

# Yarbo Wi-Fi Module WF1 specification

FCC ID: 2A9JF-HY0915-YARBO

## **FCC Statement:**

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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: 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.

## **FCC Radiation Exposure Statement**

This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following:

“Contains Transmitter Module FCC ID: 2A9JF-HY0915-YARBO Or Contains FCC ID:  
2A9JF-HY0915-YARBO”

When the module is installed inside another device, the user manual of the host must contain below warning statements;

1. 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.
- (2) This device must accept any interference received, including interference that may cause

undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

Any company of the host device which install this modular with limit modular approval should perform the test of radiated emission and spurious emission according to FCC part 15C : 15.247 and 15.209 requirement, Only if the test result comply with FCC part 15C : 15.247 and 15.209 requirement, then the host can be sold legally.

IC: 29777-HY1031YARBO

**ISED Statement:**

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

L'appareil ne doit pas produire de brouillage;

L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

Please notice that if the ISED certification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains IC: 29777-HY1031YARBO" any similar wording that expresses the same meaning may be used.

Veillez noter que si le numéro de certification ISDE n'est pas visible lorsque le module est installé à l'intérieur d'un autre dispositif, alors l'extérieur du dispositif dans lequel le module est installé doit également afficher une étiquette se référant au module fermé. Cette étiquette extérieure peut utiliser des libellés tels que: «contient IC: 29777-HY1031YARBO» toute formulation similaire qui exprime la même signification peut être utilisée.

## Common Information

Product Name: Yarbo Wi-Fi Module  
Model No.(EUT): WF1  
Trade mark: Yarbo  
Product Type: Mobile                  Portable                  Fix Location  
Operation Frequency: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz  
IEEE 802.11n(HT40): 2422MHz to 2452MHz  
Modulation Type: IEEE for 802.11b:DSSS(CCK,DQPSK,DBPSK)  
IEEE for 802.11g:OFDM(64QAM, 16QAM, QPSK, BPSK)  
IEEE for 802.11n(HT20/HT40): OFDM (64QAM, 16QAM,QPSK,BPSK)  
Number of Channel: IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels  
IEEE 802.11n HT40: 7 Channels  
Channel Separation: 5MHz  
Antenna Type: FPC Antenna  
Antenna Gain: ANT1:1.82dBi,ANT2:1.82dBi  
Function SISO    2x2 MIMO  
Beamforming    TPC  
Power Supply: DC 12V  
Test Voltage: DC 12V

## Notice

1. The module is limited to OEM installation ONLY
2. The OEM integrators is responsible for ensuring that the end-user has no manual instructions to remove or install module
3. The module is limited to installation in mobile or fixed applications, according to Part 2.1091(b)
4. The separate approval is required for all other operating configurations, including portable configurations with respect to Part 2.1093 and different antenna configurations

## Installation and operation instruction

1. The computer searches for the wireless network connection of the wireless router (the default wireless name is the router model + MAC followed by 4bit), and then click the 'Connect' button to establish a connection, the wireless password is: 12345678.
2. When your computer network icon shows connected, it means that the IP address has been successfully obtained. To ensure successful connection, please use Ping command confirmation.  
Method: Open the cmd command line window and execute the Ping command: Ping

192.168.10.1.

3. Next you will land on the router web management setup page.
4. Enter "http://192.168.10.1" in the address bar of the web browser, and enter the login user name and password in the pop-up box.
5. When logging in for the first time, please enter the default username: admin, password: admin.
6. Success.

## Antenna installation requirements

Step 1

Place the antenna in the desired direction.

Step 2

Finished.

## Main features

Intelligent anti-dropout, support online detection, online maintenance, automatic redial of dropped calls, ensure that the device is always online
RS232 serial port support
Local network PHP browsing with remote synchronisation of locally stored content
Supports serial data serial TCP/UDP transparent data transfer or AT command transfer
SMS control of routing online and offline, SMS notification of routing status
Support for VPN secure tunneling, including PPTP, L2TP
Complete and robust router with multiple Internet access options: auto-assign, assigned IP, PPPOE
IPTABLES firewall support, various network protocols
Dynamic DDNS support: peanut shell, 88IP and dyndns domain providers are supported
Support serial local TFTP, web software upgrade

## WiFi parameter

Basic parameter	WIFI switch support	SSID broadcast switch support
	MAX speed: 300Mbps	Operating frequency band: single frequency 2.4GHz
	2.4GHZ	
	Channel selection: channel 1-11	
	Wireless mode: 11b/g/n/、11bg mixed 、11bgn mixed(Def)	
	Support speed: 300Mbps (Max)	
No. of users	Up to 32 simultaneous wireless users	
Safety parameters	Supports WAP-PSK/WPA2-PSK authentication type	
	Supports 64/128-bit WEP encryption support TKIP、CCMP/AES algorithm encryption	
Transmission distance	Outdoor unobstructed/open, coverage up to 100m	

## Interface parameters

WAN port	1x 10/100M adaptive WAN port Built-in isolation
	Support for Auto Rollover (Auto MDI / MDIX) Support for PPPOE
LAN port	1x 10/100M adaptive LAN port
	Built-in 1.5 KV electromagnetic isolation protection
	Support for Auto MDI / MDIX

Serial port	1x RS232 serial port
Power connector	Standard DC connection 12V/1-2A
Antenna interface	2 x antenna interface (2 x WIFI antennas)
Indicator light	2x indicator lights (SYS light, WiFi light)

## System parameters

CPU	MIPS CPU, MT7628 Dual Core 580Mhz
MMU	The CPU has its own MMU memory management unit, which can effectively prevent the system from abnormalities caused by memory overflow
FLASH	64 Mbits of memory for easy storage of programs and data
DDR2	Large 512Mbits cache for easy system speed

## Other parameters

Supply voltage	Wide voltage design DC 7V - 35V power supply Built-in power reverse protection, overvoltage and overcurrent protection
Power supply as standard	9V/12V    1.0A - 2.0A
Outer shell	Metal housing, radiation-proof, interference-resistant, lightning-proof design, safe isolation of the housing from the system, suitable for harsh industrial control areas
Product size	75*42*12.5mm
Package size	465*345*75 mm (Pack of 100 pieces)
Product net weight	15g

Gross product weight	15g
Operating temperature	‘-30°C ~ +70°C
Storage temperature	‘-40°C ~ +85°C
Humidity	95pw (no condensation)