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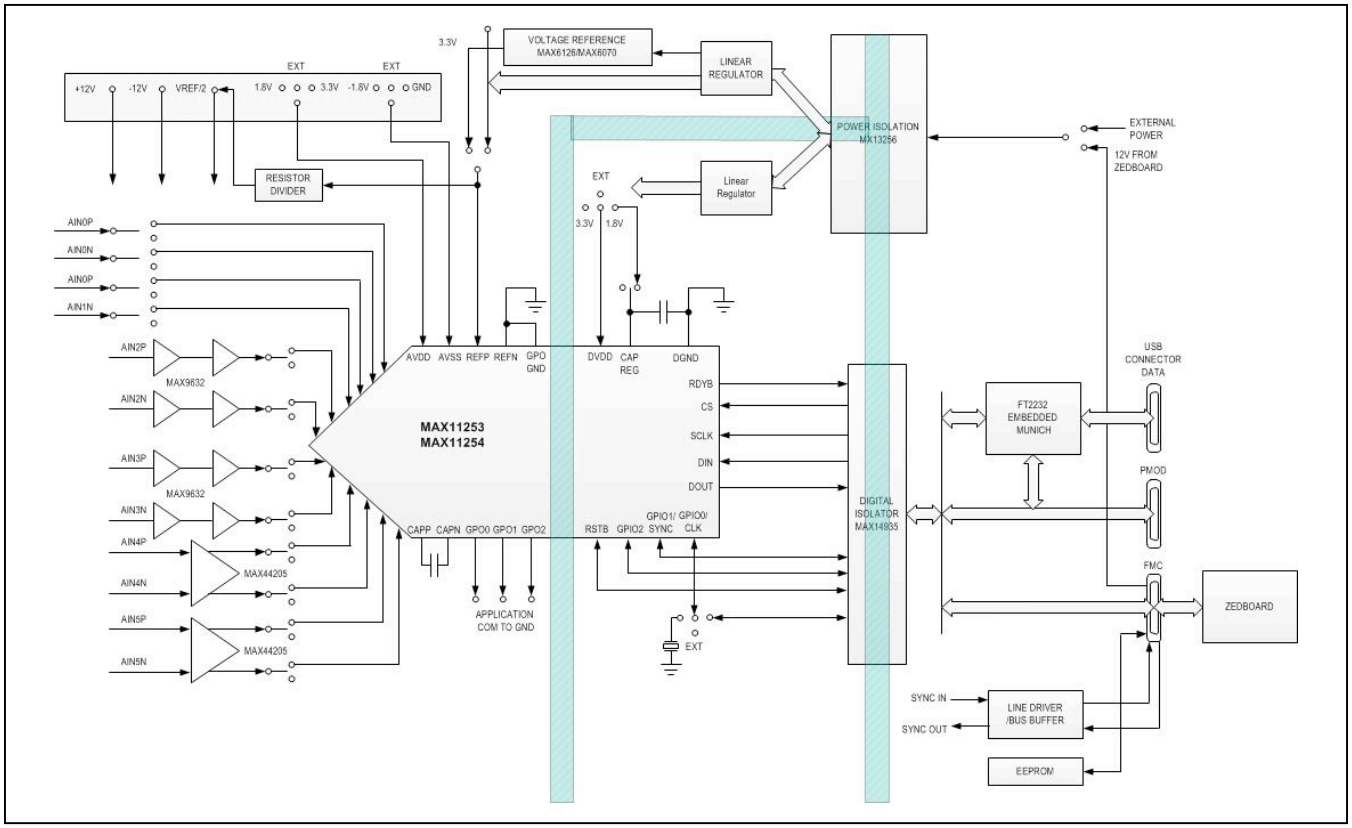
"Embedded - Microcontrollers" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

Applications of "Embedded - Microcontrollers"

Details	
Product Status	Active
Core Processor	HCS12X
Core Size	16-Bit
Speed	40MHz
Connectivity	CANbus, SCI, SPI
Peripherals	LVD, POR, PWM, WDT
Number of I/O	91
Program Memory Size	128KB (128K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	8K x 8
Voltage - Supply (Vcc/Vdd)	1.72V ~ 5.5V
Data Converters	A/D 16x12b
Oscillator Type	External
Operating Temperature	-40°C ~ 85°C (TA)
Mounting Type	Surface Mount
Package / Case	112-LQFP
Supplier Device Package	112-LQFP (20x20)
Purchase URL	https://www.e-xfl.com/pro/item?MUrl=&PartUrl=s9s12xs128j1cal

System Block Diagram



MAX11253/MAX11254 EV Kit Files

FILE	DECRIPTION
MAX11253_54EVKitSetupV1.0.exe	Application Program (GUI)
Boot.bin	ZedBoard firmware (SD card to boot Zynq)

Quick Start

Required Equipment

- MAX11253/MAX11254 EV kit
- +12V (500mA) power supply
- Micro-USB cable
- ZedBoard FPGA platform (optional – **NOT INCLUDED** with EVKit)
- Function generator (optional)
- Windows XP, Windows 7, or Windows 8.1 PC with a spare USB port

Note: In the following section(s), software-related items are identified by bolding. Text in **bold** refers to items directly from the EV system software. Text in **bold and underline** refers to items from the Windows operating system.

Procedure

The EV kit is fully assembled and tested. Follow the steps below to verify board operation:

1) Visit http://www.maximintegrated.com/evkitsoftware to download the latest version of the EV kit software, MAX11253_54EVKITSetupV1.0.zip. Save the EV kit software to a temporary folder and uncompress the ZIP file.

2) Install the EV kit software and USB driver on your computer by running the MAX11253_54EVKitSetupV1.0.exe program inside the temporary folder. The program files are copied to your PC and icons are created in the Windows **Start | Programs** menu. At the end of the installation process the installer will launch the installer for the FTDIChip CDM drivers.

Table 2. MAX11253/MAX11254 Board Jumper Settings

HEADER	JUMPER POSITION	DESCRIPTION
JMP1	1-2*	Use MAX6126 3.0V as VREF signal
	1-3	Use MAX6070 3.0V as VREF signal
	1-4	Use MAX6070 1.8V as VREF signal
J8	Open*	Generate +3.3V for DVDD
	1-2	Generate +2.0V for DVDD
J10	1-2*	Select +3.3V or +2.0V as DVDD
	2-3	Select +1.8V as DVDD
J11	Open*	U1 uses internal clock
	1-2	External clock from FPGA
	2-3	External clock from U10
J12	1-2*	Select +3.3V as AVDD
	2-3	Select +1.8V as AVDD
J13	1-2*	Select AVSS as REFN
	2-3	Select REFN_S from J1 as REFN for external sense point
J14	Open*	Use internal 1.8V subregulator if DVDD ≥ 2.0V
	1-2	Use DVDD for internal logic if DVDD ≤ 2.0V
J15	Open*	Use TP23 as GPIO1
	1-2	Use external SYNC signal
J16	1-2*	Select REFP_F signal as REFP input
	2-3	Select REFP_S signal from J1 as REFP input
J17	1-2*	Use AGND as AVSS. Use this setting if AVDD is +3.3V
	2-3	Use -1.8V as AVSS. Use this setting if AVDD is +1.8V
J24	1-2*	Use VREF as REFP_F
	2-3	Use AVDD as REFP_F
J31	1-2*	Short AIN2.1- (J27, TP38) to AGND and for U11 noninverting configuration
	3-4*	Short AIN2.1+ (J28, TP39) to AGND and for U11 inverting configuration
J32	1-2*	Short AIN2.3- (J29, TP42) to AGND and for U12 noninverting configuration
	3-4*	Short AIN2.3+ (J30, TP43) to AGND and for U12 inverting configuration
J33	1-2*	Short AIN2.2- (TP40) to AGND and for U13 noninverting configuration
	3-4*	Short AIN2.2+ (TP41) to AGND and for U13 inverting configuration
J34	1-2*	Short AIN2.4- (TP44) to AGND and for U14 noninverting configuration
	3-4*	Short AIN2.4+ (TP45) to AGND and for U14 inverting configuration
J35	1-2*	Connect output of U11 to inverting input of U13
	3-4	Connect AIN2.2- (TP40) to inverting input of U13
	5-6	Connect output of U11 to noninverting input of U13
	7-8*	Connect AIN2.2+ (TP41) to noninverting input of U13
J36	1-2*	Connect output of U12 to inverting input of U14
	3-4	Connect AIN2.4- (TP44) to inverting input of U14
	5-6	Connect output of U12 to noninverting input of U14
	7-8*	Connect AIN2.4+ (TP45) to noninverting input of U14
J37	Open*	No offset to U13 noninverting input
	1-2	Offset U13 output by VREF/2
J38	Open*	No offset to U14 noninverting input
	1-2	Offset U14 output by VREF/2

General Description of Software

The main window of the EV kit software contains seven tabs: Configuration, Scope, DMM, Histogram, FFT, Scan Mode, and Registers. The Configuration tab provides control for the ADC configuration including calibration and data capture. The other six tabs are used for evaluating the data captured by the ADC.

Configuration Tab

The **Configuration** tab provides an interface for selecting and configuring the ADC from a functional perspective. Select the desired **Device** for either Standalone or FPGA in the dropdown menu and the corresponding properties of the device are displayed including **Channel** number, **Sample Rate**, **Number of Samples**, **Reference Voltage**, **Sequencing Mode**, **Calibration**, **GPO/GPIO selection**, **Input Path (Direct or internal PGA)**, **Delta-Sigma Modulator** type selection for different **Data Format** and **Conversion Mode**, **Serial Interface** function (**Convert**, and **Read All**), **Power** setting (**NOP**, **Power Down**, and **Standby**), **Reset Registers**, and **RSTB Reset**, **Clock/SYNC** (**Internal** or **External Clock**, and **Disable** or **Enable SYNC Mode**), and **Other** for **Disable** or **Enable Current Sink/Source** and **CAPREG LDO**.

The sample settings are available on the left of the configuration menu, which allow the user to select the **Channel**, **Sample Rate**, **Number of Samples** and **Clock Source** if **FPGA** device is used.

The **Read Data** and **Status** information is displayed on the right, which shows the data in both voltage and Hex, the sample rate, and power state for the selected channel. In addition, if there are any errors, the indicator lights will turn red.

