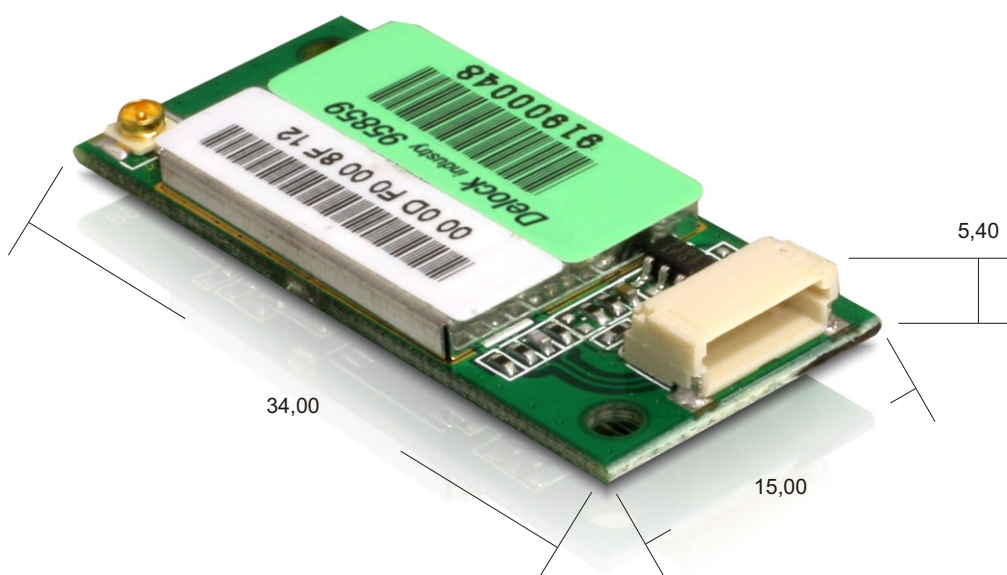


Specification

95859

Delock industry USB WLAN 150 Mbps 3V module



date: 05.01.2011

Specification

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Delock industry USB WLAN 150 Mbps 3V module

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- device overall description
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Specification

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Device Overall Description

The 95859 is designed to provide wireless LAN function on a small form factor with USB interface. The wireless LAN function is based on Ralink RT3070 MAC/BBP/RF controller and high gain power amplifier, fully comply with current draft IEEE 802.11n and IEEE 802.11 b/g standards.

Features

- Ralink RT3070 MAC/BBP/RF controller
- 1T1R modes
- 11b: 1,2,5.5,11Mbps
- 11g: 6,9,12,18,24,36,48,54Mbps
- 11n: legacy and high throughput modes, support 20/40MHz bandwidth MCS0~7(150Mbps PHY rate rate)
- reverse direction data flow and frame aggregation
- WEP 64/128, WPA, WPA2, TKIP, AES
- QoS-WMM, WMM-PS
- WPS, PIN, PBC
- multiple BSSID support
- low power with advanced power management

Specification

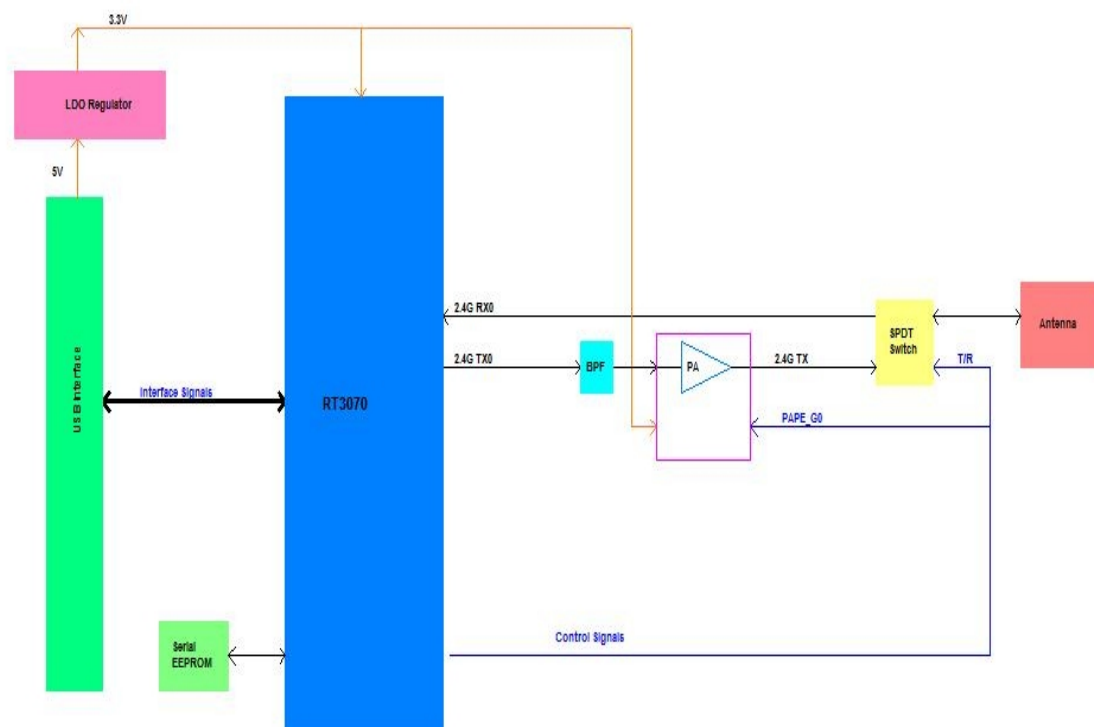
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Specification compliance

