



Full-size PCIe MINI CARD

YBTE9280NX

Dual-band 802.11n MIMO 2 x 2 mini PCIe

Features

- Atheros XB92 reference design
- Atheros XSPAN family chipset, P/N AR9280
- IEEE 802.11n compliant and backward compatible with 802.11a/b/g
- Dual-band 2 x 2 MIMO spatial multiplexing technique
- Maximum output power 18dBm@802.11a / 20dBm MIMO aggregate
- Supports up to 300Mbps physical data rates
- 4.9GHz support (Optional)^①
 - Delivers up to 10 times the throughput and nearly twice the range of legacy 802.11a and 802.11b/g networks
- Transmission Power Control (IEEE 802.11h TPC)
- Dynamic Frequency Selection (DFS)
- Multi-Country Roaming Supported (IEEE802.11d Global Harmonization Standard)
- 2 x U.FL Antenna Connector
- Complaint with PCI-Express Mini Card 1.1 Standard
- Supports 802.11x authentication, 64/128/152Bit WEP, IEEE802.11i encryption
- Supports Windows 7, Windows Vista, Windows XP, Windows 2000 operating system

Technical Specifications											
Chipset	AR9280										
Host Interface	PCI-Express 1.1 Standard										
Operating Voltage	3.3 VDC										
Power Consumption [2T2R]	11b Cont. Tx @5.5M	2.3W									
	11g Cont. Tx @6M	2.7W									
	11a Cont. Tx @6M	2.5W									
	11ng Cont. Tx@HT20 MCS0	2.7W									
	11ng Cont. Tx@HT40 MCS0	2.5W									
	11na Cont. Tx@HT20 MCS0	2.7W									
	11na Cont. Tx@HT40 MCS0	2.5W									
	11g Cont. Rx	1.3W									
	11a Cont. Rx	1.3W									
	Standby	1W									
Antenna Connector	2 x U.FL Antenna Connector										
Data Rate	IEEE 802.11a :	54Mbps	48Mbps	36Mbps	24Mbps	18Mbps	12Mbps	9Mbps	6Mbps		
	IEEE 802.11b :	11Mbps	5.5Mbps	2Mbps	1Mbps						
	IEEE 802.11g :	54Mbps	48Mbps	36Mbps	24Mbps	18Mbps	12Mbps	9Mbps	6Mbps	automatically	
		Fallback to 5.5Mbps, 2Mbps, 1Mbps									
	IEEE 802.11n :	20MHZ	1Nss: 65Mbps @ 800GI, 72.2Mbps @ 400GI (Max.) 2Nss: 130Mbps @ 800GI, 144.4Mbps @ 400GI (Max.)								
	40MHz	1Nss: 135Mbps @ 800GI, 150Mbps @ 400GI (Max.) 2Nss: 270Mbps @ 800GI, 300Mbps @ 400GI (Max.)									
Frequency Range	IEEE802.11b/g/n:	2.412GHz ~ 2.462GHz (US & Canada)									
		2.412GHz ~ 2.472GHz (Europe)									
		2.412GHz ~ 2.484GHz (Japan)									
	IEEE 802.11a/n:	5.150 ~ 5.350 GHz, 5.470 ~ 5.725GHz, 5.725 ~ 5.850 GHz (US & Canada)									
		5.150 ~ 5.350 GHz, 5.470 ~ 5.725GHz, 5.725 ~ 5.875 GHz (Europe) 5.150 ~ 5.250 GHz, 5.250 ~ 5.350GHz, 5.470 ~ 5.725GHz(Japan)									
Modulation Techniques	OFDM: BPSK, QPSK, 16-QAM, 64-QAM DSSS: DBPSK, DQPSK, CCK										
Radio & EMC Certification	CE, FCC										
RoHS Compliance	Yes										
Temperature Range	Operating: -20°C to 70°C Storage: -40°C to 90°C										
Humidity	Operating: 5% to 95% (non-condensing) Storage: Max. 90% (non-condensing)										
Dimensions	50.95mm x 30 mm x 3.2 mm (H x W x D)										