Channel Selection

To select the desired channel among the six available channels, click **Channel #** dropdown menu at the top left and select the desired channel from 0 to 5. The default selection is **Channel 0**.

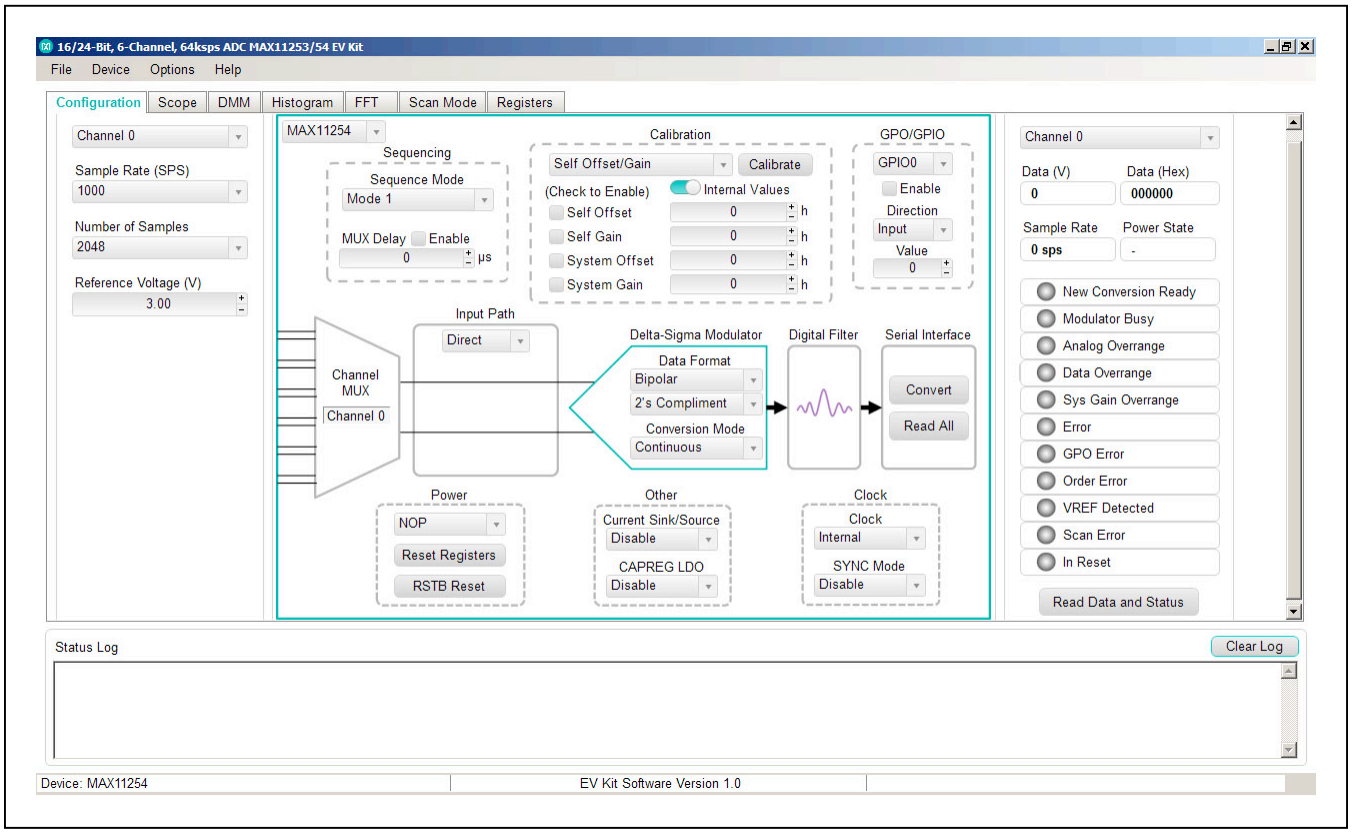


Figure 1. EV Kit Software (Configuration Tab)

Sample Rate (SPS)

To select the desired data rate for single-cycle mode from 50sps to 12800sps and for continuous mode data rate from 1.9sps to 64000sps, choose the **Sample Rate (SPS)** from the dropdown menu below the **Channel #** selection.

Reference Voltage

There are three different reference voltages available on board: MAX6070AUT18+ (1.8V), MAX6070AUT30+ (3.0V), and MAX6126AASA30+ (3.0V). To select 1.8V, place JMP1 from position 1 to 4. To select 3.0V MAX6070 with ±0.04% accuracy, place JMP1 from position 1 to 3. To select 3.0V MAX6126 with ±0.02% accuracy, place JMP1 from position 1 to 2.

Sequencer Mode

To change the sequencer mode, click the **Sequence Mode** selection below the **Sequencing** menu and select Mode 1, 2, or 3 as desired. Check the **GPO Sequencer Mode** box to enable GPO/GPIO function in mode 3. In addition, check the Enable box to enable the **MUX and GPO Delay**. Choose the desired delay in microseconds by clicking on the **+** or – buttons.

ADC Calibration

Two types of software calibration for offset and gain are available: Self calibration and system calibration.

The primary mode for calibration is using the dropdown list to select a calibration mode, followed by clicking the **Calibrate** button. The checkboxes for **Self Offset**, **Self Gain**, **System Offset**, and **System Gain** allow for the user to enable or disable the calibration values. The calibration values can also be changed manually by entering a hex value in the numeric box.

GPO/GPIO

To select GPO or GPIO ports, choose the option under the **GPO/GPIO** dropdown menu and check the **Enable** box.

Input Path

Select **Direct** under the **Input Path** dropdown menu to bypass the internal amplifiers and apply the analog input signals directly to the MAX11253/MAX11254 inputs or to use the external amplifiers.

Select **PGA** under the **Input Path** dropdown menu to use the internal programmable gain amplifiers.

Delta-Sigma Modulator

To select the desired data format, click the **Data Format** dropdown menu under the **Delta-Sigma Modulator** section and choose either Bipolar or Unipolar with two's complement or offset binary options.

Three conversion modes are provided: **Continuous**, **Single Cycle**, and **Single Continuous**. Click the **Conversion Modes** dropdown menu under the **Delta-Sigma Modulator** section to select the desired conversion mode.

Serial Interface

To starting converting, click the **Convert** button under the Serial interface section. To read all registers, click the **Read All** button.

Power

The MAX11253/MAX11254 EV kit features three power-down states: **Normal Operating Power (NOP)**, **Power down**, **and Standby**. Select the desired power state by clicking the drop-down menu under the **Power** section.

To reset the configuration settings back to default values, press the **Reset Registers** button.

To exercise the power-on reset feature, click the **RSTB** button.

Clock/SYNC

The internal clock mode is set at default condition. To use the external clock provided on-board, select **External** under the **Clock/SYNC** section and install jumper J11 from 2-3. To user-supplied external clock, select External under the **Clock/SYNC** section and install jumper J11 from 1-2. In addition, the Sync mode can be enabled or disabled by clicking the drop-down menu under this **Clock/SYNC** section and install jumper J15. The Sync signal should be provided externally.

Other

To enable (J14 open) or disable (J14 installed and $V_{DDVD} \leq 2.0V$) the internal **CAPREG LDO** for digital and I/O supply, select this option from the drop-down menu under the **Other** section. Additionally, **Current Sink/Source** can also be disabled or enabled under this section.

Read Data and Status

The **Read Data and Status** on the far right hand side of this **Configuration** menu depicts the received data and status of the device such as the selected channel, data rate, sample rate, and power state. Click the **Read Data and** Status button to view the updated status.

To save a configuration, select Save ADC Config As… in the File menu. This saves all the ADC register values to a XML file. To load a configuration, select Load ADC Config in the File menu. When the XML file is loaded, all the register values in the file are written to the ADC.

DMM Tab

The **DMM** tab sheet provides the typical information as a digital multimeter. Once the desired configuration is set, click on the **Capture** button. Figure 3 displays the results shown by the **DMM** tab when a 1.5V signal is applied to AIN0+ and 1.0V to AIN0-.

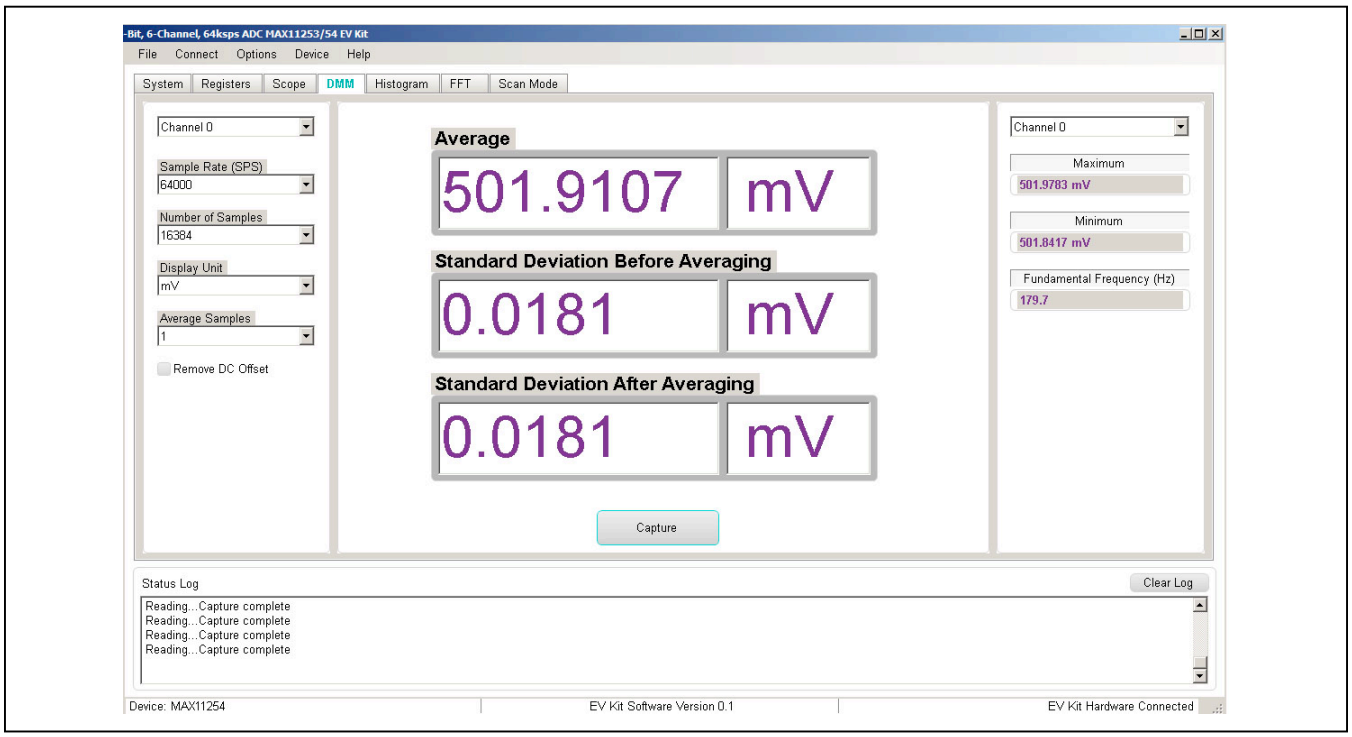


Figure 3. EV Kit Software (DMM Tab)

Scan Mode Tab

The **Scan Mode** tab is used to perform selected data conversions and read the converted data.

