

# WiFi Phone

AN9090

*Atonics AN9090 is a versatile 802.11b/g WiFi Surveillance Phone. It provides high voice quality with various codes including iLBC. AN9090 can also communicate with Skype users through Atonics eLink software. Additionally, equipped with MPEG4/JPEG decoder, AN9090 can be used as a handheld IP surveillance terminal.*



## Features

- Support Wireless Access Protocol – 802.11b/g
- Direct Sequence with data rates at 1, 2, 5.5, 11, 6, 9, 12, 18, 24, 36, 48, 54Mbps
- Support Site Survey --- scan available APs in handset's environment
- Implementing IETF RFC-3261 SIP Protocols
- ITU-T iLBC, G.729, G.723 and G.711 Voice compression coder-decoder compliant
- VAD (Voice Activity Detection) /CNG (Comfort Noise Generation) Silence
- Compression – Annex B of G.723
- Echo Canceller
- Support both DHCP and static IP
- Internet Protocol Support: IP, TCP, UDP, ARP, HTTP 1.0, DHCP, DNS
- Rechargeable Batteries – Li-ion
- Phone keypad and graphic LCD display
- Phone Configuration through handset LCD setup and web
- Time protocol support (SNTP).
- Instant Message
- Skype connection (through Atonics proprietary SIP/Skype Gateway)
- Support IP Camera (ISMA)

## Hardware:

- WiFi SoC built in 802.11b/g MAC, two external chips only for WLAN.
- Support 8Mbytes flash memory.
- Support 16Mbytes SDRAM
- 170x220 color LCM with backlight control
- Including Li-ion battery charger controller for automatic charging
- GPIO based matrix keypad without glue logics
- Including drivers for vibrator and buzzer control
- Connect receiver (speaker) and microphone to AT76C902 chip directly, no extra amplifier needed.
- Separate several system power block for optimal power management

## Specification

### General

- Complete system solution using Linux operation system
- Handset dimensions: 125mm x 45mm x 22 mm

### Wireless

- Wireless Protocol: IEEE 802.11b / g
- Data rate: 1, 2, 5.5 and 11 Mbps~54Mbps
- Frequency band: 2.400 ~ 2.497
- Operating rang: Out-door up to 300m, In-door up to 75m
- Channel: FCC Ch1 ~ 11, ETSI Ch1~13, Japan Ch1~14
- Output Power: 14+-1 dBm
- Sensitivity: -82dBm@11Mbps
- Site Survey: Scan available APs in hand set's environment

### VoIP Protocol Support

- IETF RFC-3261 SIP Protocols
- SDP (RFC-2327)
- RTP (RFC-1889)
- Support outbound proxy for NAT Traversal
- STUN for NAT Pass-Through
- QoS:ToS/Diff Serv
- RFC-2833 Out-of-Band DTMF Relay
- RFC-4028 Session Timer
- RFC-3323/3325 SIP Privacy
- Instant Message

### Voice

- ITU-T iLBC, G.729, G.723 and G.711 Voice compression coder-decoder compliant
- VAD/CNG Silence Compression
- G.168 Echo Canceller
- G.711  $\mu$ -Law or A-Law compliant
- Arbitrary Tone Generation
- DTMF Generation
- Acoustic Echo Cancellation
- Adaptive, low delay jitter buffer for voice data.

### Security

- WEP 64-bit and 128-bit
- WPA/WPA2-PSK(TKIP,AES)
- WPA-EAP : EAP-TLS, EAP-TTLS, EAP-PEAP
- Multiple AP Profile
- WMM QoS , WMM Power Save

### Phone Function Support

- Caller ID
- Keypad lock
- Re-dial
- Call hold/Un Hold/Transfer/ Forward/Waiting
- Missed Call Indicator
- Battery and signal level metering
- Time protocol support (SNTP)
- Phone books, call history for friendly usage
- Phone Books support for editing/deleting personal data
- API to support user application development.
- Configurable GPIOs for specific purposes such as LCD backlight, buzzer, charger and so on.
- Talking time 3-4 hours
- Standby time: (battery capacity: 700 mA/hr)  
Register time  $\geq$  600 sec, up to 130 hours  
Register time = 60 sec, up to 105 hours  
Register time = 30 sec, up to 90 hours  
No Register , > 110 hours
- Polyphony Ring Tone
- Speed Dial
- Speaker Volume Control
- USB Charge
- Support ISMA IP Camera

### Management

- Auto-provisioning
- WEB Configuration
- HTTP Firmware Update