

WizFi360

Application – Throughput

Version 1.1

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History

Ver	Date	Description
1.0	Aug.2019	Initial version
1.1	Sep.2019	Add command mode throughput test result

Contents

1.	Test environment	4
2.	Using Serial command	6
3.	The result of UART Throughput	7
Appendix 1		8

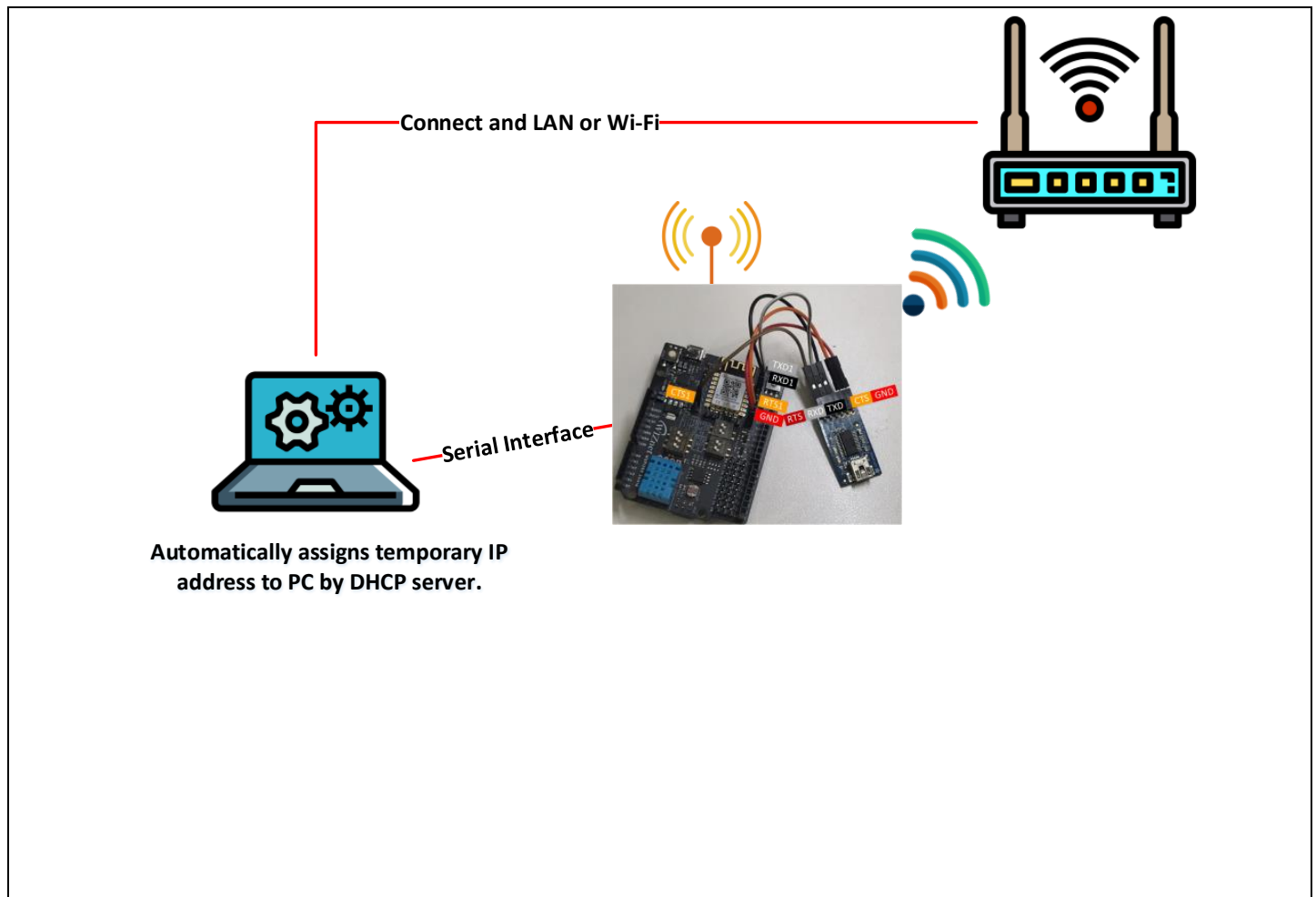
1. Test environment

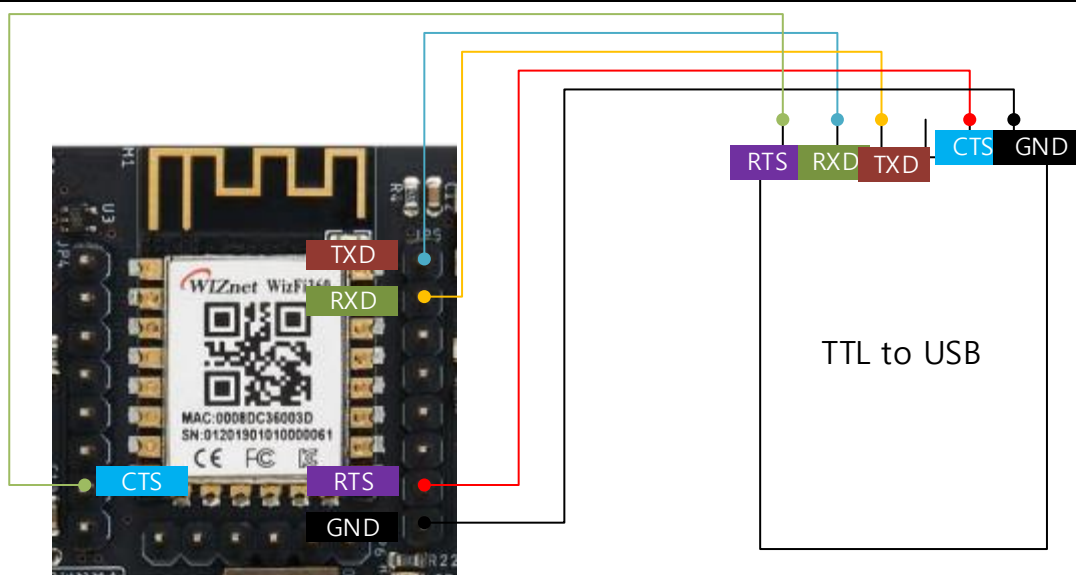
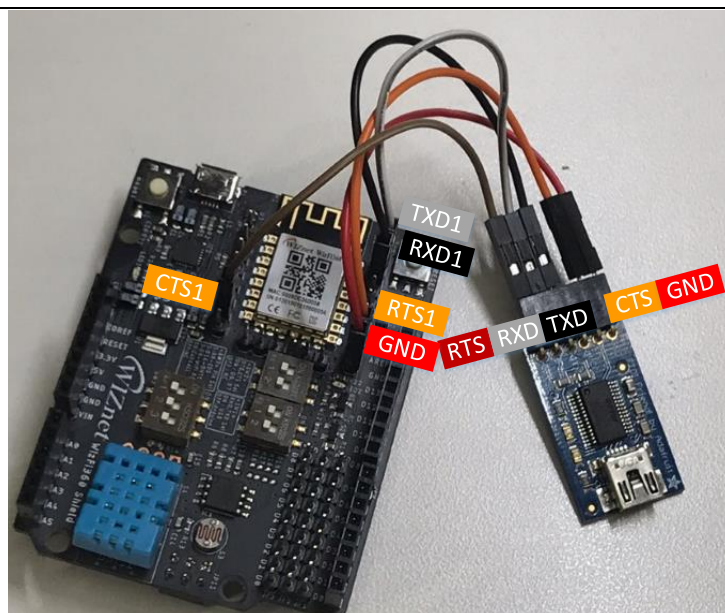
UART Throughput Test 를 하기 위해서는 CTS/RTS 를 이용한 제어가 필요하다.

- WizFi360 EVB or WizFi360io
