MAX32620, MAX32621 Evaluation Kits

Evaluate: MAX32620, MAX32621

General Description

The MAX32620 and MAX32621 evaluation kits (EV kits) provide a convenient platform for evaluating the capabilities of the MAX32620 and MAX32621 microcontrollers, respectively. While the MAX32620 EV kit includes a MAX32620 soldered directly to the board, the MAX32621 EV kit features a socketed MAX32621. Each EV kit also provides a complete, functional system ideal for development and debugging applications. Except where stated otherwise, the following sections apply to both EV kits.

EV Kit Contents

- EV Kit Board with a MAX32620 Soldered Down (MAX32620 EV Kit Only)
- EV Kit Board with a Socketed MAX32621 (MAX32621 EV Kit Only)
- Olimex ARM-USB-TINY-H JTAG Debugger with JTAG Ribbon Cable (for Connecting from Debugger to EV Kit Header J1) and USB Standard A-to-B cable (for Connecting from PC to Debugger)
- Two Standard-A to Micro-B USB Cables (for Connecting from a PC or Stand-Alone USB Power Supply to EV Kit Connectors CN1 and CN2)
- MAX32620/MAX32621 EV Kit Quick Start
- Hex Keys for the Socket (MAX32621 EV Kit Only)

Ordering Information

PART	TYPE
MAX32620-EVKIT#	EV kit with MAX32620 sample
MAX32621-EVKIT#	EV kit with socket and MAX32621 sample

#Denotes RoHS compliant.

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Benefits and Features

- Easily Load and Debug Code Using the Supplied Olimex ARM-USB-TINY-H JTAG Debugger Connected Through a Standard 20-Pin ARM JTAG Header
- Headers for Accessing the IC's Pins and Analog Front End (AFE) Input Signals
- Micro-USB Type-B Connection to the IC's USB Device Controller
- Micro-USB Type-B Connection to USB-UART Bridge Selectable Between the IC's Internal UART 0 and UART 1
- On-Board Bluetooth® 4.0 BLE Transceiver with Chip Antenna

EV Kit Contents (MAX32620 EV Kit Shown)



19-7593; Rev 2; 2/17

maxim integrated™

Getting Started

1) While observing safe ESD practices, carefully remove the EV kit board out of its packaging. Quickly inspect the board to make sure that no damage occurred during shipment. Jumpers/shunts were preinstalled prior to testing and packaging. By default, the USB-UART bridge is the source of power for the EV kit board. See Table 1 and Figure 3 for the default jumper settings and descriptions.
2) The IC was preprogrammed with a demo program. To power up the board and run the demo, simply connect the Micro-USB cable to the Micro-USB jack found at the top left of the EV kit PCB. The jack is labeled **CN1**. The other end of the Micro-USB cable can be connected either to a computer **or** to a USB wall charger in order to get +5V power.
3) Once power is applied, the demo runs. The demo displays text and graphics on the OLED display, flashes LED0–LED3, and outputs data to UART0.
4) Do not connect any of the additional USB cables or Olimex JTAG adapter until after the tool chain/drivers are installed.

If the demo ran as expected, then the next step is to download and run the installer as described in the Quick Start (separate document). The installer is a small application that allows users to select which components they would like to download and install including tools, drivers, and documentation. A description of each component and the hard drive size required for each can be seen by clicking on each component.

