Bluetooth EZ-Extender® Manual

Revision 1.0, October 2009

Part Number
82-000218-01

Analog Devices, Inc.
One Technology Way
Norwood, Mass. 02062-9106

Download from Www.Somanuals.com. All Manuals Search And Download.

Copyright Information

© 2009 Analog Devices, Inc., ALL RIGHTS RESERVED. This document may not be reproduced in any form without prior, express written consent from Analog Devices, Inc.

Printed in the USA.

Disclaimer

Analog Devices, Inc. reserves the right to change this product without prior notice. Information furnished by Analog Devices is believed to be accurate and reliable. However, no responsibility is assumed by Analog Devices for its use; nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under the patent rights of Analog Devices, Inc.

Trademark and Service Mark Notice

The Analog Devices logo, Blackfin, VisualDSP++, EZ-KIT Lite, and EZ-Extender are registered trademarks of Analog Devices, Inc.

EZ-Board is a trademark of Analog Devices, Inc.

All other brand and product names are trademarks or service marks of their respective owners.

Download from Www.Somanuals.com. All Manuals Search And Download.

Regulatory Compliance

The Bluetooth EZ-Extender is designed to be used solely in a laboratory environment. The board is not intended for use as a consumer end product or as a portion of a consumer end product. The board is an open system design, which does not include a shielded enclosure and therefore may cause interference to other electrical devices in close proximity. This board should not be used in or near any medical equipment or RF devices.

The Bluetooth EZ-Extender is currently being processed for certification that it complies with the essential requirements of the European EMC directive 89/336/EEC amended by 93/68/EEC and therefore carries the "CE" mark.

CE

The EZ-Extender system contains ESD (electrostatic discharge) sensitive devices. Electrostatic charges readily accumulate on the human body and equipment and can discharge without detection. Permanent damage may occur on devices subjected to high-energy discharges. Proper ESD precautions are recommended to avoid performance degradation or loss of functionality. Store unused EZ-Extender boards in the protective shipping package.

Download from Www.Somanuals.com. All Manuals Search And Download.

Download from Www.Somanuals.com. All Manuals Search And Download.

CONTENTS

PREFACE

Product Overview x
Purpose of This Manual xi
Intended Audience xi
Manual Contents xi
What's New in This Manual xii
Technical or Customer Support xii
Supported Products xiii
Product Information xiii
Analog Devices Web Site xiv
Technical Library CD xiv
Related Documents xv
Notation Conventions xvi

USING BLUETOOTH EZ-EXTENDER

Package Contents 1-2
Bluetooth EZ-Extender Default Configuration 1-3
Bluetooth EZ-Extender Setup 1-4
Flash Memory Interface 1-4

Download from Www.Somanuals.com. All Manuals Search And Download.

UART Interface 1-4
Bluetooth Module 1-5
USB Interface 1-5
Expansion Interface 1-6
Example Programs 1-6

BLUETOOTH EZ-EXTENDER HARDWARE REFERENCE

System Architecture 2-2
Configuration Switch 2-3
Jumpers 2-5
TWI Flash Address Configuration Jumper (JP1) 2-6
TWI Flash Write Protect Jumper (JP2) 2-6
Soft Reset Configuration Jumpers (JP3–4) 2-6
Bluetooth Module Default Configuration Jumper (JP5) 2-6
UART Receive Data Jumper (JP6) 2-6
Power LED 2-7
Connectors 2-8
STAMP UART Connector (J1) 2-9
Expansion Interface II Connector (J3) 2-9
Expansion Interface II Connector (J5) 2-10
Expansion Interface II Connector (P2) 2-10
Expansion Interface II Connector (P4) 2-11
USB Connector (P3) 2-11

Download from Www.Somanuals.com. All Manuals Search And Download.

BLUETOOTH EZ-EXTENDER BILL OF MATERIALS

BLUETOOTH EZ-EXTENDER SCHEMATIC

Title Page B-1

Module B-2

LS Connector B-3

PPI Connector B-4

INDEX

Download from Www.Somanuals.com. All Manuals Search And Download.

Download from Www.Somanuals.com. All Manuals Search And Download.

PREFACE

Thank you for purchasing the Bluetooth EZ-Extender®, Analog Devices, Inc. daughter board to a Blackfin evaluation system with the new expansion interface II (such as the ADSP-BF518F EZ-Board™) or the older STAMP interface (such as the ADSP-BF537 EZ-KIT Lite®).

Blackfin processors are embedded processors that support a Media Instruction Set Computing (MISC) architecture. This architecture is the natural merging of RISC, media functions, and digital signal processing characteristics towards delivering signal processing performance in a microprocessor-like environment.

The Bluetooth EZ-Extender is designed to be used in conjunction with an EZ-KIT Lite or an EZ-Board running the open source Linux operating system (OS). For more information about running Linux OS on a Blackfin processor, go to http://blackfin.uclinux.org/gf/.

Download from Www.Somanuals.com. All Manuals Search And Download.

Product Overview

The Bluetooth EZ-Extender is a separately sold daughter board that plugs onto an EZ-KIT Lite supporting the STAMP interface or an EZ-Board/EZ-Kit Lite supporting the expansion interface II connector. The extender board isolates the low-level configuration and communication tasks of integrating Bluetooth and radio frequency (RF) wireless technologies in your Blackfin board designs.

The board extends the capabilities of the Blackfin evaluation system by providing a connection to the Bluegiga WT12 Bluetooth module.

The board features:

- Bluegiga WT12 Bluetooth module
  - Bluetooth radio antenna
  - Fully implemented protocol stack
  - HCI and iWRAP firmware
- USB interface
  - Full speed USB interface for communicating with other compatible digital devices. The WT12 module acts as a USB peripheral.
- UART interface
  - Standard UART interface for communicating with other serial devices
  - Supports hardware flow control
- Expansion interface
  - Allows other EZ-Extenders to be stacked

Download from Www.Somanuals.com. All Manuals Search And Download.

All of the power necessary to operate the extender is derived from the mating EZ-KIT Lite/EZ-Board. Before using any of the interfaces, follow the setup procedure in "Bluetooth EZ-Extender Setup" on page 1-4.

Purpose of This Manual

The *Bluetooth EZ-Extender Manual* describes operation and configuration of the extender board components. A schematic and a bill of materials are provided for reference.

