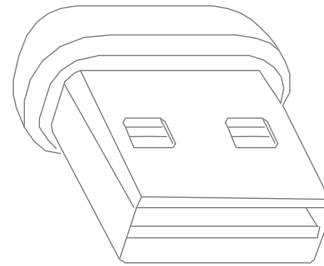# LM816 WiFi 802.11 b/g/n Nano Adapter
Host Controller Interface (HCI) via USB Interface

Product   LM816
Part No   See Last Page
Revised   16/MAY/2018
Datasheet Version   1.1

OSX | Linux | Win XP | Win Vista | Win 7 | Win 8 | Win 10 | Win IoT | Win CE 6 | Win CE 7

WIFI

17mm x 15mm x 8mm

WiFi Features

- WiFi 802.11 b/g/n

- Operates in 2.4 GHz frequency bands

- Plug and Play (Linux, macOS X, Windows XP – 10, Windows 10 IoT Core and Windows Compact Embedded 6/7 compatible)

- Fully-featured software utility for easy configuration and management

- 1x1 MIMO technology improves effective throughput and range over existing 802.11 b/g products

- Up to 150Mbps Data Transfer Rate

- BPSK, QPSK, 16 QAM, 64 QAM, DBPSK, DQPSK, and CCK modulation schemes

- WEP, TKIP, and AES, WPA, WPA2 hardware encryption Schemes

- Can be setup as an ad-hoc network for peer to peer communication

- Small convenient size

- RoHS, REACH and WEEE compliant

- See our website for this products certifications.

Overview

The LM816 WiFi adapter is fully compliant with IEEE 802.11 n, b and g standards. It supports a data transfer rate of up to 150Mbps in ad-hoc mode or infrastructure mode network architectures.

It is designed to provide excellent performance with low power consumption and enhance a robust system.

LM816 WiFi 802.11 b/g/n Nano Adapter
Host Controller Interface (HCI) via USB Interface

Product   LM816
Part No   See Last Page

General Specification

Wireless

Wireless Standard	802.11 b/g/n
Module Type	Host Controller Interface (HCI)
OS Compatibility	Linux, macOS X, Windows XP – 10, Windows 10 IoT Core and Windows Embedded Compact 6/7
Security	WEP 64 bit, WEP 128 bit, TKIP, AES, WPA and WPA2
Network Architecture	Ad hoc mode (Peer-to-Peer) and Infrastructure mode

Hardware

Chipset	Realtek
Antenna	Onboard Chip Antenna
Interfaces	USB 2.0
LED	Power

RF Characteristics

Tx Output Power	(+/- 2dBm): 13dBm@11n, 17dBm@11b, 15dBm@11g
Rx Sensitivity	11Mbps -80dBm@8%, 54Mbps -70dBm@10%, 150Mbps -64dBm@10%
Range (in open space)	Up to 100m (Indoor) and Up to 180m (Outdoor)
Current Consumption	Transmit: average 125 mA
	Receive: average 68 mA
	Transmit & Receive: average 105 mA
Data Transfer Rate	1,2,5.5,6,11,12,18,22,24,30,36,48,54,60,90,120 Mbps to a maximum of 150Mbps
Frequency	2.4GHz ISM Band
Modulation Scheme	BPSK/ QPSK/ 16-QAM/ 64-QAM/ DBPSK/ DQPSK/ CCK
Spread Spectrum	IEEE 802.11b: DSSS (Direct Sequence Spread Spectrum)
	IEEE 802.11g/n: OFDM (Orthogonal Frequency Division Multiplexing)