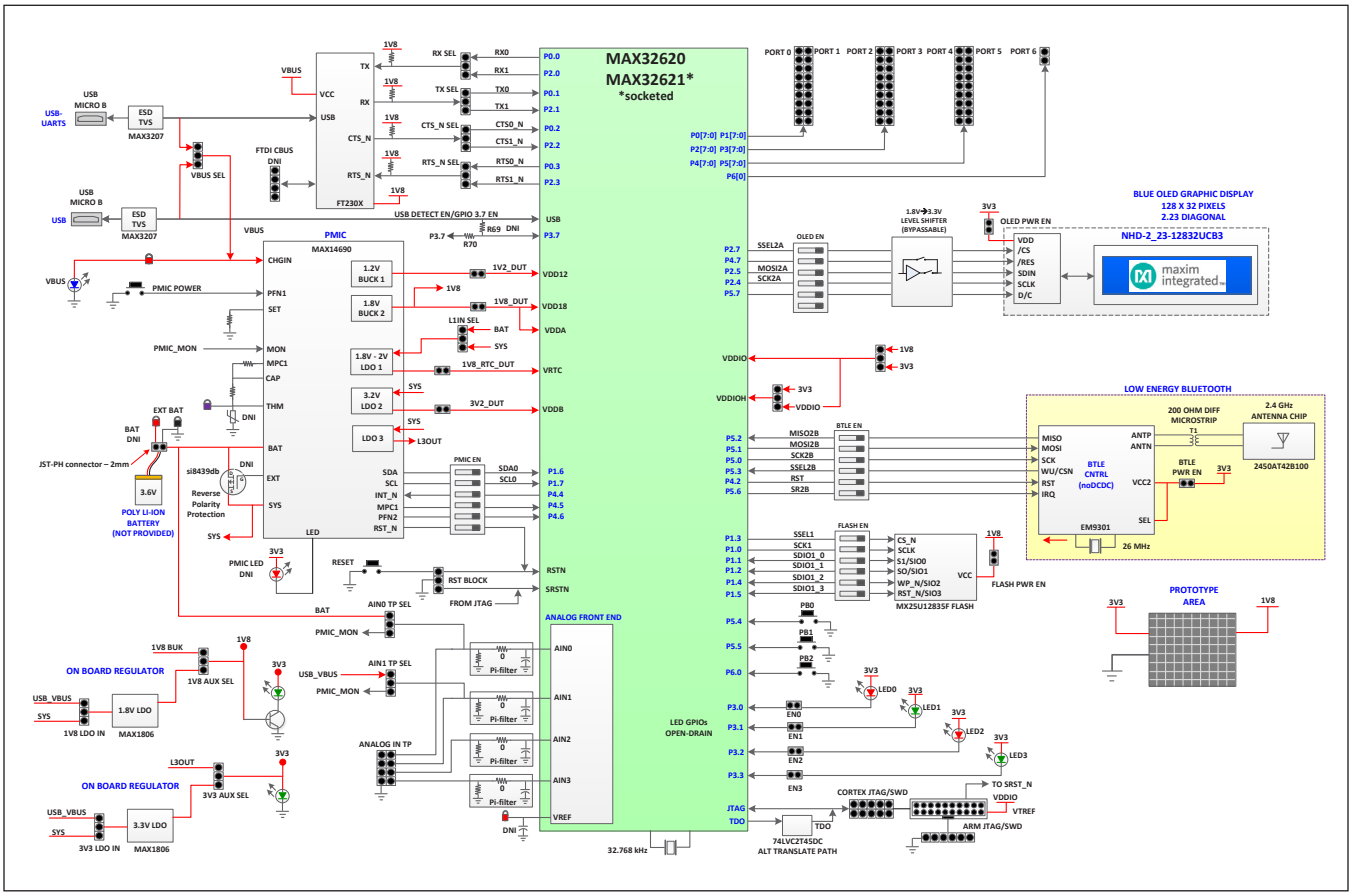


Figure 1. EV Kit Block Diagram

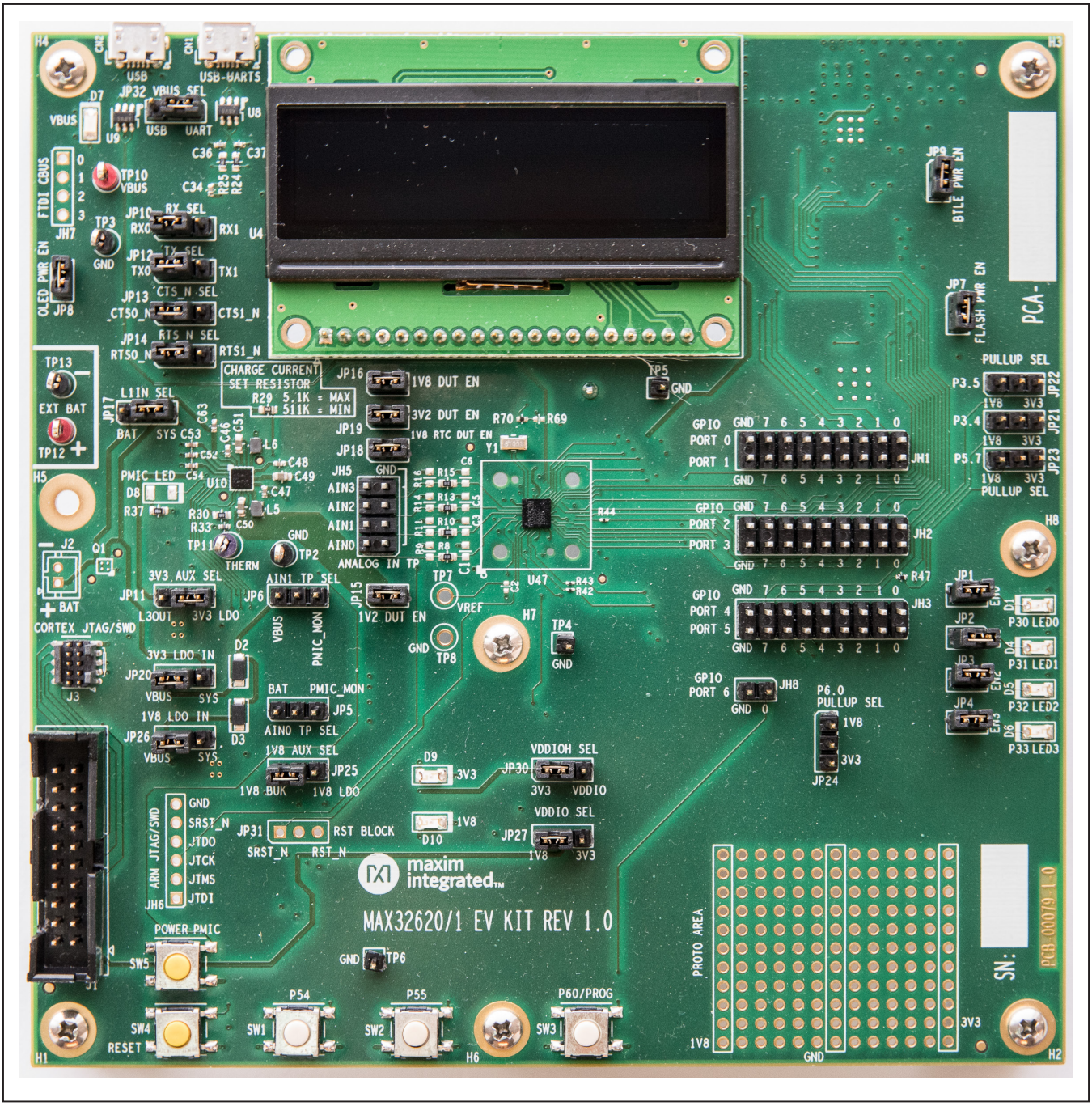


Figure 2. EV Kit Board (MAX32620 EV Kit Shown)

Detailed Description of Hardware

This section describes each major function or component on the EV kit. This EV kit is general-purpose in nature and provides many user-selectable options, which are described in the following sections. Each jumper setting is described and its default setting illustrated.

Board Power

The EV kit's main power-supply input is +5V, made available through Micro-USB type-B connector CN1 or CN2. The board is default jumpered for power to be provided by CN1.

Current Monitoring

Jumpers JP15, JP16, JP18, and JP19 provide convenient current monitoring points for VDD12 (JP15), VRTC (JP18), VDDB (JP19), and VDDA+VDD18 (JP16). VDDIO (JP27) and VDDIOH (JP30) current can be monitored using these source selection jumpers.

Pushbuttons

Pushbuttons (normally open) SW1, SW2, and SW3 can be used to generate a logic 0 signal on their corresponding GPIO port pins. Firmware defines the action taken on switch closure.

Pushbutton SW4 provides a global POR reset function for the IC by asserting the RSTN input.

Pushbutton SW5 controls the PFN1 input of the PMIC. The function of the PFN1 input is configurable, but is preset to reset the PMIC when depressed for at least 12 seconds. Refer to the MAX14690 IC data sheet for complete information.

USB

The IC provides an integrated USB2.0 full-speed interface (12Mbps). This interface is accessed through the Micro-USB type-B connector, CN2.

USB-UART Bridge

The EV kit board provides a USB-to-UART bridge chip, FTDI FT230X. This bridge eliminates the requirement for a physical RS-232 COM port. Instead, the IC's UART access is through the Micro-USB type-B connector, CN1. Virtual COM port drivers and guides for installing Windows® drivers are available at www.ftdichip.com. Default parameters are 115,200 baud, 8 bits, no parity, 1 stop bit, no flow control.

Windows is a registered trademark and registered service mark of Microsoft Corporation.

The USB-to-UART bridge can be connected to UART 0 or UART 1 of the IC with jumpers JP10 (RX), JP12 (TX), JP13 (CTS), and JP14 (RTS). This interface is the default power source for the EV kit

LEDs

The EV kit board has four LEDs with series current-limiting resistors. LEDs D1 (red), D4 (green), D5 (red), and D6 (green) are connected to the IC's GPIO pins P3.0, P3.1, P3.2, and P3.3, respectively. LED GPIOs must be configured as open drain due to 3.3V LED source voltages. An LED is illuminated when the appropriate GPIO pin is driven low.

Bluetooth Low-Energy (BLE) Controller

The EV kit board has a low-power Bluetooth controller, EM9301. Communication with the IC is through SPI 2B. This particular SPI port was selected due to the additional flow control signals that it features. The EM9301 controller is Bluetooth specification V4.0 compliant. Refer to the EM Microelectronic EM9301 data sheet for additional details.

Clocking

The IC operates from an internal 96MHz relaxation oscillator. The internal oscillator is adequate to run the core digital logic and peripherals. The accuracy of the internal oscillator is not suitable for accurate RTC timekeeping or USB operation. The external 32.768kHz crystal, Y1, provides the RTC with an accurate time base and is also used to calibrate the internal oscillator for the accuracy required for USB operation.

JTAG Connector

The ARM standard 20-pin connector pinout is provided by shrouded header J1. Various debugger modules are available for this interface. The Olimex ARM-USB-TINY-H debugger is supplied with the EV kit.

Graphic OLED Display Module

A 128 x 32 pixel graphic OLED display module, NHD-2.23-12832UCB3, is provided on the EV kit board. Communications with the NHD-2.23-12832UCB3 is through SPI 2A.

GPIO Headers and Port Configuration

The IC provides support for both 1.8V and 3.3V peripherals through power rails VDDIO and VDDIOH. GPIO voltages can be programmed on a port-by-port basis, refer to the IC's user's guide for more detail. Multiple pullup options are supported when using special function port modes, with user selectable pullup voltage options to both rail voltages supported through jumper selection.

