



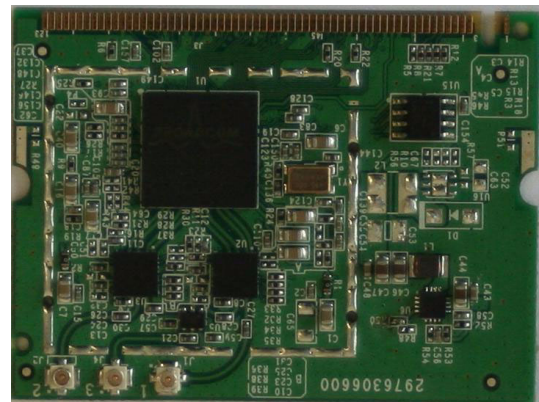
## 802.11N DRAFT 2.0 SINGLE-CHIP ENTERPRISE SOLUTION

### FEATURES

- Single-chip, all-in-one die baseband/MAC/radio for 802.11n applications
- Advanced 65-nm CMOS process for lowest power consumption and highest level of integration
- 802.11n Draft 2.0-compliant Wi-Fi® solution. Fully compatible with IEEE 802.11n Draft 1.0 and 802.11a/b/g legacy devices.
- Two transmitters and two receivers with optional 802.11n. Draft 2.0 modes allow data rates supporting 300 Mbps.
- Flexible two- and three-antenna configurations for improved range and performance
- Support for optional 802.11n features for improved rate, range, and performance
  - Greenfield preamble
  - Space time block code (STBC)
  - Short guard interval
- Multiple host interfaces supported: PCIe™, PCI, mPCI
- High-performance 802.11a/b/g/n features standard across the Intensi-fi™ and AirForce® product lines
  - FASTPATH® unified AP software for a complete turnkey software solution for enterprise and SBM access points
  - OneDriver™
    - Single driver across platforms simplifies driver update process and improves customer satisfaction
  - BroadRange™
  - Afterburner high-speed modes
  - WPA™/WPA2™
  - Full-rate AES engine in hardware
  - WMM® for quality of service

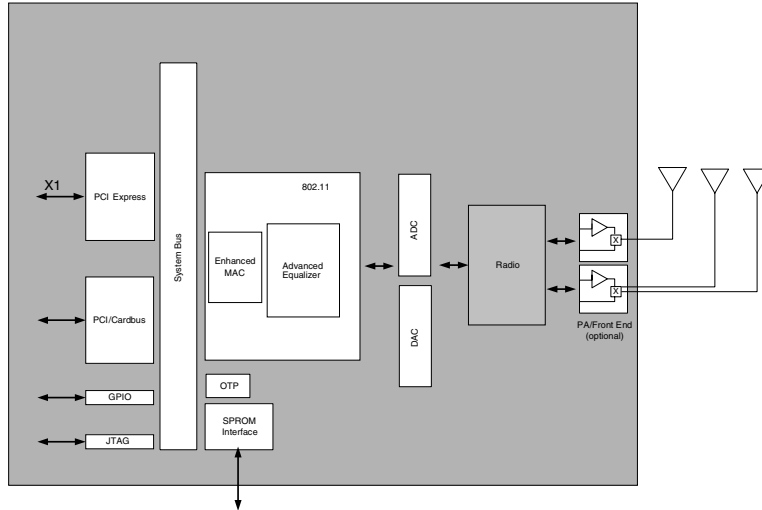
### SYSTEM/CHIP BENEFITS

- Single-chip 65-nm solution and high system integration drive down the power and cost of 802.11n solutions to enable a new generation of enterprise wireless products.
- CMOS integration and low power modes result in a 50% power reduction compared to previous generation solutions, enabling the lowest power dual concurrent enterprise APs on the market.
- Upgradable architecture reduces manufacturing test time and addresses the 802.11n standardization process.
- Increased rate/range provides user satisfaction and reduces product support call volume.
- Self-calibrating architecture allows high-yield board manufacturing.
- Designs meet Pb-free/RoHS worldwide requirements.



**BCM4342 Mini PCI Implementation**

# OVERVIEW



**BCM94342 System Block Diagram**

## BCM94342 Specifications

<b>Host Interfaces</b>	PCI/PCIe
<b>Standard</b>	IEEE 802.11n, 802.11b/g, 802.11a
<b>Data Rate, Mbps</b>	54, 48, 36, 24, 18, 12, 9, 6, 11, 5.5, 2, 1 20 MHz BW: 150, 130, 117, 104, 78 * 40 MHz BW: 300, 270, 243, 216, 162, 108 * *Many other data rates are supported by the hardware. The above specifies only the higher rates for each bandwidth.
<b>Modulation</b>	PSK/CCK, DQPSK, DBPSK, OFDM
<b>Network Architecture</b>	Infrastructure and ad hoc
<b>Operating Frequencies</b>	2.4 GHz–2.497 GHz, 4.9 GHz–5.85 GHz
<b>Operating Channels</b>	11 for North America, 13 for Europe, 14 for Japan
<b>RF Output Power (11n per chain)</b>	2.4 GHz: 18 dBm, 5 GHz: 15 dBm; higher power options available
<b>Antenna Connectors</b>	Two or more antennas allowing transmission or reception on both simultaneously
<b>Power Requirements and Consumption</b>	3.3V, average standby <75 mW (@ 3.3V)
<b>Security</b>	802.1x, WEP/WEP, WPA/WPA2, TKIP, weak-key avoidance, CCX, CCX 2.0, CCX 3.0, 128-bit OCB mode AES, 802.11i
<b>Software Support</b>	Linux®
<b>Certifications</b>	IEEE 802.11-compliant, Wi-Fi 802.11n Draft 2.0 and 802.11a/b/g certified, PCIe 1.1
<b>Product ordering information</b>	BCM94342MP—Mini PCI Reference Design
<b>FASTPATH Unified AP (UAP) Software Features, BCM954342EAP — Enterprise AP Reference Design</b>	802.11a, 802.11b, 802.11d, 802.11e (WMM & UAPSD), 802.11g, 802.11g, 802.11h, 802.11i (WPA2), 802.11j, 802.11n (draft 2.0) WPA/WPA2, spanning tree (STP), dynamic VLANs (802.1Q), L2-L4 ACLs, rate-limiting, DiffServ, full RADIUS support (EAP, PEAP, TTLS and TLS), captive portal redirect capability, cluster management, SNMP v1/v2/v3, CLI, Web, and SSL/SSH

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