

# **Fitivision Technology Corporation**

**Wireless LAN module  
WN8020**

**USER MANUAL**

## 1. Overview

WN8020 is high performance and cost effective 802.11b/g/n WLAN USB module. WG8020 is embedded with Ralink RT3070 a highly integrated MAC/BBP and 2.4GHz RF single chip with 150Mbps PHY rate supporting. It fully complies with IEEE 802.11n draft 3.0 and IEEE 802.11b/g feature rich wireless connectivity at high standards, cost-effective, throughput from extended distance. Optimized RF architecture and baseband algorithms provide superb performance and low power consumption.

WN8020 is designed to support standard based features in the areas of security, quality of service and international regulation, giving end users the greatest performance anytime in any circumstance.

## 2. Product Spec.

Chip Set	Ralink RT3070
Operation Voltage	3.3V
Network Standards	IEEE802.11b, IEEE802.11g and IEEE802.11n
Modulation Technology	OFDM, and CCK
Data Rate	Up to 150Mbps
Operating Frequencies	2.412~2.462 GHz
Antenna Type	SWIVEL TYPE , 1/4λ DIPOLE ANTENNA With RP-SMA
Antenna Gain	2.0dBi
Channel Bandwidth	20MHz and 40MHz
Frequency Stability	<±5ppm @ Room Temperature +25°C
OFDM Output Power	15dBm (Typ.) @EVM<3%, all channel
CCK Spectral Mask @Pout=18dBm	-37dBc (Typ.) @ 11~22MHz -60dBc (Typ.) @ 22~33MHz
2f Harmonics	-55dBm (Typ.)
LO Leakage Peak Power	-64dBm (Typ.) @Transmit State
Receiver sensitivity (PER<10%)	-65dBm [Typ.] @ HT40M, MCS7 -71dBm [Typ.] @ 54M, OFDM -85dBm [Typ.] @ 11M, CCK -90dBm [Typ.] @ 1M, CCK
RF Port Impedance	50Ω±10%
USB Differential Port Impedance	90Ω±10%
Temperatures(AMBIENT)	Operation: 0~60°C , Storage:-20~70°C

## USA - Federal Communications Commission (FCC)

### FCC Radiation Exposure Statement

#### **CAUTION:**

- The radiated output power of WiFi Module 802.11bgn devices is far below the FCC radio frequency exposure limits. Nevertheless, WiFi Module 802.11bgn devices should be used in such a manner that the potential for human contact during normal operation is minimized. To avoid the possibility of exceeding the FCC radio frequency exposure limits, you should keep a distance of at least 20 cm between you (or any other person in the vicinity) and the antenna that is built into the notebook.

### Interference Statement

These devices comply with Part 15 of the FCC Rules. Operation of the devices is subject to the following two conditions: (1) The devices may not cause harmful interference, and (2) The devices must accept any interference that might cause undesired operation.

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. If the equipment is not installed and used in accordance with the instructions, the equipment might cause harmful interference to radio communications. There is no guarantee, however, that such 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 taking one or more of the following measures:

- Relocate this device.
- Increase the separation between the device and the receiver.
- Connect the device into an outlet on a circuit different from that of other electronics.
- Consult the dealer or an experienced radio technician for help.