VC-B30U

RS-232 command set

No	Issue Date	Description	Apply Firmware
1	2017/08/04	First version.	VHG101
2	2018/01/29	1. Add new command 1.1 SYS_Menu set 1.2 SYS_Enter set 1.2 SYS_Menu inquiry	VHG105
3	2018/10/8	1. Add new command 1.1 Pan Direction Set 1.2 Pan Direction Inq 2. Revise command 2.1 Resolution SetttingInq : 1080p 29.97fps / 25fps, 720p 29.97fps / 25fps 2.2 Camera Control System Inquiry BYTE 9 2.3 Enlargement Function2 Query BYTE 4	VHG108
4	2019/05/14	1. Add SYS_PrivacyModeInq 2. Add SYS_PrivacyMode	VHG110

***Notice:**

1. **The RS-232 command list is for VC-B30U.**
2. **The yellow highlight means the latest update.**
3. **The blue highlight means the deleted item.**

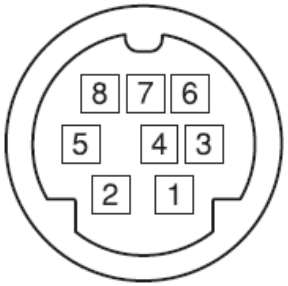
1. Communication Protocol

Transmit Method: Asynchronous Interface Half Duplex Serial Communication

- Transmit Speed: 9600bps or 38400bps
- Start bit: 1Bit
- Parity Check: NA
- Data Bit: 8Bit
- Stop Bit: 1Bit

2. The wire diagram

The RS232 wire diagram between presenter and remote controller as below



No	Pins
1	DTR IN
2	DSR IN
3	TXD IN
4	GND
5	RXD IN
6	GND

1. ACK & Completion message

	Reply Packet	Note
Ack	X0 4Y FF	Y = socket number
Completion (commands)	X0 5Y FF	Y = socket number
Completion (Inquiries)	X0 5Y ... FF	Y = socket number
X = 9 to F==>camera address + 8 , Y=1 to 2		

2. Error message

Error Packet	Description
X0 60 02 FF	Syntax Error
X0 60 03 FF	Command buffer full
X0 6Y 04 FF	Command cancelled
X0 6Y 05 FF	No socket (to be cancelled)
X0 6Y 41 FF	Command not executable
X = 9 to F==>camera address + 8 Y = socket number, Y=0 to 2, 0: Inqurity not execution	

3. Command execution cancel

	Cancel Packet	Note
Cancel	8X 2Y FF	Y = socket number
X = 1 to 7==>camera address, Y = socket number, Y=1 to 2		

4. Network Change

	Packet	Note
Address	88 30 01 FF	Always broadcasted
Network Change	X0 38 FF	
X = 9 to F==>camera address + 8		

5. IF_Clear

	Command	Reply Packet Note
IF_Clear	8X 01 00 01 FF	X0 50 FF
IF_Clear (broadcast)	88 01 00 01 FF	88 01 00 01 FF
X = 1 to 7==>camera address (For inquiry packet)		
X = 9 to F==>camera address +8 (For reply packet)		

6. Zoom Focus Position Table

	Wide end	Optical Tele end	Digital Tele end	
Sony Zoom Position	0000 to	0x4000 to	0x4033(720p) / 0x406E(1080p)	
Real Zoom Position	0000 to	1357 to	1408(720p) / 1467(1080p)	
Focus Position	Far end		Near end	focus range is limited by each zoom position
	000	to	0x857	

7. AE_Shutter Table

	Index(pq)	60/30 mode	50/25 mode
Shutter Speed	15	1/10000	1/10000
	14	1/5000	1/5000
	13	1/3000	1/3000
	12	1/2500	1/2500
	11	1/2000	1/1750
	10	1/1500	1/1250
	0F	1/1000	1/1000
	0E	1/725	1/600
	0D	1/500	1/425
	0C	1/350	1/300
	0B	1/250	1/215
	0A	1/180	1/150
	09	1/120	1/120
	08	1/100	1/100
	07	1/90	1/75
	06	1/60	1/50
	05	1/30	1/25
	04	1/15	1/12
	03	1/8	1/6
	02	1/4	1/3
	01	1/2	1/2
	00	1/1	1/1

8. AE_Gain Table

	Index(pq)	Value
Gain	0F	+30 dB
	0E	+28 dB
	0D	+26 dB
	0C	+24 dB
	0B	+22 dB
	0A	+20 dB
	09	+18 dB
	08	+16 dB
	07	+14 dB
	06	+12 dB
	05	+10 dB
	04	+8 dB
	03	+6 dB
	02	+4 dB
	01	+2 dB
	00	0 dB

9. AE_Gain Limit Table

	Index(p)	Value
Gain	0F	+30 dB
	0E	+28 dB
	0D	+26 dB
	0C	+24 dB
	0B	+22 dB
	0A	+20 dB
	09	+18 dB
	08	+16 dB
	07	+14 dB
	06	+12 dB
	05	+10 dB
	04	+8 dB

10. AE_Exposure Comp. Table

	Index(pq)	VISCA Step	OSD Value
Exposure Comp. (AE Level)	0A	10	4
	09	9	3
	08	8	2
	07	7	1
	06	6	0
	05	5	-1
	04	4	-2
	03	3	-3
	02	2	-4
	01	1	-5
	00	0	-6

11. AE_Iris Table

	Index(pq)	F Number
Iris	01	F20
	02	F14
	03	F10
	04	F7.2
	05	F5.1
	06	F3.6
	07	F2.5
	08	F1.8