In the **Sequence Setting** section at the bottom, set the desired sequencer mode (1 to 3) from the **Sequence Mode** drop-down menu and select whether to assert the RDYB pin **after one channel** or **after scan completes** options under the **RDYB** menu. Check the **GPO Sequencer Mode** and **Enable** boxes as desired. Then set the conversion time delay in µs for MUX and GPO by clicking on the **+** or **-** buttons under the **MUX Delay** and **GPO Delay** menu, allowing for high impedance source networks to stabilize after the channels are selected. Finally press the **Read All button** to view the selected settings.

In the **Read Data** section on top, select the desired unit in either LSB or voltage (V, mV, or µV) under the **Display Unit** drop-down menu. Then choose the desired sample rate by clicking on the **Sample Rate** drop-down menu under. Finally, click the Scan button to start converting and press the **Read Data** button to view the converted data displayed on the right hand side as shown in Figure 7.

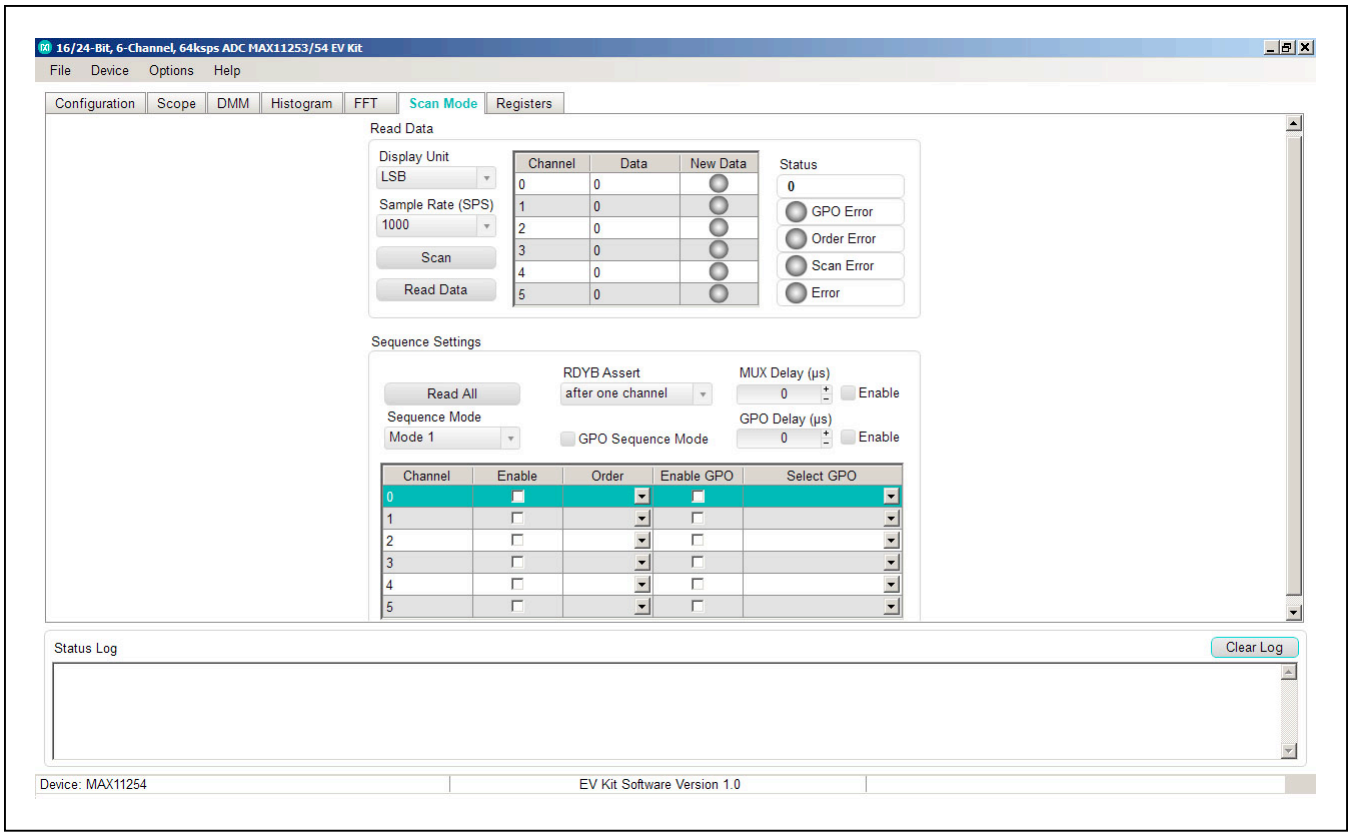


Figure 7. EV Kit Software (Scan Mode Tab)

User-Supplied SPI

To evaluate the EV kit with a user-supplied SPI bus, disconnect from the FMC bus and remove jumper J64. Apply the user-supplied SPI signals to SCLK, CSB, DIN, and DOUT at the PMOD_A header (J60). Make sure the return ground is connected to PMOD ground.

The on-board FTDI chip used for standalone mode does not conflict with the user-supplied SPI if it is powered off by removing jumper J64.

CAUTION: DO NOT PLUG THIS HEADER INTO A STANDARD PMOD INTERFACE FOUND ON OTHER FPGA OR MICROCONTROLLER PRODUCTS. THE SIGNAL DEFINITION IS UNIQUE TO THIS EV KIT.

FMC Interface:

The users should confirm compatibility of pin-usage between their own FMC implementation and that of the Maxim Integrated EV kit before connecting the Maxim Integrated EV kit to a different system with FMC connectors.

Voltage References

There are three different reference voltages available on board: MAX6070AUT18+ (1.8V), MAX6070AUT30+ (3.0V), and MAX6126AASA30+ (3.0V). To select 1.8V, place JMP1 from position 1 to 4. To select 3.0V MAX6070 with ±0.04% accuracy, place JUMP1 from position 1 to 3. To select 3.0V MAX6126 with ±0.02% accuracy, place JMP1 from position 1 to 2.

For user-supplied external references, remove jumper J24 and connect a reference voltage to J24-2. Measure and enter the value of the external reference voltage into the **Reference Voltage** edit box on the **Configuration** tab of the GUI. Table 3 depicts the reference source options.

External DVDD Power Supply

The internal 1.8V regulator can be replaced by an external supply in the range of 1.7V to 2.0V. To use external DVDD, **disable** the internal regulator by selecting the Disable in the **CAPREG LDO** drop-down menu in the Other section and install J14.

User-Supplied Power Supply

The EV kit receives power from a single DC source of 12V, 500mA through a J61 power jack. The MAX13256, H-bridge driver and transformer create an additional negative rail for +15V and -15V. The power is then rectified and regulated down to a +12V and -12V supplies for the MAX9632 op amps, as well as +5V and -5V supplies for the MAX44205 op amps. Additional supplies are generated for +1.8V/-1.8V and +2V/+3.3V for the ADCs and VREFs. See the EV kit schematic pdf for details. Specific voltages can be connected to the board for each rail, see Table 4 for corresponding jumper positions.

ADC Input Amplifiers

The input amplifiers allow for significant flexibility, supporting bipolar or unipolar input paths, as well as the option for gain control. Selected input amplifiers can be configured as inverting, noninverting, differential bipolar, and differential unipolar. See Table 5 for these analog input configurations for channels 0 to 5.

The analog front-end consists of six channels, 0 to 5, and there are four user-selectable input pairs (for example AINx+ and AINx- where x is 2, 3, 4 or 5) allowing selection between one of two op amp solutions, the MAX9632 a 36V, precision, low-noise, wide-band amplifier or the MAX44205, a 180MHz, low-noise, low-distortion, fully differential op amp. The op amps can be configured as inverting or noninverting amplifiers by jumper selectors. Both op amps work as anti-aliasing lowpass filters (LPF) and can be daisy-chained to create a second-order LPF.

The range of possible configurations are listed in Table 5.