- PC
- Serial Tool
 - o YAT Serial Tool(Data Mode)
 - o Python(Command Mode)
- 1Mbyte data file
- WiFi Router(SoftAP mode 를 사용할 경우 제외)

Data Mode 일 경우에는 YAT Serial Tool 를 이용하여 RTS/CTS 를 설정하고, DTR 로 Data Read 신호 설정해준다. 그런 후 RTS/CTS 가 제어하면서 데이터 전송이 이루어진다.

Command Mode 일 경우에는 AT+CIPSENDBUF command 를 이용하여 한번에 최대 보낼 수 있는 데이터 Byte 수인 2048 을 설정한 후 2048 Byte 크기의 Data 를 보내고, 또다시 AT+CIPSENDBUF 와 데이터를 반복해가면서 데이터 전송이 이루어진다.





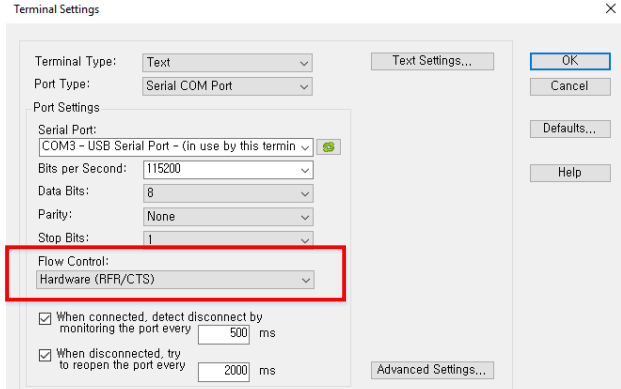
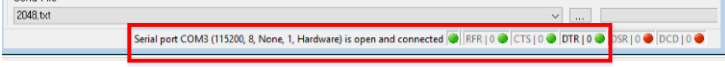
2. Using Serial command

