RANGELAN2™ 6330 Micro Design-in Module

NEW!

Bringing wireless LAN connectivity to a new class of mobile computing devices



ACTUAL SIZE

Breakthrough Size Reduction Opens Up New Design Possibilities

RangeLAN2 6330 is the smallest and lightest high performance wireless LAN adapter on the market. Less than half the size of previous products, the 6330 enables high-speed 1.6 Mbps wireless communications to be brought to devices once thought to be too small for networked connectivity, including a new class of handheld PCs and application-specific handheld, palmtop, or wearable devices. Using state-of-the-art 2.4 GHz frequency hopping spread spectrum (FHSS) technology, high performance is achieved in a tiny 1.65" by 2.65" form factor, about half the size of a PCMCIA card. Even the most compact devices can utilize the 6330 with its small 0.23 inch thickness and 0.2 inch stacking height. The 6330 uses a miniaturized connector through which most signals map directly to an ISA interface, thereby minimizing cost and allowing speedy integration.

Longer Battery Life with Marathon™ Power Management

For the newest class of small mobile devices, power consumption is even more critical than before. The 6330 utilizes Marathon™ power management, which provides the lowest power consumption of any wireless LAN adapter or design-in module available. Marathon™ Doze mode means that you save valuable battery life whenever the device is not transmitting or receiving from the network, and it provides a fast transition from doze to active transmit or receive, allowing the 6330 to outperform the competition in applications that require many transactions.

Highest-Performing Module in Its Class

Small size doesn't mean low performance. In fact, the 6330 is the highest-performing design-in wireless LAN module in its class with a 1.6 Mbps data rate and an indoor range up to 500 feet with a 2 dB gain antenna in most office environments. Fifteen independent hopping patterns are available, each of which defines an independent, co-located channel, for an aggregate data rate of 24 Mbps to support large user populations. In addition, RangeLAN2 technology is carefully designed to provide fair network access among all clients regardless of network size. Seamless roaming ensures that your users can roam freely throughout their entire campus or facility.

RangeLAN2 6330 Advantages

- **Smallest and Lightest** - Offers the most compact form factor of any wireless LAN module, anywhere!
- **High Performance** - Delivers a 1.6 Mbps data rate, the fastest FHSS wireless LAN design-in module available!
- **Lowest Power Consumption** - Provides the lowest power draw in both transmit and receive modes, and with Marathon Power Management™ provides the lowest total power consumption in the industry!
- **Greatest Compatibility** - Delivers full interoperability now with all RangeLAN2 and over 30 WLIF-compliant products, more than all other alternatives combined!
- **Antenna Diversity Support** - Allows the 6330 to choose antenna signal on-the-fly, thus increasing performance in marginal situations.

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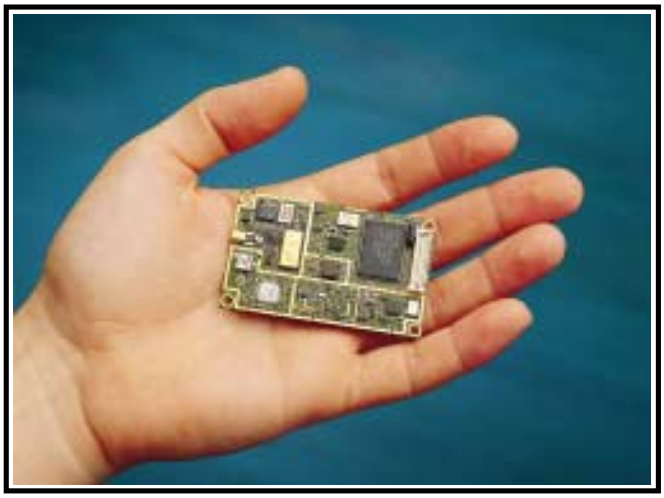
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Interoperability Delivers Choices to Your Customers

In today's market, your customers expect the flexibility to choose compatible products from a wide range of vendors to meet their solution needs. As a Wireless LAN Interoperability Forum (WLIF) vendor, Proxim is one of over 20 companies that support an open industry specification designed to provide wireless LAN interoperability today. The WLIF provides an open RF specification, allowing independent parties to develop a wide array of compatible products and networks. More products interoperate based on the WLIF specification than all other alternatives combined.