Table 4. Reference Source Options

REF SOURCE	JUMPER	CONNECTION	FUNCTION
MAX6070 (1.8V)	JMP1	1-4	Select U7 MAX6070
	J13	1-2	
	J16	1-2	
	J24	1-2	
MAX6070 (3.0V)	JMP1	1-3	Select U8 MAX6070
	J13	1-2	
	J16	1-2	
	J24	1-2	
MAX6126 (3.0V)	JMP1	1-2	Select U9 MAX6126
	J13	1-2	
	J16	1-2	
	J24	1-2	
AVDD	J13	1-2	Select AVDD
	J16	1-2	
	J24	2-3	
User-Supplied	J13	1-2	Select User-Supplied Reference
	J16	1-2	
	J24	Open. Connect user-supplied reference to J24-2	

Table 5. Power Supply to the Board

POWER	INPUT CONNECTORS	JUMPERS
Single +12V input from a wall adapter (default)	J61	J67: 3-4 J66: 3-4 J68: 3-4 J69: 5-6 J65: 1-2 J64: 1-2 (select onboard FTDI) J63: 1-2 (select FPGA ZedBoard)
An external ±12V	TP91 (+12V) TP90 (-12V)	J67: 3-4 J66: 3-4 J68: 1-2 J69: 3-4 J65: 1-2 J64: 1-2 (select onboard FTDI) J63: 1-2 (select FPGA ZedBoard)
An external ±15V	TP86 (+15V) TP83 (-15V)	J67: 1-2 J66: 1-2 J68: 3-4 J69: 5-6 J65: 1-2 J64: 1-2 (select onboard FTDI) J63: 1-2 (select FPGA ZedBoard)

Table 6. Analog Input Configurations (CH0–CH5)

CONFIGURATION		ADC INPUT CONFIGURATION	INPUT CONNECTORS	JUMPER POSITIONS
NO.	DESCRIPTION			
1	Channel 0	User-supplied signals, differential	AIN0D+, AIN0D-	N/A
2	Channel 1	User-supplied signals, differential	AIN1D+, AIN1D-	N/A
3	MAX9632, Channel 2	Noninverting, differential, second-order LPF	J28: AIN2.1+ (or TP39): AIN2.1+ and AGND J30: AIN2.3+ (or TP43): AIN2.3+ and AGND	J31: 1-2 J35: 5-6 and 3-4 J33: 1-2 J32: 1-2 J36: 5-6 and 3-4 J34: 1-2 J4: 3-4 and 5-6 J37: 1-2 (for bipolar signal or open for unipolar signal) J38: 1-2 (for bipolar signal or open for unipolar signal)

Table 6. Analog Input Configurations (CH0–CH5) (continued)

CONFIGURATION		ADC INPUT CONFIGURATION	INPUT CONNECTORS	JUMPER POSITIONS
NO.	DESCRIPTION			
8	MAX9632, Channel 3	Inverting, differential, second-order LPF	AIN3.1- (or TP56): AIN3.1- and AGND AIN3.3- (or TP60): AIN3.3- and AGND	J39: 3-4 J43: 1-2 and 7-8 J41: 3-4 J40: 3-4 J44: 1-2 and 7-8 J42: 3-4 J5: 3-4 and 5-6 J45: 1-2 (for bipolar signal or open for unipolar signal) J46: 1-2 (for bipolar signal or open for unipolar signal)
9	MAX9632, Channel 3	Noninverting, differential, first-order LPF	AIN3.2+ (or TP59): AIN3.2+ and AGND AIN3.4+ (or TP63): AIN3.4+ and AGND	J43: 7-8 and 3-4 J41: 1-2 J44: 7-8 and 3-4 J42: 1-2 J5: 3-4 and 5-6 J45: 1-2 (for bipolar signal or open for unipolar signal) J46: 1-2 (for bipolar signal or open for unipolar signal)
10	MAX9632, Channel 3	Inverting, differential, first-order LPF	AIN3.2- (or TP58): AIN3.2- and AGND AIN3.4- (or TP62): AIN3.4- and AGND	J43: 7-8 and 3-4 J41: 3-4 J44: 7-8 and 3-4 J42: 3-4 J5: 3-4 and 5-6 J45: 1-2 (for bipolar signal or open for unipolar signal) J46: 1-2 (for bipolar signal or open for unipolar signal)
11	MAX44205, Channel 4	Differential, first-order LPF	J48: AIN4- (or TP73): AIN4- and AGND J47: AIN4+ (or TP72): AIN4+ and AGND	J6: 3-4 and 5-6 J49: open
12	MAX44205, Channel 5	Differential, first-order LPF	AIN5+ (or TP74): AIN5+ and AGND AIN5- (or TP75): AIN5- and AGND	J7: 3-4 and 5-6 J50: open

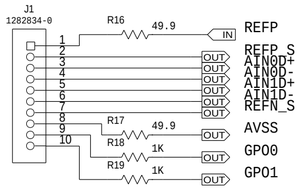
Revision History

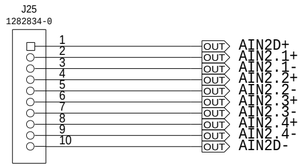
REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	4/15	Initial release	—
1	5/15	Added the MAX11253 EV kit to data sheet	1–21

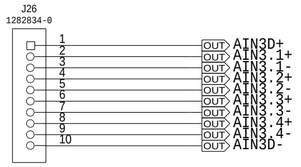
MAX11253/MAX11254 EV BOM (Rev 1, 5/15)

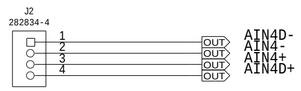
ITEM	QTY	REF DES	MFG PART #	MANUFACTURER	VALUE	COMMENTS
1	32	TP13,TP15-TP18,TP20,TP22,TP27,TP29,TP31,TP33,TP35	5001		N/A	
2	63	C1-C3, C7-C9, C19, C21-C23, C27, C28, C31, C33, C40, C41, C44, C45, C52, C53, C56, C57, C64, C65, C68, C69, C76, C77, C80-C84, C95, C96, C99, C100, C116-C118, C121, C122, C125, C128, C129, C132, C135, C137-C143, C146, C147, C155, C166-C168, C176, C184, C187	C1608X7R1H104K080AA	TDK	0.1UF	
3	41	C4-C6, C20, C26, C29, C30, C38, C39, C42, C43, C50, C51	UMK107AB7105KA	TAIYO YUDEN	1UF	
4	6	C10-C15	C1608C0G2A332J080AA	TDK	3300PF	
5	11	C16-C18, C32, C150, C157, C158, C163, C164, C169, C17	C2012X7R1E475K125AB	TDK	4.7UF	
6	3	C24, C126, C127	C0603C102K1GAC	KEMET	1000PF	
7	28	C25, C34-C37, C46-C49, C58-C61, C70-C73, C156, C159,	C1608C0G1H103J080AA	TDK	0.01UF	
8	8	C85-C92	C1608C0G1H472J080AA	TDK	4700PF	
9	4	C115, C130, C131, C136	C1608X5R1E475K080AC	TDK	4.7UF	
10	2	C133, C134	C0603HQN101-180FNP	KEMET/VENKEL	18PF	
11	9	C148, C149, C160, C161, C180-C183, C188	C2012X5R1V106K085	TDK	10UF	
12	1	C151	GRM188R71E474KA12	MURATA	0.47UF	
13	1	D1	MBR0520L	FAIRCHILD SEMICONDU	MBR0520L	
14	2	D2, D3	BAS4002A-RPP	INFINEON	BAS4002A-RPP	
15	2	DS1, DS2	LGL29K-G2J1-24-Z	OSRAM	LGL29K-G2J1-24-Z	
16	1	DS3	LS L29K-G1J2-1-Z	OSRAM	LS L29K-G1J2-1-Z	
17	3	J1, J25, J26	1282834-0	TYCO ELECTRONICS	1282834-0	
18	2	J2, J3	282834-4	TYCO ELECTRONICS	282834-4	
19	4	J4-J7	PEC04DAAN	SULLINS ELECTRONICS (	PEC04DAAN	
20	1	J8	PCC02SAAN	SULLINS	PCC02SAAN	
21	9	J10-J13, J16, J17, J24, J52, J65	PCC03SAAN	SULLINS	PCC03SAAN	
22	10	J27-J30, J47, J48, J54, J56-J58	5-1814832-1	TYCO	5-1814832-1	
23	11	J31-J34, J39-J42, J66-J68	PBC02DAAN	SULLINS ELECTRONIC C	PBC02DAAN	
24	4	J35, J36, J43, J44	PBC04DAAN	SULLINS ELECTRONICS (	PBC04DAAN	
25	2	J49, J50	PEC02DAAN	SULLINS ELECTRONIC C	PEC02DAAN	
26	1	J51	PBC10SAAN	SULLINS ELECTRONICS (	PBC10SAAN	
27	1	J53	ASP-134604-01	SAMTEC	ASP-134604-01	
28	1	J59	10118192-0001LF	FCI CONNECT	10118192-0001LF	MICRO-USB
29	1	J61	KLDX-0202-B	KYCON	KLDX-0202-B	
30	1	J62	282834-2	TE CONNECTIVITY	282834-2	
31	1	J69	PEC03DAAN	SULLINS ELECTRONICS (	PEC03DAAN	
32	1	JMP1	22-28-4043	MOLEX	22-28-4043	
33	1	L1	MMZ1608B601C	TDK	600	
34	4	L2-L5	XPL2010-333ML	COILCRAFT	33UH	
35	4	R1-R4	RN73C1J49R9B; 9-1614353-1	TE CONNECTIVITY	49.9	
36	12	R5, R8-R14, R52, R53, R93, R94	RN73C1J10RBTG; 1614350-2	TE CONNECTIVITY	10	
37	1	R6	CRCW0603237KFK; ERJ3EKF2	VISHAY DALE/PANASOI	237K	
38	6	R7, R197, R199, R201, R203, R205	ERJ3EKF7322V	PANASONIC	73.2K	
39	14	R15, R171, R172, R175-R179, R181-R186	CRCW060310K0FK; 9C06031	VISHAY DALE/PANASOI	10K	
40	6	R16, R17, R162, R164, R166, R167	CRCW060349R9FK	VISHAY DALE	49.9	
41	3	R18, R19, R195	CRCW06031001FK; CRCW06	VISHAY DALE/PANASOI	1K	
42	16	R20-R27, R54-R61	CRCW06031M00FK; MCR03E	VISHAY DALE/ROHM	1M	
43	40	R28-R35, R40-R43, R46-R49, R62-R69, R81-R84, R87-R9	RG1608N-102-B-T1	SUSUMU CO LTD.	1K	
44	12	R36-R39, R50, R51, R70-R72, R80, R91, R92	CR0603-16W-000T; CR0603-	VENKEL LTD.	0	
45	4	R44, R45, R85, R86	TNPW06031K50BE; ERA-3YE	PANASONIC	1.5K	
46	44	R73-R79, R105, R111-R117, R139-R161, R168, R169, R1	ERJ-3EKF28R0V	PANASONIC	28	
47	2	R95, R96	TNPW060310K0BE; RN731JT	VISHAY DALE/KOA SPEI	10K	
48	2	R163, R165	CRCW06030000ZS; MCR03E2	VISHAY DALE	0	
49	1	R170	CRCW060315K0FK	VISHAY DALE	15K	
50	1	R173	CRCW06032K20FK	VISHAY DALE	2.2K	
51	1	R174	CRCW060312K0FK	VISHAY DALE	12K	
52	1	R180	CRCW06034K70FK	VISHAY DALE	4.7K	
53	2	R191, R194	PANASONIC;CRCW0603200	VISHAY DALE/ROHM	20K	
54	1	R192	CRCW0603750KFK	VISHAY DALE	750K	
55	1	R193	CRCW0603165KFK	VISHAY DALE	165K	
56	1	R196	ERJ-3EKF3832	PANASONIC	38.3K	
57	2	R198, R200	ERJ3EKF6813V	PANASONIC	681K	
58	1	R202	CRCW060310R0FK; MCR03E	VISHAY DALE/ROHM	10	
59	1	R204	CRCW0603124KFK	VISHAY DALE	124K	
60	49	SU1-SU49	SX1100-B	KYCON	SX1100-B	
61	1	T1	TGM-H240V8LF	HALO ELECTRONICS, IN	TGM-H240V8LF	
62	58	TP1-TP12,TP14,TP19,TP21,TP23-TP26,TP30,TP38-TP45,	5000		N/A	
63	5	TP28,TP83,TP88,TP90,TP96	5004		N/A	
64	1	U1	MAX11254ETJ+	MAXIM	MAX11254ETJ+	
65	1	U5	MAX14935CAWE+	MAXIM	MAX14935CAWE+	
66	1	U6	MAX14935CAWE+	MAXIM	MAX14935CAWE+	MAX14931CASE+
67	1	U7	MAX6070AAUT18+	MAXIM	MAX6070AAUT18+	
68	1	U8	MAX6070AAUT30+	MAXIM	MAX6070AAUT30+	
69	1	U9	MAX6126AASA30+	MAXIM	MAX6126AASA30	
70	1	U10	LTC6930HDCB-8.19	LINEAR TECHNOLOGY	LTC6930HDCB-8.19	
71	8	U11-U18	MAX9632AUA+	MAXIM	MAX9632AUA+	
72	2	U19, U20	MAX44205	MAXIM	MAX44205	
73	2	U21, U22	74LVC2G125DP	?	74LVC2G125DP	
74	2	U23, U24	93LC66BT-I/OT	MICROCHIP	93LC66BT-I/OT	
75	1	U25	FT2232HL	FUTURE TECHNOLOGY	FT2232HL	
76	2	U26, U35	MAX15006BATT+	MAXIM	MAX15006BATT+	
77	1	U27	MAX16910CATA9+	MAXIM	MAX16910CATA9+	
78	1	U28	MAX13256ATB+	MAXIM	MAX13256ATB+	
79	1	U29	MAX15006CATT+	MAXIM	MAX15006CATT+	
80	1	U30	MAX8840ELT18+	MAXIM	MAX8840ELT18+	MAX8840ELT18+
81	3	U31, U33, U34	TPS7A3001DGN	TEXAS INSTRUMENTS	TPS7A3001DGN	
82	1	U32	TPS7A4901DGN	TEXAS INSTRUMENTS	TPS7A4901DGN	
83	1	U36	MAX15006AATT+	MAXIM	MAX15006AATT+	
84	1	Y1	ABM7-12.000MHZ-D2Y-T	ABRACON	12MHZ	
85	1	PCB	EPCB11254	MAXIM	PCB	

