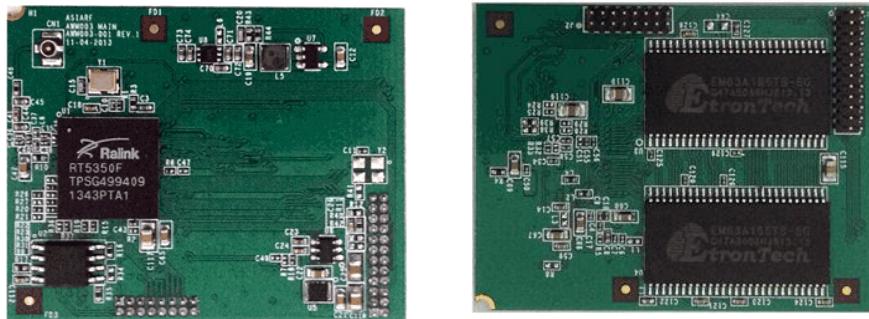


## AWM003 WiFi AP Router Module FCC ID:TKZAWM003

RT5350 8MB Flash (Max is 16MB), 64MB SDRAM Professional IP Camera version  
Pins Compatible with AWM002

**V1**



### DESCRIPTION

AWM003 is a small-size 3.8 x 4.7 cm, 802.11n AP board that achieves a data rate up to 150Mbps. Memory size is 8MB Flash, 64MB SDRAM. It is 3 times faster than the legacy 11g model but is priced less, making it more cost-effective.

**The temperature is less than 60 Celsius degree with full speed running.**

This product supports AP/Client modes. It is ideal for multi-purpose installation to share wireless connection.

By supporting 64/128-bits WEP, TKIP, WPA, WPA2, AES and WPS, helps to protect your data and privacy during transmission.

This module could be mounted on system board like IPTV, STB, Media Player, Femto, XDSL, Cable Modem, Industrial PC, Ethernet Switch, Printer Server, Connected TV, Also WiFi IP camera, **WiFi storage** function embedded.

### FEATURES

- Ralink RT5350 chipset with Interface USB, GPIO, UART and GPIOs.
- Support boot from Flash
- Data Rate up to 150Mbps
- Security: 64/128-bits WEP, TKIP, WPA, WPA2, AES, WPS
- Multi-modes: AP/Client

**SPECIFICATION****Hardware Features:**

<b>Standard</b>	IEEE 802.11 b/g/n standards compliant
<b>Wireless LAN</b>	1T1R Mode
<b>Antenna</b>	IPEX Connector *1
<b>30-pin Interface</b>	USB*1 ( Host ) UART*1 GPIOs VCC/GND I2S I2C PCM
<b>Frequency Range</b>	2.400 ~ 2.4835GHz ( subject to local regulations)
<b>Number of Selectable Channels</b>	802.11n 20MHz/40MHz ; 802.11b/g USA, Canada (FCC):11 channels (2.412GHz~2.462GHz) Europe (CE): 13 channels (2.412GHz~2.472GHz) Japan (TELEC): 14 channels (2.412GHz~2.4835GHz)
<b>Data Rate</b>	802.11n: up to 150Mbps 802.11b: 1, 2, 5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps
<b>Coverage Area</b>	Up to 6 times faster then existing 802.11 b/g products
<b>Dimension</b>	38x47 mm
<b>Certifications</b>	FCC/CE by request

## SOFTWARE FEATURE

➤ **Network Features:**

- ✧ Video, Storage
- ✧ DHCP Client/Relay/Server
- ✧ Dynamic DNS
- ✧ NTP Client
- ✧ DNS Cache/Proxy
- ✧ Firewall
  - 1. MAC/IP/Port Filter
  - 2. Virtual Server
  - 3. DMZ
  - 4. Content Filter

➤ **WiFi:**

- ✧ One Transmit and One Receive paths(1T1R)
- ✧ 20MHZ/40MHZ bandwidth.
- ✧ Support Multiple SSID
- ✧ Clock rate up to 400MHzLegacy and High Throughput Modes.
- ✧ Support WPS
- ✧ High security with build-in: WEP 64/128, TKIP, WPA, WPA2 mixed,802.1x and 802.11i
- ✧ 802.1X Authentication with RADIUS Client
- ✧ QoS-WMM.WMM-PS

## PIN DEFINITION

I

Description	Pin	Pin	Description
+3.3V	2	1	+3.3V
UART_Rx	4	3	GND
UART_Tx	6	5	Reserved
GND	8	7	WPS/Reset to Default #
LED_WLAN#	10	9	GND
LED_WPS#	12	11	USB_D+
AP/Client selection	14	13	USB_D-
1.2V	16	15	1.2V
GPIO #19	18	17	TX0+
GPIO #18	20	19	TX0-
GPIO #17	22	21	RX0+
LINK0_LED	24	23	RX0-

II

Description	Pin	Pin	Description
I <sup>2</sup> SCLK	2	1	PCMFS
I <sup>2</sup> SWS	4	3	PCMCLK
I <sup>2</sup> SSDO	6	5	PCMDRX
I <sup>2</sup> SSDI	8	7	PCMDTX
I <sup>2</sup> C_SCLK	10	9	I <sup>2</sup> C_SD
RX1+	12	11	TX1+
RX1-	14	13	TX1-
GND	16	15	GND

