

APPENDIX G WLAN SPECIFICATIONS



WLL4070(LF) Specifications

General Specification

REV.0.1 2005/02/01

Host Interface	Mini-PCI spec V1.0
Form Factor	Mini-PCI Type IIIB
Chipset	ATHEROS AR5414/AR5413
Network Standard	IEEE 802.11a/b/g
Security	Encryption AES, TKIP, WEP, 802.11i/WPA2 security Authentication 802.1x 802.11e/WMM Quality of Service
Network Architectures	Ad hoc, Infrastructure
Modulation Techniques	BPSK, QPSK, 16QAM, 64QAM
Modulation Technology	OFDM, CCK, DSSS
Media Access Technique	CSMA/CA
Supported Data Rates	IEEE 802.11a/b/g Standard Mode : 1 – 54Mbps Turbo Mode : 12 – 108Mbps
Antenna type	Internal diversity with connectors
OS Compatibility	2000, XP

Electronic Specification

Symbol	Parameter	Min	Typical	Max	Unit	Note
Ts	Storage Temperature	-40		+85	°C	
Tw	Working Temperature	+0	+25	+70	°C	
It	Transmit Mode Current					Note1
	11a		480		mA	@17dBm ART TX99 mode
	11b		420		mA	@18dBm ART TX99 mode
	11g		450		mA	@18dBm ART TX99 mode
	Turbo Mode		550		mA	@16dBm ART TX99 mode
Ir	Receive Mode Current					Note1
	11a		260		mA	
	11b		250		mA	
	11g		260		mA	
	Turbo Mode		340		mA	
Is	Sleep Mode Current		20		mA	
Vcc	Supplied Voltage	3.0	3.3	3.6	V	

Note1 : Condition at 3.3V, 25°C

Radio Specification

Condition: VCC=3.3V, Temp=25°C

Parameter	Min	Typical	Max	Unit	Note
Transmitter					
11a					
TX Power		+17		dBm	
Tx Spectrum Mask					
Transmitted spectrum at 11Mhz frequency offset			-20	dBr	Note1
Transmitted spectrum at 20Mhz frequency offset			-28	dBr	
Transmitted spectrum at 30Mhz frequency offset			-40	dBr	
Frequency Range	5150		5850	Mhz	
Turbo Mode					
TX Power		+16		dBm	
Channel					Note2
11b					
11b TX Power		+18		dBm	
11b Tx Spectrum Mask					
Transmitted spectral for frequency at $fc \pm 11\text{Mhz}$ to $fc \pm 22\text{Mhz}$			-30	dBr	Note3
Transmitted spectral for frequency at $fc \pm 22\text{Mhz}$ to $fc \pm 33\text{Mhz}$			-50	dBr	
Frequency Range	2412		2484	Mhz	
11g					
TX Power		+18		dBm	
Tx Spectrum Mask					
Transmitted spectrum at 11Mhz frequency offset			-20	dBr	Note1
Transmitted spectrum at 20Mhz frequency offset			-28	dBr	
Transmitted spectrum at 30Mhz frequency offset			-40	dBr	
Frequency Range	2412		2472	Mhz	
Turbo Mode					
TX Power		+16		dBm	
Channel					Note4
Receiver					
RX Sensitivity @ 11a 54Mbps 108Mbps PER<10%	-65			dBm	Note5
RX Sensitivity @ 11b 11Mbps PER<8%	-82			dBm	
RX Sensitivity @ 11g 54Mbps PER<10%	-65			dBm	

RX Sensitivity @ Turbo Mode 108Mbps PER<10%	-62			dBm	
Antenna Port Impedance		50		ohm	

Note 1 dBr (dB relative to the $\sin(x)/x$ peak)

Note 2 Turbo mode channel list :

Ch42, Ch50, Ch58, Ch152, Ch160, total 5 channels

Note 3 dBr (dB relative to the $\sin(x)/x$ peak)

Note 4 Turbo mode channel list : Ch6 only

Note 5 PER : Packet Error Rate