ALL INPUTS +/- 3V MAX

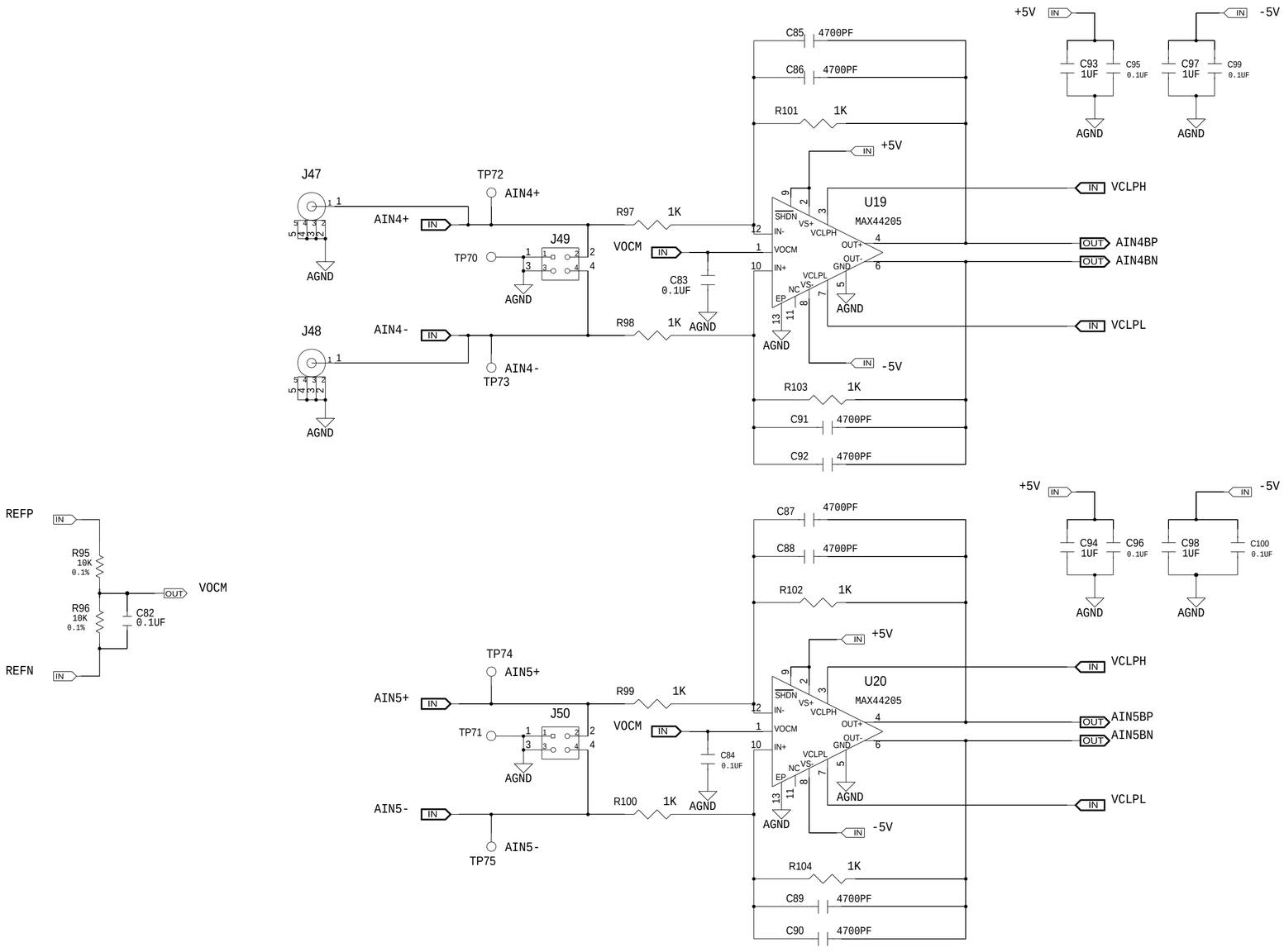




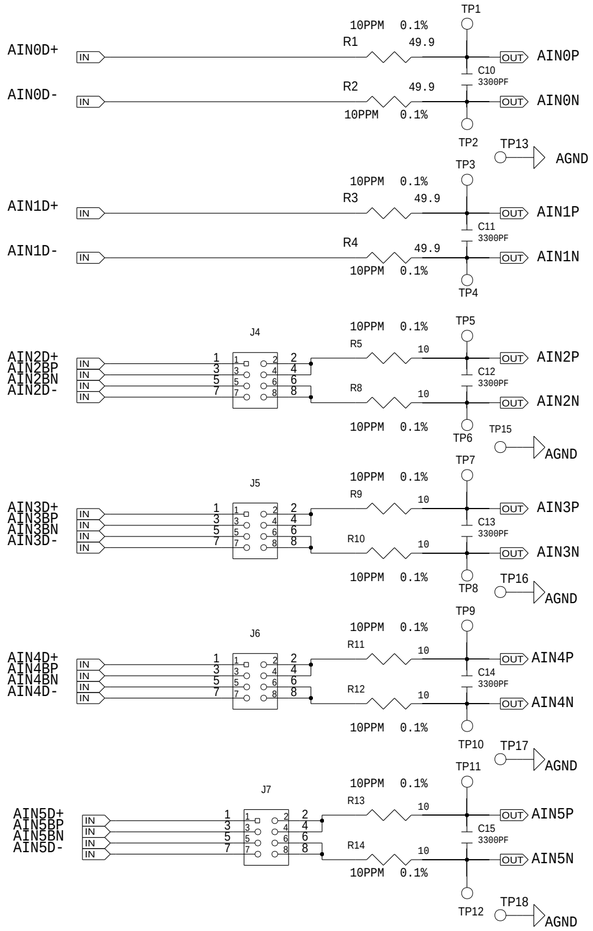


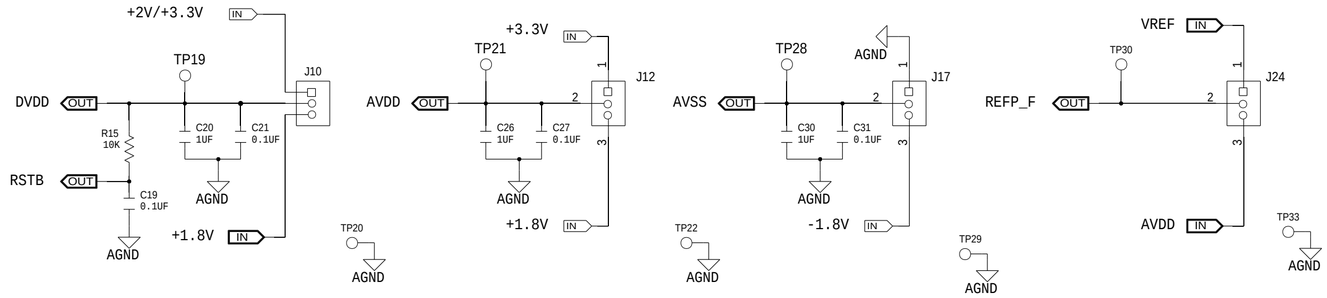


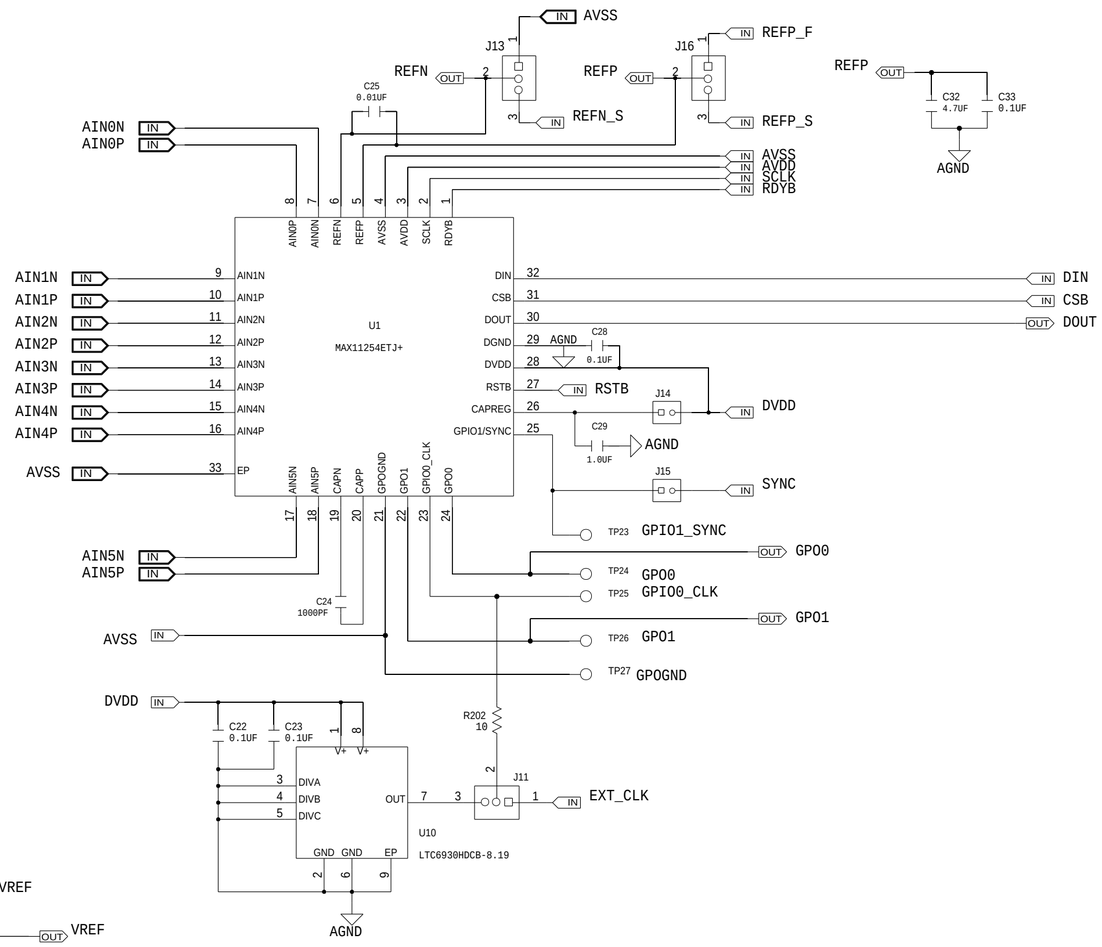
PROJECT TITLE: MAX1125X_EVKIT_A		
DRAWING TITLE: INPUT TERMINAL BLOCK		
SIZE: C	HARDWARE NUMBER: <HARDWARE_NUMBER>	DATE: 02/04/2015
ENGINEER: YURIY KURTSEVOY	DRAWN BY: JOHANN GUALBERTO	REV.: A
	TEMPLATE REV.: 1.5	SHEET <CURRENT_DESIGN_SHEET> OF <TOTAL_DESIGN_SHEETS>

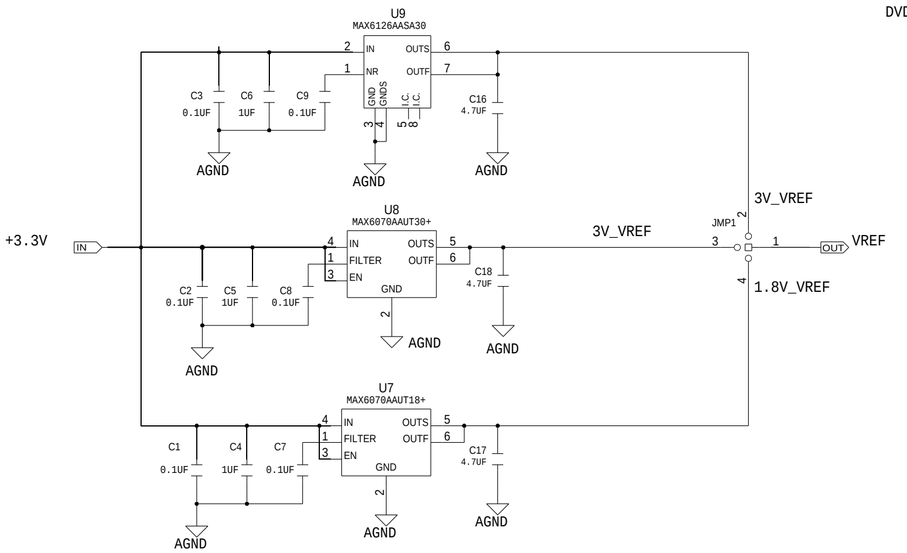


PROJECT TITLE: MAX1125X_EVKIT_A		
