

Product Specification

50-0010-CL-WF

IEEE802.11 a/b/g/n 3T3R USB Module

Version: 1.0

Date: Aug, 01, 2013

Release History

DATE	REV	Description of Change
2013/08/01	1.0	Initial release

50-0010-CL-WF

IEEE802.11a/b/g/n 3T3R USB Module

1. Introduction

50-0010-CL-WF is an integrated the Celeno CLR250 single-chip 2.4GHz / 5GHz IEEE802.11a/b/g/n 3T3R MAC/Baseband/Radio with USB2.0 interface. 50-0010-CL-WF fully complies with IEEE802.11n and IEEE802.11a/b/g/n feature rich wireless connectivity at high standards, delivers reliable, cost-effective, throughput from an extended distance.

2. Features

- Interoperable with IEEE802.11a/b/g/n WLAN.
- Reverse direction grant data flow and frame aggregation.
- Support 195Mbps for 20MHz and 450Mbps for 40MHz channel operations. Wireless multimedia enhancements quality of service support (QoS). Legacy and high throughput modes.
- Multiple BSSID support.
- WEP 64/128, WPA, WPA2, TKIP, and AES software encryption. USB2.0 compliant.
- Low power with advanced power management.
- Operating systems – Windows XP 32/64, Vista 32/64, Linux, Macintosh.

3. General Specifications

Product Specification	
Model Name	50-0010-CL-WF
WLAN Standard	IEEE 802.11a/b/g/n, 3T3R
Host interface	USB2.0 compatible Major Chipset Celeno CLR250

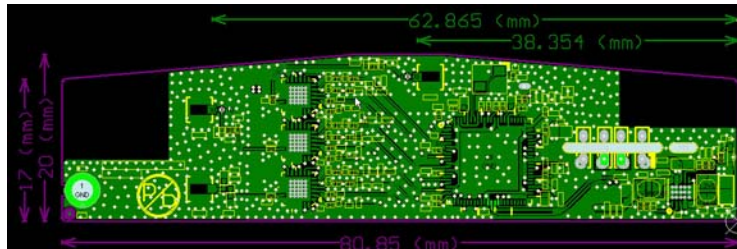
Dimensions					
	Minimum	Typical	Maximum	Unit	
Length			81	mm	
Width			20	mm	
Antenna Connector	3 Path ipex connector				
Operating Condition					
	Minimum	Typical	Maximum	Unit	
Voltage	DC	3.15	3.3	3.45	V
Temperature	-10		70	°C	
Storage temperature	-20		70	°C	
Humidity Non-Operating	5		80	%	

Electrical Specification

Frequency Range	2412 – 2462MHz / 5180 - 5825
Modulation	BPSK, QPSK, 16QAM, 64QAM, DBPSK, DQPSK, and CCK
Data Rate	
802.11b CCK Mode	11, 5.5, 2, 1 Mbps
802.11g OFDM Mode	54, 48, 36, 24, 18, 12, 9, 6 Mbps
802.11n HT20 Mode GI 800ns	6.5 ~195 Mbps MCS 0 ~ MCS 23
802.11n HT20 Mode GI 400ns	7.2 ~216 Mbps MCS 0 ~ MCS 23
802.11n HT40 Mode GI 800ns	13.5 ~ 405Mbps MCS 0 ~ MCS 23
802.11n HT40 Mode GI 400ns	15 ~ 450Mbps MCS 0 ~ MCS 23
Output Tx power	2.4GHz 11b 17dbm +/-1.5dbm 2.4GHz 11g/n 14dbm +/-1.5dbm 5 GHz LOW Band 11dbm +/-1.5dbm 5 GHz Mid Band 10dbm +/-1.5dbm 5 GHz Hi Band 8dbm +/-1.5dbm
Rx Sensitivity	2.4GHz 11b < -85dbm 2.4GHz 11g < -73dbm 2.4GHz 11n mcs7 < -70dbm 5 GHz a/n mcs7 < -70dbm
Security	WEP 64/128, WPA, WPA2, TKIP, and AES software encryption
Operating System Compatibility	
Windows XP 32/64	
Windows Vista 32/64	
Windows 7 32/64	
Linux Ubuntu	

4. Mechanical Dimensions

The I-PEX connector is on the top side of the PCB.



Federal Communication 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.

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

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

This device is restricted to **indoor** use when operated in the 5.15 to 5.25 GHz frequency range.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance **20cm** between the radiator & your body.

LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following " Contains TX FCC ID: **S4A50-0010-CL-WF**". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available on the label: This device complies with Part 15 of 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.

The OEM integrator is still responsible for the FCC compliance requirement of the end product, which integrates this module. Appropriate measurements (e.g. 15 B compliance) and if applicable additional equipment authorizations (e.g. Verification, Doc) of the host device to be addressed by the integrator/manufacture.

This module must be installed by Entone Technologies (HK) Limited. and XAVi Technologies Corporation, who will retain full control over the final installation of the device into its products, and therefore can assure the compliance of the end product to the tested results.

List of approved antennas

No.	Ant. Cat.	Ant. Type	Gain (dBi)
5GHz	External	PIFA	4.2
			4.9
			3.6
2.4G	External	PIFA	4.2
			4.2
			4.2