12. Camera Command List

Category	Command Set	Command	Command Packet	Comments
System	AddressSet	Broadcast	88 30 01 FF	Address setting
System	IF_Clear	Broadcast	88 01 00 01 FF	I/F Clear
System	CommandCancel	–	8x 2p FF	p: Socket No. (=1 or 2)
System	CAM_Power	On	8x 01 04 00 02 FF	Power ON/OFF
System	CAM_Power	Off (Standby)	8x 01 04 00 03 FF	
System	CAM_AutoPowerOff	Direct	8x 01 04 40 0p 0q 0r 0s FF	Auto Power Off, pqrs: 0x0000 To 0xFFFF pqrs: Power Off Timer 0x0000 (Timer Off) to 0xFFFF (65535min) Initial value: 0x0000 The power automatically turns off if the camera does not receive any commands or any signals from the Remote Commander for the duration you set in the timer.
Zoom	CAM_Zoom	Stop	8x 01 04 07 00 FF	p=0 (Low) to 7 (High)
Zoom		Tele (Standard)	8x 01 04 07 02 FF	
Zoom		Wide (Standard)	8x 01 04 07 03 FF	
Zoom		Tele Step	8x 01 04 07 04 FF	
Zoom		Wide Step	8x 01 04 07 05 FF	
Zoom		Tele (Variable)	8x 01 04 07 2p FF	
Zoom		Wide (Variable)	8x 01 04 07 3p FF	
Zoom	CAM_Zoom	Sony Zoom Direct	8x 01 04 47 0p 0q 0r 0s FF	pqrs: Sony Zoom Position refer to **Zoom Foucs Position Table** t:Speed:0~7
Zoom	CAM_Zoom	Sony Zoom Direct(Speed Variable)	8x 01 04 47 0p 0q 0r 0s 0t FF	

Category	Command Set	Command	Command Packet	Comments
Zoom	CAM_Zoom	Real Zoom Direct(Speed Variable)	8x 01 04 47 00 0p 0q 0r 0s 0t FF	pqrs: Real Zoom Position refer to **Zoom Foucs Position Table** t:Speed:0~7
Zoom	CAM_Zoom	D-Zoom Limit	8x 01 04 26 0p FF	p=0x00 to 0x0B 0x00: X1 (D-Zoom Off) / 0x01: X2 / … / 0x0B : 12X
Focus	CAM_Focus	Stop	8x 01 04 08 00 FF	p=0 (Low) to 7 (High) * Enabled during Focus Manual Mode
Focus		Far (Standard)	8x 01 04 08 02 FF	
Focus		Near (Standard)	8x 01 04 08 03 FF	
Focus		Far (Variable)	8x 01 04 08 2p FF	
Focus		Near (Variable)	8x 01 04 08 3p FF	
Focus	CAM_Focus	Direct	8x 01 04 48 0p 0q 0r 0s FF	pqrs: Focus Position refer to **Zoom Foucs Position Table** * Enabled during Focus Manual Mode
Focus	CAM_Focus	Auto Focus	8x 01 04 38 02 FF	AF ON/OFF
Focus		Manual Focus	8x 01 04 38 03 FF	
Focus		Auto/Manual	8x 01 04 38 10 FF	
Focus	CAM_Focus	One Push Trigger	8x 01 04 18 01 FF	One Push AF Trigger * Enabled during Focus Manual Mode
White Balance	CAM_WB	Auto	8x 01 04 35 00 FF	
White Balance		ATW	8x 01 04 35 04 FF	
White Balance		Manual	8x 01 04 35 05 FF	
		In Door	8x 01 04 35 01 FF	
		Out Door	8x 01 04 35 02 FF	

Category	Command Set	Command	Command Packet	Comments
		One Push WB	8x 01 04 35 03 FF	
		3000K	8x 01 04 35 06 FF	
		4300K	8x 01 04 35 07 FF	
		5000K	8x 01 04 35 08 FF	
		6500K	8x 01 04 35 09 FF	
		8300K	8x 01 04 35 0A FF	
		Wide Auto	8x 01 04 35 0B FF	
White Balance		SodiumLamp	8x 01 04 35 0C FF	
White Balance	CAM_WB	One Push Trigger	8x 01 04 10 05 FF	One Push WB Trigger * Enabled during One Pus WB Mode
Exposure	CAM_AE	Full Auto	8x 01 04 39 00 FF	Automatic Exposure mode
Exposure		Manual	8x 01 04 39 03 FF	Manual Control mode
Exposure		Shutter Priority	8x 01 04 39 0A FF	Shutter Priority Automatic Exposure mode
Exposure		Iris Priority	8x 01 04 39 0B FF	Iris Priority Automatic Exposure mode
Exposure		White Board	8x 01 04 39 5F FF	White Board mode
Exposure		Stable Auto	8x 01 04 39 9F FF	Stable Auto mode
Exposure	CAM_Shutter	Reset	8x 01 04 0A 00 FF	Shutter Setting pq: Shutter Position , pq: 0x00 To 0x15 refer to **AE_Shutter Table** * Enabled during Shutter Priority / Manaual Mode
Exposure		Up	8x 01 04 0A 02 FF	
Exposure		Down	8x 01 04 0A 03 FF	
Exposure	CAM_Shutter	Direct	8x 01 04 4A 00 00 0p 0q FF	
Exposure	CAM_Iris	Reset	8x 01 04 0B 00 FF	Iris Setting pq: Iris Position , pq: 0x01 To 0x08 refer to **AE_IRIS table** * Enabled during Iris Priority / Manaual Mode
Exposure		Up	8x 01 04 0B 02 FF	
Exposure		Down	8x 01 04 0B 03 FF	
Exposure	CAM_Iris	Direct	8x 01 04 4B 00 00 0p 0q FF	