Intended Audience

The primary audience for this manual is a programmer who is familiar with Analog Devices processors. This manual assumes that the audience has a working knowledge of the appropriate processor architecture and instruction set. Programmers who are unfamiliar with Analog Devices processors can use this manual, but should supplement it with other texts (such as the *Processor Hardware Reference* and *Processor Instruction Set Reference*) that describe your target architecture.

Manual Contents

The manual consists of:

- Chapter 1, "Using Bluetooth EZ-Extender" on page 1-1
  Provides basic board information.
- Chapter 2, "Bluetooth EZ-Extender Hardware Reference" on page 2-1
  Provides information about the hardware aspects of the board.

Download from Www.Somanuals.com. All Manuals Search And Download.

- Appendix A, "Bluetooth EZ-Extender Bill Of Materials" on page A-1
  Provides a list of components used to manufacture the board.
- Appendix B, "Bluetooth EZ-Extender Schematic" on page B-1
  Provides the resources to allow board-level debugging or to use as a reference guide.

What's New in This Manual

This is the first revision of the *Bluetooth EZ-Extender Manual*.

Technical or Customer Support

You can reach Analog Devices, Inc. Customer Support in the following ways:

- Visit the Embedded Processing and DSP products Web site at
  `http://www.analog.com/processors/technical_support`
- E-mail tools questions to
  `processor.tools.support@analog.com`
- E-mail processor questions to
  `processor.support@analog.com (World wide support)`
  `processor.europe@analog.com (Europe support)`
  `processor.china@analog.com (China support)`
- Phone questions to **1-800-ANALOGD**

Download from Www.Somanuals.com. All Manuals Search And Download.

- Contact your Analog Devices, Inc. local sales office or authorized distributor
- Send questions by mail to:
  Analog Devices, Inc.
  One Technology Way
  P.O. Box 9106
  Norwood, MA 02062-9106
  USA

Supported Products

The Bluetooth EZ-Extender is designed as an extender board to the ADSP-BF518F and ADSP-BF526 EZ-Board evaluation systems. The extender also is compatible with the Blackfin evaluation systems featuring the STAMP interface, such as the ADSP-BF548 and ADSP-BF527 EZ-KIT Lites.

Product Information

Product information can be obtained from the Analog Devices Web site and a technical library CD.

Download from Www.Somanuals.com. All Manuals Search And Download.

Analog Devices Web Site

The Analog Devices Web site, www.analog.com, provides information about a broad range of products—analog integrated circuits, amplifiers, converters, and digital signal processors.

To access a complete technical library for each processor family, go to http://www.analog.com/processors/technical_library. The manuals selection opens a list of current manuals related to the product as well as a link to the previous revisions of the manuals. When locating your manual title, note a possible errata check mark next to the title that leads to the current correction report against the manual.

Also note, MyAnalog.com is a free feature of the Analog Devices Web site that allows customization of a Web page to display only the latest information about products you are interested in. You can choose to receive weekly e-mail notifications containing updates to the Web pages that meet your interests, including documentation errata against all manuals. MyAnalog.com provides access to books, application notes, data sheets, code examples, and more.

Visit MyAnalog.com to sign up. If you are a registered user, just log on. Your user name is your e-mail address.

Technical Library CD

The technical library CD contains seminar materials, product highlights, a selection guide, and documentation files of processor manuals, VisualDSP++ software manuals, and hardware tools manuals for the following processor families: Blackfin, SHARC, TigerSHARC, ADSP-218x, and ADSP-219x.

To order the technical library CD, go to http://www.analog.com/processors/technical_library, navigate to the manuals page for your processor, click the request CD check mark, and fill out the order form.

Download from Www.Somanuals.com. All Manuals Search And Download.

Data sheets, which can be downloaded from the Analog Devices Web site, change rapidly, and therefore are not included on the technical library CD. Technical manuals change periodically. Check the Web site for the latest manual revisions and associated documentation errata.

Related Documents

For information on product related development software, see the following publications.

Table 1. Related Processor Publications

Title	Description
Processor Data Sheet	General functional description, pinout, and timing of the processor.
Processor Hardware Reference	Description of the internal processor architecture and all register functions.
Processor Programming Reference	Description of all allowed processor assembly instructions.

Table 2. Related Tools Publications

Title	Description
EZ-Board Evaluation System Manual *EZ-KIT Lite Evaluation System Manual*	Description of the hardware capabilities of the evaluation system.

Download from Www.Somanuals.com. All Manuals Search And Download.

Notation Conventions

Text conventions used in this manual are identified and described as follows. Additional conventions, which apply only to specific chapters, may appear throughout this document.

Example	Description
`{this | that}`	Alternative required items in syntax descriptions appear within curly brackets and separated by vertical bars; read the example as `this` or `that`. One or the other is required.
`[this | that]`	Optional items in syntax descriptions appear within brackets and separated by vertical bars; read the example as an optional `this` or `that`.
`[this,…]`	Optional item lists in syntax descriptions appear within brackets delimited by commas and terminated with an ellipse; read the example as an optional comma-separated list of `this`.
`.SECTION`	Commands, directives, keywords, and feature names are in text with `letter gothic` font.
`filename`	Non-keyword placeholders appear in text with italic style format.
	Note: For correct operation, ... A Note provides supplementary information on a related topic. In the online version of this book, the word **Note** appears instead of this symbol.
	Caution: Incorrect device operation may result if ... **Caution:** Device damage may result if ... A Caution identifies conditions or inappropriate usage of the product that could lead to undesirable results or product damage. In the online version of this book, the word **Caution** appears instead of this symbol.
	Warning: Injury to device users may result if ... A Warning identifies conditions or inappropriate usage of the product that could lead to conditions that are potentially hazardous for the devices users. In the online version of this book, the word **Warning** appears instead of this symbol.

Download from Www.Somanuals.com. All Manuals Search And Download.

1 USING BLUETOOTH EZ-EXTENDER

This chapter describes the Bluetooth EZ-Extender's package contents, configuration, installation procedure, and interfaces.

The information is presented in the following order.

- "Package Contents" on page 1-2
  Describes the product's package contents.
- "Bluetooth EZ-Extender Default Configuration" on page 1-3
  Describes the board's default configuration.
- "Bluetooth EZ-Extender Setup" on page 1-4
  Provides the board's setup procedure.
- "Flash Memory Interface" on page 1-4
  Describes the on-board flash memory interface.
- "UART Interface" on page 1-4
  Describes the on-board UART interface.
- "Bluetooth Module" on page 1-5
  Describes the on-board Bluetooth interface.
- "USB Interface" on page 1-5
  Describes the on-board USB interface.

