

UART Protocol For NuEZCam V1.00.001

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Support Chips:
W55FA Series

Support Platforms:
Windows

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1. Definition

1.1. UART protocol

Firstly host communicates with device, host sends the byte 0xAA, device receives it and replies with the byte 0x55, host receives it and the UART link is created.

Host sends the command and the command protocol includes 2 bytes, CMD + PARA, CMD (command) is 1 bytes, PARA (parameter) is 1 bytes. Device returns the status and the status protocol includes 2 bytes CMD + STATUS

1. Host selects AVI encoder and start to run, sends 0xA0 + 0x01, device returns 0xA1 + STATUS bytes. STATUS defines as follows. if STATUS is 0x80, then success, otherwise failure. The issue of SD card for 0x81, the issue of file system for 0x82. Command error for 0x85.
 2. Host captures one JPEG image during AVI encoder, sends 0xA0 + 0x02, device returns 0xA2+0x80 for success, the issue of file system for 0xA2+0x82. Command error for 0x85.
 3. Host stops AVI encoder, sends 0xA0 + 0x03, devices returns 0xA0+0x80 for success, 0xA3+0x86 for failure. Command error for 0x85.
 4. Before running UVC+UAC, user must plug USB cable in. Host selects UVC+UAC to run and sends 0xB0+0x01, devices returns 0xB1+STATUS bytes, STATUS defines as follows. if STATUS is 0x80, then success, otherwise failure, The issue of plugging USB cable in for 0x84. Command error for 0x85. Plug USB cable out to end UVC+UAC.
 5. Before running UVC+UAC, user must plug USB cable in. Host selects USB mass to run and sends 0x0C+0x01, device returns 0xC1+STATUS bytes, STATUS defines as follows. if STATUS is 0x80, then success, otherwise failure, The issue of plugging USB cable in for 0x84. Command error for 0x85. Plug USB cable out to end UVC+UAC.
- The detailed information is shown as follows

Solution	Command	Status
AVI encoder	0x5A6B7C8D+0xA0+0x01 Start to run	0x5A6B7C8D+0xA1+ 0x80, Success 0x5A6B7C8D+0xA1+ 0x81, Failure, the issue of SD card. 0x5A6B7C8D+0xA1+ 0x82, Failure, the issue of file system 0x5A6B7C8D+0xA1+ 0x83, Failure, the issue of sensor. 0x5A6B7C8D+0xA1+ 0x85, Failure, command error
	0x5A6B7C8D+0xA0+0x02 Capture	0x5A6B7C8D+0xA2+ 0x80, Success 0x5A6B7C8D+0xA2+ 0x82, Failure, the issue of file system 0xA2+ 0x85, Failure, command error
	0x5A6B7C8D+0xA0+0x03 Stop	0x5A6B7C8D+0xA3+ 0x80, Success 0x5A6B7C8D+0xA3+ 0x86, Failure 0x5A6B7C8D+0xA3+ 0x85, Failure, command error
UVC+UAC	0x5A6B7C8D+0xB0+0x01 Start	0x5A6B7C8D+0xB1+ 0x80, Success 0x5A6B7C8D+0xB1+ 0x83, Failure, the issue of sensor. 0x5A6B7C8D+0xB1+ 0x84, Failure, USB cable is plugged out. 0x5A6B7C8D+0xB1+ 0x85, Failure, command error.
USB mass storage	0x5A6B7C8D+0xC0+0x01 Start	0x5A6B7C8D+0xC1+ 0x80, Success 0x5A6B7C8D+0xC1+ 0x81, Failure, the issue of SD card. 0x5A6B7C8D+0xC1+ 0x84, Failure, USB cable is plugged out 0x5A6B7C8D+0xC1+ 0x85, Failure, command error.
Communication	0xAA	0x55

2. Revision History

Version	Date	Description
V1.00.001	Feb 22, 2017	● Created

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