

**PACKING LIST - KIT CONTENTS**

**KITUSBSPIDGLEVME**  
**USB to SPI Dongle**

<u>QUANTITY</u>		<u>REVISION</u>
1	<b>770-23490: HARDWARE DOC CD, CDUSBSPIDGL</b>	3.0
	Documentation Package for KITUSBSPIDGLEVME	
	Notice	----
	Instructions	3.0
	EVB setup diagram	3.0
	Schematic Drawing	3.0
	Picture	3.0
	Assembly Drawing	3.0
	PCB - Top copper	3.0
	PCB - Bottom Copper	3.0
	Bill of Materials	3.0
	SPI Gen 5.0.1 Installation Program (setup.exe)	
	Object code for programing MCHC908JW32FC	
1	<b>700-23490: PWA, KITUSBSPIDGLEVME</b>	
1	<b>600-75489, CABLE, 6FT. USB2.0 A-M TO B-M</b>	
1	<b>920-90570-00: TECHNICAL INFORMATION CENTER FREESCALE SEMICONDUCTOR , INC. , BR1530</b>	
1	<b>920-75133: WARRANTY CARD, FREESCALE</b>	

## IMPORTANT NOTICE

**Freescale provides the enclosed product(s) under the following conditions:**

**This evaluation kit is intended for use of ENGINEERING DEVELOPMENT OR EVALUATION PURPOSES ONLY.** It is provided as a sample IC pre-soldered to a printed circuit board to make it easier to access inputs, outputs, and supply terminals. This EVB may be used with any development system or other source of I/O signals by simply connecting it to the host MCU or computer board via off-the-shelf cables. This EVB is not a Reference Design and is not intended to represent a final design recommendation for any particular application. Final device in an application will be heavily dependent on proper printed circuit board layout and heat sinking design as well as attention to supply filtering, transient suppression, and I/O signal quality.

The goods provided may not be complete in terms of required design, marketing, and or manufacturing related protective considerations, including product safety measures typically found in the end product incorporating the goods. Due to the open construction of the product, it is the user's responsibility to take any and all appropriate precautions with regard to electrostatic discharge. In order to minimize risks associated with the customers applications, adequate design and operating safeguards must be provided by the customer to minimize inherent or procedural hazards. For any safety concerns, contact Freescale sales and technical support services.

As a prototype, this product does not fall within the scope of the European Union directive on electromagnetic compatibility and therefore may not meet the technical requirements of the directive. Please be aware that the products received may not be regulatory compliant or agency certified (FCC, UL, CE, etc.).

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## INSTRUCTIONS

### **KITUSBSPIDGLEVME** **USB to SPI Dongle**

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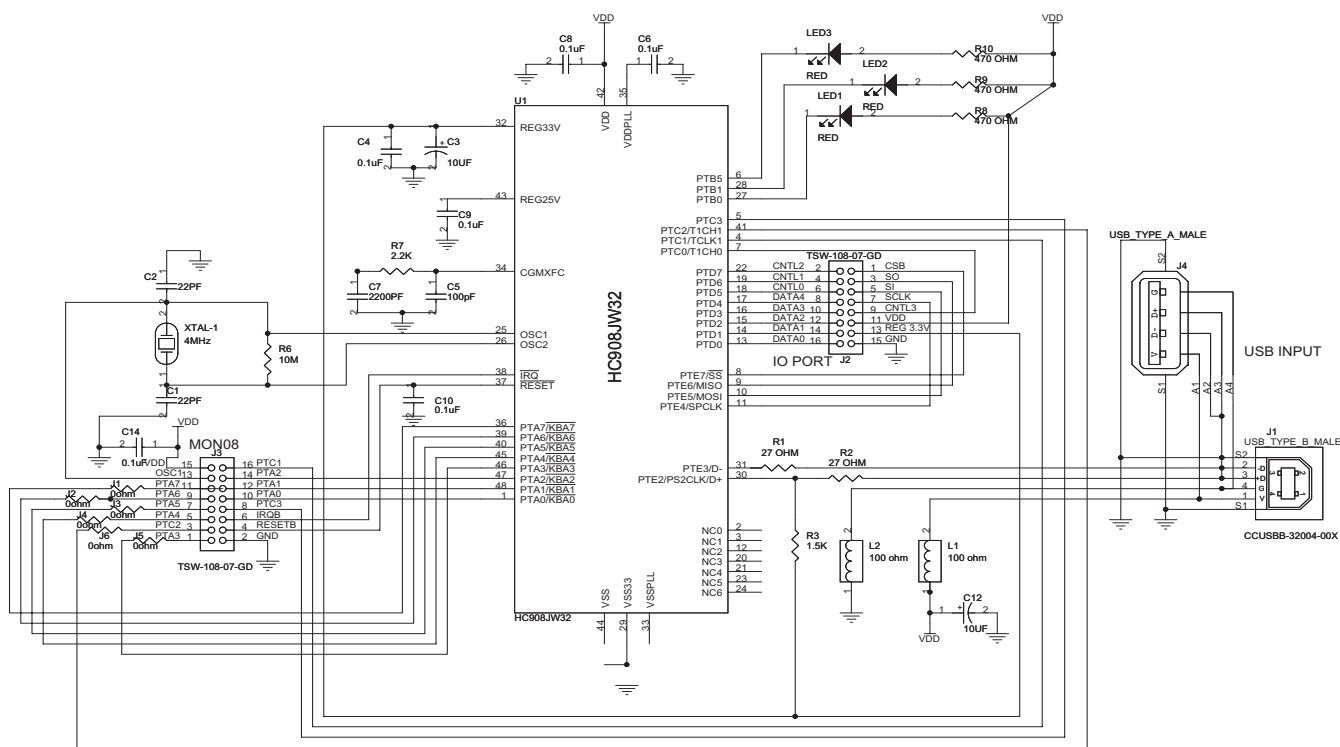
#### **Using the USB\_SPI Dongle**