Download from Www.Somanuals.com. All Manuals Search And Download.

- "Expansion Interface" on page 1-6
  Describes the board's expansion interface.
- "Example Programs" on page 1-6
  Describes the example programs installed with the board's software.

For more information about the mating Blackfin processor, see documents referred to as "Related Documents".

Package Contents

Your Bluetooth EZ-Extender package contains one item: the Bluetooth EZ-Extender board. If the board is missing, contact the vendor where you purchased your Bluetooth EZ-Extender or contact Analog Devices, Inc.

Download from Www.Somanuals.com. All Manuals Search And Download.

Bluetooth EZ-Extender Default Configuration

The EZ-Extender system contains ESD (electrostatic discharge) sensitive devices. Electrostatic charges readily accumulate on the human body and equipment and can discharge without detection. Permanent damage may occur on devices subjected to high-energy discharges. Proper ESD precautions are recommended to avoid performance degradation or loss of functionality. Store unused EZ-Extender boards in the protective shipping package.

When removing the Bluetooth EZ-Extender from the package, handle the board carefully to avoid the discharge of static electricity, which can damage some components (see Figure 1-1).

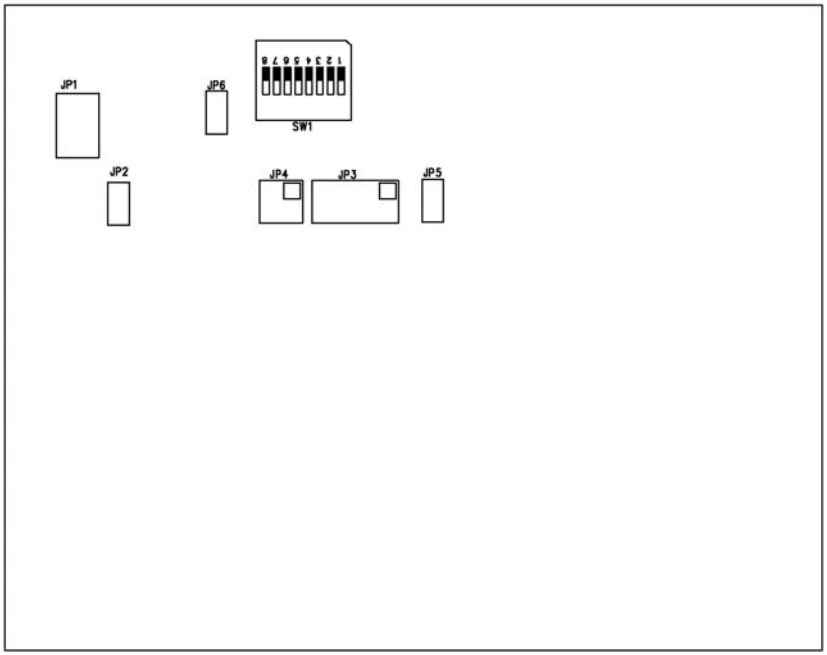


Figure 1-1. Default EZ-Extender Hardware Setup

Download from Www.Somanuals.com. All Manuals Search And Download.

Figure 1-1 shows the default jumper and switch settings, connector locations, and LED used in installation. Confirm that your board is in the default configuration before using the board.

Bluetooth EZ-Extender Setup

It is important to set up all components of the system containing the Bluetooth EZ-Extender and then apply power to the system. Power on your system after the Bluetooth EZ-Extender has been connected to the EZ-Board or EZ-KIT Lite. Do not install or remove the Bluetooth EZ-Extender when power is applied to the EZ-Board or EZ-KIT Lite.

Flash Memory Interface

The Bluetooth EZ-Extender is equipped with an I^2C serial flash memory chip for data configuration. Flash memory is programmed by the factory. For more information, refer to "TWI Flash Address Configuration Jumper (JP1)" on page 2-6 and "TWI Flash Write Protect Jumper (JP2)" on page 2-6.

UART Interface

The UART interface is used for general communication between the processor and WT12 Bluegiga Bluetooth module. The interface has a max baud rate of 3.0 Mbaud. Flow control is supported via `SW1`. Refer to "Configuration Switch" on page 2-3 for more information.

Download from Www.Somanuals.com. All Manuals Search And Download.

Bluetooth Module

The Bluegiga WT12 module is a next-generation, class 2, Bluetooth 2.0 plus EDR module. The WT12 is a highly integrated and sophisticated Bluetooth module, containing all of the necessary elements from Bluetooth radio antenna to a fully implemented protocol stack. Therefore, the WT12 module provides an ideal solution for developers who want to integrate Bluetooth wireless technology into their design with limited knowledge of Bluetooth and RF technologies.

By default, the WT12 module is equipped with powerful and easy-to-use iWRAP firmware. iWRAP enables users to access Bluetooth functionality with simple ACSII commands delivered to the WT12 module over the UART interface.

Besides the iWRAP firmware, the module has an option for other firmware options. Standard Host Command Interface (HCI) firmware is supported – an ideal solution for systems where the host system is capable of running the entire Bluetooth stack and profiles, and the WT12 module is utilized as the physical radio over the UART interface.

USB Interface

The device operates as a USB peripheral responding to requests from a master host controller, such as a PC. Both the OHCI and UHCI standards are supported. The set of implemented USB endpoints can behave as specified in the USB section of the Bluetooth v 2.0 and EDR specification or, alternatively, can appear as a set of endpoints appropriate to USB audio devices, such as speakers.

Download from Www.Somanuals.com. All Manuals Search And Download.

Expansion Interface

Expansion interface connectors on top of the Bluetooth EZ-Extender allow other EZ-Extenders to be mounted on top of the Bluetooth EZ-Extender. The UART interface is not brought up to the expansion interface because the interface is used by the WT12 Bluetooth module. All other signals are passed up to the expansion interface from the mating EZ-KIT Lite or EZ-Board through the Bluetooth EZ-Extender.

Example Programs

For more information about using the Bluetooth EZ-Extender and running µClinux on a Blackfin processor, go to http://docs.blackfin.uclinux.org/doku.php?id=hw:cards:bluetooth_ez-extender.

Download from Www.Somanuals.com. All Manuals Search And Download.

2 BLUETOOTH EZ-EXTENDER HARDWARE REFERENCE

This chapter describes the hardware design of the Bluetooth EZ-Extender.

The following topics are covered.