YBTE9280NX MINI PCIe Mini CARD RADIO									
TX SPECIFICATIONS									
802.11b	DataRate	2.437GHz (per chain)	2.437GHz (2 chains)	Tolerance	802.11g	DataRate	2.437GHz (per chain)	2.437GHz (2 chains)	Tolerance
	1Mbps	18dBm	21dBm	+1.5/-2.0 dB		6-24Mbps	17dBm	20dBm	+1.5/-2.0 dB
	5.5Mbps	18dBm	21dBm	+1.5/-2.0 dB		36Mbps	17dBm	20dBm	+1.5/-2.0 dB
	11Mbps	18dBm	21dBm	+1.5/-2.0 dB		48Mbps	16dBm	19dBm	+1.5/-2.0 dB
						54Mbps	15dBm	18dBm	+1.5/-2.0 dB
2.4GHz 11n HT20	DataRate	2.437GHz (per chain)	2.437GHz (2 chains)	Tolerance	2.4GHz 11n HT40	DataRate	2.437GHz (per chain)	2.437GHz (2 chains)	Tolerance
	MCS 0/8	17dBm	20dBm	+1.5/-2.0 dB		MCS 0/8	17dBm	20dBm	+1.5/-2.0 dB
	MCS 1/9	17dBm	20dBm	+1.5/-2.0 dB		MCS 1/9	17dBm	20dBm	+1.5/-2.0 dB
	MCS 2/10	17dBm	20dBm	+1.5/-2.0 dB		MCS 2/10	17dBm	20dBm	+1.5/-2.0 dB
	MCS 3/11	17dBm	20dBm	+1.5/-2.0 dB		MCS 3/11	17dBm	20dBm	+1.5/-2.0 dB
	MCS 4/14	17dBm	20dBm	+1.5/-2.0 dB		MCS 4/14	17dBm	20dBm	+1.5/-2.0 dB
	MCS 5/13	17dBm	20dBm	+1.5/-2.0 dB		MCS 5/13	17dBm	20dBm	+1.5/-2.0 dB
	MCS 6/14	14dBm	17dBm	+1.5/-2.0 dB		MCS 6/14	14dBm	17dBm	+1.5/-2.0 dB
MCS 7/15	10dBm	13dBm	+1.5/-2.0 dB	MCS 7/15	9dBm	12dBm	+1.5/-2.0 dB		
802.11a	DataRate	5.500GHz (per chain)		Tolerance	5.500GHz (2 chains)		Tolerance		
	6-24Mbps	17dBm			20dBm		+1.5/-2.0 dB		
	36Mbps	15dBm			18dBm		+1.5/-2.0 dB		
	48Mbps	13dBm			16dBm		+1.5/-2.0 dB		
		12dBm			15dBm		+1.5/-2.0 dB		
5GHz 11n HT20	DataRate	5.500GHz (per chain)	5.500GHz (2 chains)	Tolerance	5GHz 11n HT40	DataRate	5.500GHz (per chain)	5.500GHz (2 chains)	Tolerance
	MCS 0/8	17dBm	20dBm	+1.5/-2.0 dB		MCS 0/8	17dBm	20dBm	+1.5/-2.0 dB
	MCS 1/9	17dBm	20dBm	+1.5/-2.0 dB		MCS 1/9	17dBm	20dBm	+1.5/-2.0 dB
	MCS 2/10	17dBm	20dBm	+1.5/-2.0 dB		MCS 2/10	17dBm	20dBm	+1.5/-2.0 dB
	MCS 3/11	17dBm	20dBm	+1.5/-2.0 dB		MCS 3/11	17dBm	20dBm	+1.5/-2.0 dB
	MCS 4/14	17dBm	20dBm	+1.5/-2.0 dB		MCS 4/14	17dBm	20dBm	+1.5/-2.0 dB
	MCS 5/13	16dBm	19dBm	+1.5/-2.0 dB		MCS 5/13	16dBm	19dBm	+1.5/-2.0 dB
	MCS 6/14	12dBm	15dBm	+1.5/-2.0 dB		MCS 6/14	12dBm	15dBm	+1.5/-2.0 dB
MCS 7/15	8dBm	11dBm	+1.5/-2.0 dB	MCS 7/15	8dBm	11dBm	+1.5/-2.0 dB		
RX SPECIFICATIONS									
802.11b	DataRate	Sensitivity (2 chains)		Tolerance					
	1M	-93dBm		±2dB					
	5.5M	-93dBm		±2dB					
	11M	-91dBm		±2dB					
802.11a	DataRate	Sensitivity (2 chains)		Tolerance					
	6M	-94dBm		±2dB					
	9M	-94dBm		±2dB					
	12M	-93dBm		±2dB					
	18M	-90dBm		±2dB					
	24M	-86dBm		±2dB					
	36M	-83dBm		±2dB					
	48M	-79dBm		±2dB					
	54M	-75dBm		±2dB					
5GHz 11n HT20	MCS0	-93dBm		±2dB					
	MCS1	-91dBm		±2dB					
	MCS2	-87dBm		±2dB					
	MCS3	-85dBm		±2dB					
	MCS4	-82dBm		±2dB					
	MCS5	-77dBm		±2dB					
	MCS6	-75dBm		±2dB					
	MCS7	-72dBm		±2dB					
5GHz 11n HT40	MCS0	-90dBm		±2dB					
	MCS1	-88dBm		±2dB					
	MCS2	-85dBm		±2dB					
	MCS3	-82dBm		±2dB					
	MCS4	-79dBm		±2dB					
	MCS5	-76dBm		±2dB					
	MCS6	-72dBm		±2dB					
	MCS7	-70dBm		±2dB					
802.11g	DataRate	Sensitivity (2 chains)		Tolerance					
	6M	-94dBm		±2dB					
	9M	-94dBm		±2dB					
	12M	-93dBm		±2dB					
	18M	-90dBm		±2dB					
	24M	-86dBm		±2dB					
	36M	-83dBm		±2dB					
	48M	-80dBm		±2dB					
	54M	-78dBm		±2dB					
2.4GHz 11n HT20	MCS0	-93dBm		±2dB					
	MCS1	-92dBm		±2dB					
	MCS2	-90dBm		±2dB					
	MCS3	-86dBm		±2dB					
	MCS4	-83dBm		±2dB					
	MCS5	-78dBm		±2dB					
	MCS6	-76dBm		±2dB					
	MCS7	-73dBm		±2dB					
2.4GHz 11n HT40	MCS0	-90dBm		±2dB					
	MCS1	-89dBm		±2dB					
	MCS2	-86dBm		±2dB					
	MCS3	-82dBm		±2dB					
	MCS4	-80dBm		±2dB					
	MCS5	-76dBm		±2dB					
	MCS6	-73dBm		±2dB					
	MCS7	-71dBm		±2dB					

DIMENSIONS DRAWING