Category	Command Set	Command	Command Packet	Comments
Exposure	CAM_Gain	Reset	8x 01 04 0C 00 FF	Gain Setting refre to **AE_Gain Table** * Enabled during AE Manaual Mode
Exposure		Up	8x 01 04 0C 02 FF	
Exposure		Down	8x 01 04 0C 03 FF	
Exposure	CAM_Gain	Direct	8x 01 04 4C 00 00 0p 0q FF	Gain Position pq: Gain Position, pq:0x00 To 0x0F refre to **AE_Gain Table** * Enabled during Manaual Mode
Exposure	CAM_Gain	Gain Limit	8x 01 04 2C pq FF	pq: Gain Position , pq: 0x04 To 0x0F refer to **AE_Gain Limit Table** * Enabled during Iris Priority / Shutter Priority / Full Auto / White Board / Stable Auto Mode
Exposure	CAM_ExpCompOnOff	On	8x 01 04 3E 02 FF	Exposure Compensation ON/OFF * Enabled during Iris Priority / Shutter Priority / Full Auto / White Board / Stable Auto Mode
Exposure		Off	8x 01 04 3E 03 FF	
Exposure	CAM_ExpComp	Reset	8x 01 04 0E 00 FF	Exposure Compensation Level pq: ExpComp Position , pq: 0x00 To 0x0A refer to **AE_Exposure Comp. Table** * Enabled during Iris Priority / Shutter Priority / Full Auto / White Board / Stable Auto Mode
Exposure		Up	8x 01 04 0E 02 FF	
Exposure		Down	8x 01 04 0E 03 FF	
Exposure	CAM_ExpComp	Direct	8x 01 04 4E 00 00 0p 0q FF	
Exposure	CAM_BackLight	On	8x 01 04 33 02 FF	Back Light Compensation ON/OFF * Enabled during Iris Priority / Shutter Priority / Full Auto / White Board / Stable Auto Mode
Exposure		Off	8x 01 04 33 03 FF	
Exposure	CAM_WD	Set Parameter	8x 01 04 2D 0p FF	p: 0 ~ 5, 0: Off, 1~5: mode 1~5
Picture	CAM_PictureEffect	—	8x 01 04 63 00 FF	Off
			8x 01 04 63 02 FF	Negative
			8x 01 04 63 04 FF	Black and White

Category	Command Set	Command	Command Packet	Comments
Picture	CAM_Aperture(Sharpness)	Reset	8x 01 04 02 00 FF	Aperture Control pq: Aperture Gain, pq: 0x00 To 0x0F
Picture		Up	8x 01 04 02 02 FF	
Picture		Down	8x 01 04 02 03 FF	
Picture	CAM_Aperture(Sharpness)	Direct	8x 01 04 42 00 00 0p 0q FF	
Picture	CAM_2DNR	—	8x 01 04 53 0p FF	p: 2DNR Setting , p: 0 To 6 (0: OFF, 1~5: 1~5, 6:Auto)
Picture	CAM_3DNR	—	8x 01 04 54 0p FF	p: 3DNR Setting , p: 0 To 4 , 0 : Off / 1 : Low / 2 : Typ / 3 : Max / 4 : Auto
Picture	CAM_Gamma	—	8x 01 04 5B 0p FF	p: Gamma setting ,p: 0 To 3 ~~* Enabled during image mode is custom~~
D-effect	CAM_LR_Reverse	On	8x 01 04 61 02 FF	Mirror Image ON/OFF
D-effect		Off	8x 01 04 61 03 FF	
D-effect	CAM_PictureFlip	On	8x 01 04 66 02 FF	VC-B30U: Picture flip ON/OFF VC-B30UM: Picture flip ON
D-effect		Off	8x 01 04 66 03 FF	
System	CAM_Memory(Preset)	Reset	8x 01 04 3F 00 pp FF	pp: Memory Number (pp: 0x00 To 0x7F)
System	CAM_Memory(Preset)	Set	8x 01 04 3F 01 pp FF	pp: Memory Number (pp: 0x00 To 0x7F)
System	CAM_Memory(Preset)	Recall	8x 01 04 3F 02 pp FF	pp: Memory Number (pp: 0x00 To 0x7F)
Picture	CAM_ColorGain(Saturation)	Direct	8x 01 04 49 00 00 00 pq FF	pq:0x00~0x19 ~~* Enabled during image mode is custom~~
Picture	CAM_ColorHue	Direct	8x 01 04 4F 00 00 00 0p FF	p: 0x00~0x0E ~~* Enabled during image mode is custom~~
System	SYS_Menu	Auto	8x 01 06 06 10 FF	turn on / off menu
System		On	8x 01 06 06 02 FF	turn on menu

Category	Command Set	Command	Command Packet	Comments
System		Off	8x 01 06 06 03 FF	turn off menu
System	SYS_Enter	Enter	8x 01 7E 01 02 00 01 FF	menu enter
System	IR_Receive	On	8x 01 06 08 02 FF	IR(remote commander) receive ON/OFF
System		Off	8x 01 06 08 03 FF	
System		On/Off	8x 01 06 08 10 FF	
System	IR_ReceiveReturn	On	8x 01 7D 01 03 00 00 FF	IR (remote commander) receive message via the communication ON/OFF
System	IR_ReceiveReturn	Off	8x 01 7D 01 13 00 00 FF	
System	IR Pass Through	-	8x 01 06 09 0p FF	p: 0 to 3 0 / 1 / 2: Right AND Left 3: Off
Pan Tilt	Pan-tiltDrive	Up	8x 01 06 01 VV WW 03 01 FF	VV: Pan speed 0x01 (low speed) to 0x18 (high speed) WW: Tilt Speed 0x01 (low speed) to 0x18 (high speed) YYYY: Pan Position 0x0000 to 0x2260 & 0xFFFF to 0xDDA0 (center 0x0000) ZZZZ: Tilt Position 0x0000 to 0x0A00 & 0x0000 to 0xF600 (center 0x0000)
Pan Tilt		Down	8x 01 06 01 VV WW 03 02 FF	
Pan Tilt		Left	8x 01 06 01 VV WW 01 03 FF	
Pan Tilt		Right	8x 01 06 01 VV WW 02 03 FF	
Pan Tilt		UpLeft	8x 01 06 01 VV WW 01 01 FF	
Pan Tilt		UpRight	8x 01 06 01 VV WW 02 01 FF	
Pan Tilt		DownLeft	8x 01 06 01 VV WW 01 02 FF	
Pan Tilt		DownRight	8x 01 06 01 VV WW 02 02 FF	
Pan Tilt		Stop	8x 01 06 01 VV WW 03 03 FF	
Pan Tilt	Pan-tiltDrive	AbsolutePosition	8x 01 06 02 VV WW 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	
Pan Tilt	Pan-tiltDrive	RelativePosition	8x 01 06 03 VV WW 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	
Pan Tilt	Pan-tiltDrive	Home	8x 01 06 04 FF	