- 802.11n Draft3.0
- 802.11b/g
- 802.11i
- 802.11e
- 802.11d
- 802.11h
- 802.11j
- USB2.0

Block diagram



Specification

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Channel assignment

2.4GHz channel support

| Channel | FCC (US) | IC (CA) | ETSI (EU) | Japan JP) |
|---------|----------|---------|-----------|-----------|
| 1 | x | x | x | x |
| 2 | x | x | x | x |
| 3 | x | x | x | x |
| 4 | x | x | x | x |
| 5 | x | x | x | x |
| 6 | x | x | x | x |
| 7 | x | x | x | x |
| 8 | x | x | x | x |
| 9 | x | x | x | x |
| 10 | x | x | x | x |
| 11 | x | x | x | x |
| 12 | | | x | x |
| 13 | | | x | x |
| 14 | | | | x |

KEY:

US = United States, CA = Canada, EU = European countries (except France and Spain) JP = Japan many countries and region are currently revising the channel assignment. X = Supported

Security

- complete security features - WEP 64/128, WPA, WPA2, 802.1x, and 802.11i
- Cisco CCS compliant

Certification

- Cisco CCX

RF Specifications

TBD

Specification

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RF Characteristics

| RF Characteristics | Minimum | Typical | Maximum | Units |
|---------------------------------|---------|--------------|---------|--------|
| PC Interface USB 2.0 | | USB 2.0 | | |
| Internal Antenna Impedance | | 50 | | ohms |
| Operating Temperature Range | 0 | | + 65 | |
| Storage Temperature Range | -20 | | + 65 | |
| Supply Voltage | 3.0 | 3.3 | 3.6 | V |
| RX Supply Current (11b 11Mbps) | | 140 | | mA |
| Power Consumption | | 462 | | mWatts |
| RX Supply Current (11g 54Mbps) | | 150 | | mA |
| Power Consumption | | 495 | | mWatts |
| RX Supply Current (11n 150Mbps) | | 190 | | mA |
| Power Consumption | | 627 | | mWatts |
| TX Supply Current (11b 1Mbps) | | 265 | | mA |
| Power Consumption | | 875 | | mWatts |
| TX Supply Current (11g 6Mbps) | | 255 | | mA |
| Power Consumption | | 842 | | mWatts |
| TX Supply Current (11n 15Mbps) | | 245 | | mA |
| Power Consumption | | 809 | | mWatts |
| Radio off Current | | 40 | | mA |
| Power Consumption | | 132 | | mWatts |
| RX Sensitivity (11b,11Mbps) | | -86 | | dBm |
| RX Sensitivity (11g,54Mbps) | | -71 | | dBm |
| RX Sensitivity (11n,150Mbps) | | -63 | | dBm |
| TX Output Power (11b,11M) | | 17.5 | | dBm |
| TX Output Power (11g,54Mbps) | | 14 | | dBm |
| TX Output Power (11n,MCS0) | | 17.5 | | dBm |
| TX Output Power (11n,MCS7) | | 14 | | dBm |
| TX Spectral Mask (CCK) | | PASS | | |
| TX Spectral Mask (OFDM) | | PASS | | |
| TX Spectral Mask (11n,20M) | | PASS | | |
| TX Spectral Mask (11n,40M) | | PASS | | |
| Preamble Length | | Long / Short | | |

