

## AN-622 IEEE 802.11a/b/g/n Mini PCI Module AirRunner™ WiFi Series

The Zcomax AN-622 is an extremely versatile mPCI module, supporting the ISM 2.4GHz and 5GHz UNII bands. Utilizing the field proven Atheros AR9220 802.11a/b/g/n chipset ensures use of the latest technology while remaining a cost effective choice for a wide array of projects. The AR9220 chipset enables 300Mbps performance on either band (2.4GHz or 5GHz). This wireless mini PCI module has been purposely designed with integrated applications in mind. Its low profile external antenna connectors and standard mini PCI interface, ensure that the AN-622 will fit into any design supporting the mini PCI form factor.

The AN-622's reliable design helps to reduce the overall costs associated with wireless integration by eliminating the need for the debugging and driver support commonly associated with designing a product from the "ground up". The AN-622 module is a robust plug and play ready device.

For more information on this or any other Zcomax product please contact one of our sales professionals today.



### AN-622 mPCI Module

#### Key Features

- IEEE 802.11a/b/g/n compliant
- 2.4GHz / 5GHz dual-band MIMO
- Standard 32-bit mPCI Type III-A interface
- Based on Atheros XSPAN® family
- Chipset: Atheros AR9220
- Tx power up to 24dBm
- Receive sensitivity to -93dBm
- 2 x Hirose u.FL
- RoHS compliant
- Temperature range: -20 to +60°C

#### AN-622 at a Glance

Chipset	Atheros AR9220 (XSPAN®)
Transmit Power	Up to 24 dBm
Performance	300 Mbps performance
MIMO	2x2 dual-band

IEEE	Radio	RoHS	Interface

Radio Specification					
802.11 Standard	IEEE 802.11a/b/g/n compliant				
Chipset	Atheros AR9220 (Single chip, dual-band)				
Modulation	OFDM: BPSK, QPSK, 16-QAM, 64-QAM / DSS: DBPSK, DQPSK, CCK				
Supported Frequency Ranges	ISM Band: FCC-2.412GHz ~ 2.462GHz, ETSI-2.412GHz ~ 2.472GHz				
	UNII : FCC-5.15GHz~5.850GHz, ETSI 5.15GHz~5.35GHz, 5.47GHz~5.725GHz				
RF Output Power (± 2dB)	IEEE 802.11a	5150-5350MHz 5470-5725MHz	6-24Mbps	21dBm	
			36Mbps	21dBm	
			48Mbps	20dBm	
		5725-5825MHz	54Mbps	19dBm	
			6-24Mbps	21dBm	
			36Mbps	20dBm	
	IEEE 802.11b			48Mbps	19dBm
				54Mbps	17dBm
				1-11Mbps	21dBm
	IEEE 802.11g			6-24Mbps	24dBm
				36Mbps	23dBm
				48Mbps	22dBm
				54Mbps	20dBm
	IEEE 802.11gn			HT20 MCS0/8	24dBm
				HT20 MSC1/9	
				HT 20 MSC2/10	
				HT 20 MSC3/11	
				HT 20 MSC4/12	
				HT 20 MSC5/13	23dBm
				HT 20 MSC6/14	
				HT 20 MSC7/15	19dBm
				HT 40 MSC0/8	23dBm
				HT 40 MSC1/9	
				HT 40 MSC2/10	
				HT 40 MSC3/11	
				HT 40 MSC4/12	22dBm
				HT 40 MSC5/13	21dBm
			HT 40 MSC6/14		
			HT 40 MSC7/15	19dBm	
	IEEE 802.11an	5150~5350			HT20 MCS0/8
			HT20 MCS1/9		
			HT20 MCS2/10		
			HT20 MCS3/11	23dBm	
			HT20 MCS4/12		
			HT20 MCS5/13		
			HT20 MCS6/14		
5470~5725				HT20 MCS7/15	22dBm
				HT20 MCS0/8	22dBm
				HT20 MCS1/9	
				HT20 MCS2/10	
				HT20 MCS3/11	
				HT20 MCS4/12	
				HT20 MCS5/13	
		HT20 MCS6/14	17dBm		
		HT20 MCS7/15			
5725~5825				HT20 MCS0/8	22dBm
				HT20 MCS1/9	
				HT20 MCS2/10	
				HT20 MCS3/11	
				HT20 MCS4/12	
				HT20 MCS5/13	
				HT20 MCS6/14	21dBm
		HT20 MCS7/15	17dBm		
5150~5350				HT40 MCS0/8	22dBm

Dual-Band 802.11n MIMO

			HT40 MCS1/9	21dBm	
			HT40 MCS2/10		
			HT40 MCS3/11		
			HT40 MCS4/12		
			HT40 MCS5/13		
			HT40 MCS6/14		
	5470~5725			HT40 MCS7/15	16dBm
				HT40 MCS0/8	20dBm
				HT40 MCS1/9	
				HT40 MCS2/10	
				HT40 MCS3/11	
				HT40 MCS4/12	
	5725~5825			HT40 MCS5/13	
				HT40 MCS6/14	
				HT40 MCS7/15	
				HT40 MCS0/8	
				HT40 MCS1/9	
				HT40 MCS2/10	
Receiver Sensitivity	OFDM Data Rate		2.4GHz	5GHz	
	1Mbps / 11Mbps		-93dBm / -88dBm	N/A	
	6Mbps / 9Mbps		-91dBm / -90dBm	-88dBm / -87dBm	
	12Mbps / 18Mbps		-88dBm / -86dBm	-86dBm / -84dBm	
	24 Mbps / 36 Mbps		-83dBm / -79dBm	-81dBm / -77dBm	
	48Mbps / 54Mbps		-75dBm / -74dBm	-75dBm / -74dBm	
	802.11n Data Rates		2.4GHz	5GHz	
	HT20 MSC0/MSC7		-90dBm / -71dBm	-90dBm / -71dBm	
	HT40 MSC0/MSC7		-86dBm / -68dBm	-86dBm / -68dBm	
Power Consumption	IEEE 802.11a/b/g Tx ≤ 750mA, Rx ≤ 400mA				
Regulatory Compliance	FCC				

Physical Specification	
Interface	32-bit mini-PCI Type III-A
Dimensions	59.6mm x 50.95mm x 4.5mm ± 0.15mm
Weight	≤ 15g
Operating voltage	DC 3.3V ± 5%
Working Temperature	-20°C to 60°C, < 95% relative humidity (non-condensing)
Storage Temperature	-30°C to 80°C, 5-90% relative humidity (non-condensing)
Green Information	RoHS Compliant
Antenna Connectors	2 x u.FL

Warranty	
Warranty Period	1 Year limited warranty from the date of purchase