Physical Characteristics

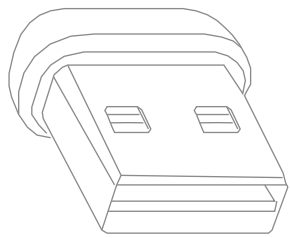|	
Operating Temperature	-10°C to +60°C ambient temperature
Storage Temperature	-20°C to +70°C ambient temperature
Humidity	5% to 90% maximum (non-condensing)
Dimensions (L x W x H)	17mm x 15mm x 8mm
Weight	1.80g +/- 0.25g tolerance (25.36g in retail pack)
Certifications	See our website for this products certifications.
Compliance	RoHS, REACH and WEEE

www.lm-technologies.com

Physical Dimensions

17mm x 15mm x 8mm
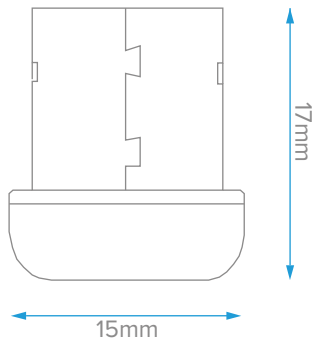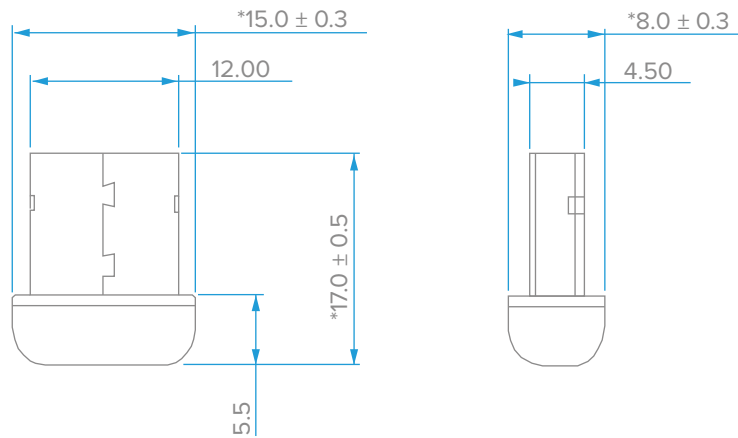
*15.0 ± 0.3

12.00

*17.0 ± 0.5

5.5

*8.0 ± 0.3

4.50

17mm

15mm

Datasheet Version Notes

| v1.0 | 11 JAN 2018 | Added version notes to datasheet. |
| v1.1 | 16 MAY 2018 | PCN (Part Number Change) plus updates to Packaging Options page. |

LM816 WiFi 802.11 b/g/n Nano Adapter
Host Controller Interface (HCI) via USB Interface

Product   LM816
Part No   See Last Page

LM816
Page 4 of 5

+44(0) 207 428 2647 | sales@lm-technologies.com

LM816 WiFi 802.11 b/g/n Nano Adapter
Host Controller Interface (HCI) via USB Interface

Product   LM816
Part No   See Below

LM816 Packaging Options

ETSI Versions

816-0648-1 ETCHED	**CSP - Carton Sample Pack** ADPT 802.11n EUS 1T1R USB ETCH SP	

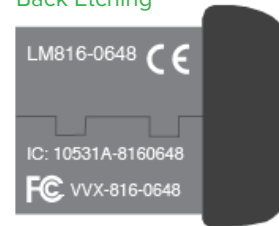Cartons contain sample bags of 2 pieces. Contact LM for your desired quantities.

Front Etching

| 816-0648-2 ETCHED | **RP - Retail Pack** ADPT 802.11n EUS 1T1R USB ETCH RP |

Back Etching

| 816-0648-3 ETCHED | **AO - Adapter Only** ADPT 802.11n EUS 1T1R USB ETCH AO |

US Versions

Front Etching

| 816-0648-1 US ETCHED | **CSP - Carton Sample Pack** ADPT 802.11n EUS 1T1R USB ETCH SP |

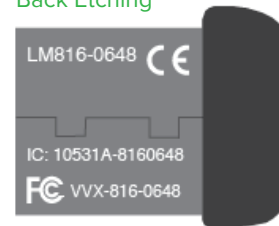Cartons contain sample bags of 2 pieces. Contact LM for your desired quantities.

| 816-0648-2 US ETCHED | **RP - Retail Pack** ADPT 802.11n EUS 1T1R USB ETCH RP |

Back Etching

| 816-0648-3 US ETCHED | **AO - Adapter Only** ADPT 802.11n EUS 1T1R USB ETCH AO |

- See our website to download any applicable Product Software, Manuals and Notes - http://www.lm-technologies.com/downloads