Category	Command Set	Command	Command Packet	Comments
Pan Tilt	Pan-tiltDrive	Reset	8x 01 06 05 FF	
Pan Tilt	Pan-tiltLimitSet	LimitSet	8x 01 06 07 00 0W 0Y 0Y 0Y 0Y 0Z 0Z 0Z 0Z FF	W: 1 UpRight YYYY: Pan Limit Position 0x0000~0x2260 ZZZZ: Tilt Limit Position 0x0000~0x0A00 W: 0 DownLeft YYYY: Pan Limit Position 0xFFFF~0xDDA0 ZZZZ: Tilt Limit Position 0xFFFF~0xF600
Pan Tilt	Pan-tiltLimitSet	LimitClear	8x 01 06 07 01 0W 07 0F 0F 0F 07 0F 0F 0F FF	
Pan Tilt	Pan-tilt PPS Table Set	Pan PPS Set	8x 01 06 1A 0U 0V 0W 0X 0Y 0Z FF	UV: Speed Index WXYZ: PPS(1~35354 for Pan / 1~8838 for Tilt)
Pan Tilt	Pan-tilt PPS Table Set	Tilt PPS Set	8x 01 06 1B 0U 0V 0W 0X 0Y 0Z FF	
Pan Tilt	Pan-tilt PPS Table Set	P/T PPS Total Segment Select + Load Default	8x 01 06 1C 0U 0V 0D 0E 0F FF	UV: select total segment and load default PPS, value = 24 / 100
Pan Tilt	Pan-tilt PPS Table Set	P/T PPS Total Segment Select	8x 01 06 1D 0U 0V FF	UV: total segment select, value = 24 / 100
Pan Tilt	Pan-tilt PPS Table Set	P/T PPS Table Save	8x 01 06 1E FF	to save PPS table
Pan Tilt	Pan Direction Set	Normal	8x 01 06 14 00 FF	face to VC-B30U, handle-bar of controller control direction is the same as camera header
Pan Tilt		Reverse	8x 01 06 14 01 FF	behind VC-B30U, handle-bar of controller control direction is the same as camera header (VC-B30U only)
System	Error Code	Clear Error Code Record	8x 02 02 02 FF	
System	Factory Reset	Factroy Reset	8x 01 04 3F 03 00 FF	
System	System Reset	System Reset	8x 01 04 3F 06 00 FF	
Picture	CAM_ImageModeSkin Tone	Set Skin Tone	8x 01 04 75 06 0p FF	p: 0x00~0x04 skin tone level ~~* Enabled during image mode is custom~~

Category	Command Set	Command	Command Packet	Comments
Picture	CAM_ImageModeBrightness	Set Brightness	8x 01 04 75 67 0p FF	p: 0x00~0x0E ~~* Enabled during image mode is custom~~
Picture	CAM_ImageModeContrast	Set Contrast	8x 01 04 75 68 0p FF	p: 0x00~0x0E ~~* Enabled during image mode is custom~~
Picture	CAM_ImageModeBlackLevel	Set Black Level	8x 01 04 75 69 0p FF	p: 0x00~0x03 0: Off / 1: Type1 / 2: Type2 / 3: Type3 ~~* Enabled during image mode is custom~~
Focus	CAM_AF_SENSITIVE	-	8x 01 04 58 0p FF	p: 1 to 3, 1:High , 2:Middle, 3:Low
Focus	CAM_AF_FRAME	Full Frame	8x 01 04 5C 02 FF	Set AF frame : Full Frame / Center
Focus		Center	8x 01 04 5C 03 FF	
Focus		Full Frame / Center	8x 01 04 5C 10 FF	
System	CAM_FREEZE	Freeze On	8x 01 04 62 02 FF	Freeze On
System		Freeze Off	8x 01 04 62 03 FF	Freeze Off
System	Save last memory	-	8x 01 04 3F 03 02 FF	
System	CAM_IDWrite	—	8x 01 04 22 0p 0q 0r 0s FF	pqrs: Camera ID (=0000 to FFFF)
System	CAM Vender Model	Set Camera Vender model	8x 01 04 23 pp qq rr ss FF	ppqq: Vender ID , rrss:Model ID, (for example, HD1 = 00, 01, 05, 04)
System	CAM_MemSave	Write Mem Data	8x 01 04 23 00 0p 0p 0q 0q FF	Address 00, ppqq: 0x0000 to 0xFFFF (Data)
			8x 01 04 23 01 0p 0p 0q 0q FF	
			8x 01 04 23 02 0p 0p 0q 0q FF	
			8x 01 04 23 03 0p 0p 0q 0q FF	
			8x 01 04 23 04 0p 0p 0q 0q FF	
			8x 01 04 23 05 0p 0p 0q 0q FF	
			8x 01 04 23 06 0p 0p 0q 0q FF	
			8x 01 04 23 07 0p 0p 0q 0q FF	
White	CAM_RGain	Reset	8x 01 04 03 00 FF	Manual Control of R Gain

