WiFiMCU Tutorial

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Basic

1, Install USB Driver

WiFiMCU uses CP2102 to converter USB data to UART TTL data. The USB to UART Bridge Virtual COM Port drivers are required for device operation. The latest driver can be found at:

http://www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx

The following instructions are made in Windows 7 OS.

STEP 1 Install the USB Bridge VCP drivers. According to your Windows OS, choose "CP210xVCPInstaller_x86.exe" for 32 bit OS or "CP210xVCPInstaller_x64.exe" for 64 bit OS.

Name	Date modified	Туре	Size
🐌 х64	2014/4/12 5:56	File folder	
👢 х86	2014/4/12 5:56	File folder	
💐 CP210xVCPInstaller_x64.exe	2014/4/12 5:56	Application	1,026 KB
💐 CP210xVCPInstaller_x86.exe	2014/4/12 5:56	Application	901 KB
🖬 dpinst.xml	2014/4/12 5:56	XML Document	12 KB
ReleaseNotes.txt	2014/4/12 5:56	Text Document	11 KB
SLAB_License_Agreement_VCP_Windows	2014/4/12 5:56	Text Document	9 KB
slabvcp.cat	2014/4/12 5:56	Security Catalog	12 KB
islabvcp.inf	2014/4/12 5:56	Setup Information	5 KB





STEP 2 Check the Serial COM Port

Power up WiFiMCU with a Micro USB Cable. Go to "Start Memu"-> "Control Pannel"->"Device Manager"

If the Serial COM Port in "Ports(COM&LPT)" is shown as below, it means you have installed the driver successfully. Otherwise, change a Micro USB cable or a WiFiMCU to retry.



2, Quickly Start with WiFiMCU STUDIO

After install the USB to UART Bridge VCP driver. You can use WiFiMCU STUDIO to test WiFiMCU simplify and quickly. Here are the instructions to quickly start with WiFiMCU.

2.0 Prepare

WiFiMCU STUDIO is an open source develop tool for WiFiMCU. The latest executable program can be downloaded at:

https://github.com/SmartArduino/WiFiMCU-STUDIO/tree/master/BIN

You can pull the source code from:

https://github.com/SmartArduino/WiFiMCU-STUDIO

2.1 Power Up

Power up the WiFiMCU with a Micro USB Cable.



Press "Reset" button to restart WiFiMCU. Press "Boot" button while power up or press "Reset" button to enter into bootloader mode.

2.2 Check the COM Port

Go to "Start Memu"-> "Control Pannel"->"Device Manager" to check the Serial COM Port.

2.3 Run WiFiMCU STUDIO.

Click "Scan Port" button to scan the existing serial com ports in the computer.

Make sure choose the right serial port of WiFiMCU, then click "Open" to open the serial com port. The default serial com parameters for WiFiMCU is 115299bps, 8 data bits, none check, one stop bit.

WIFIMCU STUDIO www.doit.am	- - X
->Welcome to WiFiMCU<	<u>^</u>
when	
• AP • STA SSID WiFiMCU PSW SetWiFiM	
Scan StopWiFi GetIP GetLink	
NET	
Sockt Type Server Client Transport Type TCP UDP Bind Local Port	
Remote IP 11.11.11.2 Local Port 9000 Bind Port 8000 Set	
Send Data Test Data Send	
4	+
Serial Port COM5 is Opened Upload/Download file progress	

You can type a command in the right black textbox just like what your do in other serial tools such as "SecureCR", "PuTTY".

Type "mcu.reboot()" in the command textbox and press enter, The commands are go into the Lua interpreter, and executed. The results will be shown in the textbox.

You will see like this:

🔊 WiFiMCU STUDIO www.doitam
WIFMCU STUDIO www.doit.am
Serial Port COM5 is Opened Upload/Download file progress

You can also just click "Reboot" button to do the same thing.

Other common commands:

"collectgarbage()", collect the garbage in Lua interpreter.

"=mcu.tick()", get the current time tick of the MCU (ms) since startup.