DRAWING TITLE: ADC INPUT BUFFER CH 4 & 5		
SIZE: C	HARDWARE NUMBER: <HARDWARE_NUMBER>	DATE: 02/04/2015
ENGINEER: YURIY KURTSEVOY	DRAWN BY: JOHANN GUALBERTO	REV.: A
	TEMPLATE REV.: 1.5	SHEET <CURRENT_DESIGN_SHEET> OF <TOTAL_DESIGN_SHEETS>

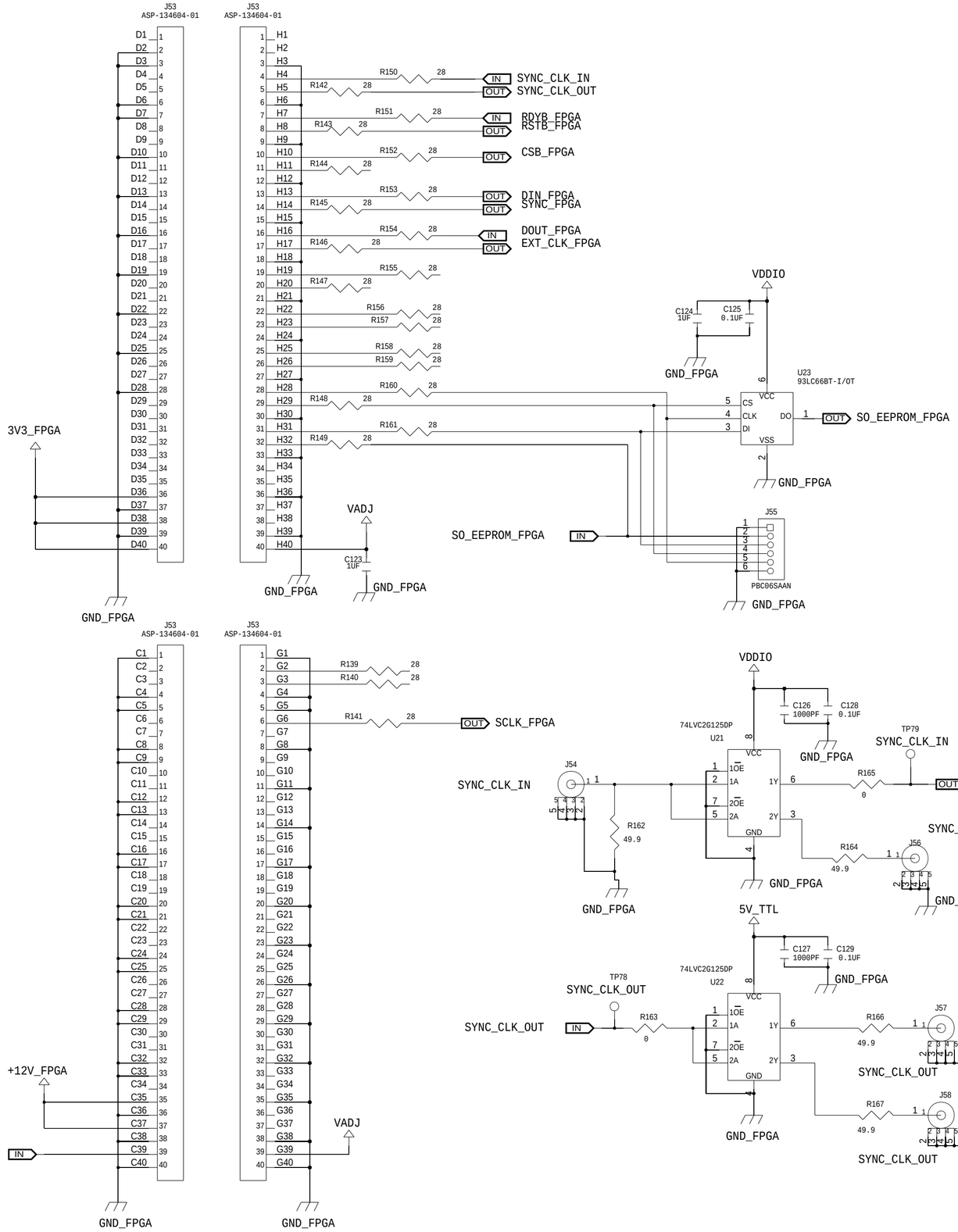








PROJECT TITLE: MAX1125X_EVKIT_A		
DRAWING TITLE: MAX1125X ADC		
SIZE: C	HARDWARE NUMBER: <HARDWARE_NUMBER>	DATE: 02/04/2015
ENGINEER: YURIY KURTSEVOY	DRAWN BY: JOHANN GUALBERTO	REV.: A
	TEMPLATE REV.: 1.5	SHEET <CURRENT_DESIGN_SHEET> OF <TOTAL_DESIGN_SHEETS>