**Warning: Always wear Safety Glasses when working around electronic modules and when soldering.**

See file USB\_SPI\_Dongle\_Information.pdf on this CD for Instructions

REVISIONS

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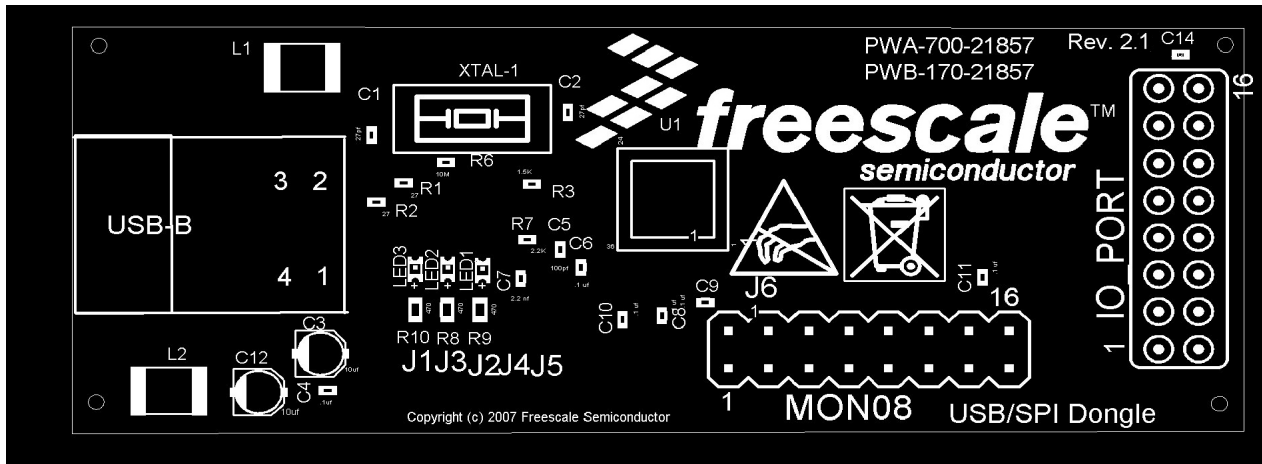


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TITLE  
**SCHUSBSPIDGLEVME SCHEMATIC**