Antenna Diversity Support Can Improve Performance in Difficult Environments

The 6330 provides support for antenna diversity, offering a design option to improve performance in difficult physical environments such as multipath or at the limits of the range. With antenna diversity, a control signal drives an external antenna switch to select the best incoming signal. This can increase range and throughput when multiple RF paths are present or when an antenna is having difficulty receiving a signal.



At 1.65" x 2.65", the 6330 is the world's smallest high-performance wireless LAN module available.

Award-Winning Technology Chosen by More Companies Worldwide

In 1996, Proxim RangeLAN2 technology was chosen as the Editor's Choice by PC Magazine, and Product of the Year by LAN Magazine. Further demonstrating Proxim's industry leadership, in 1997 InfoWorld announced that the 7400 PC Card and the 7520 AP-II access point are the magazine's Top Products of 1996. Most significant of all, RangeLAN2 products have been integrated into more products worldwide than all other alternatives combined.

Proxim's Services and Tools Expedite Integration

Proxim offers a wide variety of support tools and services to facilitate our partners' design-in projects, including:

- **Developer Kit with Design Guide** - A complete, integrated package that contains all the hardware, software, support, and documentation needed to quickly establish a 2-node network, evaluate the 6330, and begin an integration.
- **Drivers** - Drivers for DOS, Windows 3.1, and Windows-95 clients may be licensed from Proxim in either object code or source code for use with the 6330 on PC platforms.
- **DriverTools** - A portable C code version of the drivers can be licensed from Proxim in source code form for porting to non-DOS platforms.
- **Tools** - The site survey utility is a software tool that allows end users to install their RF network to provide the best coverage in their physical environment.
- **Integration Engineering** - For your design-in questions, Proxim provides a team of skilled networking and wireless engineers that understand OEM requirements and have broad-based integration experience.
- **Program Management** - Complete project management services are available from Proxim on a contracted basis.
- **Worldwide Certifiability** - The 6330 Micro Module is certifiable worldwide, as are all our 2.4 GHz FHSS products. Certification information and guidance is available to our OEM partners.

These are some of the reasons why more OEMs have chosen Proxim **than all other alternatives combined!**

RANGELAN2 6330 Micro Design-in Module

Specifications

General

Bus interface	Parallel interface, electrically similar to ISA, with a 40-pin digital connector
Data rate	1.6 Mbps per channel, 800 Kbps backoff
Channels	Supports 15 orthogonal (non-interfering) co-located channels
Marathon power management	Draws 300 mA transmit, 150 mA receive, 5 mA doze, 2 mA sleep (all typical)
Compatibility	Fully interoperable with all RangeLAN2 and WLIF-compliant products.
Compliance	The 6330 is certifiable under FCC Parts 15.209 and 15.247, ETSI ETS 300.328, and CE EMC-EEC 89/336. The 6330-JP product is certifiable under RCR STD-33A in Japan. *NOTE: As with all wireless LAN products intended for integration, certification is the responsibility of the OEM.*

Network Information

Network architecture types	Supports ad hoc peer-to-peer networks as well as communications to wired networks via an access point
Drivers licensable with product	ODI (NetWare 2.x, 3.x, 4.x, Personal NetWare), NDIS (Windows for Workgroups, LAN Manager) and Windows-95. The CLLD may be licensed to facilitate design-in for non-PC platforms
Media access protocol	RangeLAN2 CSMA/CA. Proxim version of CSMA/CA optimized for spread spectrum radio, includes patented contention management protocol
Roaming	Supports transparent roaming between RangeLAN2 Access Points
Error detection/correction	Spread spectrum encoding, decoding
Ethernet standard compliance	Supports Ethernet frame types IEEE 802.3, IEEE 802.2, Ethernet II, SNAP
Domains	Supports 16 domains for simultaneous independent overlapping networks
Security	Hardware scrambling of Security ID. Software encryption through 15 channels and 16 domains per network - over 1 million ID choices per domain