"=mcu.mem()", get the memory status.

All the commands for WiFiMCU can be found in the reference book:

https://github.com/SmartArduino/WiFiMCU/tree/master/Document/

2.4 Toggle LED on WiFiMCU board

There is a LED connected to D17 on WiFiMCU board. You can toggle it very simply using WiFiMCU STUDIO.

STEP1, Switch to "Command" tabpage.

STEP2, Choose GPIO Pin "17 adc/led" in "GPIO" groupbox. Then choose "gpio.OUTPUT" in mode combox list.

WIFIMCU STUDIO www.doit.am	
- Serial Port	$ \frac{1}{1} 1$
Command WiFi Net File Firmware About	cannot open init.lua
MCU ● ver • info • reboot • mem • chipid • bootreason send Pin 17 adc/led • fode exic OUTPUT • grio INPUT PULL UP grio INPUT PULL DOWN epio INPUT INPUT HIGH IMPEDANCE DOWN epio INPUT INPUT HIGH IMPEDANCE DOWN epio OUTPUT PUSH PULL grio OUTPUT PUSH PULL grio OUTPUT PUSH PULL grio INT(rising edge) epio INT(rising edge) PWM ADC grio INT(trising edge) grio INT(rising edge) PWM Pin 1 pwm/adc • Start ADC Pin 1 pwm/adc • Freq(Hz) 10000 Read Duty 50 Stop	
Serial Port COM5 is Opened Upload/Download file progress	

STEP 3, click "Set mode", command string "gpio.mode(17,gpio.OUTPUT)" will be sent to WiFiMCU and executed. The LED on WiFiMCU board will be lighted on or off after you click"Toggle" button.

Wirlivico Stobio www.doit.am	
- Serial Port	> mcu. reboot ()
115200 Vent Close Reboot garbage Lick Memory	
Command WiFi Net File Firmware About	cannot open init.lua
MCU	> gpio.mode(17,gpio.OUTPUT)
• ver • info • reboot • mem • chipid • bootreason send	> gpio.toggle(17)
GPIO	> gpio.toggle(17)
Pin 17 adc/led Mode gpio.OUTPUT	> gpio.toggle(17)
Set mode Read High Low Toggle	> gpio.toggle(17)
TIMER	>
ID 0 ▼ Period(ms) 1000 Start Stop	
Tick Delayms Wdclr StopALL	
PWM ADC	
PWM Pin 1 pwm/adc ▼ Start ADC Pin 1 pwm/adc ▼	
Freq(Hz) 10000 Read	
Duty 50 Stop	۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲
Serial Port COM5 is Opened Upload/Download file progress	



You can test the other gpio functions such as input/ interrup / pwm/ adc in the "Command" tabpage.

2.5 Start AP mode

The WiFi interface of WiFiMCU could work in either Access Point(AP), Station(STA), or AP+STA mode. The instructions below will setup a WiFi interface in AP mode for example.

STEP 1, Switch to "WiFi Net" tabpage.

STEP 2, Choose "AP", fill the SSID and PSW textbox. It will be "WiFiMCU_Wireless" for SSID and empty for PSW in default. Click "Set" to send the command string.



STEP 3, A WiFi interface with SSID: "WiFiMCU_Wireless" will be setup.



STEP 4, You can connected to the Open sercurity WiFi. The default IP for WiFiMCU is "11.11.11.1". The IP could be customized, check WiFiMCU Reference Book for more details.