Power Management IC (PMIC)

The MAX14690 manages the EV kit power rails. It also manages the selection of EV kit power from either VBUS from CN1, CN2, or an (optional) external lithium-ion polymer battery. The MAX14690 can also function as a battery charger. Refer to the MAX14690 IC data sheet for additional information.

Prototyping Area

An area for adding customer-specific circuitry is provided. This matrix is on a 0.1in spacing and is usable for solder or wire-wrap construction. Power and ground rails run through the matrix.

Jumper Descriptions

Table 1 details the functions of the configurable jumper headers on the EV kit board. The headers are standard 0.1in spacing, 0.025in posts. Settings in Table 1 marked with an asterisk ("*") indicate default placements. Figure 3 also shows the default placements highlighted in red.

Table 1. Jumper Functions and Default Settings

JUMPER	SIGNAL	SETTING	DESCRIPTION
JP1	GPIO3_0	1-2*	Connects GPIO3_0 to LED0
		Open	Disconnects LED0
JP2	GPIO3_1	1-2*	Connects GPIO3_1 to LED1
		Open	Disconnects LED1
JP3	GPIO3_2	1-2*	Connects GPIO3_2 to LED2
		Open	Disconnects LED2
JP4	GPIO3_3	1-2*	ConnectsGPIO3_3 to LED3
		Open	Disconnects LED3
JP5	AIN0_TP	1-2	Connects AIN0_TP to BAT
		2-3	Connects AIN0_TP to PMIC_MON
JP6	AIN1_TP	1-2	Connects AIN1_TP to VBUS
		2-3	Connects AIN1_TP to PMIC_MON
JP7	1V8	1-2*	Connects FLASH VCC to 1V8 power
		Open	Disconnects FLASH VCC
JP8	3V3	1-2*	Connects OLED display to 3V3 power
		Open	Disconnects OLED display
JP9	3V3	1-2*	Connects BTLE to 3V3 power
		Open	Disconnects BTLE
JP10	TXD of USB-SERIAL IC	1-2*	Connects TXD of USB - Serial IC to P0_0 (UART0A_RX)
		2-3	Connects TXD of USB - Serial IC to P2_0 (UART1A_RX)
JP11	3V3	1-2	Connects PMIC L3OUT to 3V3
		2-3*	Connects LDO OUT to 3V3
JP12	RXD of USB-SERIAL IC	1-2*	Connects RXD of USB - Serial IC to P0_1 (UART0A_TX)
		2-3	Connects RXD of USB - Serial IC to P2_1 (UART1A_TX)

Table 1. Jumper Functions and Default Settings (continued)

JUMPER	SIGNAL	SETTING	DESCRIPTION
JP13	/RTS of USB-SERIAL IC	1-2*	Connects /RTS of USB - Serial IC to P0_2 (UART0A_CTS)
		2-3	Connects /RTS of USB - Serial IC to P2_2 (UART1A_CTS)
JP14	/CTS of USB-SERIAL IC	1-2*	Connects /CTS of USB - Serial IC to P0_3 (UART0A_RTS)
		2-3	Connects /CTS of USB - Serial IC to P2_3 (UART1A_RTS)
JP15	1V2_DUT	1-2*	Connects VDD12 to the PMIC B1OUT (1V2)
		Open	Disconnects the PMIC B1OUT (1V2)
JP16	1V8_DUT	1-2*	Connects 1V8_DUT to the PMIC B2OUT (1V8)
		Open	Disconnects the PMIC B2OUT (1V8)
JP17	L1IN of PMIC	1-2	Connects L1IN of the PMIC to BAT (battery)
		2-3*	Connects L1IN of the PMIC to SYS
JP18	1V8_RTC_DUT	1-2*	Connects 1V8_RTC_DUT to the PMIC L1OUT (1V8)
		Open	Disconnects the PMIC L1OUT (1V8)
JP19	3V2_DUT	1-2*	Connects 3V2_DUT to the PMIC L2OUT (3V2)
		Open	Disconnects the PMIC L2OUT (3V2)
JP20	IN of the 3V3 LDO	1-2*	Connects IN of the 3V3 on-board LDO to VBUS
		2-3	Connects IN of the 3V3 on-board LDO to SYS
JP21	GPIO3_4	1-2	Connects GPIO3_4 to 1V8 10K pullup
		2-3	Connects GPIO3_4 to 3V3 10K pullup
JP22	GPIO3_5	1-2	Connects GPIO3_5 to 1V8 10K pullup
		2-3	Connects GPIO3_5 to 3V3 10K pullup
JP23	GPIO5_7	1-2	Connects GPIO5_7 to 1V8 10K pullup
		2-3	Connects GPIO5_7 to 3V3 10K pullup
JP24	GPIO6_0	1-2	Connects GPIO6_0 to 1V8 10K pullup
		2-3	Connects GPIO6_0 to 3V3 10K pullup
JP25	1V8	1-2*	Connects 1V8 to PMIC 1V8_BUK (1V8)
		2-3	Connects 1V8 to 1V8 on-board LDO
JP26	IN of the 1V8 LDO	1-2*	Connects IN of the 1V8 on-board LDO to VBUS
		2-3	Connects IN of the 1V8 on-board LDO to SYS
JP27	VDDIO	1-2*	Connects VDDIO to 1V8
		2-3	Connects VDDIO to 3V3
JP30	VDDIOH	1-2*	Connects VDDIOH to 3V3
		2-3	Connects VDDIOH to VDDIO
JP32	USB_VBUS	1-2*	Connects USB_VBUS to USB-UARTS (CN1)
		2-3	Connects USB_VBUS to USB (CN2)

