

# USR-C216 Datasheet

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# 1. Product Overview

The hardware of USR-C216 is integrated into MAC, basic frequency chip and RF transceiver unit. Built-in low power operation mechanism can effectively realize the low power operation of the module; Support Wi-Fi protocol and TCP/IP protocol, users only need a simple configuration, to achieve the networking function of UART devices.

# 2. Product Features

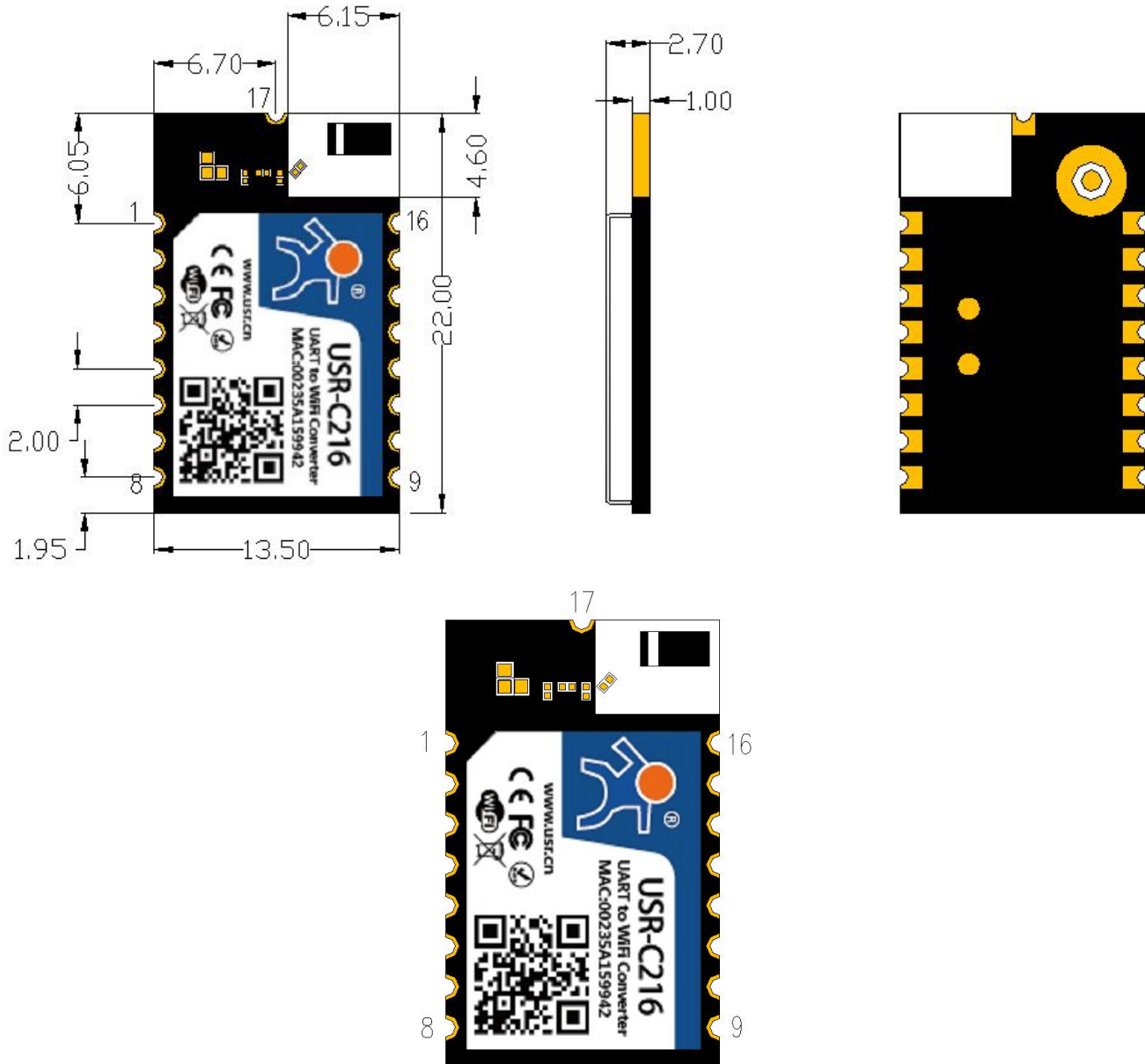
- Support WiFi@2.4 GHz 802.11b/g/n wireless standards
- Support WEP/WPA/WPA2 security mode
- Support AP, STA, AP+STA working mode
- Completely integrated serial-to-wireless TCP/UDP transmission function, multiple serial rate selection
- Local area network search and wireless parameter setting function
- Support TCP/UDP client registration packet mechanism
- Supporting simple Config /usrlink fast networking configuration
- Support similar RFC2217 automatic baud rate adaptation function
- Supporting simple AT commands
- Support Httpd client function
- 3.3V single power supply
- Selection of built-in antenna and external antenna (antenna pad)
- Ultra-small size: 22.0mm x 13.5mm x 2.7mm, SMT package