N	etwork Connection Details		X
	Network Connection Details:		
	Property	Value	
	Connection-specific DNS S		
	Description	Intel(R) Centrino(R) Advanced-	N 6200 AGN
	Physical Address	00-27-10-25-67-08	
	DHCP Enabled	Yes	
	IPv4 Address	11.11.11.2	
	IPV4 Subnet Mask	255.255.255.0	
	Lease Obtained	2015年0月22日21.11.05 2015年8日23日 21:11:05	
	IPv4 Default Gateway	11 11 11 1	
	IPv4 DHCP Server	11.11.11.1	
	IPv4 DNS Server	11.11.11.1	
1.	IPv4 WINS Server		
	NetBIOS over Tcpip Enabl	Yes	
	Link-local IPv6 Address	fe80::b0ae:feae:9d5c:6d04%12	2
	IPv6 Default Gateway		
	IPv6 DNS Server		
			<u>C</u> lose
L			

2.6 Setup a simply webserver

WiFiMCU can be configured to support TCP/UDP Server and Client. It's very easy to setup sockets and connections. A simply webserver will be created by using Lua scripts in this section. We will use the WiFiMCU STUDIO to upload a Lua scripts file and run it.

STEP 0, Make sure the WiFiMCU is running in AP mode or STA mode or AP+STA mode, if you are strange for this, follow the instructions in 2.5 section.

STEP 1, Save the Lua scripts below as "webserver.lua".

- 1. skt = net.new(net.TCP,net.SERVER)
- 2. net.on(skt,"accept",function(clt,ip,port)
- 3. print("accept ip:"..ip.." port:"..port." clt:"..clt)
- 4. net.send(clt,[[HTTP/1.1 200 OK
- 5. Server: WiFiMCU
- 6. Content-Type:text/html
- 7. Content-Length: 28
- 8. Connection: close
- 9.
- 10.
- 11. <h1>Welcome to WiFiMCU!</h1>]])
- 12. end)
- 13. net.start(skt,80)

	(C)
webs	server.lua

STEP 2, Switch to "File" tabpage.

WIFIMCU STUDIO www.doitam
Serial Port COM5 Scan Port Close Reboot Collect garbage Tick Memory Collect Collec
Index Name Size(Bytes) Upload Filelist file.info file.state Format
Serial Port COM5 is Opened Upload/Download file progress

STEP 3, Click "Upload" button to choose "webserver.lua".

Select the Uploading File				
😋 💮 – 🗼 🕨 Comi	iter ► Local Disk (D:) ► Test	🗸 🍫 Search Test	Q	
Organize 🔹 New f	lder			
🗼 Downloads 🔺	Name	Date modified	Туре	
▶ 我的酷盘	webserver.lua	2015/8/21 11:06	LuaEditor.	
闫 Libraries				
🤏 Homegroup	E			
ika Computer				
bcal Disk (C:)				
Iccal Disk (D:)				
👢 我的酷盘				
	✓ <		۰.	
File	ame: webserver.lua	lua (*.lua) Open	Cancel	

STEP 4, The uploading procedure will be started automatically. If uploading successfully, the files stored in WiFiMCU will be listed in the listbox.

🔊 WiFiMC	U STUDIO www.doit.am			
- Serial P COM5 115200 Comr	Scan Port Close nand WiFi Net File	Reboot Collect garbage	fick	> mcu.reboot()
Index	Name	Size(Bytes)	Upload	<pre>> cfg=();cfg.ssid='WiFiMCU_Wireless';cfg.pwd='';wifi.startap(cfg);c > Start upload file: 'webserver lua'</pre>
1 2	udpserver.lua tcpserver.lua	251 313	Cprous	>Upload file: 'webserver.lua' successful<
3 4	test.lua	392 14	Filelist	
5	webserver.lua	313	file.info	
			file.state	
			Format	
Serial P	ort COM5 is Opened	Upload Successfully	, 1	100%

STEP 5, Choose "webserver.lua" in the listbox. Right Click the mouse, a submenu list will be shown. Click "Run" to run the script. Command string "dofile('webserver.lua')" will be sent to Lua interpreter.

You can test the other operations for the selected file freely.