- "System Architecture" on page 2-2
  Describes the daughter board's configuration and explains how the board components interface with the processor and EZ-Board.
- "Configuration Switch" on page 2-3
  Shows the location and describes the board's configuration switch.
- "Jumpers" on page 2-5
  Shows the location and describes the board's jumpers.
- "Power LED" on page 2-7
  Shows the location and describes the board's power LED.
- "Connectors" on page 2-8
  Shows the locations, describes, and provides part numbers for the on-board connectors. In addition, the manufacturer and part number information is provided for the mating parts.

Download from Www.Somanuals.com. All Manuals Search And Download.

System Architecture

A block diagram of the Bluetooth EZ-Extender is shown in Figure 2-1.

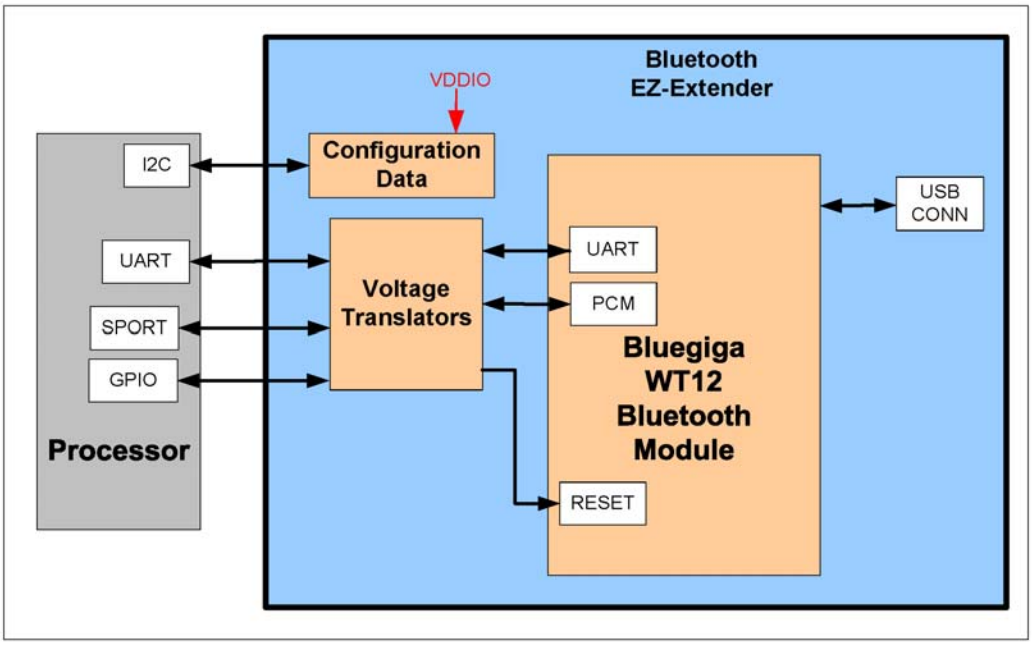


Figure 2-1. Bluetooth EZ-Extender Block Diagram

The block diagram illustrates how the UART, SPORT, and USB ports are interfaced the Bluetooth module and processor on a mating EZ-KIT Lite/EZ-Board. The block diagram is a high-level diagram and does not show the voltage translation circuitry or the clock buffers. The schematic pages are available in "Bluetooth EZ-Extender Schematic" on page B-1.

The board supports 3.3, 2.5, and 1.8 volt I/O. The on-board voltage translator automatically translates the motherboard signals to the correct voltage levels.

Download from Www.Somanuals.com. All Manuals Search And Download.

The board contains a Bluegiga WT12 class 2, a Bluetooth 2.0, and EDR module, described in "Bluetooth Module" on page 1-5. The EZ-Extender is equipped with an I^2C serial flash memory chip for data storage and configuration.

Configuration Switch

This section describes the board's configuration switch (SW1). The switch location is shown in Figure 2-2.

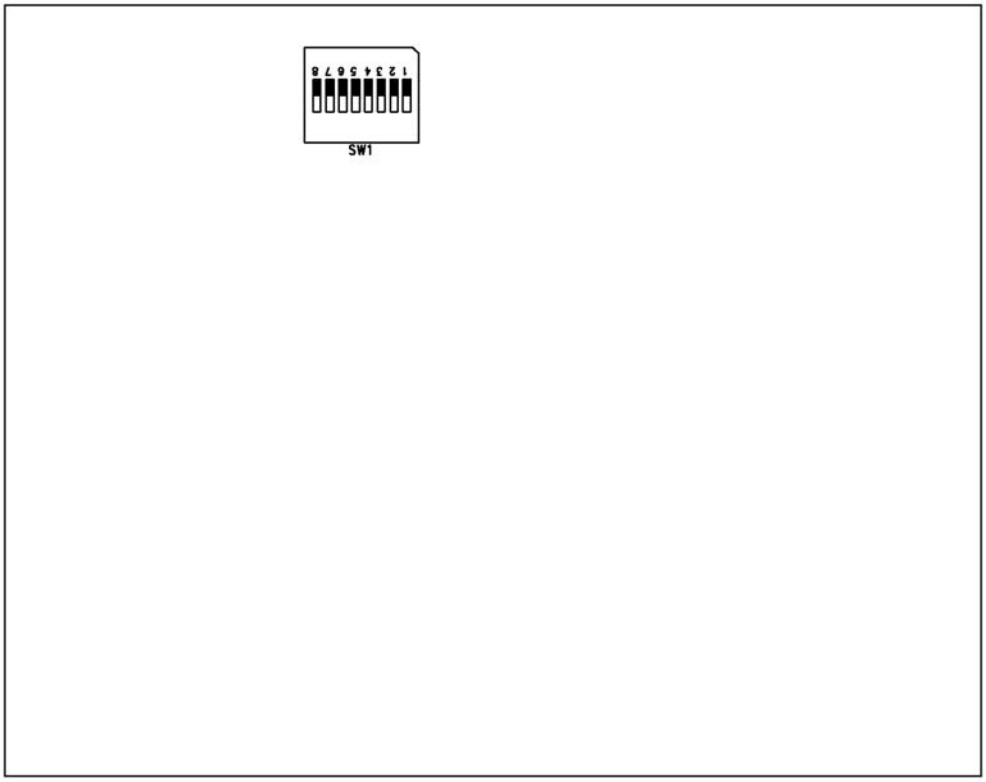


Figure 2-2. Configuration Switch Location

Download from Www.Somanuals.com. All Manuals Search And Download.

