



LA-5137

Wireless 802.11a/b/g radio card for embedded mobile applications



FEATURES

802.11a/b/g

Takes advantage of three radio bands when splitting network traffic to optimize security and availability features

WPA/WPA2 and 802.1x (AES) compatible

Provides robust standards-based security for Linux and Windows applications

Pre-emptive roaming

Optimized network availability, improved wireless link reliability and enhanced mobility

Dynamic load balancing

Increased throughput in cluttered, real-world environments

Power management

Extended operation time on-station between charges

Limited modular worldwide regulatory approval backed by Motorola service/support

Potentially accelerates time-to-market, reducing product development time and cost

Continuing a tradition of enabling enterprise mobility

The latest in Motorola's portfolio of client radio cards for embedded mobile applications, the LA-5137 delivers the power of 802.11a/b/g wireless connectivity to application-specific enterprise clients, medical devices and other equipment. It offers robust security and high-availability features to end-user applications and peace of mind to developers.

Backed by Motorola's strong OEM product development support and built on the same code base and common worldwide radio chipset architecture as the 802.11b/g LA-5127, the LA-5137 continues the product line's tradition of providing enterprise mobility with the OEM customer in mind.

Enterprise-class features for mobile applications

The LA-5137 radio card provides enterprise-class security and high-availability features to wireless handheld, portable and stationary devices alike. Advanced encryption and authentication features offer the data and network security for Linux and Windows applications required by industry standards such as HIPAA and PCI, making the card ideal for use in healthcare settings, retail environments, or anyplace security is essential.

High performance mobility features include exceptional throughput using dynamic load balancing for reduced latency and increased

bandwidth; low-power modes to preserve battery life and pre-emptive roaming to allow users to transparently move anywhere within the secure wireless network — across a room or across the campus. Take advantage of the 802.11a/b/g functionality when splitting network traffic to allow one band for visitors, one band for equipment and employee traffic, and one for critical or high priority use such as patient monitoring or voice applications. The unique self-hosted card architecture also reduces the host device's workload and maximizes power savings while maintaining authenticated connectivity.

Packaged with peace of mind

A hardware encryption engine and security supplicant are provided with the card, so developers can concentrate on developing the device, already assured of its security.

In addition to all its great mobility and security features, the LA-5137 also comes with a full warranty, extended hardware and software warranty options, and the Motorola commitment to product quality, service and support.

Wi-Fi Certified®, the LA-5137 is compatible with any Wi-Fi certified 802.11a/b/g wireless LAN, so you can be confident that products using the LA-5137 will work with the LANs most often found in enterprise, medical, and other professional environments.

SPECIFICATION SHEET

LA-5137

Wireless 802.11a/b/g radio card for embedded mobile applications

Comprehensive software development kit

Provides the tools for customizing the LA-5127 for embedded mobile applications

Design support and technical service

Enables custom solutions optimized for each OEM

Hard MAC with on-card memory

Easily upgradeable with substantial memory for future features and functions

Common code-base radio architecture platform

Leverages end-product driver development and regulatory efforts; accelerates product migration path

Accelerate time-to-market — now and in the future

Available uniquely to the OEM market, the LA-5137 comes with a comprehensive development kit and API. Easily customize and port the API and drivers for Linux and Windows CE to proprietary operating systems. Simplify profile creation, operation and control of the radio's most advanced features in the Windows CE environment, a Windows CE card management and set-up application. Motorola's OEM support team can work directly with designers to help leverage the LA-5137's regulatory approvals by providing software to facilitate regulatory testing, uploading Motorola-proprietary information to labs and regulatory bodies and, in some cases, even using customers' antennas as part of our regulatory certifications.

Because Motorola controls the source code down to the lower MAC level, we can optimize radio performance features and functions today and over

the lifetime of the product. The LA-5137 is based on a worldwide radio chipset, backed by multi-tiered pre- and post-design support. Motorola's extensive regulatory and compliance process provides a limited modular approval with the card, which can significantly reduce regulatory and compliance testing requirements for the end-product. In some cases, end-products attain certification compliance by simply referencing the LA-5137 — without additional testing.

