

TWD-5301H & TWD-2301H mPCIe Card

Overview

Transsystem Inc. offers two 802.11n 3x3 3-stream 802.11n mini PCI express cards to enable data rate up to 450Mbps link rate for 40MHz channel, they are based on full size mPCIe form factor design to deliver a variety of high-reliability & bandwidth-intensive applications.

- TWD-5301H is 5GHz mPCIe card, up to +18dBm Transmit output power per chain
- TWD-2301H is 2.4GHz mPCIe card, up to +18dBm Transmit output power per chain

Both mPCIe cards are based on Atheros AR9590 design, and with pre-filter design to provide the excellent radio rejection against the interfering signal from the another WiFi module on con-current 2.4 & 5GHz (dual band dual concurrent, DBDC) application to dramatically improve the data throughput/range performance.

Key Features

- Standard 50 x 50.8 mm full PCIe mini card form factor with screw mounting hole
- Based on Atheros AR9590 3x3 MIMO Platform
- Three U.FL antenna connectors enable flexible connectivity
- Supports IEEE802.11a/b/g backward compatibility allows inter-operability among multiple WiFi networks
- Supports spatial multiplexing, cycle-delay diversity (CDD), low-density parity check (LDPC), maximal ratio combining (MRC), space time block code (STBC), and Tx beamforming (TxBF)
- RoHS compliance



TranSystem. Inc.

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TWL-5301H

Wireless Interface

5GHz Radio

- Standard IEEE 802.11a, 802.11n
- Operation Frequency 5.150 – 5.850 GHz
- Transmit Power* (± 2 dB) (average)

802.11a		
54 Mbps		+15 dBm
6 Mbps		+18 dBm

802.11n		
HT20		
	MCS-23	+13 dBm
	MCS-16	+17 dBm
	MCS-15	+13 dBm
	MCS-8	+17 dBm
	MCS-7	+13 dBm
	MCS-0	+17 dBm

- Receive Sensitivity* (Typical)

802.11a		
54 Mbps		-76 dBm
6 Mbps		-91 dBm

802.11n		
HT20		
	MCS-7	-72 dBm
	MCS-0	-91 dBm
HT40		
	MCS-7	-68 dBm
	MCS-0	-89 dBm

Electrical Specification

- Power consumption: up to 3.0Watts

Environmental Specification

- Operating Temp. Ambient 0°C to +70°C
- Storage Temperature -10°C to + 80 °C
- Humidity 0 – 95% (Non-condensing)

Typical value @ 25°C, unless otherwise specified

Specifications are subject to change without prior notice

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TWL-2301H

Wireless Interface

2.4GHz Radio

- Standard IEEE 802.11b, 802.11g, 802.11n
- Operation Frequency 2.4.12 – 2.4835 GHz (Ch.1-13)
- Transmit Power* (± 2 dB) (average)

802.11b		
11 Mbps		+18 dBm

802.11g		
54 Mbps		+16 dBm
6 Mbps		+18 dBm

802.11n		
HT20		
	MCS-23	+16 dBm
	MCS-16	+18 dBm
	MCS-15	+16 dBm
	MCS-8	+18 dBm
	MCS-7	+16 dBm
	MCS-0	+18 dBm

- Receive Sensitivity* (Typical)

802.11g		
54 Mbps		-75 dBm
6 Mbps		-84 dBm

802.11n		
HT20		
	MCS-7	-72 dBm
	MCS-0	-84 dBm
HT40		
	MCS-7	-68 dBm
	MCS-0	-82 dBm

Electrical Specification

- Power consumption: up to 3.0Watts

Environmental Specification

- Operating Temp. Ambient 0°C to +70°C
- Storage Temperature -10°C to + 80 °C
- Humidity 0 – 95% (Non-condensing)

*Note: the wireless interface spec is based on one chain TX/RX.