Category	Command Set	Command	Command Packet	Comments
Balance				pq: R Gain,data range:0x00~0x3C * Enabled during WB Manual Mode
White Balance		Up	8x 01 04 03 02 FF	
White Balance		Down	8x 01 04 03 03 FF	
White Balance	CAM_RGain	Direct	8x 01 04 43 00 00 0p 0q FF	
White Balance	CAM_BGain	Reset	8x 01 04 04 00 FF	Manual Control of B Gain pq: B Gain,data range:0x00~0x3C * Enabled during WB Manual Mode
White Balance		Up	8x 01 04 04 02 FF	
White Balance		Down	8x 01 04 04 03 FF	
White Balance	CAM_BGain	Direct	8x 01 04 44 00 00 0p 0q FF	
System	SYS_MotionlessPreset	On	8x 01 07 01 02 FF	Motionless Preset On
System		Off	8x 01 07 01 03 FF	Motionless Preset Off
System	SYS_PrivacyMode	On	8x 01 04 00 01 02 FF	Privacy Mode On
System		Off	8x 01 04 00 01 03 FF	Privacy Mode Off

13. Inquiry

Category	Inquiry Command	Command Packet	Inquiry Packet	Comments
System	CAM_PowerInq	8x 09 04 00 FF	y0 50 02 FF	On
System	CAM_PowerInq		y0 50 03 FF	Off (Standby)
Zoom	CAM_ZoomPosInq	8x 09 04 47 FF	y0 50 0p 0q 0r 0s FF	pqrs: Sony Zoom Position (Optical + Digital Zoom Position) refer to **Zoom Foucs Position Table**
Zoom	CAM_ZoomRealPosInq	8x 09 04 47 00 FF	y0 50 0p 0q 0r 0s FF	pqrs: Real Zoom Position (Optical + Digital Zoom Position) refer to **Zoom Foucs Position Table**
Zoom	CAM_DZoomLimitInq	8x 09 04 26 FF	y0 50 0p FF	p = 0(x1), 1(x2), 2(x3), 3(x4), 4(x5), 5(x6), 6(x7), 7(x8), 8(x9), 9(x10), A(x11), B(x12)
Zoom	CAM_DZoomModeInq	8x 09 04 06 FF	y0 50 02 FF	D-Zoom On
Zoom	CAM_DZoomModeInq		y0 50 03 FF	D-Zoom Off
Zoom	Digital Zoom Position	8x 09 04 46 FF	y0 50 00 00 0p 0q FF	pq: D-Zoom Position(*Enabled during Separate Mode), pq: 00 To 0x33(720p) / 0x6E(1080p)
Focus	CAM_FocusModeInq	8x 09 04 38 FF	y0 50 02 FF	Auto Focus
Focus	CAM_FocusModeInq		y0 50 03 FF	Manual Focus
Focus	CAM_FocusPosInq	8x 09 04 48 FF	y0 50 0p 0q 0r 0s FF	pqrs: Focus Position refer to **Zoom Foucs Position Table**
White Balance	CAM_WBModeInq	8x 09 04 35 FF	y0 50 00 FF	Auto
White Balance	CAM_WBModeInq		y0 50 04 FF	ATW
White Balance	CAM_WBModeInq		y0 50 05 FF	Manual

Category	Inquiry Command	Command Packet	Inquiry Packet	Comments
White Balance	CAM_WBModeInq		y0 50 01 FF	In Door
White Balance	CAM_WBModeInq		y0 50 02 FF	Out Door
White Balance	CAM_WBModeInq		y0 50 03 FF	One Push WB
White Balance	CAM_WBModeInq		y0 50 06 FF	3000K
White Balance	CAM_WBModeInq		y0 50 07 FF	4300K
White Balance	CAM_WBModeInq		y0 50 08 FF	5000K
White Balance	CAM_WBModeInq		y0 50 09 FF	6500K
White Balance	CAM_WBModeInq		y0 50 0A FF	8300K
White Balance	CAM_WBModeInq		y0 50 0B FF	Wide Auto
White Balance	CAM_WBModeInq		y0 50 0C FF	SodiumLamp
White Balance	CAM_RGainInq	8x 09 04 43 FF	y0 50 00 00 0p 0q FF	pq: R Gain
White Balance	CAM_BGainInq	8x 09 04 44 FF	y0 50 00 00 0p 0q FF	pq: B Gain
Exposure	CAM_PowerFreqInq	8x 09 04 3A FF	y0 50 01 FF	50Hz
Exposure	CAM_PowerFreqInq		y0 50 02 FF	60Hz

Category	Inquiry Command	Command Packet	Inquiry Packet	Comments
Exposure	CAM_AEModeInq	8x 09 04 39 FF	y0 50 00 FF	Full Auto
Exposure	CAM_AEModeInq		y0 50 03 FF	Manual
Exposure	CAM_AEModeInq		y0 50 0A FF	Shutter Priority
Exposure	CAM_AEModeInq		y0 50 0B FF	Iris Priority
Exposure	CAM_AEModeInq		y0 50 5F FF	White Board
Exposure	CAM_AEModeInq		y0 50 9F FF	Stable Auto
Exposure	CAM_ShutterPosInq	8x 09 04 4A FF	y0 50 00 00 0p 0q FF	pq: Shutter Position, pq: 0x00 To 0x15 refer to **AE_Shutter Table**
Exposure	CAM_IrisPosInq	8x 09 04 4B FF	y0 50 00 00 0p 0q FF	pq: Iris Position , pq: 0x01 To 0x08 refer to **AE_IRIS table**
Exposure	CAM_GainPosInq	8x 09 04 4C FF	y0 50 00 00 0p 0q FF	pq: Gain Position, pq: 0x00 To 0x0F refre to **AE_Gain Table**
Exposure	CAM_GainLimitInq	8x 09 04 2C FF	y0 50 0q FF	p: Gain Limit, p: 0x04 To 0x0F refer to **AE_Gain Limit Table**
Exposure	CAM_ExpCompModeInq	8x 09 04 3E FF	y0 50 02 FF	On
Exposure	CAM_ExpCompModeInq		y0 50 03 FF	Off
Exposure	CAM_ExpCompPosInq	8x 09 04 4E FF	y0 50 00 00 0p 0q FF	pq: ExpComp Position, pq: 0x00 To 0x0A refer to **AE_Exposure Comp. Table**
Exposure	CAM_BackLightModeInq	8x 09 04 33 FF	y0 50 02 FF	On
Exposure	CAM_BackLightModeInq		y0 50 03 FF	Off
Exposure	CAM_SpotAEModeInq	8x 09 04 59 FF	y0 50 02 FF	On
Exposure	CAM_SpotAEModeInq		y0 50 03 FF	Off
Exposure	CAM_SpotAEPosInq	8x 09 04 29 FF	y0 50 0p 0q 0r 0s FF	pq: X position, rs: Y position, pq: 00 To 08, rs: 00 To 06
Exposure	CAM_WDParameterInq	8x 09 04 2D FF	y0 50 0p FF	p: 0 ~ 5, 0: Off, 1~5: mode 1~5
	Picture Effect inq	8x 09 04 63 FF	y0 50 00 FF	Off

