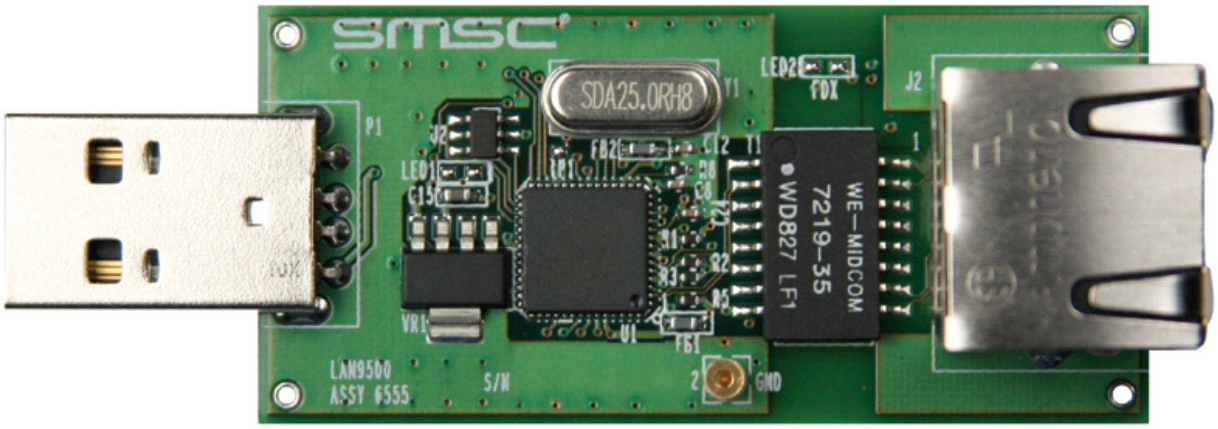
EVB-LAN9500A-LC Evaluation Board User Manual



1 Introduction

The LAN9500A is a high performance, small form factor solution for USB to 10/100 Ethernet port bridging. With applications ranging from embedded systems, set-top boxes, and PVR's, to USB port replicators, USB to Ethernet adapters, PC docking stations, and test instrumentation, the LAN9500A is targeted as a high performance, low cost USB/Ethernet connectivity solution.

The LAN9500A contains an integrated 10/100 Ethernet PHY, USB PHY, Hi-Speed USB 2.0 device controller, 10/100 Ethernet MAC, TAP controller, EEPROM controller, and a FIFO controller with a total of 30 KB of internal packet buffering. The LAN9500A complies with the IEEE 802.3 (full/half-duplex 10BASE-T and 100BASE-TX) Ethernet protocol and USB 2.0 specification, enabling compatibility with industry standard Fast Ethernet and USB 2.0 applications.

The EVB-LAN9500A-LC is an Evaluation Board (EVB) that utilizes the LAN9500A to provide a fully functional, bus-powered USB to Ethernet interface. The EVB-LAN9500A-LC provides fully integrated Ethernet and USB ports via the onboard RJ45 and USB Type A connectors. The onboard 256x8 EEPROM is used to load the EVB-LAN9500A-LC's USB configuration parameters and MAC address.

LAN9500A software drivers are available for Windows XP, Windows Vista, Mac OS X, Linux, and Windows CE. Additional manufacturing and diagnostic tools are available for debugging and external EEPROM configuration. For complete details, refer to the "LAN9500A Software User Manual".

A simplified block diagram of the EVB-LAN9500A-LC can be seen in Figure 1.1.