### 3. Product Specifications

	Item	Index
<b>Wireless parameters</b>	Wireless standard	802.11 b/g/n
	Transmitting power	802.11b: +19dBm(Max.@11Mbps, CCK)
		802.11g: +18dBm(Max.@54Mbps, OFDM)
		802.11n: +16dBm(Max.@HT20, MCS7)
	Receiving sensitivity	802.11b: -85 dBm(@11Mbps, CCK)
		802.11g: -70 dBm(@54Mbps, OFDM)
		802.11n: -68 dBm(@HT20, MCS7)
Antenna	C216-a: antenna pad	
	C216-b:board-mounted ceramic antenna	
<b>Hardware parameters</b>	Data interface	UART
	Working voltage	3.0~3.6V
	Working current	AP: average:74mA max:285mA STA: average:32mA max:196mA (work with 3.3V power supply)
	Working temperature	-20°C-85°C
	Storage temperature	-40°C-125°C
	Working humidity	5~95%RH(no condensation)
	Storage humidity	5~95%RH(no condensation)
	Size	103*105*25mm (L*W*H)
	Encapsulation	SMT
<b>Software parameters</b>	Wireless network type	STA/AP/STA+AP mode
	Security mechanism	WEP/WPA-PSK/WPA2-PSK
	Encryption type	TKIP/AES
	Network protocol	IPV4, TCP/UDP
<b>Software function</b>	DHCP/static IP	support
	DNS	support
	Web server	support
	Socket	TCP Server, TCP Client, UDP Server, UDP Client
	Httpd client	support
	Similar RFC2217	support
	Register packet	support
	Setup method	AT+ command, webpage

## 4. Product Dimensions

Unit: mm



Pin	Name	Signal type	Intro
1	GPIO1	NC	NC
2	GPIO2	NC	NC
3	GPIO3	I/O	GPIO, do not support
4	GPIO4	I/O	GPIO, do not support
5	UART0_TX	O	TX of UART
6	UART0_RX	I	RX of UART
7	UART0_CTS	I	CTS of UART

8	UART0_RTS	O	RTS of UART
9	SPI_IRQ	O	485 Control pin, after disabled 485 function presents high resistance state, enable 485 function, the default is low level; when serial port has data transmission, temporary switch to high level
10	nReset	I	Module reset, low level effective, pull down at least 100 ms
11	nReady	O	Module works normally with indication pin, low efficiency, external LED
12	nReload	I	Pull down 0.5-3 seconds to start Simple Config distribution network. Pull down more than 3 seconds to restore factory settings.
13	nLink	O	Module WiFi Connection Indicator Pin, Low Effective, External LED
14	WPS	I/O	WPS function pin, do not support
15	VCC	P	3.3V
16	GND	P	ground
17	RFIO	O	Radio Frequency Signal Output

## 5. Contact Us

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## 7. Update History

Edition	Describe
V1.0.0	2019-03-13 establish