Positions 7 and 8 of the configuration switch enable or disable UART flow control. Other switch positions are intended for internal Analog Devices test purposes only and not supported.

By default, SW1 is all OFF. The switch settings are shown in Table 2-1.

Table 2-1. Configuration Switch (SW1)

SW1 Position	UART Flow Control Off	UART Flow Control On
SW1.1	OFF	OFF
SW1.2	OFF	OFF
SW1.3	OFF	OFF
SW1.4	OFF	OFF
SW1.5	OFF	OFF
SW1.6	OFF	OFF
SW1.7	OFF	ON
SW1.8	OFF	ON

Download from Www.Somanuals.com. All Manuals Search And Download.

Jumpers

This section describes functionality of the configuration jumpers. Figure 2-3 shows the jumper locations.

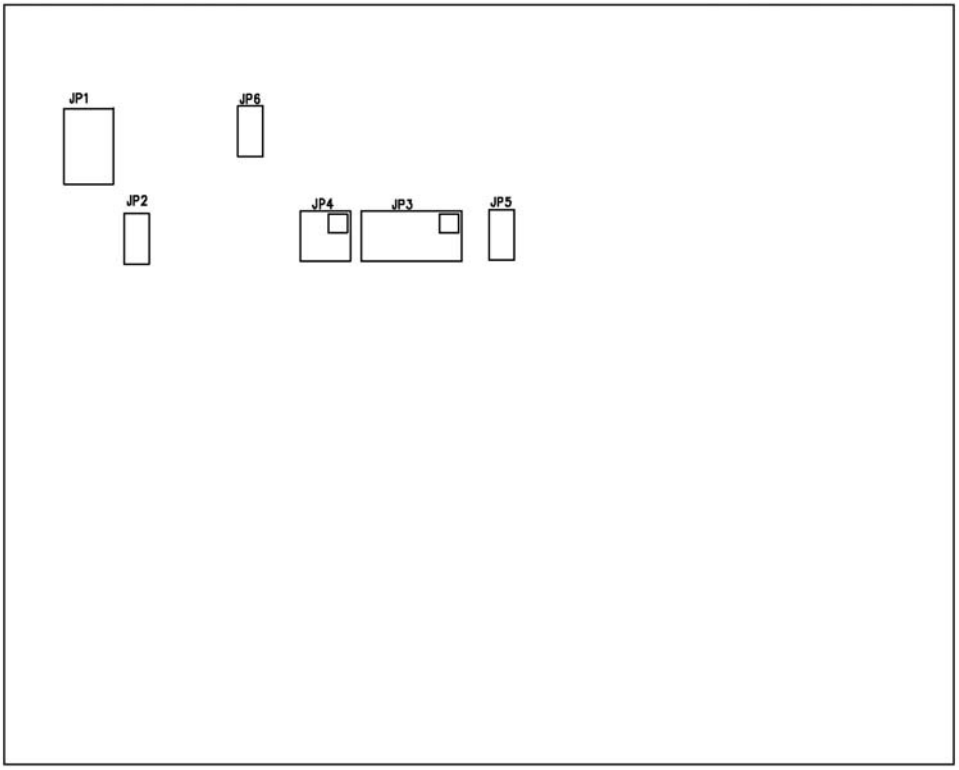


Figure 2-3. Jumper Locations

Download from Www.Somanuals.com. All Manuals Search And Download.

TWI Flash Address Configuration Jumper (JP1)

The TWI flash address configuration jumper (JP1) controls the base address of the configuration flash memory. When multiple EZ-Extenders are stacked on top of each other, it may be necessary to change the JP1 setting to avoid any conflict with the configuration flash memory on another EZ-Extender. The default is no jumper installed.

TWI Flash Write Protect Jumper (JP2)

The TWI flash write protect jumper (JP2) is not available; the jumper is intended for internal Analog Devices test purposes only. The default is no jumper installed.

Soft Reset Configuration Jumpers (JP3–4)

The software reset configuration jumpers (JP3–4) determine which GPIO signal is used to perform a soft reset of the Bluegiga WT12 Bluetooth module. The default is no jumpers installed.

Bluetooth Module Default Configuration Jumper (JP5)

The Bluegiga WT12 Bluetooth module default configuration jumper (JP5) resets the module's settings to the default values. This feature requires software support; refer to the example programs for more information. The default is no jumper installed.

UART Receive Data Jumper (JP6)

The UART receive data jumper (JP6) is not available; the jumper is intended for internal Analog Devices test purposes only. The default is no jumper installed.

Download from Www.Somanuals.com. All Manuals Search And Download.

Power LED

This section describes the power LED (LED1). When LED1 is lit up, it indicates that the board is powered. Figure 2-4 shows the LED location.

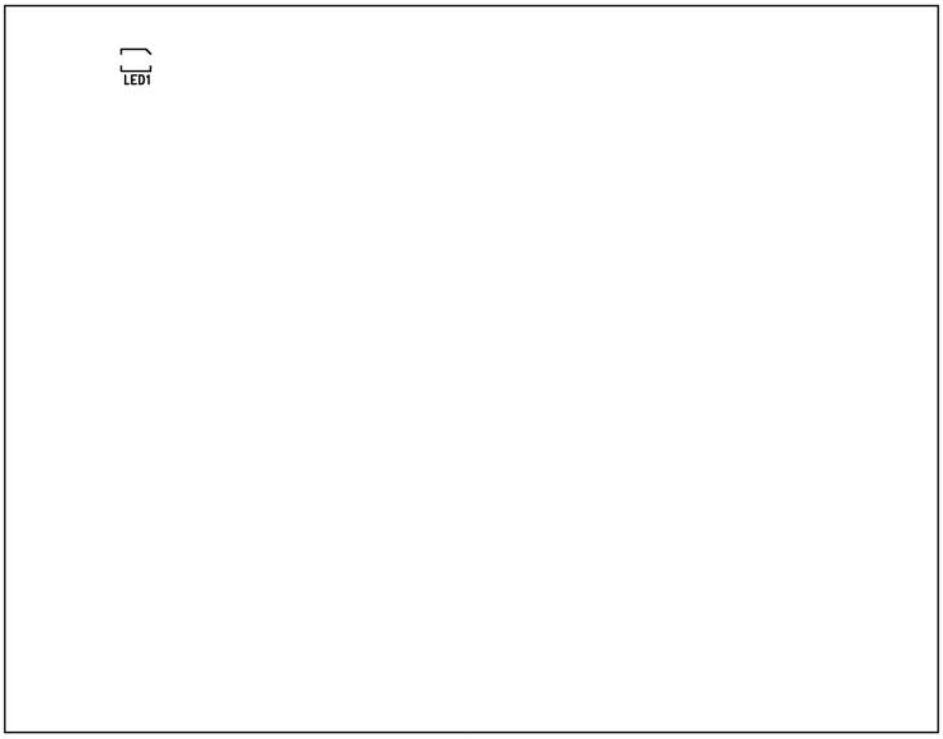


Figure 2-4. Power LED Location

Download from Www.Somanuals.com. All Manuals Search And Download.