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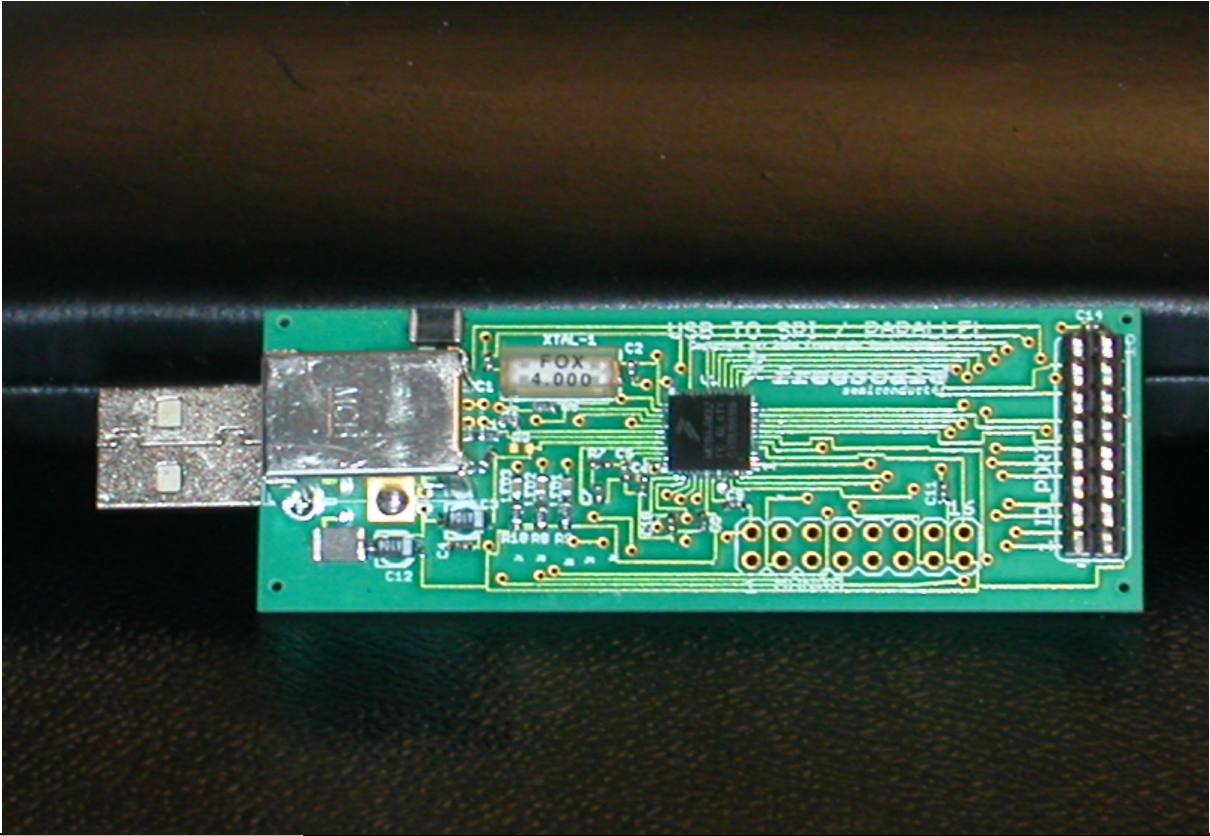
TITLE

**KITUSBSPIDGLEVME  
ASSEMBLY DWG**

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**KITUSBSPIDGLEVME  
ASSEMBLY DWG**

