

VC070X Series Software Manual

A. Ready

1st step: Install the software "VC0706CommTool(EN) Setup V1.00".

2nd step: Connect module to COM port of computer via EV-board JC0706E

and power ON. (We advise to connect the COM port directly, not use USB converter, because it is instable! The length of RS232 cable<3 m)

3rd step: Double click "VC0706CommTool(EN) Setup V1.00".You will get

the below window.



4th step: Choose correct "COM port" and "Baudrate" (You can consult supplier to get initial Baudrate), then click "Open" button.





5th step: You will get below window.

🗗 VC0706 Comm Tool		
<u>T</u> ools <u>H</u> elp		
Comm Setting Close COM Port: COM2 Y BautRate: 115200 Y DataBit: 8 Y ParityBit: None Y StopBit: 1 Y Comm Command Config Get Version R/W Data Color Ctrl Mirror Ctrl Mirror Ctrl Power Ctrl Timer Ctrl Motion Ctrl OSD Config Image Property Gamma Spi Flash Other Ctrl Up/Down Load System Reset Fbuf Ctrl Zoom Ctrl	Data Show	Clear Show

6th step: Then click "System Reset" button, you will get below window.





7th step: Click "Get Version" button. You should get below window, it means the connection between module and computer is correct.

VC0706 Comm Tool		
Tools <u>H</u> elp		
Comm Setting Close COM Fort: COM2 Y BautRate: 115200Y DataBit: 8 Y ParityBit: None Y StopBit: 1 Y Comm Command Config Get Version R/W Data Color Ctrl Mirror Ctrl Mirror Ctrl Power Ctrl Mirror Ctrl Motion Ctrl OSD Config Image Property Gamma Spi Flash Other Ctrl Up/Down Load System Reset Fbuf Ctrl Zoom Ctrl	Data Show Hex Show VC0703 1.00 Ctrl infr exist User-defined sensor 525 Init end Version: "VC0703 1.00" 确定	Clear Show

8th step: Click red frame, it means "YES". Now you have finished all preparative before taking photo.

DM Port: COM2 BautRate: 115200 BautRate: 115200 StaBit: B ParityBit: None StopBit: 1 Comm Command Config Color Ctrl Mirror Ctrl Power Ctrl Yersion: "VC0703 1.00" Yersion: "VC0706CommTool Wirror Ctrl Power Ctrl Motion Ctrl OSD Config Image Property Omma Spi Flash Other Ctrl	Clear Show
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B. Take photo

9th step: Click "System Reset" button (important !), then click "Fbuf Ctrl" button, you will get below window. Please click "Stop CFbuf" button in red frame, then click "Sel File" button in green frame.

Fbuf			×
-Fbuf Ctrl	-Image		
Stop CFbuf Resume	🔽 Show Image	Image Len:	
Stop NFbuf Step			
LDAT VERA			
Frame Type: Current Fbuf 💌			
Decrypt After Receive			
Key word: 0x00 -			
Sel File Read			
GetLen			
Fbuf Write			
Key word: Ov00			
Read Rile Write			
Care Sat			
Op Mode: MCV V			
RW Device: MCU UART -			
SPI Dev Type: Host			
Delay Time: 3000			
🔽 Video source is FBUF			
-Fbuf En/Decryption Set			
Enable En/Decryption			
Key word: 0x00 -			
Set Config Get Config			
Compression Ratio			
TCR: 0x35 • Ratio: 13.00			
Set Config Get Config	ö.		

Remark: When you click "Stop CFbuf" button, the camera module have taken the scene into Non-volatile memory.

10th step: You will get below window. Please click "Save" button to save the

picture into your computer.

Remark: You can choose the path when saving, because my computer is Chinese operation system, it displays Chinese window, and please do it according to your actual window.



Fbuf		×
Fbuf Ctrl Stop CFbuf Resume Stop NFbuf Step Fbuf Read	Image Image Image Len:	
Frame Type: Current Fbuf 💌 Decrypt After Receive Key word: 0x00 💌 Sel File Read	見友社	
GetLen Fbuf Write Encrypt Befor Send Key word: 0x00 • Read File Write	保存在 ①:	
Comm Set Op Mode: MCU RW Device: MCU UART SPI Dev Type: Host Delay Time: 3000	文件名 (型): tmp 保存 (S) 保存类型 (T): (*, jpg) ▼	
Fbuf En/Decryption Set Enable En/Decryption Key word: 0x00 Set Config Get Config		
Compression Ratio TCR: 0x35 👻 Ratio: 13.00 Set Config Get Config		

11th step: Click "read" button in green frame. This is very important, don't

click wrong button!!! The picture is transferred into your computer.