### Size:

1. Size: 38\*47 mm

Double row 1.27mm pitch on the 35mm side

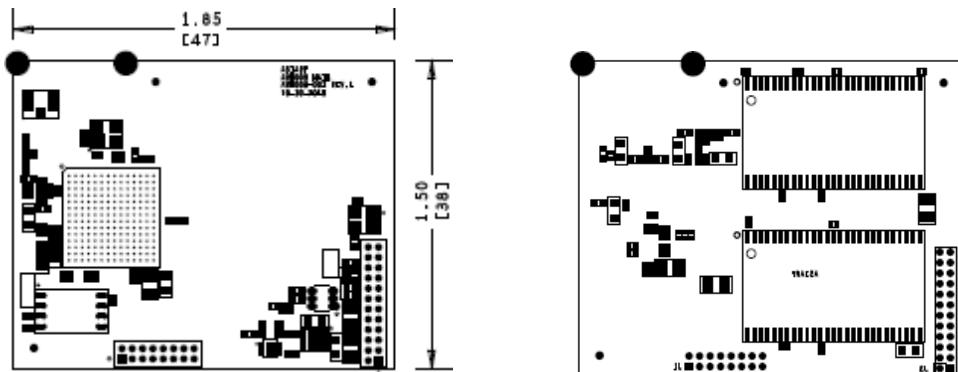
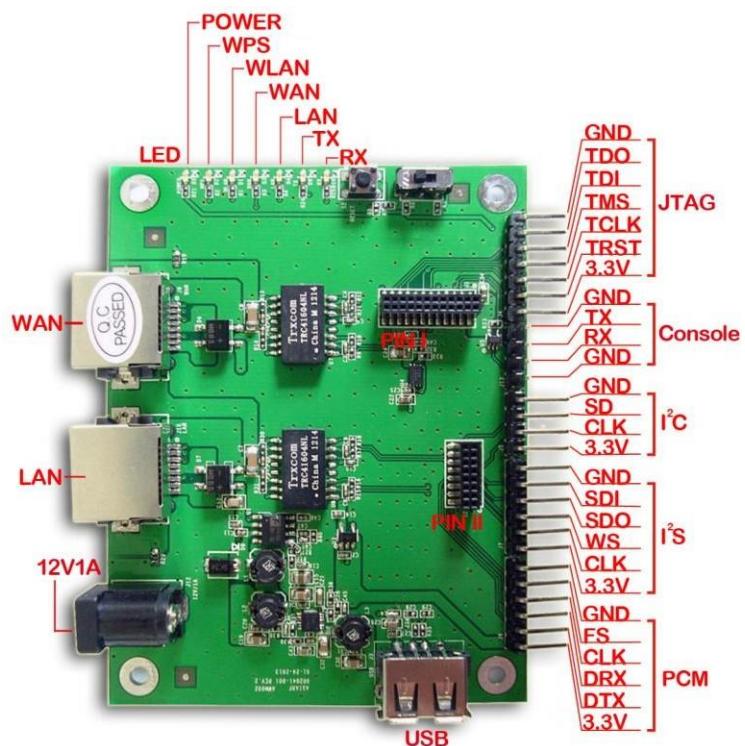
2. Reserved: Available for use

3. Reserved is ACTIVE LOW

4. LEDs and WPS/Reset to Default are active LOW

Reset /Reset to default function is share AP/Client selection pin

**Evaluated Board:**



### Pin Sharing Table:

			PIN1			
3.3V			1	2	3.3V	
UART_RX	GPIO #16	RX	3	4	GND	
UART_TX	GPIO #15	TX	5	6	LINK1_LED	LINK1_LED
GND			7	8	#0	RST_PBC
WLAN_LED			9	10	GND	
WPS_LED	GPIO #21	JTAG_TRST_N	11	12	USB D+	
AP/Client	GPIO #20	JTAG_TCLK	13	14	USB D-	
1.2V			15	16	1.2V	
GPIO #19	GPIO #19	JTAG_TMS	17	18	TX0+	
GPIO #18	GPIO #18	JTAG_TDI	19	20	TX0-	
GPIO #17	GPIO #17	JTAG_TDO	21	22	RX0+	
LINK0_LED			23	24	RX0-	

			PIN2				
RTS	I2S_CLK	GPIO #7	1	2	GPIO #11	PCM_FS	DTR
TXD	I2S_WS	GPIO #8	3	4	GPIO #12	PCM_CLK	DCD
CTS	I2S_SDO	GPIO #9	5	6	GPIO #13	PCM_DRX	DSR
RXD	I2S_SDI	GPIO #10	7	8	GPIO #14	PCM_DTX	RI
	I2C_CLK	GPIO #2	9	10	GPIO #1	I2C_SD	
		RX1+	11	12	TX1+		
		RX1-	13	14	TX1-		
		GND	15	16	GND		

Each column is one function, the same color is the same setting.

## FCC Statement:

### **FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

### **CAUTION:**

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## **RF exposure warning**

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

## **End Product Labeling :**

This transmitter module is authorized only for use in device where the antenna may be installed such that 20cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains FCC ID: TKZAWM003".

## **Information for the OEMs and Integrators**

The following statement must be included with all versions of this document supplied to an OEM or integrator, but should not be distributed to the end user.

- 1) This device is intended for OEM integrators only.
- 2) Please see the full Grant of Equipment document for other restrictions.

**Because this module doesn't have a shield case so belong a limit module approval (LMA) which specific host listed as below :**

<b>Model</b>	<b>Model Description</b>
WCB001	WIFI CONTROL BOX

\* Antenna Gain = 1.8dBi ( type : Dipole / Reverse SMA )