**Default setting.*

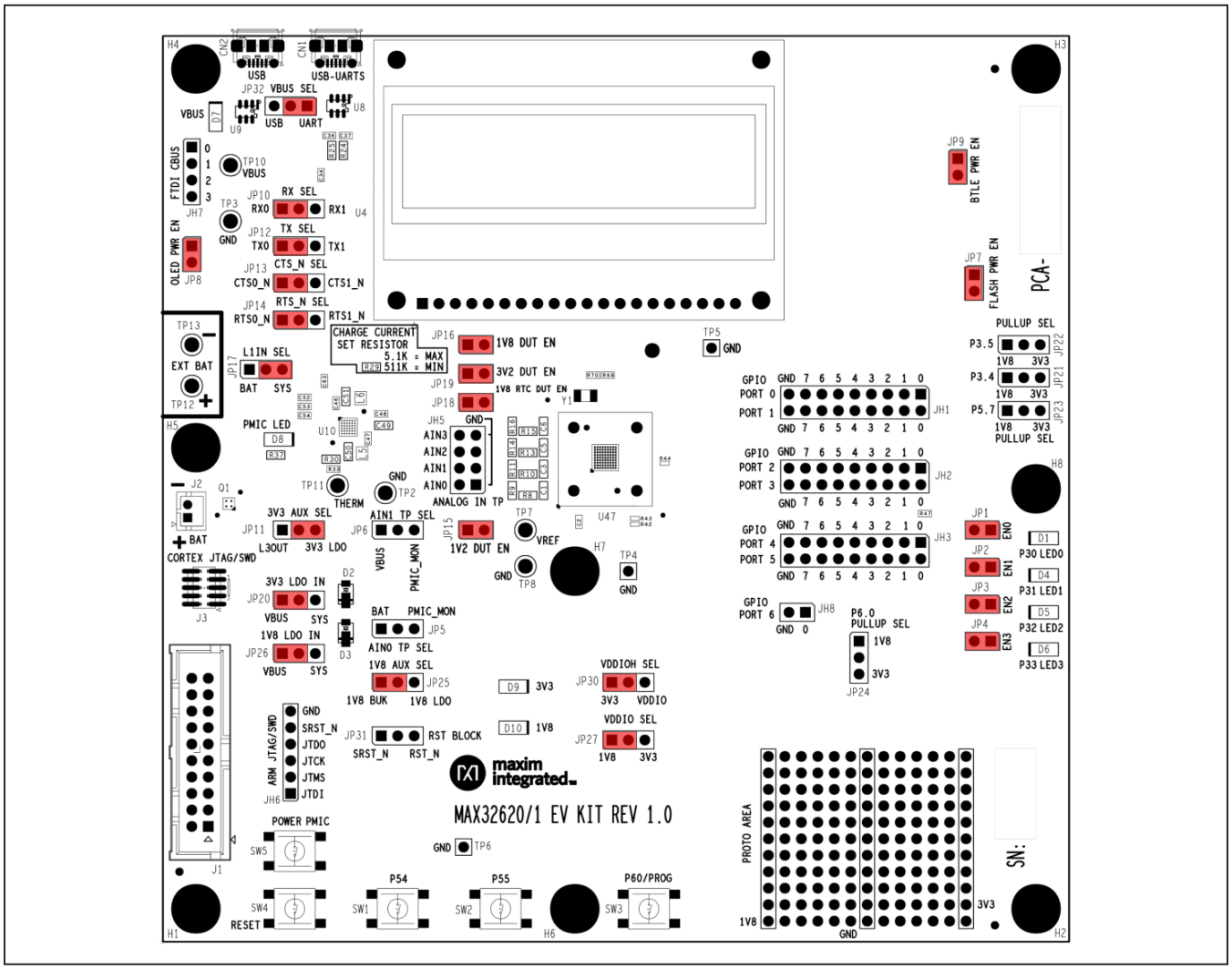


Figure 3. Default Jumper Placement (Applies to Both MAX32620 and MAX32621 EV Kits)

Additional Resources

- MAX32620/MAX32621 EV Kit Quick Start
- MAX32620/MAX32621 EV Kit Data Sheet (this document)
- MAX32620/MAX32621 EV Kit Schematics
- MAX32620/MAX32621 IC Data Sheet
- MAX32620 User's Guide
- Getting Started with Eclipse using the Maxim ARM® Cortex® Toolchain (see note)
- MAX326XX SDK: Firmware Developer's Guide (see note)
- Example projects (see note)

Note: Additional information resides in the Installer. Once this component is installed, the information can be found in the Windows **Start** menu under **Maxim Integrated**, **or** it can be found by exploring the installation directory. It is recommended to visit **www.maximintegrated.com** to check whether updates have been made to any of the documents.

Technical Support

For technical support, go to:

http://support.maximintegrated.com/micro.

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EV Kit Bill of Materials

QTY	PART	VALUE	BOM DESCRIPTION	MANUFACTURER PN	MANUFACTURER
1	ANT1	2450AT42B100E	ANTENNA CHIP 2.4GHZ	2450AT42B100E	Johanson Technology Inc
8	BMP1,BMP2,BMP3,BMP4,BMP5,BMP6,BMP7,BMP8	RB Bump	BUMPER RECESSED #4 SCREW BLACK	720	Keystone Electronics
9	C1,C3,C5,C6,C64,R9,R11,R14,R16	DNI	DNI		
1	C2	100nF	CAP CER 0.1UF 10V 10% X5R 0402	GRM155R61A104KA01D	Murata
17	C7,C8,C9,C10,C11,C46,C47,C48,C52,C53,C54,C56,C62,C63,C144,C146,C163	1uF	CAP CER 1UF 6.3V 10% X5R 0402	C1005X5R0J105K050BB	TDK Corporation
2	C12,C33	4.7nF	CAP CER 4700PF 25V 10% X7R 0402	GRM155R71E472KA01D	Murata
12	C13,C14,C17,C24,C34,C39,C58,C60,C61,C162,C164,C165	100nF	CAP CER 0.1UF 10V 10% X5R 0402	GRM155R61A104KA01D	Murata
1	C15	4.7nF	CAP CER 4700PF 25V 10% X7R 0402	GRM155R71E472KA01D	Murata
2	C16,C31	1uF	CAP CER 1uF 16V 10% X7R 0603	GCM188R71C105KA64D	Murata
2	C22,C23	15pF	CAP CER 15PF 50V 5% NP0 0402	GRM1555C1H150JA01D	Murata
1	C25	47uF	CAP CER 47uF 6.3V 20% X5R 1206	C3216X5R0J476M	TDK Corporation
2	C30,C32	100pF	CAP CER 100PF 50V 5% NP0 0402	C1005C0G1H101J050BA	TDK Corporation
2	C35,C44	10nF	CAP CER 10nF 25V 10% X7R 0603	GRM188R71E103KA01D	Murata
2	C36,C37	47pF	CAP CER 47PF 50V 1% NP0 0402	C1005C0G1H470F050BA	TDK Corporation
1	C38	4.7uF	CAP CER 4.7uF 10V 10% X5R 0603	C0603C475K8PACTU	Kemet
3	C40,C42,C45	100nF	CAP CER 0.1UF 25V 10% X8R 0603	C1608X8R1E104K080AA	TDK Corporation
1	C41	100nF	CAP CER 0.1uF 16V 10% X7R 0603	C0603C104K4RACTU	Kemet
1	C43	1uF	CAP CER 1UF 35V 10% X5R 0603	GMK107BJ105KA-T	Taiyo Yuden
3	C49,C50,C51	22uF	CAP CER 22UF 4V 20% X5R 0603	AMK107BJ226MA-T	Taiyo Yuden
2	C55,C161	22uF	CAP CER 22uF 6.3V 20% X5R 1206	C3216X5R0J226M/0.85	TDK Corporation
2	C57,C160	10uF	CAP CER 10UF 6.3V 20% X5R 0603	CL10A106MQ8NNNC	Samsung Electro-Mechanics America, Inc
1	C159	30pF	CAP CER 30pF 50V 5% NP0 0603	C0603C300J5GACTU	Kemet
2	CN1,CN2	MICRO USB R/A	CONN RCPT MICRO USB R/A SMD	105017-0001	Molex
2	D1,D5	RED	LED 660NM RED WTR CLR 1206 SMD	SML-LX1206SRC-TR	Lumex Opto
2	D2,D3	DFLS230L-7	DIODE SCHOTTKY 30V 2A POWERDI123	DFLS230L-7	Diodes Inc
4	D4,D6,D9,D10	GRN	LED 565NM WTR CLR GREEN 1206 SMD	SML-LX1206GC-TR	Lumex Opto
1	D7	BLUE	LED 469NM BLUE DIFF 1206 SMD	HSMR-C150	Avago Technologies US Inc.
1	D8	RED	LED 660NM RED WTR CLR 1206 SMD	SML-LX1206SRC-TR	Lumex Opto
1	H1	DNI	DNI MTG 125DRL 300PAD		
1	H2	DNI	DNI MTG 125DRL 300PAD		
1	H3	DNI	DNI MTG 125DRL 300PAD		
1	H4	DNI	DNI MTG 125DRL 300PAD		
1	H5	DNI	DNI MTG 125DRL 300PAD		
1	H6	DNI	DNI MTG 125DRL 300PAD		
1	H7	DNI	DNI MTG 125DRL 300PAD		
1	H8	DNI	DNI MTG 125DRL 300PAD		
1	HDR1	20P 1x20	CONN HEADER .100 SINGL STR 20POS	PEC20SAAN	Sullins
1	J1	20P 10x2	CONN HEADER LOPRO STR 20POS GOLD	5103308-5	TE Connectivity
1	J2	2POS 2MM	CONN HEADER PH TOP 2POS 2MM	B2B-PH-K-S(LF)(SN)	JST Sales America Inc
1	J3	10P CORTEX DEBUG	CONN HEADER 10POS DUAL .05" SMD	FTSH-105-01-F-DV-K	Samtec
3	JH1,JH2,JH3	18P 2x9	CONN HEADER .100 DUAL STR 18POS	PEC09DAAN	Sullins
1	JH5	8P 2x4	CONN HEADER .100 DUAL STR 8POS	PEC04DAAN	Sullins
1	JH6	6P 1x6	CONN HEADER .100 SINGL STR 6POS	PEC06SAAN	Sullins
1	JH7	4P 1x4	CONN HEADER .100 SINGL STR 4POS	PEC04SAAN	Sullins
1	JH8	2P 1x2	CONN HEADER .100 SINGL STR 2POS	PEC02SAAN	Sullins
11	JP1,JP2,JP3,JP4,JP7,JP8,JP9,JP15,JP16,JP18,JP19	JUMPER	CONN HEADER .100 SINGL STR 2POS (2x1)	PEC02SAAN	Sullins
18	JP5,JP6,JP10,JP11,JP12,JP13,JP14,JP17,JP20,JP21,JP22,JP23,JP24,JP25,JP26,JP27,JP30,JP32	3P 3x1	CONN HEADER .100 SINGL STR 3POS	PEC03SAAN	Sullins
1	JP31	3P 3x1	CONN HEADER .100 SINGL STR 3POS	PEC03SAAN	Sullins
1	L1	3.3nH	INDUCTOR MULTILAYER 3.3NH 0402	MLK1005S3N3ST000	TDK Corporation
1	L2	1.5nH	INDUCTOR MULTILAYER 1.5NH 0402	MLK1005S1N5ST000	TDK Corporation
2	L3,L4	HZ1206C202R-10	FERRITE CHIP SIGNAL 2000 OHM SMD	HZ1206C202R-10	Laird-Signal Integrity Products
2	L5,L6	2.2uH	INDUCTOR POWER 2.2UH 1.05A SMD	VLS201610ET-2R2M	TDK Corporation
1	L7	BLM21PG221SN1D	FERRITE CHIP 220 OHM 0805	BLM21PG221SN1D	Murata Electronics North America
8	MS1,MS2,MS3,MS4,MS5,MS6,MS7,MS8	Screw Steel	MACHINE SCREW PAN PHILLIPS 4-40	PMSSS 440 0025 PH	B&F Fastener Supply
8	MST1,MST2,MST3,MST4,MST5,MST6,MST7,MST8	STANDOFF	HEX STANDOFF 4-40 ALUMINUM 5/8"	1808	Keystone Electronics
1	PCB1	PCB			
1	PROTO1	DNI	Proto Type Area 11x13 (0.1" LS)		
1	Q1	SI8439DB-T1-E1	MOSFET P-CH 8V MICROFOOT	SI8439DB-T1-E1	Vishay Siliconix
1	Q2	MMBT2222ALT1G	TRANS GP SS NPN 40V SOT23	MMBT2222ALT1G	ON Semi
3	R1,R2,R3	100	RES 100 OHM 1/10W 1% 0603 SMD	ERJ-3EKF1000V	Panasonic
3	R4,R6,R37	470	RES 470 OHM 1/10W 1% 0603 SMD	ERJ-3EKF4700V	Panasonic
4	R5,R7,R38,R55	332	RES 332 OHM 1/10W 1% 0603 SMD	ERJ-3EKF3320V	Panasonic
4	R8,R10,R13,R15	0	RES 0.0 OHM 1/10W JUMP 0603 SMD	ERJ-3GEY0R00V	Panasonic
4	R17,R19,R21,R50	215K	RES 215K OHM 1/10W 1% 0603 SMD	ERJ-3EKF2153V	Panasonic