Category	Inquiry Command	Command Packet	Inquiry Packet	Comments
			y0 50 02 FF	Negative
Picture			y0 50 04 FF	Black and White
Picture	CAM_ApertureInq	8x 09 04 42 FF	y0 50 00 00 0p 0q FF	pq: Aperture Gain, pq: 00 To 0F
Picture	CAM_2DNRModeInq	8x 09 04 53 FF	y0 50 0p FF	p: NR Setting , p: 0 To 6 (0: OFF, 1~5: 1~5, 6:Auto)
Picture	CAM_3DNRModeInq	8x 09 04 54 FF	y0 50 0p FF	p: 3DNR Setting , p: 0 To 4 , 0 : Off / 1 : Low / 2 : Typ / 3 : Max / 4 : Auto
Picture	CAM_GammaInq	8x 09 04 5B FF	y0 50 0p FF	Gamma p: 0 To 3
D-effect	CAM_LR_ReverseModeInq	8x 09 04 61 FF	y0 50 02 FF	On
D-effect	CAM_LR_ReverseModeInq		y0 50 03 FF	Off
D-effect	CAM_PictureFlipModeInq	8x 09 04 66 FF	y0 50 02 FF	On
D-effect	CAM_PictureFlipModeInq		y0 50 03 FF	Off
Picture	CAM_ImageModeSkinToneInq	8x 09 04 75 06 FF	y0 50 0p FF	p: 0x00~0x04 skin tone level
Picture	CAM_ImageModeBrightnessInq	8x 09 04 75 67 FF	y0 50 0p FF	p: 0x00~0x0E
Picture	CAM_ImageModeContrastInq	8x 09 04 75 68 FF	y0 50 0p FF	p: 0x00~0x0E
Picture	CAM_ImageModeBlackLevelInq	8x 09 04 75 69 FF	y0 50 0p FF	p: 0x00~0x03, 0: Off / 1: Type1 / 2: Type2 / 3: Type3
Picture	CAM_ColorGainInq	8x 09 04 49 FF	y0 50 00 00 00 pq FF	pq: Color Gain setting , pq: 0x00 To 0x19
Picture	CAM_ColorHueInq	8x 09 04 4F FF	y0 50 00 00 00 0p FF	p: Color Hue setting p: 0x0 To 0x0E
	SYS_Menu	8x 09 06 06 FF	y0 50 02 FF	On
	SYS_Menu		y0 50 03 FF	Off
System	IR_Receive	8x 09 06 08 FF	y0 50 02 FF	On
System	IR_Receive		y0 50 03 FF	Off
System	IR_ReceiveReturn		y0 07 7D 01 04 00 FF	Power ON/OFF
System	IR_ReceiveReturn		y0 07 7D 01 04 07 FF	Zoom tele/wide
System	IR_ReceiveReturn		y0 07 7D 01 04 38 FF	AF On/Off

Category	Inquiry Command	Command Packet	Inquiry Packet	Comments
System	IR_ReceiveReturn		y0 07 7D 01 04 33 FF	CAM_Backlight
System	IR_ReceiveReturn		y0 07 7D 01 04 3F FF	CAM_Memory
System	IR_ReceiveReturn		y0 07 7D 01 06 01 FF	Pan_tiltDrive
System	IR Pass Through Inq	8x 09 06 09 FF	y0 50 0p FF	p: 0 to 3 0 / 1 / 2: Right AND Left 3: Off
Pan Tilt	Pan-tiltMaxSpeedInq	8x 09 06 11 FF	y0 50 ww zz FF	ww = Pan Max Speed, ww: 0x18 zz = Tilt Max Speed, zz: 0x18
Pan Tilt	Pan-tiltPosInq	8x 09 06 12 FF	y0 50 0w 0w 0w 0w 0z 0z 0z 0z FF	wwww: Pan Position, 0x0000 To 0x2260 or 0xFFFF To 0xDDA0 zzzz: Tilt Position, 0x0000 To 0x0A00 or 0xFFFF To 0xF600
Pan Tilt	Pan PPS Table Inq	8x 09 06 1A 0U 0V FF	y0 50 0w 0x 0y 0z FF	UV: speed index 1-24 for 24 segment of P/T PPS table 1-100 for 100 segment of P/T PPS table wxyz: PPS value of the speed index
Pan Tilt	Tilt PPS Table Inq	8x 09 06 1B 0U 0V FF		
Pan Tilt	Pan Direction Inq	8x 09 06 14 FF	y0 50 00 FF	Normal
Pan Tilt	Pan Direction Inq		y0 50 01 FF	Reverse **(VC-B30U only)**
Focus	CAM_AF_SENSITIVE_INQ	8x 09 04 58 FF	y0 50 0p FF	p: 1 to 3, 1:High , 2:Middle, 3:Low
Focus	CAM_AF Frame Inq	8x 09 04 5C FF	y0 50 02 FF	Full
Focus	CAM_AF Frame Inq		y0 50 03 FF	Center
System	Freeze Inq	8x 09 04 62 FF	y0 50 02 FF	Freeze On
System	Freeze Inq		y0 50 03 FF	Freeze Off
System	SYS_MotionlessInq	8x 09 07 01 FF	y0 50 02 FF	Motionless Preset On
System	SYS_MotionlessInq		y0 50 03 FF	Motionless Preset Off