Fbuf			×
Fbuf Ctrl Stop CFbuf Resume Stop NFbuf Step	Image √ Show Image	Image Len:	
Frame Type: Current Fbuf 💌 Decrypt After Receive Key word: 0x00 💌 Sel File Read GetLen			
Fbuf Write Fburyt Befor Send Key word: 0x00 Read File Write Comm Set Op Mode: MCU RW Device: MCU UART SPI Dev Type: Host Delay Time: 3000 Video cause is WEW			
Fuff En/Decryption Set Enable En/Decryption Key word: 0x00 Set Config Get Config Compression Ratio TCR: 0x35 Ratio: 13.00 Set Config Get Config			



12th step: You will get below window. You can find real resolution and image size information in green frame.



14th step: Please click red frame above picture, it means "Yes". Now taking

photo and saving it into your computer are over.

15th step: If you need take new picture, please repeat 9th to 14th steps.

Don't forget to click "System Reset" firstly!!!



C. Modify Baudrate and Resolution

16th step: Click "Up/Down Load" button in red frame.



17th step: You will get below window. Please modify the items in red frame.

pload/Download	×
System Reset	
-Select Ctrl Info Device Check Ctrl Info Device Check Flash Typ	e Erase Flash
Ctrl Info Device: Unknow 💌 Device Size: 64K Bytes 💌	-
- Upload	
Only read ctrl info Read whole device data Devid since size data	Vpload
Download	
File:	Download



18th step: Please set all items in red frame like as below window, and then

click the button in green frame.

Jpload/Download		×
System Reset) evice	
Check Ctrl Info	Device Check Flash Type Er	ase Flash
Ctrl Info Device: Device Size:	I2C E2prom 💌 2K Bytes 💌 24C16 (2 KB)	_
Vpload File: © Only read ctrl © Read whole dev © Read given siz	info ce data data 2 KBytes 💌	Upload
-JownLoad File:	I	 JownLoad
ſ		

19th step: You can download the file you need from your computer into

module, please choose correct file and click "Open" button



Remark: We have edited Baudrate and resolution as ".bin" file to use easily.



For file name, the foremost figures mean baud rate, like 9600 means 9600bps.

VGA means 640x480, QVGA means 320x240,7740 means ov7740 sensor.

File name 115200QVGA-7740 means the baud rate is 115200bps and resolution is 320x240.

File name 115200VGA-7740 means the baud rate is 115200bps and resolution is 640x480.

Please choose the file you need.

20th step: Click "Download" button in red frame, wait!!!

System Reset	
Select Ctrl Info Device	
Check Ctrl Info Device Check Flash Typ	Erase Flash
Ctrl Info Device: I2C E2prom 💌	
Device Size: 2K Bytes 💌 24C16	(2 KB) 💌
Upload	
File:	
• Only read ctrl info	
C Read whole device data	Upload
🤆 Read given size data 🛛 2 KBytes 💌	
← Read given size data 2 KBytes 💌	1.
← Read given size data 2 KBytes 💌	
C Read given size data 2 KBytes ▼ JownLoad File: H: \115200VGA-7740. bin	
C Read given size data 2 KBytes ▼ DownLoad File: H:\115200VGA-7740.bin	Download
○ Read given size data 2 KBytes ▼ JownLoad File: H:\115200VGA-7740.bin	Download

21st step: When you get below window, it means you have updated Baudrate and resolution, please click "Yes" button in red frame and "System Reset" button in purple frame and I button in green frame.



System Reset	
Select Ctrl Info Device Check Ctrl Info Device Ctrl Info Device: Device Size: 2K Bytes	Flash Type Erase Flash
Upload File: © Only read ctrl inf © Read whole device © Read given size da	nload finish!
Download File: H:\115200VGA-7740.bin	Download
Write finish	[845/845]

22nd step: You will get below window. Now you have modified Baudrate and resolution successfully.



23rd step: You can repeat 4th to 14th steps to take new photo.



D. Modify Compression Rate

24th step: Check 1st to 8th steps, if correct, click "R/W Data" button in red



25th step: You will get below window. Please set the items in red frame like as below picture. The value in green frame is the code of compression ratio, please refer table and input the code you need, click "Write" button, then close this window.

ead/¶rite	Data		×
Read/Write R/W	Data(Address and data format is Hex) Select Device Data Width Data Num Address	Value	
Write 💌	I2C E2prom 💌 1Byte 💌 1 💌 1A 00)	Write
Chip Reg:	Data Width = 1 ; Address = [0x00, 0xFFFF]		
Sensor Reg:	Data Width = [1,3]: Address = [0x00, 0xFFFF]		
I2C E2prom:	Data Width = 1 ; Address = [0x00, 0xFFFF]		
SPI E2prom:	Data Width = 1 ; Address = [0x00, 0xFFFF]		