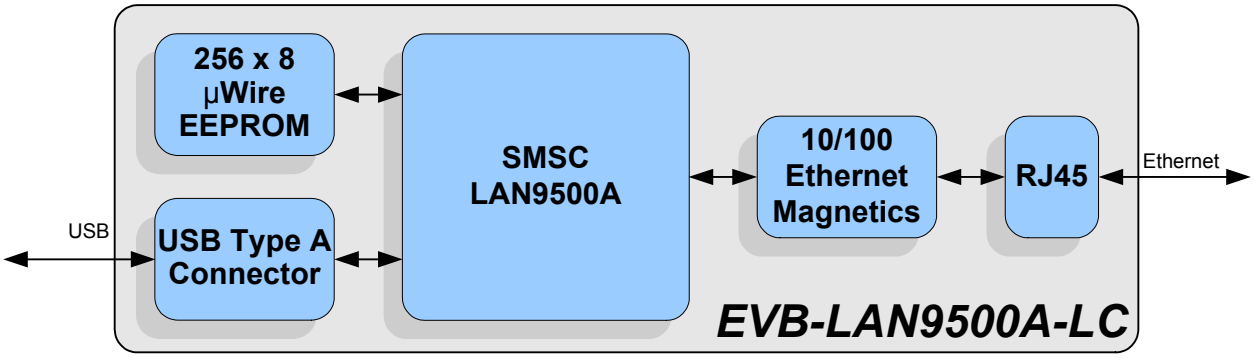


Figure 1.1 EVB-LAN9500A-LC Block Diagram

1.1 References

Concepts and material available in the following documents may be helpful when using the EVB-LAN9500A-LC.

Table 1.1 References

DOCUMENT	LOCATION
SMSC LAN9500A Datasheet	http://www.smsc.com/lan9500a
AN8-13 Suggested Magnetics	http://www.smsc.com/lan9500a
SMSC EVB-LAN9500A-LC Evaluation Board Schematic	http://www.smsc.com/lan9500a
SMSC LAN9500A Software User Manual	http://www.smsc.com/lan9500a

2 Board Details

This section includes the following EVB-LAN9500A-LC board details:

- Configuration
- Mechanicals

2.1 Configuration

The following sub-sections describe the various board features including LEDs, test points, and system connections. A top view of the EVB-LAN9500A-LC is shown in Figure 2.1.