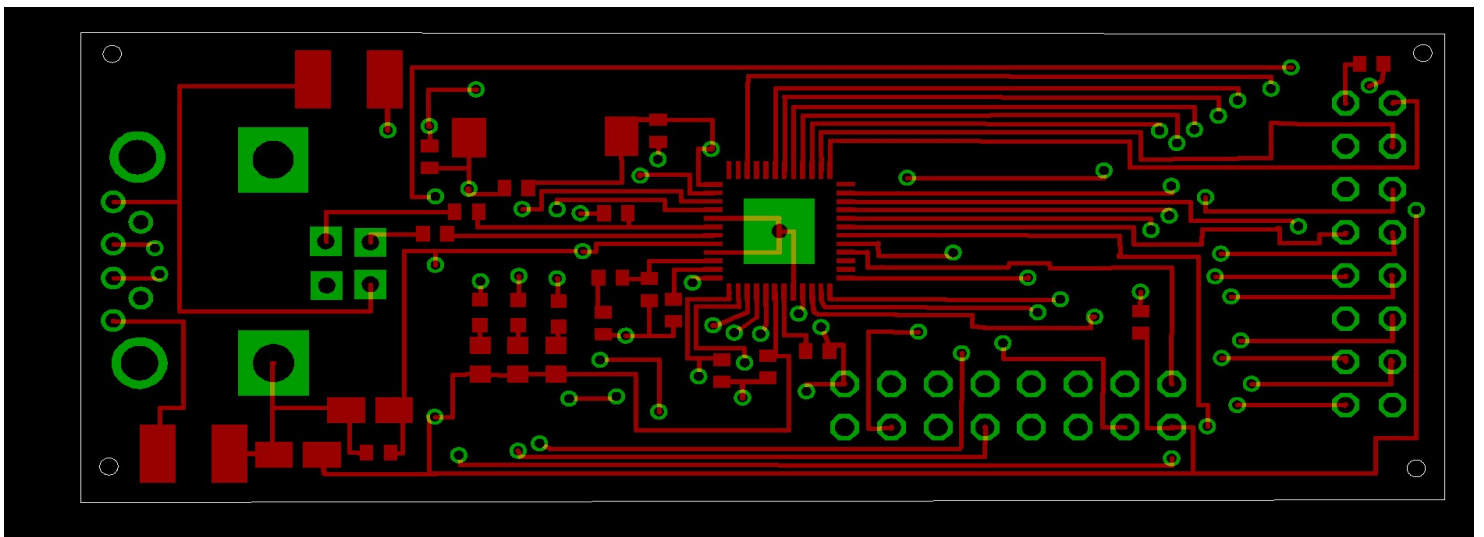
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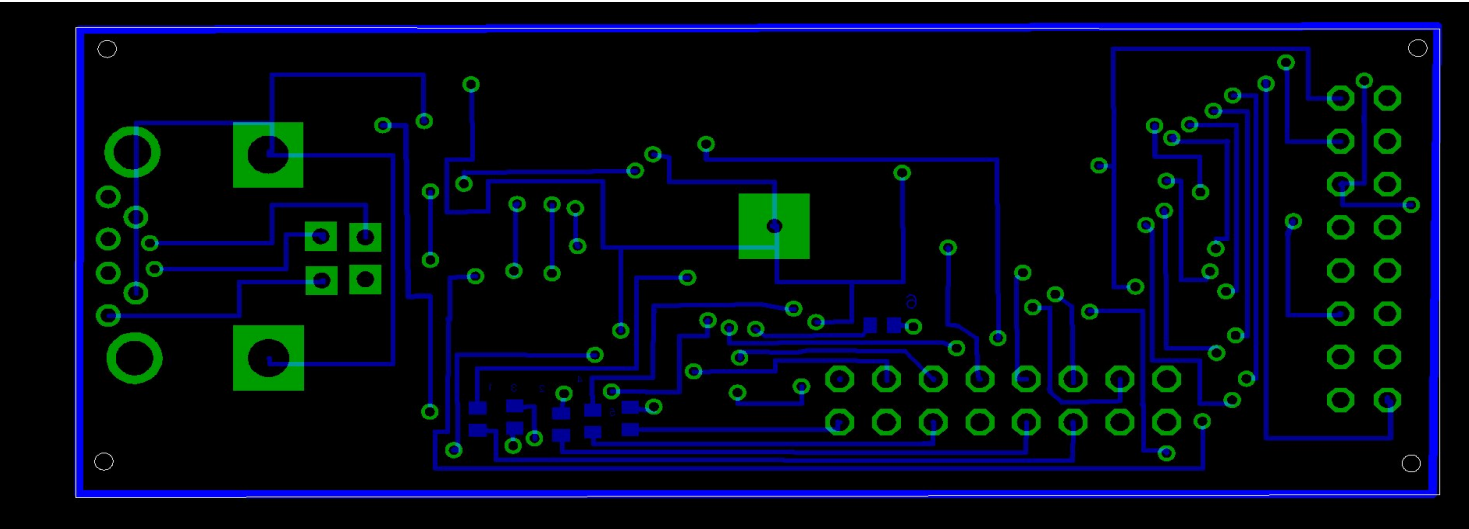
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## BILL OF MATERIALS