The card's hard MAC with 8MB of on-board SDRAM makes it easily upgradeable, with substantial memory for future features and functions, and the LA-5137 is the second of a family of Motorola wireless radios to be built on a common code base and common radio architecture. This eases future product migration and means you can leverage today's driver development efforts for future adoption of new features.

LA-5137 Specifications

Network Standard Compatibility:	802.11a - 5GHz band, Up to 54Mbit/s physical RF spec.; 802.11b - 2.4GHz band, Up to 11Mbit/s physical RF spec.; 802.11g - 2.4GHz band, Up to 54Mbit/s physical RF spec.; 802.11d - international country-to-country roaming; 802.11i - enhanced security, Wi-Fi Protected Access/WPA2 with AES
Frequency Range:	4.9 to 5.85GHz; 2.4 to 2.5GHz
Operating Channels:	802.11a: 24 (U.S. FCC); 19 (EU ETSI); 35 (Japan) 802.11b/g: 11 (U.S. FCC); 13 (EU ETSI); 14 (Japan)
Modulation Type:	CCK, DBPSK, DQPSK, QPSK, OFDM (BPSK and 16/64QAM)
Data Rate:	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54Mbps
Range:	3000 ft. (typical max., outdoor) 300 ft. (typical max., office environment)
Radiated Power:	Up to 18dBm (including antenna gain, varies with data rate, channels, and environment)
Input Voltage:	3.3V ± 5%
Input Current (typical):	Transmit: 500ma (maximum continuous transmit power); Receive: 280ma (maximum continuous receive power); Standby/idle: 17ma (while associated to the network)
On-Card Memory:	8MB of SDRAM (code space for new features/ functions/standards)
System Operational Modes:	Continuous power mode (297mA for 20% Tx duty cycle); Fast power-save mode; Maximum power-save mode
System Interface:	Mechanical: 50 pin CF card connector Electrical: 16-bit PC Card

Antenna:	Two coaxial antenna connectors (Hirose U.FL-R-SMT, or equivalent); Two-antenna diversity
Physical Characteristics:	Type I/II CF card (extended) Connectorized/external antenna: 1.69 in. W x 2.18 in L x .13 in. H 42.8 mm W x 55.4 mm L x 3.3 mm H Internal antenna: 1.69 in. W x 2.18 in L x .23 in. H 42.8 mm W x 55.4 mm L x 5.9 mm H 50-pin CF card connector
Wireless Security:	Wireless equivalent protection (WEP: 64/128 bit, with AES); Wireless protected access (WPA); WPA2 (802.11i); Advance encryption standard (AES)
Wi-Fi Certified® Interoperability:	WPA/WPA2; EAP-TLS; EAP-TLS/MSCHAPv2; PEAPv0/EAP-MSCHAPv2; PEAPv1/EAP-GTC; EAP-SIM
Operating Environment:	+0 to +55°C; Up to 95% relative humidity, non-condensing; Vibration to withstand .02g/Hz, random, sine, 20-2k Hz; Mechanical shock to withstand 50 G peak, 11 ms, half sine; ESD to withstand 1.5KV
Electrical Safety:	Certified to UL / cUL 60950-1, IEC / EN60950-1
RF Compliance:	USA: FCC Part 15.247, 15.407; Canada: RSS-210; EU: EN 300 328, EN 301 893; Japan: ARIB STD-T33, ARIB STD-T66, ARIB STD-T71; Australia: AS/NZS 4268
EMI/EMS:	North America: FCC Part 15; Canada: ICES 003 Class B; EU: EN55022 Class B, EN 301 489-1, EN 310 489-17, EN 60601-1-2; Australia: AS/NZS CISPR A 22
Operating Systems:	Linux 2.4 and Windows CE 5.0
Applications:	Mobile Companion (profile set-up, configuration and management)



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