

# **WIN-A2 WIFI Module User Manual Rev. 0.01**

| Department           | Name    | Review Dates |         |
|----------------------|---------|--------------|---------|
|                      |         | Plan         | Results |
| Hardware Engineering | GaoJian |              |         |
|                      |         |              |         |

# 1. Introduction

Project Name: 802.11b/g/n WIFI module.

This documentation describes the product specification of the WIFI 802.11b/g/n module, it is a confidential document of FOXCONN.

## 1.1 Scope

The device provide communications for applications operating in the globally available 2.4GHz unlicensed ISM band, which utilizing direct sequence spread spectrum and OFDM/CCK technology, the maximum data rate can reach to 65 Mbps(MCS7) for HT20.

## 1.2 Function

- Support single-band IEEE 802.11b/g and handheld device class 802.11n.
- 1x1 single stream with antenna diversity.
- SDIO v2.0 4bit mode interface support.
- Full support for power saving modes.

## 2. Product Specification

### 2.1 Output Center And Symbol Clock Frequency Tolerance

| Center frequency tolerance |       |
|----------------------------|-------|
| CH1/CH7/CH13               |       |
| Spec. (ppm)                | +/-25 |

### 2.2 RF Specification

#### 2.2.1 Spectrum Mask spec

| Mode of Operation 802.11g           | Specifications |
|-------------------------------------|----------------|
| 802.11 g at $\pm 9$ MHz Offset      | 0 dBr          |
| 802.11 g at $\pm 11$ MHz Offset     | -20 dBr        |
| 802.11 g at $\pm 20$ MHz Offset     | -28 dBr        |
| 802.11 g at $\pm 30$ MHz Offset     | -40 dBr        |
| Mode of Operation 802.11b           | Specifications |
| 802.11b at +/-11MHz~+/-22MHz Offset | -30 dBr        |
| 802.11b at >+22MHz,<-22MHz Offset   | -50 dBr        |
| Mode of Operation 802.11n-HT20      | Specifications |
| 802.11n at $\pm 9$ MHz offset       | 0 dBr          |
| 802.11n at $\pm 11$ MHz offset      | -20 dBr        |
| 802.11n at $\pm 20$ MHz offset      | -28 dBr        |
| 802.11n at $\pm 30$ MHz offset      | -45 dBr        |