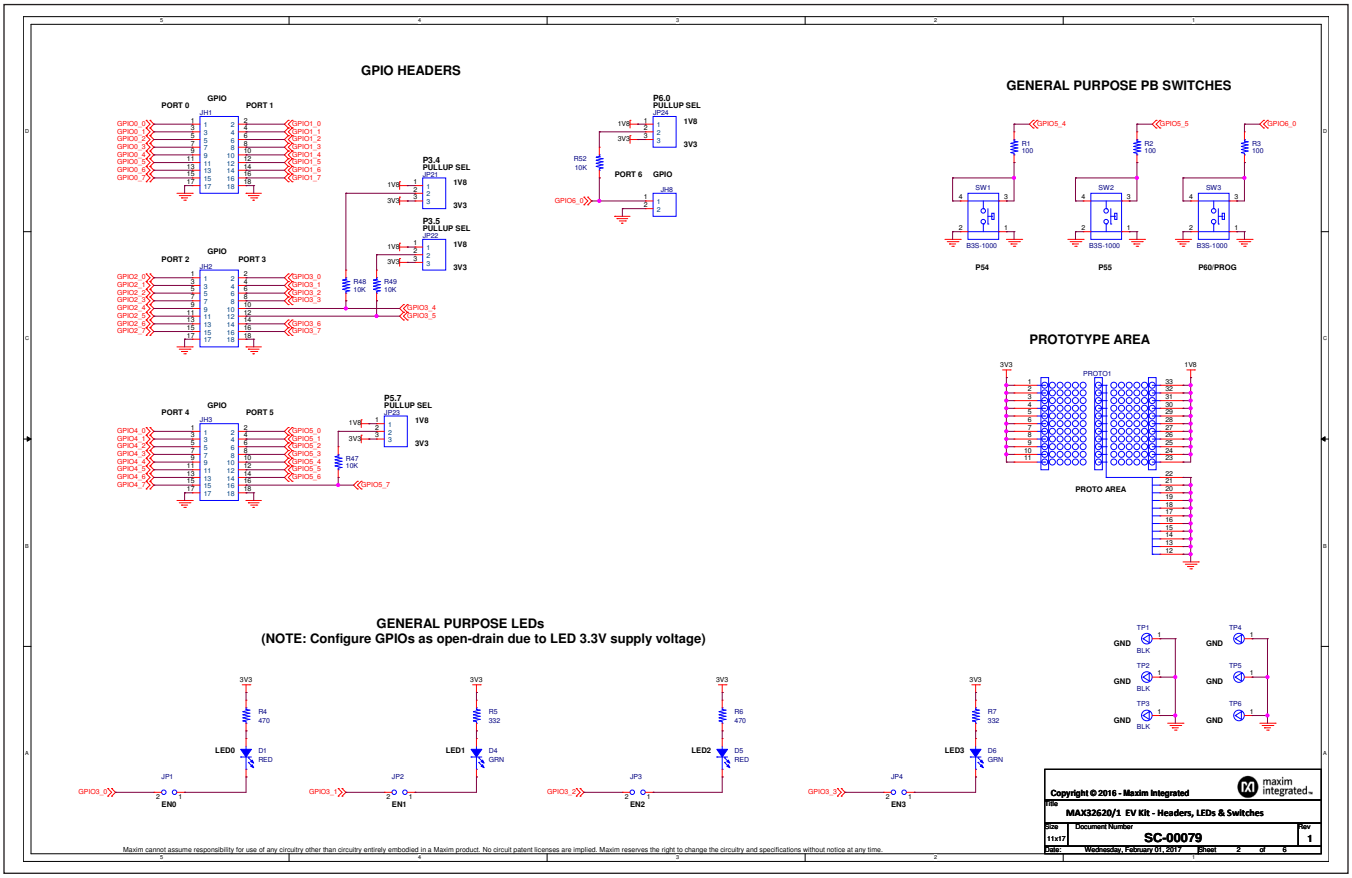
EV Kit Bill of Materials (continued)