Specification

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Software & OS support

| operating system | driver |
|---------------------|-----------|
| Windows 2000 | available |
| Windows XP 32/64 | available |
| Windows Vista 32/64 | available |
| Windows CE 5.0/6.0 | available |
| Linux | available |
| MAC OS | available |

Operating conditions

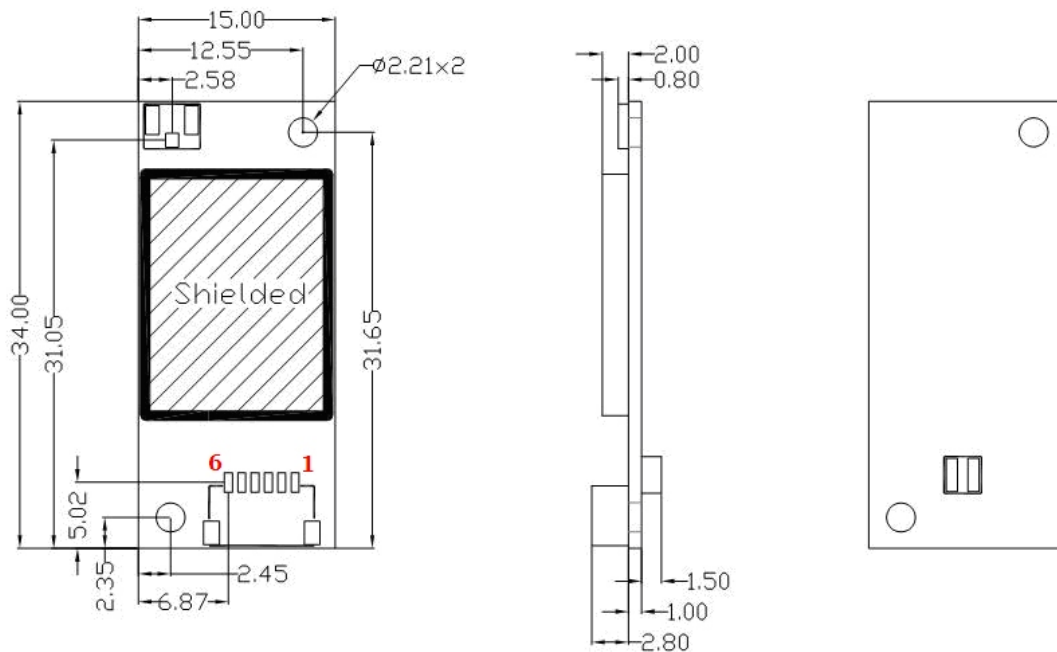
| | |
|------------------------------------|---------------------------|
| voltage range | 3.3V (± 0.3V) |
| operating temperature range | 0°C - 65°C |
| storage temperature range | -10°C - 85°C |
| relative humidity during operating | max. 95% (non-condensing) |
| relative humidity during storage | max. 95% (non-condensing) |

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Mechanical drawing



Specification

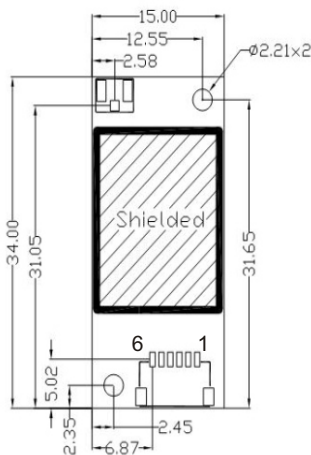
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Antenna connector

| Connector | Vendor | Part# |
|------------|--------|---|
| Antenna *1 | Hirose | CL331-0471-0-10 (U FL-R-SMT), or compliance |

Connector Status:



Host interface pin definition

| | | | |
|---|---------------|---|---------------------------------|
| 1 | Vcc 3V | 2 | USB Data - |
| 3 | USB Data + | 4 | GND |
| 5 | WLAN LED LINK | 6 | FAA pin: WLAN RF Disable/Enable |

cable optional: Delock industry A95835



-host interface connector : 6 pin SMT Male USB connector

-connector product number (Male): 87213-0600L (connector Vender Aces Electronic CO., LTD.)

Note: Pin 5 is low active for WLAN LED link

Pin 6 is low voltage to disable RF function

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LED status:

| LED status | WLAN card activity |
|------------------------|---|
| LED on | Associated, and authenticated but not transmitting or receiving |
| LED Slow Blink | Scanning for AP |
| LED Intermittent Blink | Activity proportional to transmitting/receiving speed |
| LED off | Radio off |

