TurboComm 2.4GHz Wireless LAN

IEEE 802.11b/g Wireless LAN PCI Card with Nitro XM

Model Number: WLI303

General Descriptions

TurboComm's WLI303 is a 2.4GHz wireless LAN add-on-card which plug into the PCI slot of desktop computer system. Offering easy installation and cost-effective connection for Wireless network service.

With the performance enhancement of Nitro XM, the WLI303 can achieve wireless speeds up to 140Mbps[1] in a pure Nitro XM environment through the use of new wireless techniques such as Compression, Concatenation, Piggyback Acknowledgements, Packet Bursting and Direct Link mode. This provides a bandwidth large enough to handle video/audio streaming and Video on Demand (VoD) applications.

All TurboComm products are made in TL9000 approved factory. WLI303 Wireless PCI Card complies with FCC part15 regulations and CE approval.

Features and Benefits

- 32-bit PCI V2.2 compliant and plug and play compatible for easy configuration, plug-and-play installation
- 802.11g industry standard
- Use popular 2.4GHz frequency band
- Backwards compatible with existing 802.11b wireless devices
- Performance enhancement up to 140Mbps[1] by Nitro XM
  - **Compression -** Compress data allowing faster throughput
  - **Concatenation**
    - Combines multiple small packets of data into a "jumbo" 802.11 packet – improves network efficiency
    - Highly effective when used with Compression
  - **Piggyback Acknowledgements** - Eliminates redundant messages
  - **Packet Bursting** - Delivers throughput enhancement in both mixed and g-only networks
  - **Direct Link -** Enables an automatic, secure, high-speed link directly between wireless clients while maintaining communications with the Access Point
- Advanced security with WPA, TKIP and Pre-Shared Key function support
- Runs Windows® 98SE, 2000, ME, XP

Specifications

Standards
- IEEE 802.11
- IEEE 802.11b
- IEEE 802.11g

Bus Type
PCI 2.2

Media Access Control Protocol
CSMA/CA (Carrier Sense Multiple Access with Collision Avoidance) with Random Backoff

Network Architecture Types
- Ad-Hoc mode (Peer-to-Peer)
- Infrastructure mode (Access Point)

Frequency Range
2.412 ~ 2.484 GHz

Operating Channels
- US (FCC): 11
- Europe (ETSI): 13
- Canada (DOC): 11

Network Transfer Rate[1] /Modulation Technique
- 802.11b
  11Mbps, 5.5Mbps: CCK
  2Mbps: QPSK
  1Mbps: BPSK
- 802.11g
  54Mbps, 48Mbps, 36Mbps, 24Mbps, 18Mbps, 12Mbps, 9Mbps, 6Mbps: OFDM (orthogonal Frequency Division Multiplexing)

Receiver Sensitivity
- 54Mbps OFDM, 10% PER: -70dBm
- 48Mbps OFDM, 10% PER: -72dBm
- 36Mbps OFDM, 10% PER: -77dBm
- 24Mbps OFDM, 10% PER: -81dBm
- 18Mbps OFDM, 10% PER: -85dBm
- 12Mbps OFDM, 10% PER: -88dBm
- 11Mbps CCK, 8% PER: -88dBm
- 9Mbps OFDM, 10% PER: -89dBm
- 6Mbps OFDM, 10% PER: -91dBm
- 5.5Mbps CCK, 8% PER: -91dBm
- 2Mbps QPSK, 8% PER: -92dBm
- 1Mbps BPSK, 8% PER: -96dBm

Transmitter output power
- 12 dBm (±1dBm)

Security
- 64/128-bit WEP data encryption
- EAP - MD5-Challenge, LEAP, TTLS, PEAP, TLS
- WPA-PSK/WPA-None
  (Encryption level: TKIP/AES)

Antenna
External Dipole antenna with detachable reverse SMA connector

Emission (EMI)
FCC part 15 Class B and CE Class B

Mechanical
- Size (app.): 120mm(length) x 51mm (width) x 11mm (height)
- Net Weight (app.): 65 g

Environmental
- Operating temperature
  0°C ~ 50°C
- Humidity
  5 % ~ 95 % (non-condensing)
- Storage temperature
  -20°C ~ 60°C

Supported OS
Windows 98SE, ME, 2000 and XP

Sales and Service Points

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[1] Maximum wireless signal rate derived from IEEE standard 802.11g specifications. Actual data throughput will vary. Network conditions and environment factors lower actual data throughput rate.
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* Specifications are subject to change without notice.