QTY	PART	VALUE	BOM DESCRIPTION	MANUFACTURER PN	MANUFACTURER
1	R20	27K	RES 27K OHM 1/10W 1% 0402 SMD	ERJ-2RKF2702X	Panasonic
4	R23,R26,R27,R28	10K	RES 10K OHM 1/10W 1% 0603 SMD	ERJ-3EKF1002V	Panasonic
2	R24,R25	27	RES 27 OHM 1/10W 1% 0603 SMD	ERJ-3EKF27R0V	Panasonic
1	R29	511K	RES 511K OHM 1/10W 1% 0603 SMD	ERJ-3EKF5113V	Panasonic
1	R30	100K	RES 100K OHM 1/10W 1% 0603 SMD	ERJ-3EKF1003V	Panasonic
2	R31,R56	2.7K	RES 2.7K OHM 1/10W 1% 0603 SMD	ERJ-3EKF2701V	Panasonic
10	R32,R34,R35,R39,R41,R47,R48,R49,R52,R57	10K	RES 10K OHM 1/10W 1% 0402 SMD	ERJ-2RKF1002X	Panasonic
1	R33	100K	THERMISTOR 100K OHM NTC 0402 SMD	NCP15WF104F03RC	Murata Electronics North America
1	R36	4.7K	RES 4.7K OHM 1/10W 1% 0402 SMD	ERJ-2RKF4701X	Panasonic
4	R42,R43,R44,R45	0	RES 0.0 OHM 1/20W JUMP 0201 SMD	ERJ-1GN0R00C	Panasonic
1	R51	62	RES 62 OHM 1/10W 1% 0402 SMD	ERJ-2RKF62R0X	Panasonic
8	R53,R58,R59,R60,R61,R62,R68,R69	0	RES 0.0 OHM 1/10W JUMP 0402 SMD	ERJ-2GE0R00X	Panasonic
7	R54,R63,R64,R65,R66,R67,R70	0	RES 0.0 OHM 1/10W JUMP 0402 SMD	ERJ-2GE0R00X	Panasonic
1	R71	1M	RES SMD 1M OHM 5% 1/8W 0805	ERJ-6GEYJ105V	Panasonic
3	SW1,SW2,SW3	B3S-1000	SWITCH TACTILE SPST-NO 0.05A 24V	B3S-1000	Omron Electronics
2	SW4,SW5	B3S-1002 BY OMZ	SWITCH TACTILE SPST-NO 0.05A 24V	B3S-1002 BY OMZ	Omron Electronics
4	SW6,SW7,SW8,SW9	DIP SW 6POS SMT	SWITCH DIP 6POS HALF PITCH SMD	TDA06H0SB1R	C&K Components
1	T1	2450BL15B200	BALUN 2.4GHZ WIFI/BLUETOOTH	2450BL15B200E	Johanson Technology Inc
4	TP1,TP2,TP3,TP13	BLK	TEST POINT PC MULTI PURPOSE BLK	5011	Keystone Electronics
3	TP4,TP5,TP6	1P	CONN HEADER .100 SINGL STR 1POS	PEC01SAAN	Sullins
1	TP7	RED	TEST POINT PC MULTI PURPOSE RED	5010	Keystone Electronics
1	TP8	BLK	TEST POINT PC MULTI PURPOSE BLK	5011	Keystone Electronics
2	TP10,TP12	RED	TEST POINT PC MULTI PURPOSE RED	5010	Keystone Electronics
1	TP11	PRPL	TEST POINT PC MULTI PURPOSE PRPL	5129	Keystone Electronics
1	U2	MX25U12835FZ2I-10G	IC FLASH 128MBIT 104MHZ 8WSON	MX25U12835FZ2I-10G	Macronix International
1	U4	NHD-2.23-12832UCB3	LCD OLED GRAPHIC 128 X 32 BLUE	NHD-2.23-12832UCB3	Newhaven Display Intl
1	U6	EM9301V02LF24D+	BLE Controller without DCDC	EM9301V02LF24D+	EM Microelectronic
1	U7	FT230XS-R	IC USB SERIAL BASIC UART 16SSOP	FT230XS-R	FTDI
2	U8,U9	MAX3207EAUT+T	ESD PROT DIFF SOT23-6	MAX3207EAUT+T	Maxim Integrated
1	U10	MAX14690NEWX+	MAX14690 36P WLP	MAX14690	Maxim Integrated
1	U11	MAX1806EUA33+	IC REG LDO 3.3V/ADJ 0.5A 8UMAX	MAX1806EUA33+	Maxim Integrated
1	U15	74LVC2T45DC	TXRX TRANSLATING 3ST 8VSSOP	74LVC2T45DC,125	NXP Semiconductors
1	U46	MAX1806EUA18+	Low Dropout Linear Regulator	MAX1806EUA18+	Maxim Integrated
1	U47	MAX32620	Exclusive to the MAX32620 EV kit Bill of Materials	MAX32620IWG+	Maxim Integrated
		MAX32621	Exclusive to the MAX32621 EV kit Bill of Materials	MAX32621IWG+	Maxim Integrated
1	U49	74LVC8T245PW,118	TXRX 8BIT TRANSLATING 24TSSOP	74LVC8T245PW,118	NXP Semiconductors
1	XU1	C13951	81P WLP SKT C13951, exclusive to the MAX32621 EV kit Bill of Materials	C13951	Ironwood Electronics, INC.
1	Y1	32.768kHz	CRYSTAL 32.768KHZ 6.0PF SMD	ABS07-32.768KHZ-6-T	Abracon Corp
1	Y2	26MHz	CRYSTAL 26MHZ 10PF SMD	ABM8-26.000MHZ-10-1-U-T	Abracon Corporation