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Code	Ratio										
00	/	30	11.75	60	23.75	90	35.75	C0	47.75	F0	59.75
01	/	31	12.00	61	24.00	91	36.00	C1	48.00	F1	60.00
02	0.25	32	12.25	62	24.25	92	36.25	C2	48.25	F2	60.25
03	0.50	33	12.50	63	24.50	93	36.50	C3	48.50	F3	60.50
04	0.75	34	12.75	64	24.75	94	36.75	C4	48.75	F4	60.75
05	1.00	35	13.00	65	25.00	95	37.00	C5	49.00	F5	61.00
06	1.25	36	13.25	66	25.25	96	37.25	C6	49.25	F6	61.25
07	1.50	37	13.50	67	25.50	97	37.50	C7	49.50	F7	61.50
08	1.75	38	13.75	68	25.75	98	37.75	C8	49.75	F8	61.75
09	2.00	39	14.00	69	26.00	99	38.00	C9	50.00	F9	62.00
0A	2.25	ЗA	14.25	6A	26.25	9A	38.25	CA	50.25	FA	62.25
0B	2.50	3B	14.50	6B	26.50	9B	38.50	СВ	50.50	FB	62.50
0C	2.75	3C	14.75	6C	26.75	9C	38.75	СС	50.75	FC	62.75
0D	3.00	3D	15.00	6D	27.00	9D	39.00	CD	51.00	FD	63.00
0E	3.25	3E	15.25	6E	27.25	9E	39.25	CE	51.25	FE	63.25
0F	3.50	3F	15.50	6F	27.50	9F	39.50	CF	51.50	FF	63.50
10	3.75	40	15.75	70	27.75	A0	39.75	D0	51.75		
11	4.00	41	16.00	71	28.00	A1	40.00	D1	52.00		
12	4.25	42	16.25	72	28.25	A2	40.25	D2	52.25		
13	4.50	43	16.50	73	28.50	A3	40.50	D3	52.50		
14	4.75	44	16.75	74	28.75	A4	40.75	D4	52.75		
15	5.00	45	17.00	75	29.00	A5	41.00	D5	53.00		
16	5.25	46	17.25	76	29.25	A6	41.25	D6	53.25		
17	5.50	47	17.50	77	29.50	A7	41.50	D7	53.50		
18	5.75	48	17.75	78	29.75	A8	41.75	D8	53.75		
19	6.00	49	18.00	79	30.00	A9	42.00	D9	54.00		
1A	6.25	4A	18.25	7A	30.25	AA	42.25	DA	54.25		
1B	6.50	4B	18.50	7B	30.50	AB	42.50	DB	54.50		
1C	6.75	4C	18.75	7C	30.75	AC	42.75	DC	54.75		
1D	7.00	4D	19.00	7D	31.00	AD	43.00	DD	55.00		
1E	7.25	4E	19.25	7E	31.25	AE	43.25	DE	55.25		
1F	7.50	4F	19.50	7F	31.50	AF	43.50	DF	55.50		
20	7.75	50	19.75	80	31.75	B0	43.75	E0	55.75		
21	8.00	51	20.00	81	32.00	B1	44.00	E1	56.00		
22	8.25	52	20.25	82	32.25	B2	44.25	E2	56.25		
23	8.50	53	20.50	83	32.50	B3	44.50	E3	56.50		
24	8.75	54	20.75	84	32.75	B4	44.75	E4	56.75		
25	9.00	55	21.00	85	33.00	B5	45.00	E5	57.00		
26	9.25	56	21.25	86	33.25	B6	45.25	E6	57.25		
27	9.50	57	21.50	87	33.50	B7	45.50	E7	57.50		
28	9.75	58	21.75	88	33.75	B8	45.75	E8	57.75		
29	10.00	59	22.00	89	34	B9	46.00	E9	58.00		



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2A	10.25	5A	22.25	8A	34.25	BA	46.25	EA	58.25	
2B	10.50	5B	22.50	8B	34.5	BB	46.50	EB	58.50	
2C	10.75	5C	22.75	8C	34.75	BC	46.75	EC	58.75	
2D	11.00	5D	23.00	8D	35	BD	47.00	ED	59.00	
2E	11.25	5E	23.25	8E	35.25	BE	47.25	EE	59.25	
2F	11.50	5F	23.50	8F	35.5	BF	47.50	EF	59.50	

26th step: Click "System Reset" button to initialize system, you have modified compression rate successfully.(important!!!)

27th step: If you need view the real value of compression ratio, please click "Fbuf Ctrl" button, you will get below window. Click "Get Config" button in red frame, you will get the real value you are using.



28th step: Finished and thank you!

Notice: This manual only describe how to test our camera module by using VC070x software and EV-kit JC0706E. As a rule, when you integrate this module into your system, you have to use logic commands to control it.

For command protocol, please refer our data sheet.