high speed ee=19 Blending Mode ee=20 Sport ee=21 HDR ee=22 HDR SIM. ee=23 Super Bright ee=24 (Alexa auto check 2D/3D User)	