PROJECT TITLE: MAX1125X_EVKIT_A		
DRAWING TITLE: FMC AND SYNC		
SIZE: C	HARDWARE NUMBER: <HARDWARE_NUMBER>	DATE: 02/04/2015
ENGINEER: YURIY KURTSEVOY	DRAWN BY: JOHANN GUALBERTO	REV.: A
	TEMPLATE REV.: 1.5	SHEET <CURRENT_DESIGN_SHEET> OF <TOTAL_DESIGN_SHEETS>

J60
PMOD HEADER
DN1

RSTB_FPGA
RDYB_FPGA
3V3_FPGA
CSB_FPGA
DIN_FPGA
DOUT_FPGA
SCLK_FPGA
3V3_FPGA
GND_FPGA
GND_FPGA

ONE CAPACITOR PER EACH POWER PIN

+1.8V_USB
3V3_USB
C135 0.1UF
C137 0.1UF
C139 0.1UF
GND_FPGA
C140 0.1UF
C141 0.1UF
C142 0.1UF
C143 0.1UF
GND_FPGA
C131 4.7UF
C132 0.1UF
GND_FPGA
C136 4.7UF
C138 0.1UF
GND_FPGA
C130 4.7UF
GND_FPGA

U25
FT2232HL
VPHY VPLL VCORE VCORE VCORE VCCIO VCCIO VCCIO VCCIO
4 9 12 37 64 20 31 42 56

R175 R176 R177 R178 R179 R181 R182 R183 R184 R185 R186
10K

MICRO-USB
J59
10118192-0001LF
L1
600
R168 28
R169 28
GND_FPGA

+5V_USB
R170 15K
R171 10K
GND_FPGA

R172 10K
R173 2.2K
U24
93LC66BT-I/OT
VCC CS CLK DI VSS DO
5 4 3 2 1 6
GND_FPGA

R174 12K
GND_FPGA

C133 18PF
C134 18PF
Y1 12MHZ
GND_FPGA
GND_FPGA

50 VREGIN
49 VREGOUT
7 DM
8 DP
6 REF
14 RESET#
63 EECS
62 EECLK
61 EEDATA
2 OSCI
3 OSCO
13 TEST

AGND GND GND GND GND GND GND GND
10 1 5 11 15 25 35 47 51
GND_FPGA

ADBUS0 16
ADBUS1 17
ADBUS2 18
ADBUS3 19
ADBUS4 21
ADBUS5 22
ADBUS6 23
ADBUS7 24
ACBUS0 26
ACBUS1 27
ACBUS2 28
ACBUS3 29
ACBUS4 30
ACBUS5 32
ACBUS6 33
ACBUS7 34
BDBUS0 38
BDBUS1 39
BDBUS2 40
BDBUS3 41
BDBUS4 43
BDBUS5 44
BDBUS6 45
BDBUS7 46
BCBUS0 48
BCBUS1 52
BCBUS2 53
BCBUS3 54
BCBUS4 55
BCBUS5 57
BCBUS6 58
BCBUS7 59
PWREN# 60
SUSPEND# 36

R189 28 SCLK_FPGA
R187 28 DIN_FPGA
R190 28 DOUT_FPGA
R188 28 CSB_FPGA
R73 28 RDYB_FPGA
R74 28 RSTB_FPGA
R75 28
R76 28
R77 28 SYNC_FPGA
R78 28
R79 28

R180 4.7K
DS1 GREEN
GND_FPGA

PROJECT TITLE: MAX1125X_EVKIT_A		
DRAWING TITLE: USB AND FTDI CHIP		
SIZE: C	HARDWARE NUMBER: <HARDWARE_NUMBER>	DATE: 02/04/2015
ENGINEER: YURIY KURTSEVOY	DRAWN BY: JOHANN GUALBERTO	REV.: A
	TEMPLATE REV.: 1.5	SHEET <CURRENT_DESIGN_SHEET> OF <TOTAL_DESIGN_SHEETS>

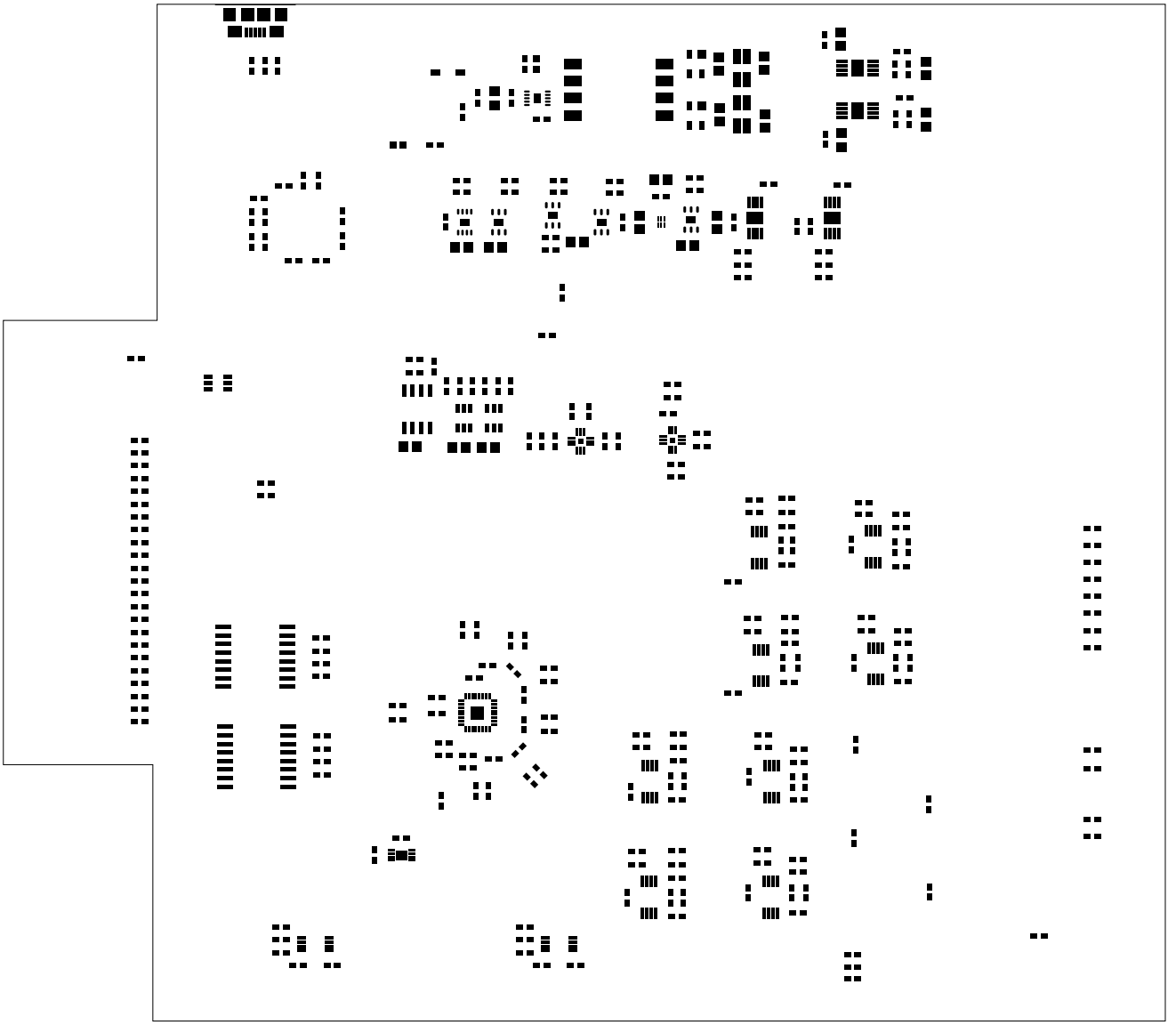
maxim integrated™

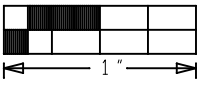
HARDWARE NAME:MAX11254_EVKIT_A

HARDWARE NUMBER:

