



## Serial port query command set

Version: VHD-QR-RD-005 V2.1

No.	Command	Command Package	Return Package	Instruction	Actual results	Remark
1	CAM_PowerInq	81 09 04 00 FF	y0 50 02 FF	On	OK	
			y0 50 03 FF	Off(Standby)	OK	
2	CAM_ZoomPosInq	81 09 04 47 FF	y0 50 0p 0q 0r 0s FF	pqrs: Zoom Position	OK	
3	CAM_FocusAFModelInq	81 09 04 38 FF	y0 50 02 FF	Auto Focus	OK	
			y0 50 03 FF	Manual Focus	OK	
4	CAM_FocusPosInq	81 09 04 48 FF	y0 50 0p 0q 0r 0s FF	pqrs: Focus Position	OK	
5	CAM_WBModelInq	81 09 04 35 FF	y0 50 00 FF	Auto	OK	
			y0 50 01 FF	Indoor mode	OK	
			y0 50 02 FF	Outdoor mode	OK	
			y0 50 03 FF	OnePush mode	OK	
			y0 50 05 FF	Manual	OK	
			y0 50 20 FF	VAR	OK	
6	CAM_RGainInq	81 09 04 43 FF	y0 50 00 00 0p 0q FF	pq: R Gain	OK	
7	CAM_BGainInq	81 09 04 44 FF	y0 50 00 00 0p 0q FF	pq: B Gain	OK	
8	CAM_AEModelInq	81 09 04 39 FF	y0 50 00 FF	Full Auto	OK	
			y0 50 03 FF	Manual	OK	
			y0 50 0A FF	Shutter priority	OK	
			y0 50 0B FF	Iris priority	OK	
			y0 50 0D FF	Bright	OK	
9	CAM_ShutterPosInq	81 09 04 4A FF	y0 50 00 00 0p 0q FF	pq: Shutter Position	OK	
10	CAM_IrisPosInq	81 09 04 4B FF	y0 50 00 00 0p 0q FF	pq: Iris Position	OK	
11	CAM_GainPosInq	81 09 04 4C FF	y0 50 00 00 0p 0q FF	pq: Gain Position	OK	
12	CAM_BrightPosInq	81 09 04 4D FF	y0 50 00 00 0p 0q FF	pq: Bright Position	OK	
13	CAM_ExpCompModelInq	81 09 04 3E FF	y0 50 02 FF	On	OK	
			y0 50 03 FF	Off	OK	
14	CAM_ExpCompPosInq	81 09 04 4E FF	y0 50 00 00 0p 0q FF	pq: ExpComp Position	OK	
15	CAM_BacklightModelInq	81 09 04 33 FF	y0 50 02 FF	On	OK	
			y0 50 03 FF	Off	OK	
16	CAM_Noise2DModelInq	81 09 04 53 FF	y0 50 0p FF	Noise Reduction (2D) p: 0 to 5	OK	
17	CAM_Noise3DModelInq	81 09 04 54 FF	y0 50 0p FF	Noise Reduction (3D) p: 0 to 5	OK	
18	CAM_FlickerModelInq	81 09 04 55 FF	y0 50 0p FF	p: Flicker Settings(0: OFF, 1: 50Hz, 2: 60Hz)	OK	
19	CAM_ApertureInq	81 09 04 42 FF	y0 50 00 00 0p 0q FF	pq: Aperture Gain	OK	
	CAM_PictureEffectModelInq		y0 50 02 FF	Off	OK	

20	CAM_PictureEffectModelInq	81 09 04 63 FF	y0 50 03 FF	Neg.Art	OK
			y0 50 04 FF	B&W	OK
21	CAM_MemoryInq	81 09 04 3F FF	y0 50 0p FF	p: Memory number last operated.	OK
22	SYS_MenuModelInq	81 09 06 06 FF	y0 50 02 FF	On	OK
			y0 50 03 FF	Off	OK
23	CAM_LR_ReverseInq	81 09 04 61 FF	y0 50 02 FF	On	OK
			y0 50 03 FF	Off	OK
24	CAM_PictureFlipInq	81 09 04 66 FF	y0 50 02 FF	On	OK
			y0 50 03 FF	Off	OK
25	CAM_IDInq	81 09 04 22 FF	y0 50 0p 0q 0r 0s FF	pqrs: Camera ID	OK
26	CAM_VersionInq	81 09 00 02 FF	y0 50 ab cd mn pq rs tu vw FF	ab: Factory Code(00: VHD, 01:MR, 08:T) cd: Hardware Version mnpq: ARM Version rstu: FPGA Version vw: Camera model 01: C Type 02: M Type 03: S Type	OK
27	Pan-tiltMaxSpeedInq	81 09 06 11 FF	y0 50 ww zz FF	ww: Pan Max Speed zz: Tilt Max Speed	OK
28	Pan-tiltPosInq	81 09 06 12 FF	y0 50 0w 0w 0w 0w 0z 0z 0z 0z FF	www: Pan Position zzzz: Tilt Position	OK
29	CAM_DateInq	81 09 00 04 FF	y0 50 0r ss uu vv ww 0D FF	Version date r: Big Version Number ss: Little Version Number uuu: Year vv: Month ww: Day	OK
30	CAM_ModelInq	81 09 04 A6 FF	y0 50 00 FF	Mode0	OK
			y0 50 02 FF	Mode2	OK
31	CAM_MeteringModelInq	81 09 04 3A FF	y0 50 00 FF	Average Metering	OK
			y0 50 01 FF	Center-weighted Average Metering	OK
			y0 50 02 FF	Smart	OK
			y0 50 03 FF	Top	OK
32	CAM_GainLimitInq	81 09 04 2C FF	y0 50 0q FF	p: Gain Limit	OK
33	CAM_DHotPixelInq	81 09 04 56 FF	y0 50 0q FF	p: Dynamic Hot Pixel Setting (0: Off, level 1 to	OK
34	CAM_AFSensitivityInq	81 09 04 58 FF	y0 50 01 FF	High	OK
			y0 50 02 FF	Normal	OK