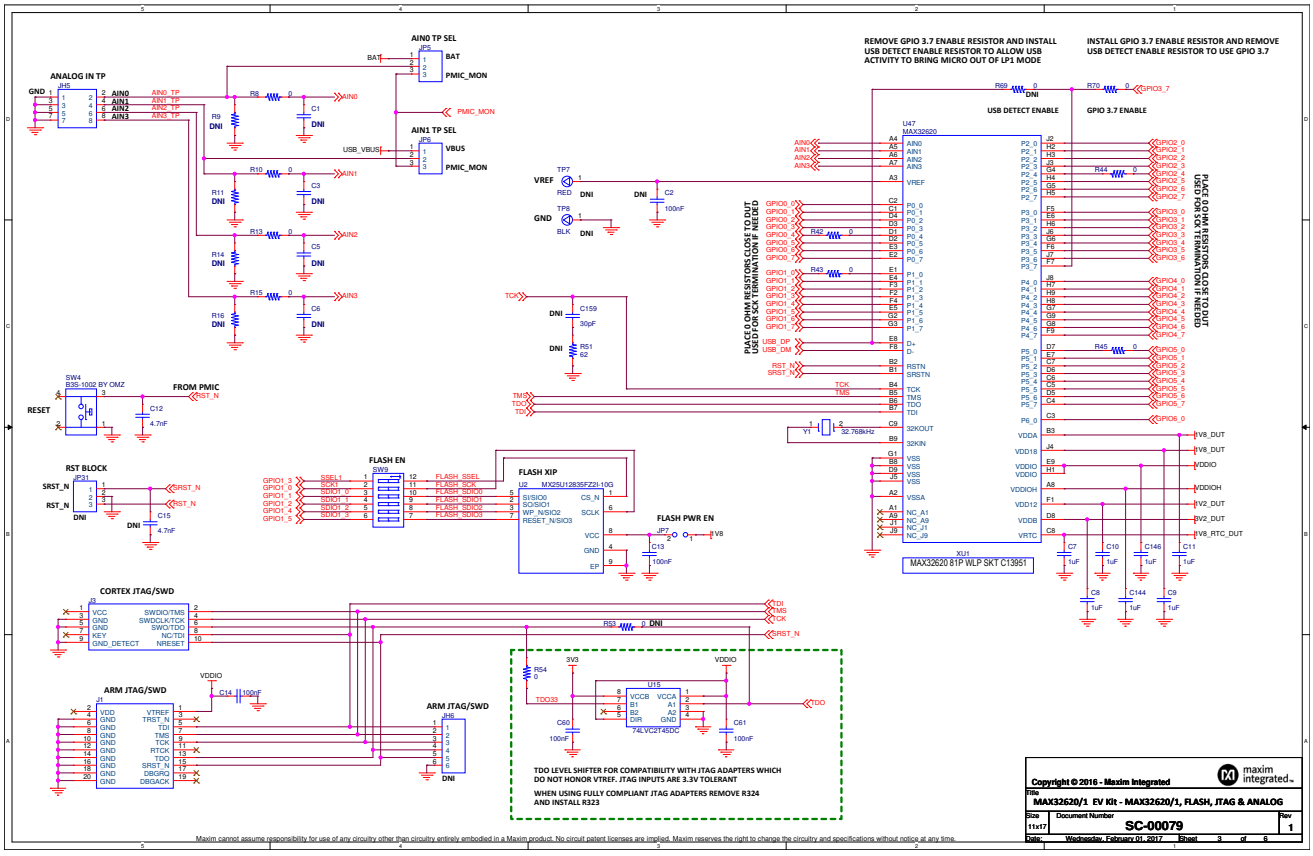
EV Kit Schematics



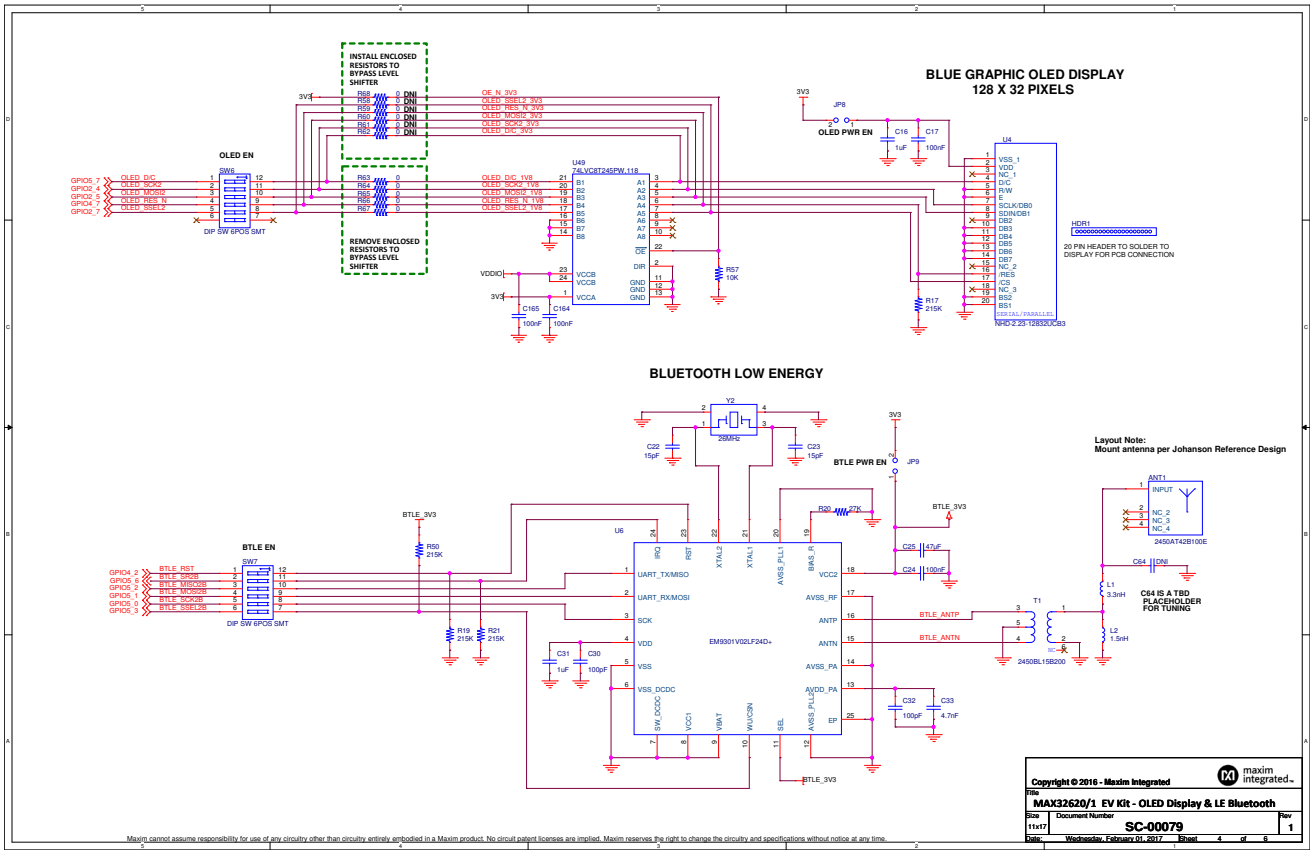
EV Kit Schematics (continued)



