

Sparklan WMIA-166AG 802.11a/b/g Wireless miniPCI Adapter



The **Sparklan WMIA-166AG** miniPCI module based on the Atheros AR5006XS (AR5414A) Single Chip.

Highlights:

- Mini PCI Type III A
- Operating in 2.4GHz and 5.8GHz with data rate up to 54Mbps
- Supplied Driver: Windows 98SE/ME/2000/XP
- Single antenna with 1dBi antenna gain at 2.4GHz band and 2dBi antenna gain at 5GHz band. (External antenna)

Technical Specification

Chipset	Atheros AR5006XS (AR5414A)
Interface Type	MiniPCI Interface Type IIIA
Standards	IEEE 802.11a, 802.11b, 802.11g
Frequency Bands	802.11a: 5.150 – 5.850GHz 802.11b: 2.400 - 2.484GHz 802.11g: 2.400 – 2.484GHz
Spreading	802.11a: Orthogonal Frequency Division Multiplexing (OFDM) 802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g: Orthogonal Frequency Division Multiplexing (OFDM)
Modulation	802.11b: CCK, DQPSK, DBPSK 802.11a/g: 64 QAM, 16 QAM, QPSK, BPSK
Data Rates	IEEE 802.11a (auto fallback): 54, 48, 36, 24, 18, 12, 9, 6 Mbps IEEE 802.11b (auto fallback): 11, 5.5, 2, 1 Mbps IEEE 802.11g & 802.11a (auto fallback): 54, 48, 36, 24, 18, 12, 9, 6 Mbps
Antenna	Single antenna with 1dBi antenna gain at 2.4GHz band and 2 dBi antenna gain at 4GHz (External antenna)
Transmit Power	IEEE 802.11a: see the output power table below, tolerance +-1.5 dBm IEEE 802.11g: see the output power table below, tolerance +-1.5 dBm IEEE 802.11b: see the output power table below, tolerance +-1.5 dBm
Receive Sensitivity	802.11a/g Nominal Temp Range: 6Mbps 10-5 BER @ -90 dBm, typical 9Mbps 10-5 BER @ -89 dBm, typical 12Mbps 10-5 BER @ -88 dBm, typical 18Mbps 10-5 BER @ -86 dBm, typical 24Mbps 10-5 BER @ -82 dBm, typical 36Mbps 10-5 BER @ -78 dBm, typical 48Mbps 10-5 BER @ -72 dBm, typical 54Mbps 10-5 BER @ -68 dBm, typical

	802.11b: Typ. -88 dBm @ 11Mbps +- 2 dBm Typ. -91 dBm @ 5.5Mbps Typ. -92 dBm @ 2Mbps Typ. -93 dBm @ 1Mbps
Operating Range	outdoor 300 m, indoor: 100 m The transmission speed varies in the surrounding environment.
Power Consumption (peak)	802.11a: TX 510mA @ 3.3V, RX 250mA @ 3.3V 802.11b: TX 380mA @ 3.3V, RX 220mA @ 3.3V 802.11g: TX 400mA @ 3.3V, RX 280mA @ 3.3V
Size	60 x 45 x 4 mm (LxWxH)
Weight	20g
Temperature	Operating: 0C - 55C Storing: -20C – 80C
Humidity	Operating: 10-85 % Non-condensing Storing : 5-90 % Non-condensing
Operating Voltage	3.3V+/-5%
LED Indicators	Activity
Network Protocol	TCP/IP, IPX, NDIS 4, NDIS 5, NDIS 5.1
Supplied Driver	Win98SE/ME/2000/XP
Certification	CE, FCC
Warranty	1 year

Output power table (dBm), base mode for 802.11a, ETSI (preliminary data)

CH	5180 MHz	5200 MHz	5220 MHz	5240 MHz	5260 MHz	5280 MHz	5300 MHz	5320 MHz	5500 MHz	5600 MHz	5700 MHz
6-24 Mbps	17	17	17	17	17	17	17	17	17	17	17
36 Mbps	16	16	16	16	16	16	16	16	16	16	16
48 Mbps	14	14	14	14	14	14	14	14	14	14	14
54 Mbps	12	12	12	12	12	12	12	12	12	12	12

Output power table (dBm), in 802.11g, ETSI (preliminary data)

CH	2412 MHz	2447 MHz	2472 MHz
6-24 Mbps	14.5	14.5	14.5
36 Mbps	14.5	14.5	14.5
48 Mbps	14.5	14.5	14.5
54 Mbps	14.5	14.5	14.5

Output power table (dBm), in 802.11b, ETSI (preliminary data)

CH	2412 MHz	2447 MHz	2472 MHz
1 Mbps	16	16	16
2 Mbps	16	16	16
5.5 Mbps	16	16	16
11 Mbps	16	16	16