			y0 50 03 FF	Low	OK
35	CAM_BrightnessInq	81 09 04 A1 FF	y0 50 00 00 0p 0q FF	pq: Brightness Position	OK
36	CAM_ContrastInq	81 09 04 A2 FF	y0 50 00 00 0p 0q FF	pq: Contrast Position	OK
37	CAM_FlipInq	81 09 04 A4 FF	y0 50 00 FF	Off	OK
			y0 50 01 FF	Flip-H	OK
			y0 50 02 FF	Flip-V	OK
			y0 50 03 FF	Flip-HV	OK
38	CAM_IridixInq	81 09 04 A7 FF	y0 50 00 00 0p 0q FF	pq: Iridix Position	OK
39	Color System Inq	81 09 04 A8 FF	y0 50 02 FF	VGA Mode On	OK
			y0 50 03 FF	VGA Mode Off	OK
40	CAM_AFZone	81 09 04 AA FF	y0 50 00 FF	Top	OK
			y0 50 01 FF	Center	OK
			y0 50 02 FF	Bottom	OK
41	CAM_DVIModeInq	81 09 04 AB FF	y0 50 02 FF	DVI Mode:HDMI	OK
			y0 50 03 FF	DVI Mode:DVI	OK
42	CAM_ColorHueInq	81 09 04 4F FF	y0 50 00 00 00 0p FF	p: Color Hue setting 0h (- 14 dgree) to Eh (+14 degrees)	OK
43	CAM_AWBSensitivityInq	81 09 04 A9 FF	y0 50 00 FF	High	OK
			y0 50 01 FF	Normal	OK
			y0 50 02 FF	Low	OK
44	CAM_LensBlockInq	81 09 7E 7E 00 FF	y0 50 0u 0u 0u 0u 00 00 0v 0v 0v 0v 00 0w 00 FF	uuuu: Zoom Position vvvv: Focus Position w.bit0: Focus Mode 1: Auto 0: Manual	OK
45	CAM_CameraBlockInq	81 09 7E 7E 01 FF	y0 50 0p 0p 0q 0q 0r 0s tt 0u vv ww 00 xx 0z FF	pp: R_Gain qq: B_Gain r: WB Mode s: Aperture tt: AE Mode u.bit2: Back Light u.bit1: Exposure Comp. vv: Shutter Position ww: Iris Position xx: Bright Position z: Exposure Comp. Position	OK

46	CAM_EnlargementBlockIn q	81 09 7E 7E 03 FF	y0 50 00 00 00 00 00 00 0p 0q rr 0s 0t 0u FF	p: AF sensitivity q.bit0: Picture flip(1:On, 0:Off) rr.bit6~3: Color Gain(0h(60%) to Eh(200%)) s: Flip(0: Off, 1:Flip-H, 2:Flip-V, 3:Flip-HV) t.bit2~0: NR2D Level u: Gain Limit	OK	
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**Visca return commands**

No.	Command	Function	Command	Instruction		Remark
1	ACK/Comletion Messages	ACK	z0 4y FF (y: Socket No.)	Return when the command is accepted.	OK	
		Completion	z0 5y FF (y: Socket No.)	Return when the command has been executed.	OK	
2	Error Messages	Syntax Error	z0 60 02 FF	Returned when the command format is different or when a command with illegal command parameters is accepted.	OK	
		Command Buffer Full	z0 60 03 FF	Indicates that two sockets are already being used(executing two commands) and the command could not be accepted when	OK	
		Command Canceled	z0 6y 04 FF (y: Socket No.)	Returned when a command which is being executed in a socket specified by the cancel command is canceled. The completion message for the command is not returned.	OK	
		No Socket	z0 6y 05 FF (y: Socket No.)	Returned when no command is executed in a socket specifild by the cancel command, or when an invalid socket number is specified.	OK	
		Command Not Executable	z0 6y 41 FF (y: Execution command Socket No. Inquiry command: 0)	Returned when a command cannot be executed due to current conditions.For example, when commands controlling the focus manually are received during auto	OK	