Connectors

This section describes connector functionality and provides information about mating connectors. The connector locations are shown in Figure 2-5. Dashed lines indicate connectors on the bottom side of the board.

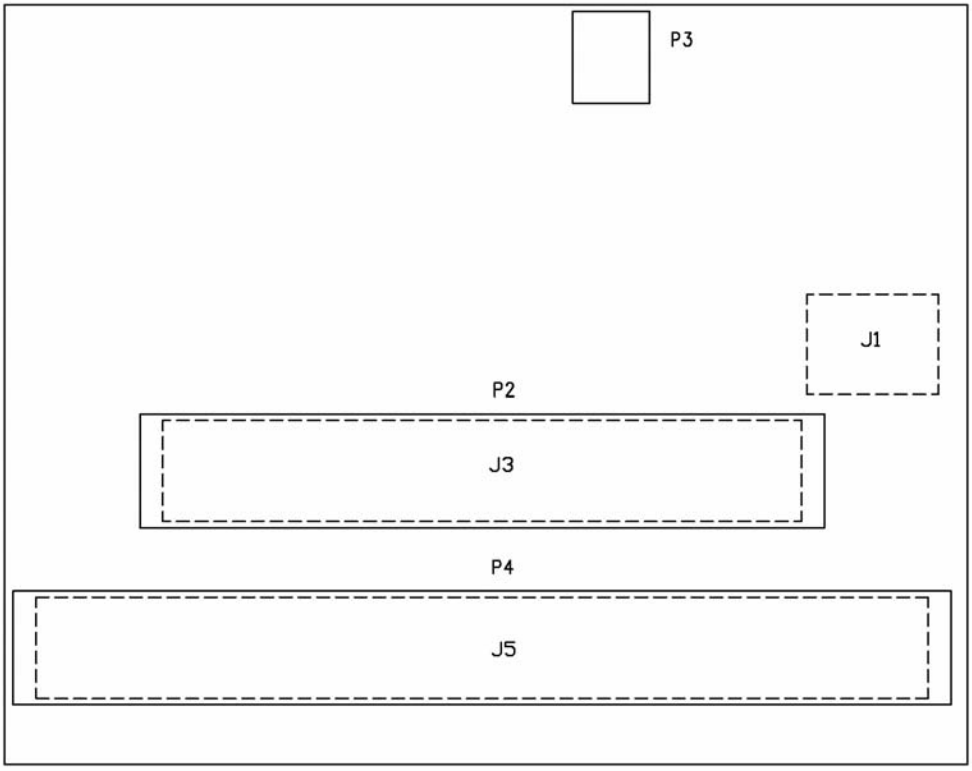


Figure 2-5. Connector Locations

Download from Www.Somanuals.com. All Manuals Search And Download.

STAMP UART Connector (J1)

The STAMP UART connector (J1) allows the Bluetooth EZ-Extender to be plugged onto an EZ-KIT Lite development board supporting a STAMP interface. The J1 connector is located on the bottom side of the board. For availability and pricing of the connectors, contact Samtec.

Refer to "Expansion Interface" on page 1-6 or more information.

Part Description	Manufacturer	Part Number
10-position 0.1", SMT socket	SAMTEC	SSW-105-22-F-D-VS
Mating Connector		
10-position 0.1", SMT header	SAMTEC TSSH	TSSH-105-01-L-DV-A

Expansion Interface II Connector (J3)

The board-to-board connector (J3) provides signals for the SPI, TWI, UART, SPORT interfaces and general-purpose I/O (GPIO) signals of the mating EZ-Board. The connector is located on the bottom side of the board. For availability and pricing of the connectors, contact Samtec.

Refer to "Expansion Interface" on page 1-6 for more information.

Part Description	Manufacturer	Part Number
50-position 0.1", SMT socket	SAMTEC	SSW-125-22-F-D-VS
Mating Connector		
50-position 0.1", SMT header	SAMTEC	TSSH-125-01-L-DV-A

Download from Www.Somanuals.com. All Manuals Search And Download.

Expansion Interface II Connector (J5)

The board-to-board connector (J5) provides signals for the PPI, TWI interfaces and GPIO signals of the mating EZ-Board. The connector is located on the bottom side of the board. For availability and pricing of the connectors, contact Samtec.

Refer to "Expansion Interface" on page 1-6 for more information.

Part Description	Manufacturer	Part Number
70-position 0.1", SMT socket	SAMTEC	SSW-135-22-F-D-VS
Mating Connector		
70-position 0.1", SMT header	SAMTEC	TSSH-135-01-L-DV-A

Expansion Interface II Connector (P2)

The board-to-board connector (P2) provides signals for the SPI, TWI, SPORT interfaces and GPIO signals of the mating EZ-Board. The connector is located on the top side of the board. For availability and pricing of the connectors, contact Samtec.

Refer to "Expansion Interface" on page 1-6 for more information.

Part Description	Manufacturer	Part Number
50-position 0.1", SMT socket	SAMTEC	TSSH-125-01-L-DV-A
Mating Connector		
50-position 0.1", SMT header	SAMTEC	SSW-125-22-F-D-VS

Download from Www.Somanuals.com. All Manuals Search And Download.

Expansion Interface II Connector (P4)

The board-to-board connector (P4) provides signals for the PPI, TWI interfaces and GPIO signals of the mating EZ-Board. The connector is located on the top side of the board. For availability and pricing of the connectors, contact Samtec.

Refer to "Expansion Interface" on page 1-6 for more information.

Part Description	Manufacturer	Part Number
70-position 0.1", SMT socket	SAMTEC	TSSH-135-01-L-DV-A
Mating Connector		
70-position 0.1", SMT header	SAMTEC	SSW-135-22-F-D-VS

USB Connector (P3)

Part Description	Manufacturer	Part Number
USB Mini-B connector	MOLEX	0675031010
Mating Connector		
USB Mini-B to USB A cable	ASSMANN	AK672M/2-3

Download from Www.Somanuals.com. All Manuals Search And Download.

