Laird TECHNOLOGIES

Innovative **Technology**
for a **Connected** World

Access Point Gateway Platform
APG BT400

Laird Technologies' Access Point Gateway (APG) is an innovative device platform capable of acting as a network node bridging several of the most common types of wireless, network, and serial data protocols for the purpose of remote data acquisition and control. It is a modular and highly functional product in a compact physical form factor that combines reliability, standard protocol support, ease of use and ease of customization and flexibility. Featuring Laird Technologies' industry leading Bluetooth® modules and the powerful ARM9 microcontroller, the APG is designed to deliver machine-to-machine (M2M) solutions and is ideal for point of sale (POS), vending, digital signage/displays, healthcare and various other market applications.

The unique feature of the APG device is its capability to support a variety of short range personal wireless networks such as Bluetooth, Zigbee®, or Proprietary RF, as well as IP connectivity over Ethernet, WLAN, and cellular interfaces. The platform runs on a Linux operating system and allows users to upload custom applications written in Lua scripting language. The device also has RS232 and USB interfaces, and offers remote configuration and troubleshooting features.

The first variant product from the APG platform is the APG BT400, which provides short range wireless connectivity through Bluetooth and IP connectivity including Ethernet, 802.11 b/g, and GSM/GPRS. The APG BT400 allows connectivity with up to 28 active Bluetooth connections at any given time. The Bluetooth connectivity can be ordered for medium (250 meters) or long (km) range operation.

Laird Technologies is a global manufacturer of high performance components for the electronics and M2M industry which includes embedded radio modules such as Bluetooth, ZigBee, WLAN, and Proprietary, as well as high performance reception systems and antennas for many markets and industries.

FEATURES AND BENEFITS RoHS

- Bridges PAN to WAN networks
- Embedded Linux operating system
- Flexible mounting provisions
- Multiple radio standards supported
- Multiple wired connectivity options
- Diagnostic LED indicators
- Customizable Lua scripting language
- FCC/IC and CE certified

APPLICATION AREAS

- POS Equipment
- Vending
- Display/Signage
- Medical/Healthcare
- Industrial Applications
- Building Automation

global solutions: local support ™

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Access Point Gateway Platform
APG BT400

WIRELESS SPECIFICATION

FEATURE	IMPLEMENTATION
Standard	Bluetooth V2.0 or Bluetooth V2.1 + EDR
Transmit Class	Class 1
Frequency	2.4 GHz
Max Transmit Power	+6 dBmi
Min Transmit Power	-27 dBm
Receive Sensitivity	Better than -86 dBm
Range	250 m or 1 km, depending on model
Standard	WLAN b/g[1]
Frequency	2.4 GHz
Max Transmit Power	15 dBm
Receive Sensitivity	-85 dBm @ 802.11b, -72 dBm @ 802.11g
Max Data Transfer Rate	11 Mbps @ 802.11b, 54 Mbps @ 802.11g
Modulation	DSSS/CCK/OFDM
Antenna Gain	1.5 dBi
Standard	GSM/GPRS[1]
Transmit Class	Class 1 @ 1.8/1.9 GHz, Class 4 @ 850/900 MHz
Frequency	850/900/1800/1900 MHz
Transmit Power	30 dBm (1800/1900 MHz), 33 dBm (850/900 MHz)
Receive Sensitivity	< -106 dBm
Antenna Gain	2 dBi

1 - Options available in a future version

HARDWARE

- ARM9 Core 200 MIPS/180 MHz
- 64 MB RAM (Upgradeable to 128 MB)
- 64 MB NandFlash
- Ethernet - 10/100BASE LAN on RJ45
- Universal Serial Bus (USB)
- WLAN – 802.11 b/g with up to 54 Mbps RF rate
- GSM/GPRS Quad Band (850/900/1800/1900 MHz) with SIM card slot
- RS232 Serial Data Port with configurable baud rate up to 115 kbps
  RS422/485 support using external converter
  RS232 serial port for console debugging
- User friendly LEDs for Bluetooth, WLAN, GSM/GPRS, power and status visible on the front panel
- 6V to 15V DC Power supply, Current ratings 2A
- RTC backup using coin cell battery

SOFTWARE

- Embedded Linux operating system
- Multiple configuration interfaces: Lua, Web, Remote Management Software
- Secure LAN data access using SSL
- Easily customizable using Lua scripts. No need of build and flashing the firmware
- Profiles supported SPP, PAN, FTP*, DUN*, HDP*, OPP*, AGP*
- Bluetooth SPP Bridging and SPP data logging to a remote server

MECHANICAL DETAILS

- Size: 181 x 144 x 39 mm (approx)
- Weight: 500 g (approx)

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LWS-DS-APG BT400 1111

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