WiFiMCU STUDIO www.doit.am		
Command WiFi Net File Fir	Reboot Collect Tic garbage Tic	$\begin{array}{c c} & & & \\ \hline \\ \hline$
Index Name 1 udpserver.lua	Size(Bytes) 251	Upload cfg=(); cfg.sid='WiFiMCU_Wireless'; cfg.pwd=''; wifi.startap(cfg) Start upload file: 'webserver.lua'
2 tcpserver.lua 3 tcpclient.lua 4 test.lua	313 392 14	>Upload file: 'webserver.lua' successful<
5 webserver.lua Run View Compile Rename Remove		file.info
		file.state
•	•	Format

STEP 6, Use a PC or a smart Phone connect to the AP that WiFiMCU made. For example, such as "WiFiMCU_Wireless" we made in section 2.5.

STEP 7, Open a browser, and type "11.11.11.1" in the address field. You will get:



3, Use SecureCRT (Optional)

You can use any serial port tools to interact with WiFiMCU. Here is a simply instruction to use SecureCRT for example.

STEP 1, Setup a new session. Set the parameters as: 115200, n, 8, 1.

🕞 not connected - Secu	ureCRT			
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>O</u> p	tions <u>T</u> ransfer <u>S</u> cript	Too <u>l</u> s <u>W</u> indow	<u>H</u> elp	
Enter	New Session Wizard			Ŧ
Session Manager		This wizard will he remote server. What type of conr Prototol: SSH2 SSH1 Telnet RLogin Serial TAPI Raw	<pre>nelp you create a new session for connecting to a nection do you want to establish? t /SSL s wizard when creating sessions Next > Finish Cancel</pre>	
Ready			0, 0 0 Rows, 0 Cols CAP NUM	
New Session Wizard Ent Bau Det Par Sto	er the data necessary to make a serial of the data necessary to make a serial of drate:	connection (Control DTR/DSR BTS/CTS KON/XOFF	New Session Wizard The wizard is now ready to create the new session for you. What name do you want to use to uniquely identify the new session? Session game: Senal-COMS Description:	
	< <u>B</u> ack <u>N</u> ext >	Cancel	A state of the	

STEP 2, Connect WiFiMCU with a Micro USB, then open the session.



E Serial-COM5 - SecureCRT		
<u>File Edit View Options Transfe</u>	er <u>S</u> cript Too <u>l</u> s <u>W</u> indow <u>H</u> elp	
🔚 🔀 🎣 🕷 Enter host <alt+r></alt+r>	🗈 🛍 🗛 🧏 🍠 🚰 💥 🕴 🞯 🖾	Ŧ
Session Manager 🛛 📮 🗙	Serial-COM5 ×	4 ⊳
G C Karley Karley Comparison (Serial-COM5)	<pre>cannot open init.lua > print('hello, wiFiMCU user') > ello, wiFiMCU user') > ello, wiFiMCU user</pre>	E
Ready	Serial: COM5, 115200 11, 3 24 Rows, 80 Cols VT100	CAP NUM

STEP 3, Type commands in the interface. Enjoy it.

Adavanced

1 Flash LED -use TIMER module

A LED is flashed every 500ms in this example. The LED on WiFiMCU is used. Timer0 is set to toggle gpio17 in the Lua scripts.

STEP 1, Save the Lua scripts below as "Flash_LED.lua".

- 1. print("---WiFiMCU Demo---")
- 2. print("Flash LED")
- 3. pin = 17
- 4. gpio.mode(pin,gpio.OUTPUT)
- 5. tmr.start(0,500,function()
- 6. gpio.toggle(pin)
- 7. end)



WIFIMCU STUDIO www.doit.a اللار ال dofile('Flash LED.lua') -WiFiMCU Demo---ash LED 115200 Command WiFi Net File Firmware About Index Name Size(Bytes) Upload Run Filelist View Compile Rename file.info file.state Format 100% Serial Port COM5 is Opened Upload Successfully

STEP2, Upload the scripts via WiFiMCU STUDIO, Run this script.

STEP 3, The LED on WiFiMCU board will be flashing every 500ms.

2 Breathing LED -use PWM module

A breathing LED could be easily setup by the PWM function on the WiFiMCU board.