Category	Inquiry Command	Command Packet	Inquiry Packet	Comments
System	SYS_PrivacyModeInq	8x 09 04 00 01 FF	y0 50 02 FF	Privacy Mode On
System	SYS_PrivacyModeInq		y0 50 03 FF	Privacy Mode Off
System	Resolution SetttingInq (HDMI output timing)	8x 09 06 23 FF	y0 50 0p FF	p: 0x00:1080p-60 0x01:1080p-50 0x02:1080p-29.97 0x03:1080p-25 0x06:720p-60 0x07:720p-50 0x08:720p-29.97 0x09:720p-25
System	CAM_MemoryInq	8x 09 04 3F FF	y0 50 pp FF	pp: Memory number recalled last, default value(no get any recall command) pp:0x00 , pp: 0x00 To 0x7F
System	CAM_Machine_IDInq	8x 09 04 22 FF	y0 50 0p 0q 0r 0s FF	pqrs: Camera ID
System	CAM Vender Model Inq	8x 09 00 02 FF	y0 50 pp qq rr ss jj jj kk FF	ppqq: Vender ID(0001) rrss: Model ID(0504) jjjj: Rom revision(0104) kk: Maxinum socket(02)
System	CAM_MemSaveInq	8x 09 04 23 00 FF	y0 50 0p 0p 0q 0q FF	Address 00, ppqq: 0x0000 to 0xFFFF (Data)
		8x 09 04 23 01 FF		Address 01, ppqq: 0x0000 to 0xFFFF (Data)
		8x 09 04 23 02 FF		Address 02, ppqq: 0x0000 to 0xFFFF (Data)
		8x 09 04 23 03 FF		Address 03, ppqq: 0x0000 to 0xFFFF (Data)
		8x 09 04 23 04 FF		Address 04, ppqq: 0x0000 to 0xFFFF (Data)
		8x 09 04 23 05 FF		Address 05, ppqq: 0x0000 to 0xFFFF (Data)
		8x 09 04 23 06 FF		Address 06, ppqq: 0x0000 to 0xFFFF (Data)
		8x 09 04 23 07 FF		Address 07, ppqq: 0x0000 to 0xFFFF (Data)

Category	Inquiry Command	Command Packet	Inquiry Packet	Comments
Lumens	FW VERSION M4	8x 09 00 02 00 00 FF	y0 50 aa bb cc dd ee ff gg hh ii jj kk ll FF	aabbccddeeffgghhiijjkkll (Ascii, data range = 0x00 ~ 0x7F)
Lumens	FW VERSION M0	8x 09 00 02 00 01 FF		
Lumens	FW VERSION USB	8x 09 00 02 00 02 FF		
Lumens	FW VERSION LATTICE	8x 09 00 02 00 03 FF		
Lumens	FW VERSION CM	8x 09 00 02 00 04 FF		
Lumens	FW VERSION DSP	8x 09 00 02 00 05 FF		

14. Camera Block Inquiry Command List

14.1 Lens Control System Inquiry Commands…….Command Set 8x 09 7E 7E 00 FF

Byte	Bit	Comments
Byte0	0	Source Address
	1	
	2	
	3	
	4	Destination Address
	5	
	6	
	7	
Byte1	0	0
	1	0
	2	0
	3	0
	4	1
	5	0
	6	1
	7	0 Completion Message (50h)
Byte2	0	Optical Zoom Position (HH)
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte3	0	Optical Zoom Position (HL)
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte4	0	Optical Zoom Position (LH)
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte5	0	Optical Zoom Position (LL)
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte6	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte7	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte8	0	Focus Position (HH)
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte9	0	Focus Position (HL)
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte10	0	Focus Position (LH)
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte11	0	Focus Position (LL)
	1	
	2	
	3	
	4	0
	5	0
	6	0

Byte	Bit	Comments
	7	0
Byte12	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte13	0	Focus Mode 0: Manual 1: Auto
	1	0
	2	Reserved
	3	Reserved
	4	Reserved
	5	Reserved

Byte	Bit	Comments
	6	0
	7	0
Byte14	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte15	0	1
	1	1
	2	1
	3	1
	4	1
	5	1
	6	1
	7	1 Terminator (FFh)

14.2 Camera Control System Inquiry Commands…….Command Set 8x 09 7E 7E 01 FF

Byte	Bit	Comments
Byte0	0	Source Address
	1	
	2	
	3	
	4	Destination Address
	5	
	6	
	7	
Byte1	0	0
	1	0
	2	0
	3	0
	4	1
	5	0
	6	1
	7	0 Completion Message (50h)
Byte2	0	Reserved
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte3	0	Reserved
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte4	0	Reserved
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte5	0	Reserved
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte6	0	WB Mode
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte7	0	Aperture
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte8	0	Exposure Mode
	1	
	2	
	3	
	4	
	5	
	6	
	7	

Byte	Bit	Comments
Byte9	0	Reserved
	1	Exposure Comp. 1: On 0: Off
	2	Back Light 1: On 0: Off
	3	Reserved
	4	Reserved
	5	Reserved
	6	0
	7	0
Byte10	0	Shutter Position
	1	
	2	
	3	
	4	
	5	
	6	
	7	