ENGINEER:YURIY KURTSEVOY DESIGNER:ABRAHAM DIMAPILIS

DATE: 02/05/2015 ODB++/GERBER: PASTE_TOP





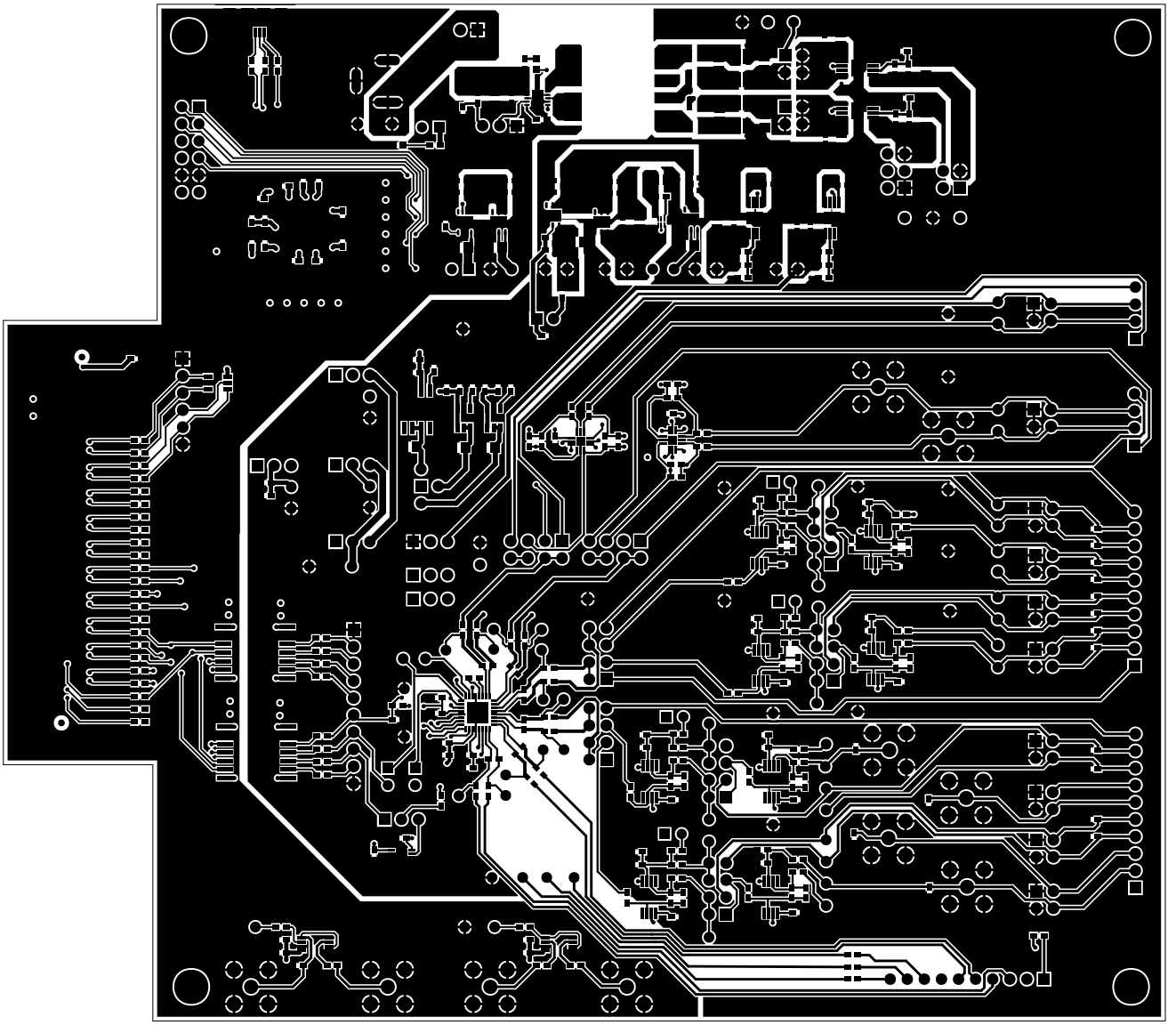
maxim integrated™

HARDWARE NAME:MAX11254_EVKIT_A

HARDWARE NUMBER:

ENGINEER:YURIY KURTSEVOY DESIGNER:ABRAHAM DIMAPILIS

DATE: 02/05/2015 ODB++/GERBER: TOP



1 ″

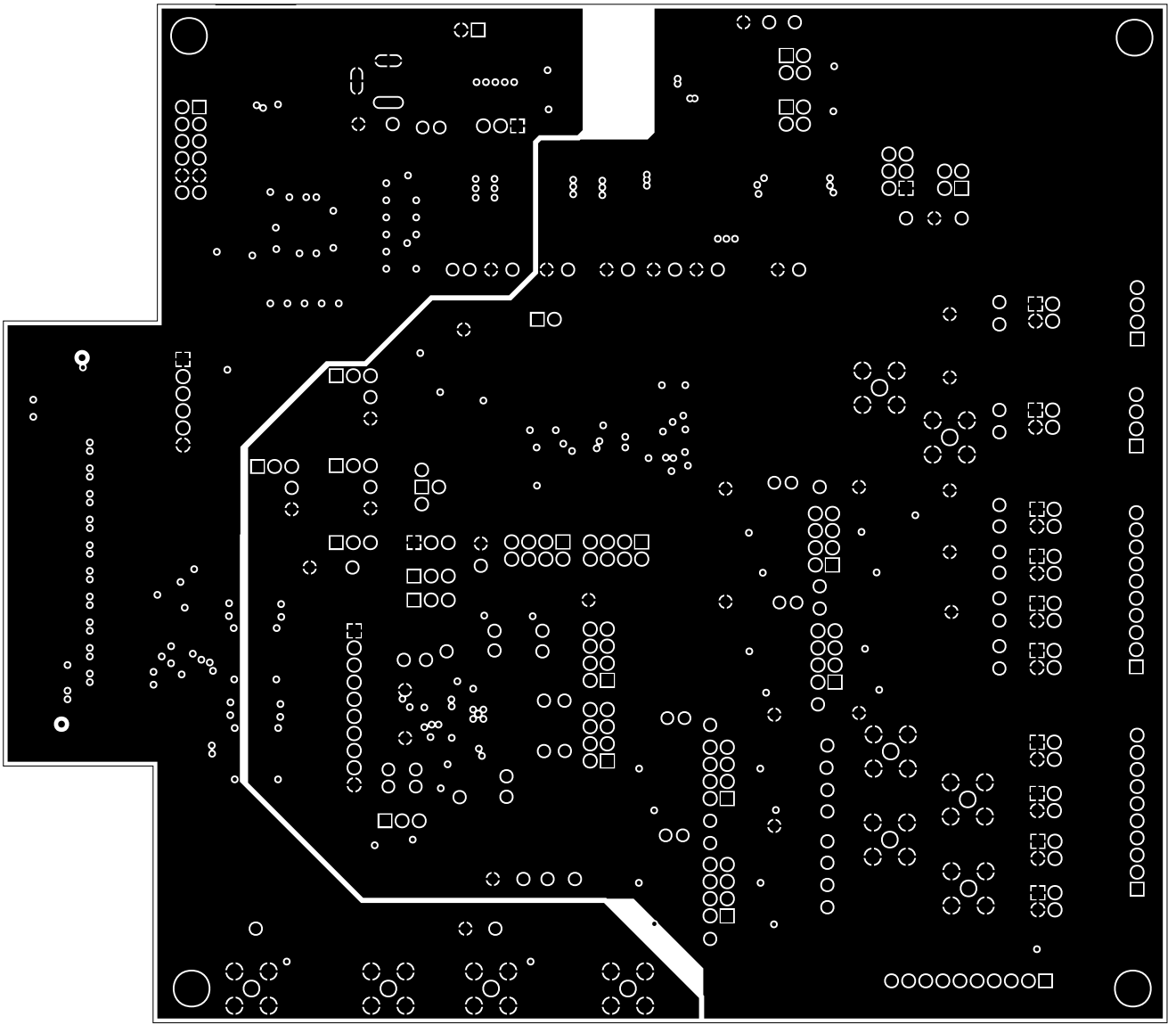
maxim integrated™

HARDWARE NAME:MAX11254_EVKIT_A

HARDWARE NUMBER:

ENGINEER:YURIY KURTSEVOY DESIGNER:ABRAHAM DIMAPILIS

DATE: 02/05/2015 ODB++/GERBER: INTERNAL2



1"

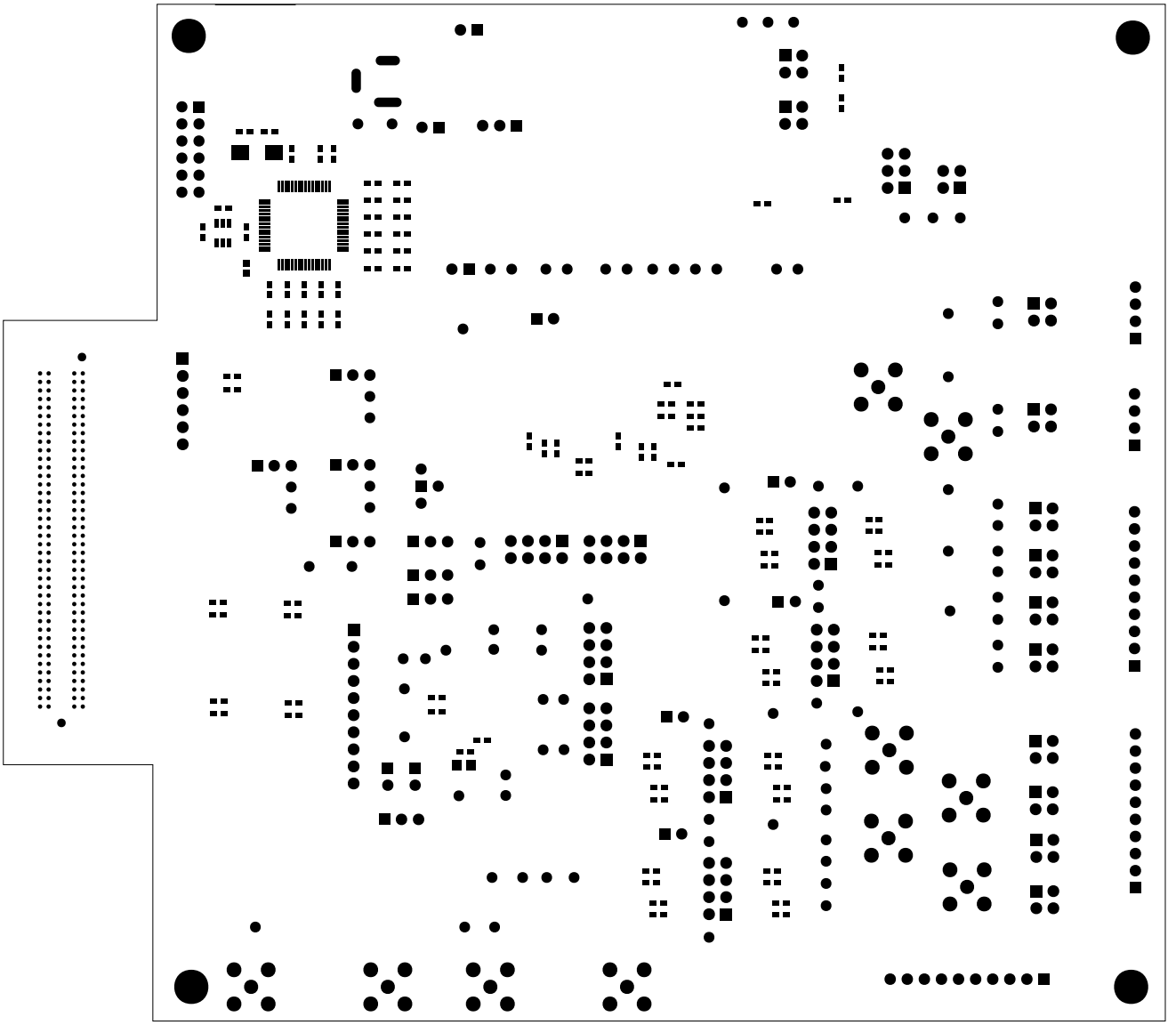
maxim integrated™

HARDWARE NAME:MAX11254_EVKIT_A

HARDWARE NUMBER:

ENGINEER:YURIY KURTSEVOY DESIGNER:ABRAHAM DIMAPILIS

DATE: 02/05/2015 ODB++/GERBER: MASK_BOT



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