STEP 1, Find a LED with dupont lines. Connect the anode to D1(or whatever pin that supports PWM function) while the cathnode to a GND pin on WiFiMCU board.

STEP 2, Save the Lua scripts below as "Breathing_LED.lua".

- 1. print("---WiFiMCU Demo---")
- 2. print("Breathing LED")
- 3. pin = 1
- 4. freq =10000
- 5. duty =0
- 6. dir = 1
- 7. tmr.start(1,50,function()
- 8. if dir ==1 then
- 9. duty = duty + 5
- 10. if duty>100 then
- 11. duty=100
- 12. dir = 0
- 13. end
- 14. else
- 15. duty = duty 5
- 16. if duty < 0 then
- 17. duty = 0
- 18. dir = 1
- 19. end
- 20. end
- 21. pwm.start(pin,freq,duty)
- 22. end)

STEP 3, Upload the scripts via WiFiMCU STUDIO, Run this script.





3 Socket programming –use Net module

Please refer to github: https://github.com/SmartArduino/WiFiMCU/tree/master/Document/demos/5%20net

4 WiFi to Serial transparent transmission

Please refer to github:

https://github.com/SmartArduino/WiFiMCU/blob/master/Document/demos/9%20uart/2%20u art_2_wifi_trans.lua

5 Update Firmware

The firmware, bootloader, or the WLAN driver for WiFiMCU can be updated. There are two ways: Using a serial port with Y modem protocols, Using SWD programmer.

5.1, Get the latest firmware

You can get the latest firmware, bootloader, or WLAN driver at: <u>https://github.com/SmartArduino/WiFiMCU/releases</u> Otherwise, You can download the source code and recompile your own firmware: <u>https://github.com/SmartArduino/WiFiMCU</u> The IDE of source code is IAR Embedded Workbench V7.20

5.2, Use WiFiMCU STUDIO to update firmware

STEP 1, Open WiFiMCU STUDIO and connect to WiFiMCU. STEP 2, Switch to "Firmware" tabpage.

WiFiMCU STUDIO www.doit.am	
Command WiFi Net File Firmware About	↓ >Welcome to WiFiMCU<
Be very careful!	
Upload a wrong firmware file may cause the MCU fail to startup!	
 Firmware Bootloader 	
© Wlan Driver	
Serial Port closed Upload/Download file progress	

STEP 3, On the WiFiMCU board, Press"Boot" button while press "Reset" button in order to enter into bootloader mode.

Boot Micro USB Reset	TO TO BAG EN BIG ELE SLO ELO ALO ELE TOTORIO DI SOLO TOTORIO DI SOLO TO
WiFiMCU STUDIO www.doit.am	
Serial Port Coms Network Second Port Close Port Close Port Close Collect Collect Tick Memory Command WiFi Net File Firmware About Be very careful! Upload a wrong firmware file may cause the MCU fail to startup! Firmware Bootloader Wlan Driver	WFIMCU Bootloader for EMW3165, HARDWARE_REVISION: V 1.0 * command
Serial Port COM5 is Opened Upload/Download file progress	

STEP 4, Choose upload type :"Firmware", "Bootloader", "Wlan Driver", and click "Update" to choose a binary file. The update procedure will started automatically.



STEP 5, Wait for finishing. You can "Abort" the update. Be careful, if updating is failed or Abort by user, the WiFiMCU may fail to startup.

WiFiMCU STUDIO www.doit.am	
Scrint Port	WiFiMCU> WiFiMCU Bootloader for EMW3165, HARDWARE_REVISION: V 1.0 * command
Command WiFi Net File Firmware About	4:FLASHUPDATE <-i><-e><-r>
Be very careful!	b:BEMUKTMAP List flash memory map 6:BOOT Excute application 7:REB00T Reboot
Upload a wrong firmware file may cause the MCU fail to startup! • Firmware • Bootloader • Update	Success W, doit am for more info. i internal flash -s SPI flash ish start address 1000 -end 0x0003FFFF": Update sp 100003FFFF 0x807ffff 0x807ffff 0x807ffff
○ Wlan Driver	OK (press 'a' to abort)
	•
Serial Port COM5 is Opened Upload Successfully	100%

STEP 6, Click "Reboot" button in WiFiMCU STUDIO to activate new firmware. Type command string "=mcu.ver()" to check the firmware version.