Radio

Frequency band	USA: 2.4 - 2.4835 GHz; varies for other countries
Radio type	Spread Spectrum Frequency Hopping
Output power	+20 dBm EIRP with 2dBi gain antenna
Voltage	5 V nominal
Sensitivity	-85 dBm in BFSK, -77 dBm in 4FSK (typical)

Environmental

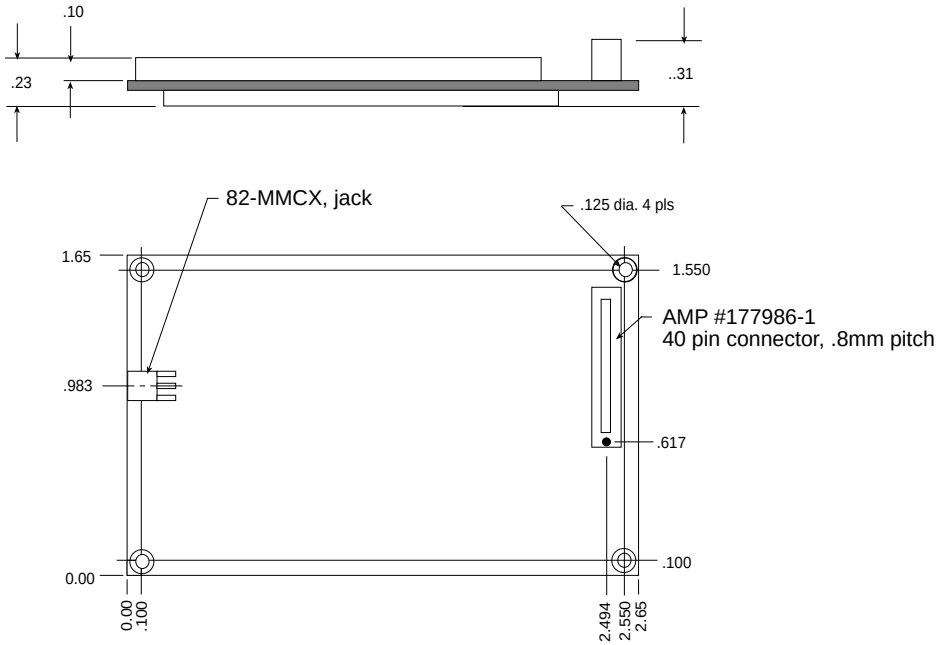
Temperature range (operating)	-20· to +60· C
Temperature range (storage)	-50· to +85· C
Humidity (non-condensing)	10% to 90%

Physical Characteristics

Board dimensions	1.65 inch x 2.65 inch x 0.23 inch (0.31 inch height at connector) 42 mm x 68 mm x 6 mm (8mm height at connector)
Antenna connector	MMCX
Mating connector	40-pin, vertical orientation
Weight	Less than 0.7 ounce (20 grams)

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Outline Drawing



Pin-Out Summary

Pin Number	Signal	I/O
1	GND	I
2	Reserved	N/A
3	VDD	I
4	Reserved	N/A
5	VDD	I
6	Reserved	N/A
7	CD_LED	O
8	Reserved	N/A
9	AEN	I
10	T/RX_LED	O
11	RSSI	O
12	SD14	I/O
13	SD7	I/O
14	SD13	I/O
15	SD6	I/O
16	SD12	I/O
17	SD5	I/O
18	SD11	I/O
19	SD4	I/O
20	GND	I
21	GND	I
22	SD3	I/O
23	CS#	I
24	SD15	I/O
25	IOREAD#	I
26	IOWRITE#	I
27	INTR	O
28	IOCHRDY	O
29	SA2	I
30	SA1	I
31	SA0	I
32	SD0	I/O
33	SD8	I/O
34	SD1	I/O
35	SD9	I/O
36	SD2	I/O
37	SD10	I/O
38	I/OIS16	O
39	VDD	I
40	GND	I

Ordering Information

NOTE: All 6330 products have the same integration characteristics.

6330-05 ..... For integration in devices intended for US certification
6330-02CE ..... For integration in devices intended for ETSI certification
6330-JP ..... For integration in devices intended for Japan certification
9707-02 ..... Developer Kit, includes Design Guide and 6330-02CE
9707-JP ..... Developer Kit, includes Design Guide and 6330-JP

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