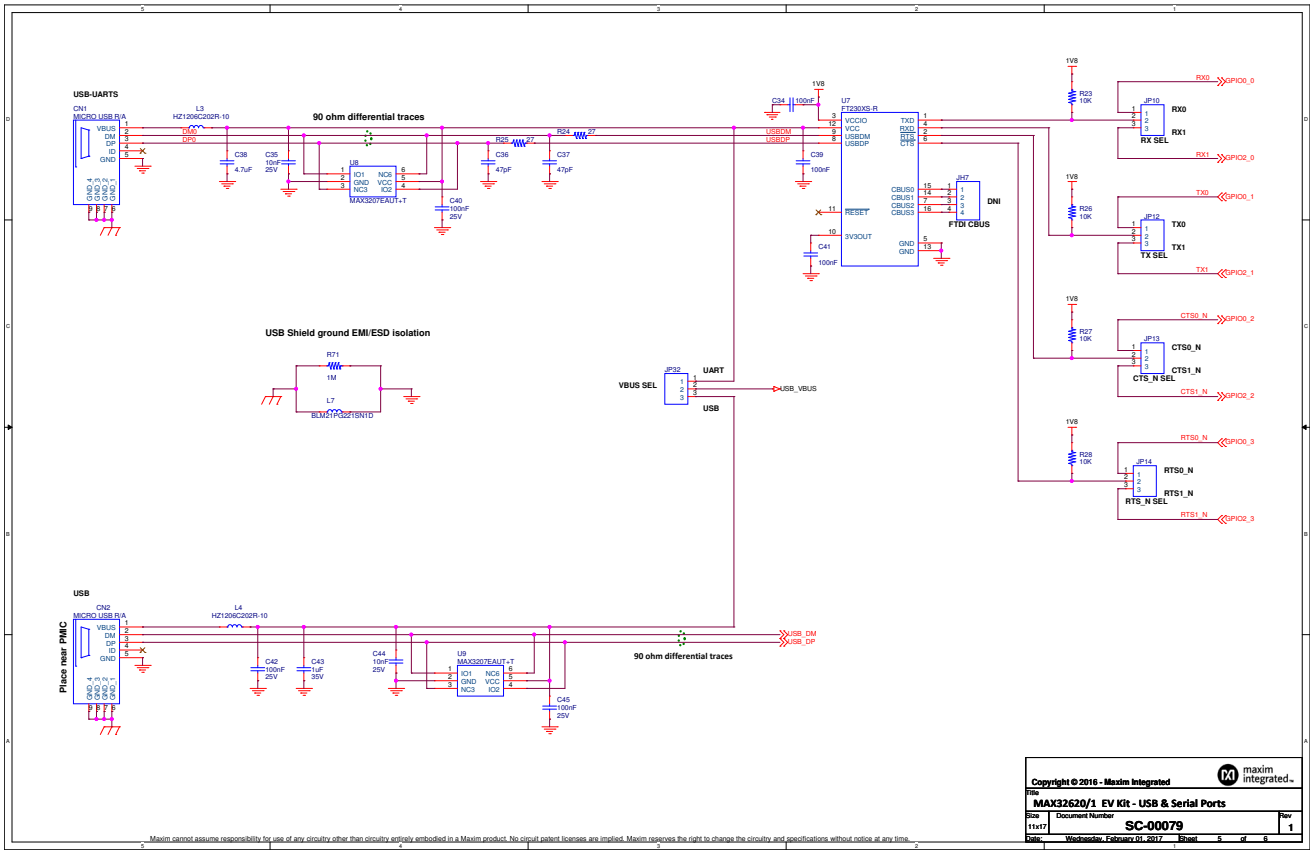
EV Kit Schematics (continued)



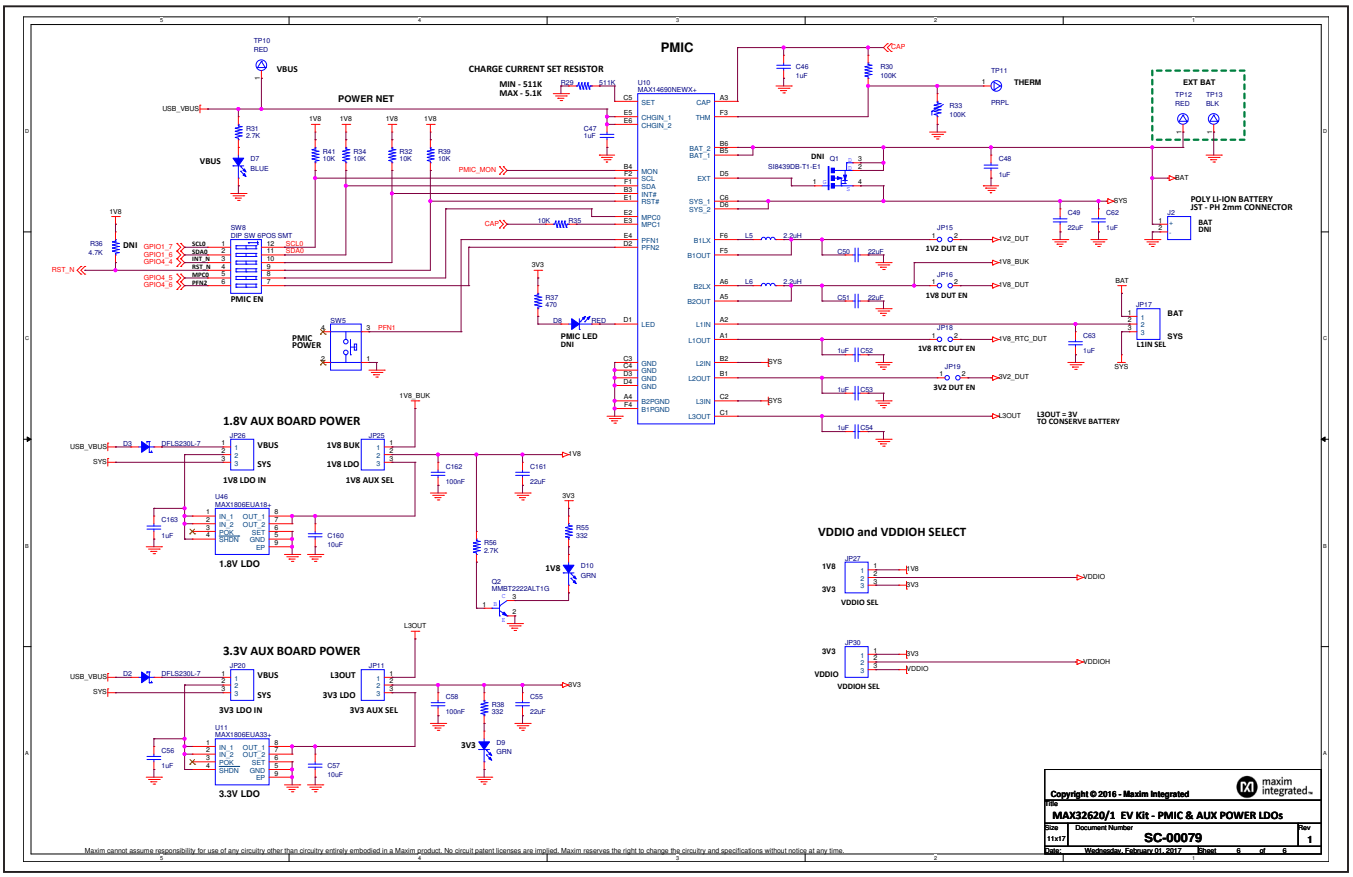
EV Kit Schematics (continued)



EV Kit Schematics (continued)



EV Kit Schematics (continued)



Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	4/15	Initial release	—
1	11/16	Updated *EV Kit Contents*, *Benefits and Features*, Figure 1, *Getting Started*, Figure 2, Figure 3, *Detailed Description*, *Board Power*, *Pushbuttons*, *USB*, *USB-UART Bridge*, *LEDs*, *Bluetooth Low-Energy (BLE) Controller*, *Clocking*, *Power Management IC (PMIC)*, Table 1, Figure 4, *Additional Resources*, *Ordering Information*, *MAX32620 EV Kit Bill of Materials*, and *MAX32620 EV Kit Schematics*, and added *GPIO Headers and Port Configuration* section	1–16
2	2/17	Added MAX32621 to data sheet, updated *General Description*, *EV Kit Contents*, *Benefits and Features*, *EV Kit photo*, Figure 1, Figure 2, *Getting Started*, Detailed *USB*, *USB-UART Bridge*, *GPIO Headers and Port Configuration*, Table 1, Figure 3, *Additional Resources*, *Ordering Information*, *EV Kit Bill of Materials*, and *EV Kit Schematics*	1–17

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