WiFiMCU STUDIO www.doit.am	
- Serial Port	Example: Input "4 -s -start 0x00002000 -end 0x0003FFFF": Update sp flash from 0x00002000 to 0x0003FFFF
Collac V Scan Port Close Reboot Collect Tick Memory	WiFiMCU> 4 -i -start 0x300C000 -end 0x807ffff Updating flash content From 0x800c000 to 0x807ffff Waiting for the file to be sent (press 'a' to abort) CC
Command WiFi Net File Firmware About	• • • • • • • • • • • • • • • • • • • •
- MCU	
GPIO	Programming Successfully!
Pin 0 hoot Mode gpio INPUT	Name: firmware
	Size: 259226 Bytes
Set mode Read High Low Toggle	WiFiMCU>
	WiFiMCU>
TIMER	ReBooting
ID 0 • Period(ms) 1000 Start Stop	
Tick Delayms Wdclr StopALL	
	1 1 701_1 www.u01t.com 62010
PWMPPIII I pwmpade V Start ADC Pin I pwm/adc V	cannot open init.lua
Freq(Hz) 10000 Read	WiFiMCU 0.9.3 build 20150818
Duty 50 Stop	· · · · · · · · · · · · · · · · · · ·
	< •
Serial Port COM5 is Opened Upload Successfully	100% .::

5.3, Use SecureCRT to update firmware

Beside WiFiMCU STUDIO, the firmware, bootloader and WLAN driver can be updated using a serial terminal tool which supports Y modem transmission protocol. The updated method with SecureCRT is taken as an example in this section.

STEP 1, Setup a serial interface connection with WiFiMCU just as what we have done at "Basic"->"3, UseSecureCRT(Optional)".

STEP 2, On the WiFiMCU board, Press"Boot" button while press "Reset" button in order to enter into bootloader mode. The same operations as STEP 2 in 5.2 section.

Serial-COM5 - SecureCRT		X
<u>File E</u> dit <u>V</u> iew <u>O</u> ptions <u>T</u> ransf	er <u>S</u> cript Too <u>l</u> s <u>W</u> indow <u>H</u> elp	
🔚 🕄 🎣 🗶 Enter host <alt+r></alt+r>	🔄 🛍 🗛 😼 🎒 🚰 💥 🌹 🛛 🞯 🌆	Ŧ
Session Manager 🛛 📮 🗙	✓ Serial-COM5 ×	4 Þ
Serial-COM5	<pre>wiFiMCU Bootloader for EMW3165, HARDWARE_REVISION: V 1.0 + command</pre>	A III
Ready	Serial: COM5, 115200 21, 10 24 Rows, 80 Cols VT100 CAP N	UM 📑

STEP 3, Use command string to update the firmware, bootloader, or WLAN driver follow the instructions.

``4 -i -start 0x800C000 -end 0x807ffff ' for firmware update.

"4 -i -start 0x8000000 -end 0x8007fff" for bootloader update.

"4 -s -start 0x00002000 -end 0x0003FFFF" for WLAN driver update.

Taking firmware updatding for example:

STEP 4, Type the command string "4 -i -start 0x800C000 -end 0x807ffff".

Serial-COM5 - SecureCRT		
<u>File Edit View Options Tra</u>	nsfer <u>S</u> cript Too <u>l</u> s <u>W</u> indow <u>H</u> elp	
🔚 🕄 🎣 🗙 Enter host <alt+< th=""><th>-R> 🗈 🛍 🗛 👍 😼 🥔 🖀 🐝 🏌 🎯 🚟</th><th>Ŧ</th></alt+<>	-R> 🗈 🛍 🗛 👍 😼 🥔 🖀 🐝 🏌 🎯 🚟	Ŧ
Session Manager 🛛 🗣	× Serial-COM5 ×	⊲ ⊳
Serial-COM5	<pre>WiFiMCU Bootloader for EMW3165, HARDWARE_REVISION: V 1.0 + command</pre>	E
Ready	Serial: COM5, 115200 24, 11 24 Rows, 80 Cols VT100	CAP NUM

STEP 5, Choose the firmware, Waiting for finishing.