Byte	Bit	Comments
Byte11	0	F20 = 1
	1	F14 = 2
	2	F10 = 3
	3	F7.2 = 4
	4	F5.1 = 5 F3.6 = 6 F2.5 = 7 F1.8 = 8 Closed = 0 (Internal Used)
	5	0
	6	0
	7	0
Byte12	0	Gain Position
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte13	0	Reserved
	1	
	2	
	3	

Byte	Bit	Comments
	4	
	5	0
	6	0
	7	0
Byte14	0	ExpComp Position
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte15	0	1
	1	1
	2	1
	3	1
	4	1
	5	1
	6	1
	7	1 Terminator (FFh)

14.3 Other Inquiry Commands…….Command Set 8x 09 7E 7E 02 FF

Byte	Bit	Comments
Byte0	0	Source Address
	1	
	2	
	3	
	4	Destination Address
	5	
	6	
	7	
Byte1	0	0
	1	0
	2	0
	3	0
	4	1
	5	0
	6	1
	7	0 Completion Message (50h)
Byte2	0	Power 1: On 0: Off
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte3	0	0
	1	0
	2	LR Reverse 1: On 0: Off
	3	Reserved
	4	Reserved
	5	0
	6	0
	7	0
Byte4	0	0
	1	0
	2	0
	3	0
	4	Reserved
	5	0
	6	0
	7	0
Byte5	0	Picture Effect
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte6	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte7	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte8	0	Reserved
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte9	0	Reserved
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte10	0	Reserved
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte11	0	Reserved
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte12	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte13	0	0

Byte	Bit	Comments
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte14	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte15	0	1
	1	1
	2	1
	3	1
	4	1
	5	1
	6	1
	7	1 Terminator (FFh)

14.4 Enlargement Function1 Query Command…….Command Set 8x 09 7E 7E 03 FF

Byte	Bit	Comments
Byte0	0	Source Address
	1	
	2	
	3	
	4	Destination Address
	5	
	6	
	7	
Byte1	0	0
	1	0
	2	0
	3	0
	4	1
	5	0
	6	1
	7	0 Completion Message (50h)
Byte2	0	Reserved
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte3	0	Reserved
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte4	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte5	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte6	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte7	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte8	0	SpotAE Position (X)
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte9	0	SpotAE Position (Y)
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0
Byte10	0	Picture flip (1: On, 0: Off)
	1	Reserved
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte11	0	Color Gain
	1	
	2	
	3	
	4	
	5	
	6	
	7	
Byte12	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte13	0	2DNR Level
	1	
	2	
	3	0
	4	Gamma
	5	
	6	
	7	0
Byte14	0	Gain Limit
	1	
	2	
	3	
	4	Reserved
	5	
	6	
	7	0
Byte15	0	1
	1	1
	2	1
	3	1
	4	1
	5	1
	6	1
	7	1 Terminator (FFh)

14.5 Enlargement Function2 Query Command…….Command Set 8x 09 7E 7E 04 FF

Byte	Bit	Comments
Byte0	0	Source Address
	1	
	2	
	3	
	4	Destination Address
	5	
	6	
	7	
Byte1	0	0
	1	0
	2	0
	3	0
	4	1
	5	0
	6	1
	7	0 Completion Message (50h)
Byte2	0	Reserved
	1	
	2	
	3	0
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte3	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte4	0	Reversed
	1	Reversed
	2	Reversed
	3	Reversed
	4	Reversed
	5	Reversed
	6	Reversed
	7	Reversed
Byte5	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte6	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte7	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte8	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte9	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte10	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte11	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte12	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte13	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte14	0	0
	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
Byte15	0	1
	1	1
	2	1
	3	1
	4	1
	5	1
	6	1
	7	1 Terminator (FFh)

14.6 Enlargement Function3 Query Command……..Command Set 8x 09 7E 7E 05 FF

Byte	Bit	Comments
Byte0	0	Source Address
	1	
	2	
	3	
	4	Destination Address
	5	
	6	
	7	
Byte1	0	0
	1	0
	2	0
	3	0
	4	1
	5	0
	6	1
	7	0 Completion Message (50h)
Byte2	0	Color Hue
	1	
	2	
	3	
	4	0
	5	0
	6	0
	7	0

Byte	Bit	Comments
Byte3	0	Reserved
	1	
	2	
	3	
	4	
	5	
	6	
	7	0
Byte4	0	Reserved
	1	
	2	
	3	
	4	
	5	
	6	
	7	0
Byte5	0	Reserved
	1	
	2	
	3	
	4	
	5	
	6	
	7	0

Byte	Bit	Comments
Byte6	0	Reserved
	1	
	2	
	3	
	4	
	5	
	6	
	7	0
Byte7	0	Reserved
	1	
	2	
	3	
	4	
	5	
	6	
	7	0
Byte8	0	Reserved
	1	
	2	
	3	
	4	
	5	
	6	
	7	0

Byte	Bit	Comments
Byte9	0	Reserved
	1	
	2	
	3	
	4	
	5	
	6	
	7	0
Byte10	0	Reserved
	1	
	2	
	3	
	4	
	5	
	6	
	7	0

Byte	Bit	Comments
Byte11	0	Reserved
	1	
	2	
	3	
	4	
	5	
	6	
	7	0
Byte12	0	Reserved
	1	
	2	
	3	
	4	
	5	
	6	
	7	0

Byte	Bit	Comments
Byte13	0	Reserved
	1	
	2	
	3	
	4	
	5	
	6	
	7	0
Byte14	0	Reserved
	1	
	2	
	3	
	4	
	5	
	6	
	7	0
Byte15	0	1
	1	1
	2	1
	3	1
	4	1
	5	1
	6	1
	7	1 Terminator (FFh)