Download from Www.Somanuals.com. All Manuals Search And Download.

A BLUETOOTH EZ-EXTENDER BILL OF MATERIALS

The bill of materials corresponds to "Bluetooth EZ-Extender Schematic" on page B-1.

Ref.	Qty.	Description	Reference Designator	Manufacturer	Part Number
1	1	SN74LVC1G14DB VR SOT23-5	U4	DIGI-KEY	296-11607-1-ND
2	1	SN74LVC1G08 SOT23-5	U8	TI	SN74LVC1G08DBVR
3	1	WT12 ICS010	U3	BLUEGIGA	WT12-A-AI
4	1	MIC94040 MLF4	U7	MICREL	MIC94040YFL
5	1	M24C02 TSSOP8DW	U2	ST MICRO	M24C02-RDW6TP
6	1	SN74ALVC125 TVSOP14	U9	TI	SN74ALVC125DGVRE4
7	1	ADG3231 SOT23-6	U5	ANALOG DEVICES	ADG3231BRJZ-REEL
8	1	ADG3308 TSSOP20	U1	ANALOG DEVICES	ADG3308BRUZ
9	1	DIP8 SWT016	SW1	C&K	TDA08H0SB1
10	1	IDC 3X2 IDC3X2_SMT	JP1	SAMTEC	TSM-103-01-T-DV
11	1	USB_MINI-B 5PIN CON028	P3	MOLEX	0675031010
12	1	IDC 2X2 IDC2X2	JP4	FCI	68737-404HLF

Download from Www.Somanuals.com. All Manuals Search And Download.

Ref.	Qty.	Description	Reference Designator	Manufacturer	Part Number
13	1	IDC 4X2 IDC4X2	JP3	SULLINS	GEC04DAAN
14	1	IDC 25x2 IDC25x2_SMTA	P2	SAMTEC	TSSH-125-01-L-DV-A
15	1	IDC 35x2 IDC35x2_SMTA	P4	SAMTEC	TSSH-135-01-L-DV-A
16	1	IDC 35X2 IDC35x2_SMT_F	J5	SAMTEC	SSW-135-22-F-D-VS
17	1	IDC 25X2 IDC25x2_SMT_F	J3	SAMTEC	SSW-125-22-F-D-VS
18	3	IDC 2X1 IDC2X1_SMT	JP2,JP5-6	SAMTEC	TSM-102-01-T-SV
19	1	IDC 5X2 IDC5x2_SMT_F	J1	SAMTEC	SSW-105-22-F-D-VS
20	12	0.1UF 10V 10% 0402	C1-12	AVX	0402ZD104KAT2A
21	9	10K 1/16W 5% 0402	R1-4,R6,R14-17	VISHAY	CRCW040210K0FKED
22	7	22 1/16W 5% 0402	R11-12,R18-22	PANASONIC	ERJ-2GEJ220X
23	1	1.5K 1/10W 5% 0603	R8	PANASONIC	ERJ-3GEYJ152V
24	1	330 1/10W 5% 0603	R5	VISHAY	CRCW0603330RJNEA
25	1	GREEN LED001	LED1	PANASONIC	LN1361CTR
26	1	47.0K 1/16W 1% 0402	R9	ROHM	MCR01MZPF4702
27	2	10NH 5% 0402	L1-2	PANASONIC	ELJ-QF10NJF
28	2	15K 1/16W 5% 0402	R7,R13	PANASONIC	ERJ-2GEJ153X
29	1	27K 1/16W 5% 0402	R10	PANASONIC	ERJ-2GEJ273X

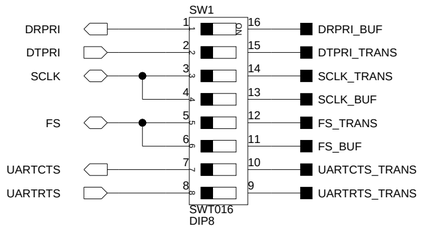
Download from Www.Somanuals.com. All Manuals Search And Download.

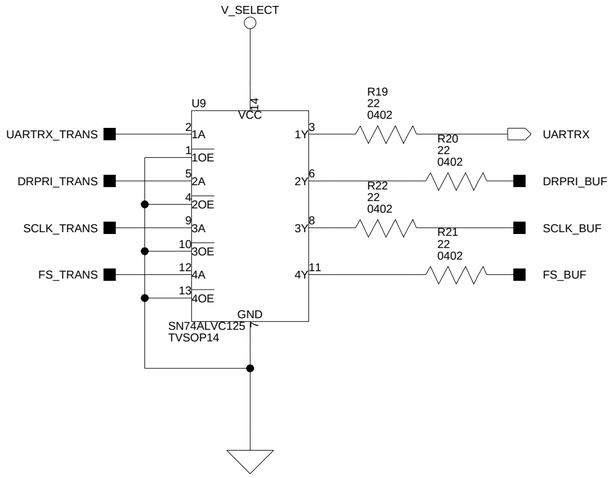
BLUETOOTH DAUGHTERBOARD

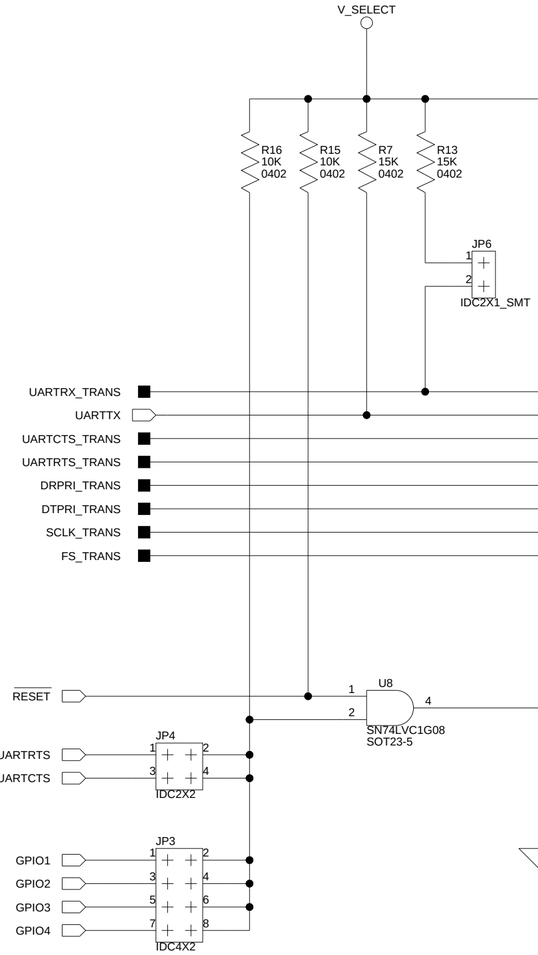
ANALOG DEVICES
20 Cotton Road
Nashua, NH 03063
PH: 1-800-ANALOGD

