



## LM816 WiFi 802.11 b/g/n Nano Adapter

Host Controller Interface (HCI) via USB Interface

Revised

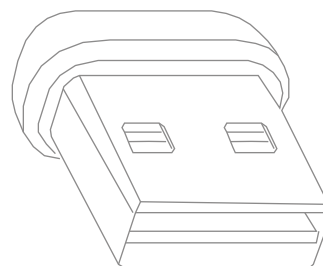
22/JAN/2021

Datasheet Version

1.2

Ordering Options

See last page



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.





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### 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

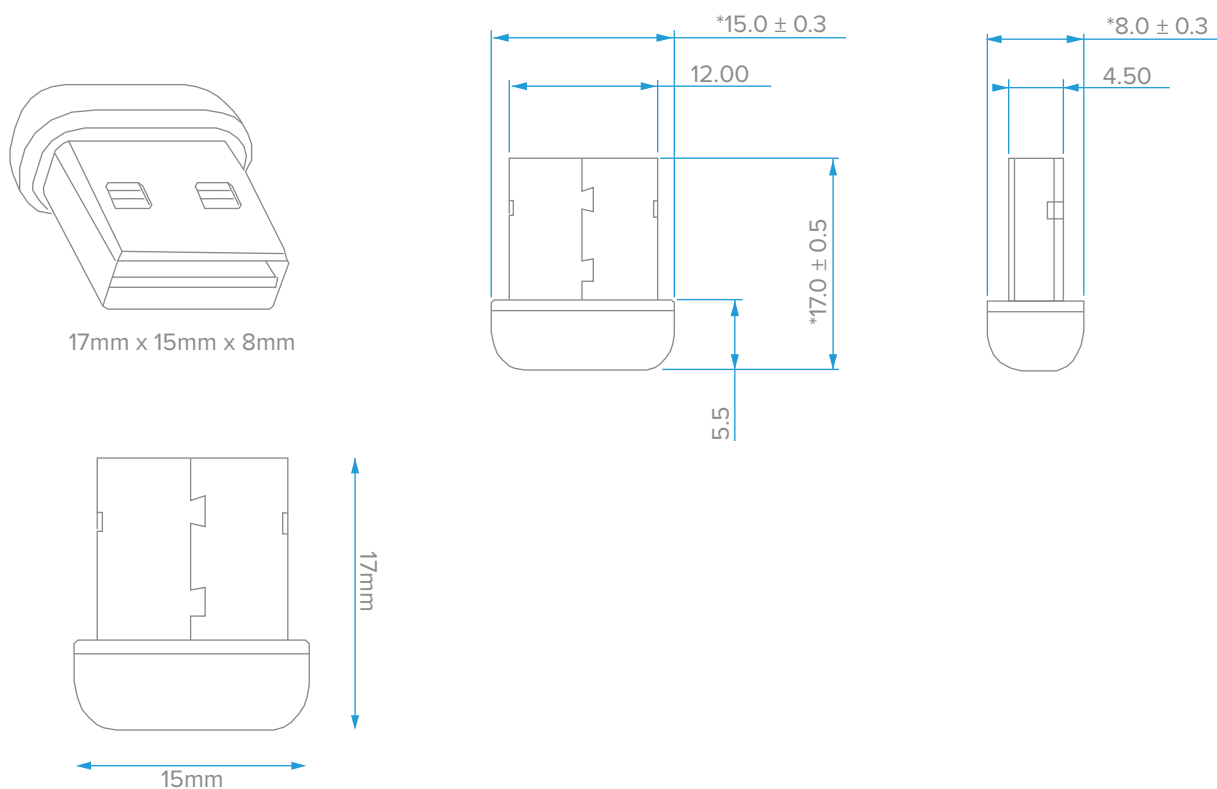
Operating Temperature	-10°C to +60°C ambient temperature
Storage Temperature	-20°C to +70°C ambient temperature
Humidity	5% to 90% maximum (non-condensing)
Dimensions (L x W x H)	17mm x 15mm x 8mm
Weight	1.80g +/- 0.25g tolerance (25.36g in retail pack)
Certifications	See our website for this products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



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### Physical Dimensions





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### 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.
v1.2	22 JAN 2021	Datasheet branding update.



## LM816 WiFi 802.11 b/g/n Nano Adapter

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### Ordering Options

#### ETSI Versions



**816-0648-1**  
ETCHED

##### 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**  
ETCHED

##### Retail Pack

ADPT 802.11n EUS 1T1R USB ETCH RP



**816-0648-3**  
ETCHED

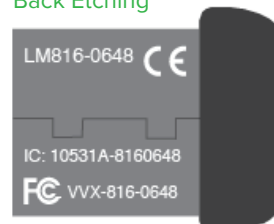
##### Adapter Only

ADPT 802.11n EUS 1T1R USB ETCH AO

##### Front Etching



##### Back Etching



#### US Versions



**816-0648-1 US**  
ETCHED

##### 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

##### Retail Pack

ADPT 802.11n EUS 1T1R USB ETCH RP



**816-0648-3 US**  
ETCHED

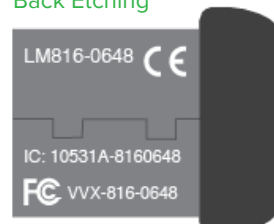
##### Adapter Only

ADPT 802.11n EUS 1T1R USB ETCH AO

##### Front Etching



##### Back Etching



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