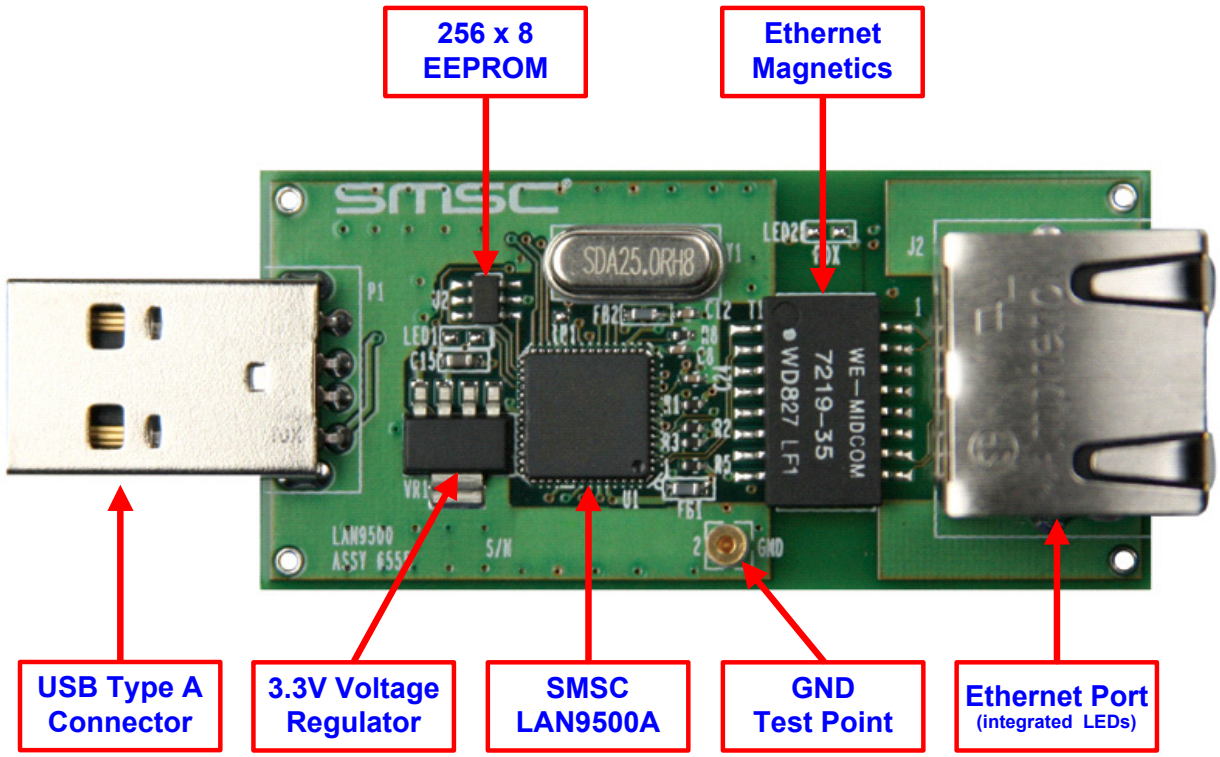


Figure 2.1 EVB-LAN9500A-LC Top View

2.1.1 LEDs

Table 2.1 LEDs

REFERENCE	COLOR	INDICATION
J2	Green	Ethernet Link/Activity **Solid:** Link established **Blinking:** Link activity **OFF:** No link
	Yellow	Ethernet Speed **ON:** 100BASE-TX **OFF:** 10BASE-T

2.1.2 Test Points

Table 2.2 Test Points

TEST POINT	DESCRIPTION	CONNECTION
TP2	Single Pin Gold Post GND Test Point	GND

2.1.3 System Connections

Table 2.3 System Connections

PLUG/HEADER	DESCRIPTION	PART
P1	USB Type-A Plug	Molex 48037-0001
J2	RJ45 with Integrated LEDs	Amphenol RJHSE-5381

2.2 Mechanicals

Figure 2.2 details the EVB-LAN9500A-LC mechanical dimensions.

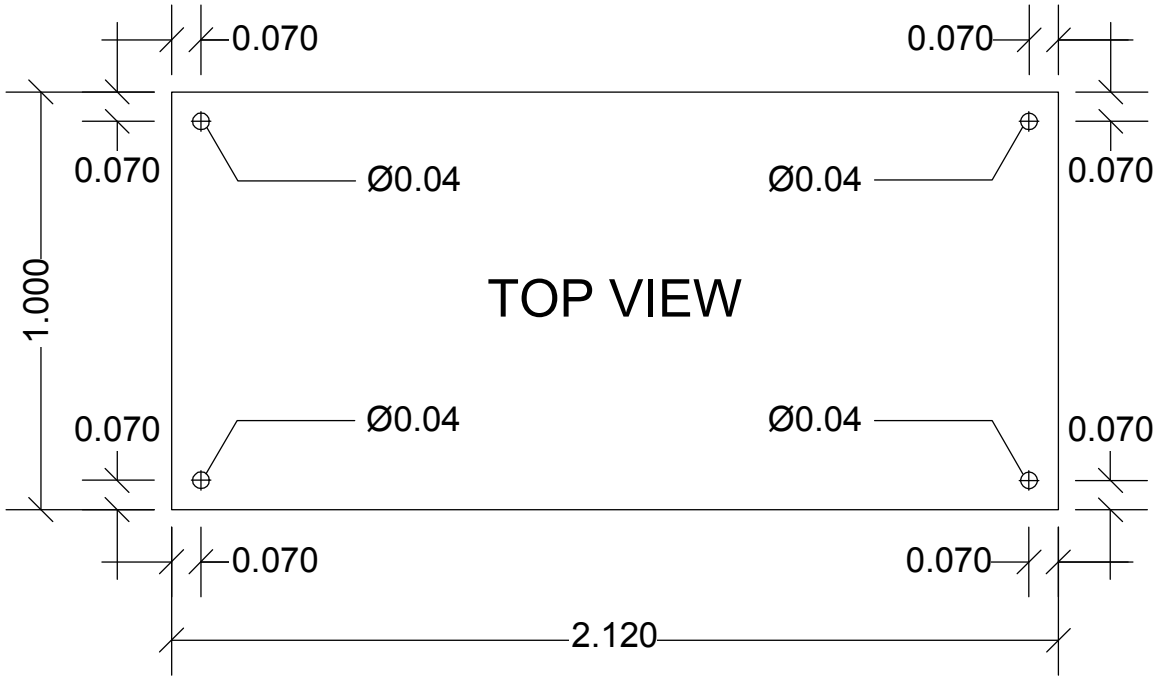


Figure 2.2 EVB-LAN9500A-LC Mechanicals

3 Revision History

Table 3.1 Revision History

REVISION LEVEL & DATE	SECTION/FIGURE/ENTRY	CORRECTION
Rev. 1.0 (12-04-12)	Document co-branded: Microchip logo added, modification to legal disclaimer.	
Rev. 1.0 (02-02-10)	Initial Release	

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