- Station Mode

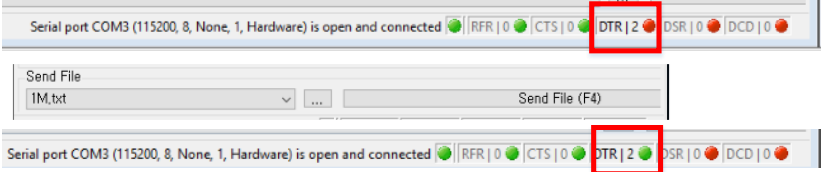
AT command	Terminal
AT AT+CWMODE_CUR=1 AT+CWDHCP_CUR=1,1 AT+CWLAP AT+CWJAP_CUR="wizms1","maker0701" AT+CIPSTA_CUR?	<pre> AT<CR><LF> <CR><LF> OK<CR><LF> AT+CWMODE_CUR=1<CR><LF> <CR><LF> OK<CR><LF> AT+CWDHCP_CUR=1,1<CR><LF> <CR><LF> OK<CR><LF> AT+CWLAP<CR><LF> +CWLAP:(4,"DIR-815_Wiznet",-59,"",1)<CR><LF> +CWLAP:(0,"ESP_574935",-71,"",1)<CR><LF> +CWLAP:(3,"#WIZnet_irina",-46,"",1)<CR><LF> +CWLAP:(3,"Matthew2.4",-63,"",2)<CR><LF> +CWLAP:(3,"rena",-46,"",3)<CR><LF> +CWLAP:(0,"iptime",-67,"",4)<CR><LF> +CWLAP:(3,"Dap",-63,"",5)<CR><LF> +CWLAP:(0,"ESP_577CC7",-67,"",6)<CR><LF> +CWLAP:(3,"wizms1",-63,"",6)<CR><LF> +CWLAP:(0,"Wizfi360",-69,"",6)<CR><LF> +CWLAP:(4,"DLINK-IPv6",-55,"",10)<CR><LF> +CWLAP:(0,"iptime",-59,"",11)<CR><LF> +CWLAP:(3,"WIZnet_Scott",-51,"",11)<CR><LF> +CWLAP:(0,"WizFi360_A1B2D1",-69,"",11)<CR><LF> +CWLAP:(3,"Teddy_AP",-57,"",13)<CR><LF> <CR><LF> OK<CR><LF> AT+CWJAP_CUR="wizms1","maker0701"<CR><LF> WIFI_DISCONNECT<CR><LF> WIFI_CONNECTED<CR><LF> WIFI_GOT_IP<CR><LF> <CR><LF> OK<CR><LF> AT+CIPSTA_CUR?<CR><LF> +CIPSTA_CUR:ip:"192.168.1.120"<CR><LF> +CIPSTA_CUR:gateway:"192.168.1.1"<CR><LF> +CIPSTA_CUR:netmask:"255.255.255.0"<CR><LF> <CR><LF> OK<CR><LF> </pre>

- UART CTS/RTS Setting

AT command	Terminal
AT+CWUART_CUR = 115200,8,1,0,1	<pre> AT+UART_CUR=115200,8,1,0,1<CR><LF> <CR><LF> OK<CR><LF> </pre>
Terminal Setting	

<ol style="list-style-type: none"> 1. Ctrl+Shift+S > Open the Settings 2. Flow Control안에 Hardware(RFR/CTS)로 변경 	
<ol style="list-style-type: none"> 3. Terminal창 아래에 오면 CTS/DTR이 초록으로 들어온 것을 확인할 수 있다. 	

- TCP Client /Data mode

AT command	Terminal
AT+CIPSTART="TCP","192.168.100.27",5001 AT+CIPMODE=1 AT+CIPSEND	<pre> AT+CIPSTART="TCP", "192.168.100.27", 5001<CR><LF> CONNECT<CR><LF> <CR><LF> OK<CR><LF> AT+CIPMODE=1<CR><LF> <CR><LF> OK<CR><LF> AT+CIPSEND<CR><LF> <CR><LF> > </pre>
Terminal Setting	
<ol style="list-style-type: none"> 1. DTR이 빨간불일 때, 1M.txt를 보내고, 2. DTR를 클릭해서 초록불로 바뀌면 데이터가 Serial을 통해 전송되게 된다. 	

- TCP Client / Command mode

AT command	Terminal
AT+CIPSTART="TCP","192.168.100.27",5001 AT+CIPMODE=0 AT+CIPSENDERBUF=2048 Send the 1Mbyte.txt	<pre> AT+CIPSTART="TCP", "192.168.100.27", 5001<CR><LF> CONNECT<CR><LF> <CR><LF> OK<CR><LF> AT+CIPMODE=0<CR><LF> AT+CIPMODE=0<CR><LF> <CR><LF> OK<CR><LF> AT+CIPSENDERBUF=2048<CR><LF> AT+CIPSENDERBUF=2048<CR><LF> 1, 0<CR><LF> <CR><LF> OK<CR><LF> > </pre>

3. The result of UART Throughput

1Mbyte를 PC에서 WizFi360의 Serial(UART1)로 데이터를 보내고, TCP Server로 데이터를 전송한다.