### KITUSBSPIDGLEVME

#### USB to SPI Dongle

Schematic Designation	Device or Signal Name	Agile Number	Description	Mfr. Name	Mfr. Part Number
C1	OSC2	150-75266	CAP CER 22PF 50V 5% C0G CC0402	AVX	04025A220JAT2A
C2	OSC1	150-75266	CAP CER 22PF 50V 5% C0G CC0402	AVX	04025A220JAT2A
C3	REG3.3V	150-30020	CAP TANT 10UF 10V 10% -- --	VISHAY INTERTECHNOLOGY	293D106X9010A2TE3
C4	REG3.3V	150-30007	CAP CER 0.1UF 10V 20% Y5V 0402	AVX	CM05Y5V104Z16AH
C5	CGMXFC	N/A	CAP CERAMIC 100PF 50V NP0 0402	YAGEO CORP.	CC0402JRNPO9BN101
C6	VDD PLL	150-30007	CAP CER 0.1UF 10V 20% Y5V 0402	AVX	CM05Y5V104Z16AH
C7	CGMXFC	N/A	CAP CERM .022UF 10% 16V X7R 0402	AVX	0402YC223KAT2A
C8	VDD	150-30007	CAP CER 0.1UF 10V 20% Y5V 0402	AVX	CM05Y5V104Z16AH
C9	REG2.5V	150-30007	CAP CER 0.1UF 10V 20% Y5V 0402	AVX	CM05Y5V104Z16AH
C10	RESET	150-30007	CAP CER 0.1UF 10V 20% Y5V 0402	AVX	CM05Y5V104Z16AH
C11	VDD	150-30007	CAP CER 0.1UF 10V 20% Y5V 0402	AVX	CM05Y5V104Z16AH
C12	VDD	150-30020	CAP TANT 10UF 10V 10% -- --	VISHAY INTERTECHNOLOGY	293D106X9010A2TE3
C14	VDD	150-30007	CAP CER 0.1UF 10V 20% Y5V 0402	AVX	CM05Y5V104Z16AH
R1	D+	N/A	RES 27 OHM 1/16W 5% 0402 SMD	PANASONIC ECG	ERJ-2GEJ270X
R2	D-	N/A	RES 27 OHM 1/16W 5% 0402 SMD	PANASONIC ECG	ERJ-2GEJ270X
R3	D+	470-76065	RES TF 1.5K 1/16W 1% RC0402 ROHS	BOURNS	CR0402FX1501GLF
R6	OSC1 OSC2	N/A	RESISTOR 10M OHM 1/16W 5% 0402	PANASONIC ECG	ERJ-2GEJ106X
R7	CGMXFC	N/A	RES 2.2K OHM 1/16W 5% 0402 SMD	YAGEO CORP.	RC0402JR-072K2L
R8	LED1	N/A	RES 470 OHM 1/10W 5% 0603 SMD	YAGEO CORP.	RC0603JR-07470RL
R9	LED2	N/A	RES 470 OHM 1/10W 5% 0603 SMD	YAGEO CORP.	RC0603JR-07470RL
R10	LED3	N/A	RES 470 OHM 1/10W 5% 0603 SMD	YAGEO CORP.	RC0603JR-07470RL
L1	+5V	NA	FERRITE 8A 125 OHMS 1812 SMD	STEWART	HI1812V101R-10
L2	GND	NA	FERRITE 8A 125 OHMS 1812 SMD	STEWART	HI1812V101R-10
J1	PTA7	N/A	connector	Wire jumper	
J2	PTA6	N/A	JUMPER TO CONNECT PTA6 to Pin 9 of MON08 connector	Wire jumper	
J3	PTA5	N/A	JUMPER TO CONNECT PTA5 to Pin 7 of MON08 connector	Wire jumper	
J4	PTA4	N/A	JUMPER TO CONNECT PTA4 to Pin 5 of MON08 connector	Wire jumper	

**BILL OF MATERIALS**

**KITUSBSPIDGLEVME**

**USB to SPI Dongle**

J5	PTA3	N/A	JUMPER TO CONNECT PTA3 to Pin 1 of MON08 connector	Wire jumper	
J6	PTC2	N/A	JUMPER TO CONNECT PTC2 to Pin 3 of MON08 connector	Wire jumper	
U1	MICRO	NA	MCHC908JW32FC 8 bit USB/SPI microcontroller ROHS COMPLIANT	FREESCALE SEMICONDUCTOR	MC68HC908JW32
LED1	LED1	N/A	LED 660NM RED DIFF 0603 SMD	AVAGO TECHNOLOGIES US INC.	HSMH-C190
LED2	LED2	N/A	LED 660NM RED DIFF 0603 SMD	AVAGO TECHNOLOGIES US INC.	HSMH-C190
LED3	LED3	N/A	LED 660NM RED DIFF 0603 SMD	AVAGO TECHNOLOGIES US INC.	HSMH-C190
IO PORT	MA08-2	N/A	CONN HEADER .100 DUAL STR 16POS	3M CORP	929665-02-08-I
MON08	MA08-2	N/A	CONN HEADER .100 DUAL STR 16POS	3M CORP	929665-02-08-I
XTAL-1	OSC1 OSC2	230-75423	CRYSTAL 4.0 MHZ 20PF SMD	FOX ELECTRONICS	FQ1045A-4
USB-A	USB-A Input	N/A	USB-A Male PC Board mount	SPARK FUN ELECTRONICS	PType-USB-A
USB-B	USB-B Input	N/A	CONN USB RT ANG RECPT TYPE B BLK	MOLEX/WALDOM ELECTRONICS CORP	67068-8000