Gerial-COM5 - SecureCRT	STEP 1, Type the on	onand string"	I-i-start 0x800C0			
File Edit View Options Tr	ansfer Script Tools Wind	low Help				
🏗 🔀 🍪 🕷 Enter host <	Send ASCII	🖪 😁 🕉 📍	0			Ŧ
Session Manager	Receive ASCII				4 Þ	>
- 🖓 🕞 🖄 👗 🖺 🕄	Send Binary	><-e> i><-s><-e><-r>	Update MICO settir	igs	•	
Serial-COM5	Send Kermit	><-end address>	List flash conte Excute application	map		
Senar-COM5	Receive Kermit		Reboot	+ .		h
	Send Xmodem	am, Pls visit www.doit.am for more info.				
	Receive Xmodem	address -end fla s -start 0x00002	ash start address 2000 -end 0x0003FFFF	": Update spi		
	Send Ymodem	0x800c000 -end	0x807fff		=	
	Receive Ymodem	nt From 0x800c00	00 to 0x807ffff			l
	Zmodem Upload List	to be sent	(press 'a' to abort			l
	Start Zmodem Upload					
						-
	Serial: COM	5, 115200 24, 39	24 Rows, 80 Cols VT	100	CAP NUM	



STEP 6, Reboot WiFiMCU, type command string "=mcu.ver()" to check the firmware version.

Gerial-COM5 - SecureCRT		_ X
<u>File Edit View Options Transfe</u>	er <u>S</u> cript Too <u>l</u> s <u>W</u> indow <u>H</u> elp	
🔚 🕄 🎣 🗶 Enter host <alt+r></alt+r>	i 🗈 😩 🏦 🕞 🤧 🚰 i 🚰 💥 🕴 i 🞯 i 🜌	Ŧ
Session Manager 🛛 📮 🗙	Serial-COM5 ×	4 ⊳
G Sessions G Serial-COM5	Starting ymodem transfer. Press Ctrl+C to cancel. Transferring wiFiMCU_Firmware_20150815.bin 100% 253 KB 6 KB/sec 00:00:39 0 Errors WiFiMCU>	•
	wiFiMCU>	
	WiFiMCU> 7 ReBooting	
	/]_[///////////////////////////////////	∷ ▼
Ready	Serial: COM5, 115200 24, 3 24 Rows, 80 Cols VT100	CAP NUM

5.4, Use SWD to update firmware

The SWD interface for WiFiMCU is shown below. The tutorial for SWD programmer can be found easily. You can compile the source code by using IAR and download the firmware, or just use SEGGER J-Flash to program the flash.



Helpful Links

- CP210x USB Bridge VCP driver: http://www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx
- WiFiMCU binary firmware and source code: <u>https://github.com/SmartArduino/WiFiMCU/releases</u>
- WiFiMCU STUDIO: <u>https://github.com/SmartArduino/WiFiMCU-STUDIO</u>
- eLua : <u>https://github.com/elua/elua</u>

- NodeMCU <u>https://github.com/nodemcu/nodemcu-firmware</u>
- Lua 5.1.4 manual: http://www.lua.org/manual/5.1/
- Discussion: <u>www.emw3165.com</u> <u>http://bbs.smartarduino.com</u> <u>http://bbs.doit.am</u>
- Buy: <u>http://www.smartarduino.com/view.php?id=94744</u>

http://www.aliexpress.com/item/WiFiMCU-Wireless-WiFi-Development-Board-Using-Lua-F rom-EMW3165/32440839773.html