## 2.3 Electrical Specification

### 2.3.1 Absolute Maximum Ratings

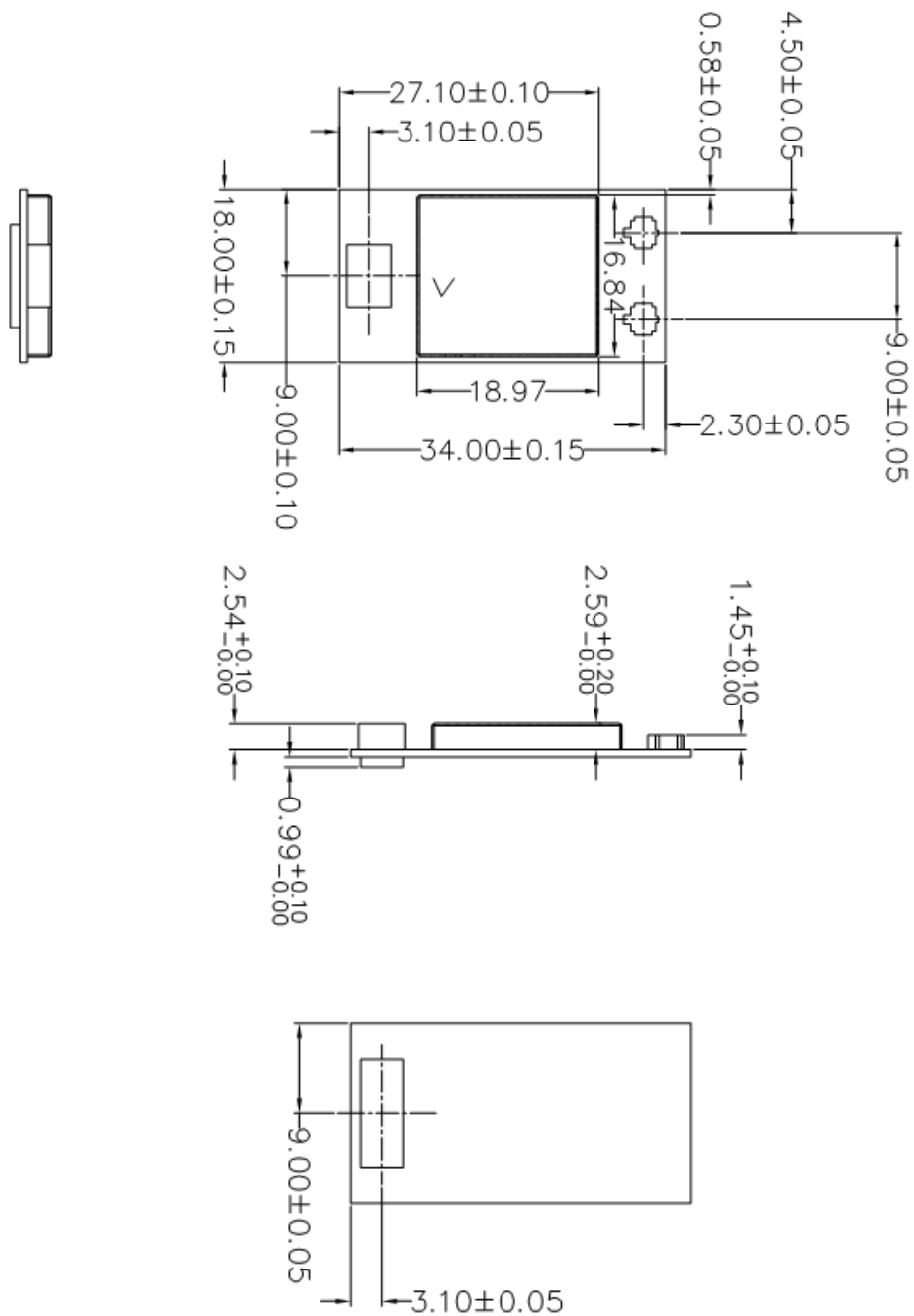
The specification indicates levels where permanent damage to the device can occur. Functional operation is not guaranteed under these conditions. Operation at absolute maximum conditions for extended can adversely affect long-term reliability of the device.

| Rating                           | Symbol | Value  | Unit |
|----------------------------------|--------|--------|------|
| DC supply voltage for the device | VDD    | -0.5~6 | V    |

### 2.3.2 Recommended operating condition

| Parameter         | Minimum | Typical | Maximum | Unit |
|-------------------|---------|---------|---------|------|
| DC Supply Voltage | 3       | 3.3     | 3.6     | [v]  |

### 3. Mechanical Drawing



## 4. Regulatory Information

### USA-Federal Communications Commission (FCC)

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.

#### **Caution**

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

#### **Labeling**

Hon Hai Precision WiFi 11b/g/n module WIN-A2 labeled as below.

FCC ID: MCLWINA2

The proposed with FCC ID label format is to be placed on the module. If FCC ID is not visible when the module is installed into the system, "Contains FCC ID: MCLWINA2" shall be placed on the outside of final host system.

#### **Caution: Exposure to Radio Frequency Radiation.**

To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.

This device must not be co-located or operating in conjunction with any other antenna or transmitter.

## **Canada-Industry Canada (IC)**

This device complies with RSS 210 of Industry Canada.

Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of this device.

The term “IC” before the equipment certification number only signifies that the Industry Canada technical specifications were met.

### **Caution: Exposure to Radio Frequency Radiation.**

To comply with IC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.