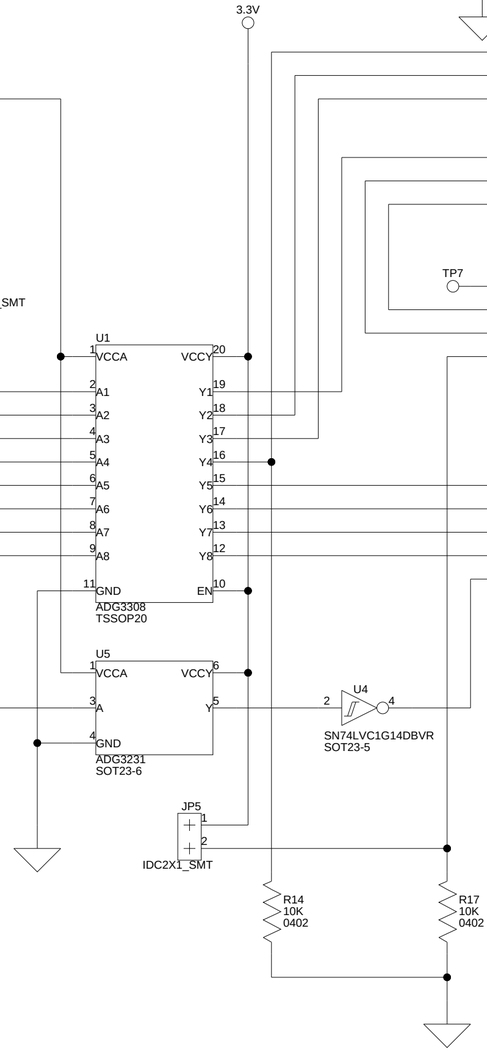
Title	BLUETOOTH EZ-EXTENDER TITLE		
Size C	**Board No.** A0218-2008		**Rev** 1.1
Date 3-27-2009_11:41		**Sheet** 1 **of** 4	

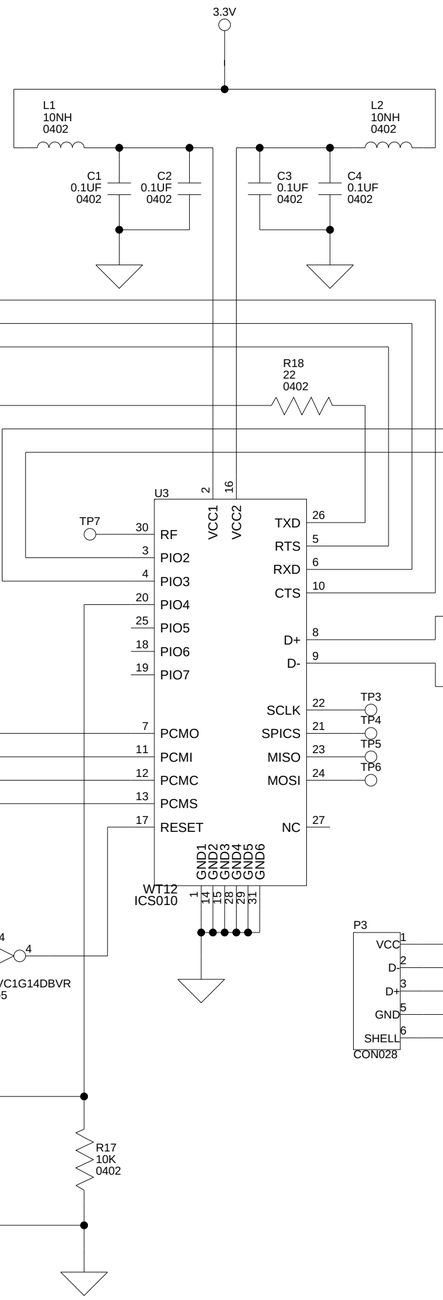
Download from Www.Somanuals.com. All Manuals Search And Download.

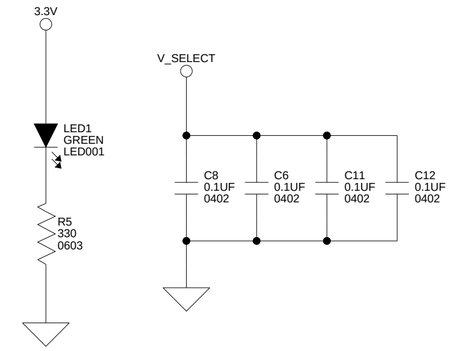


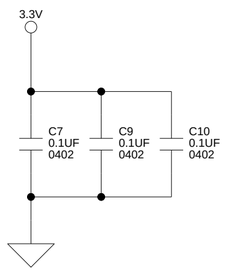


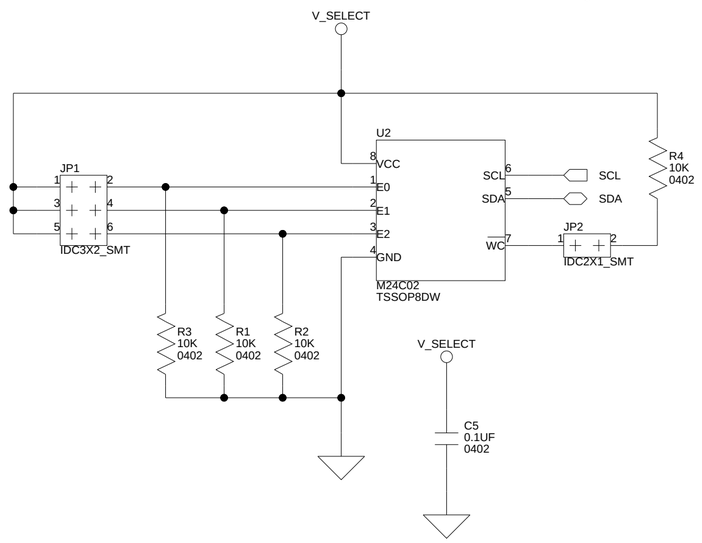








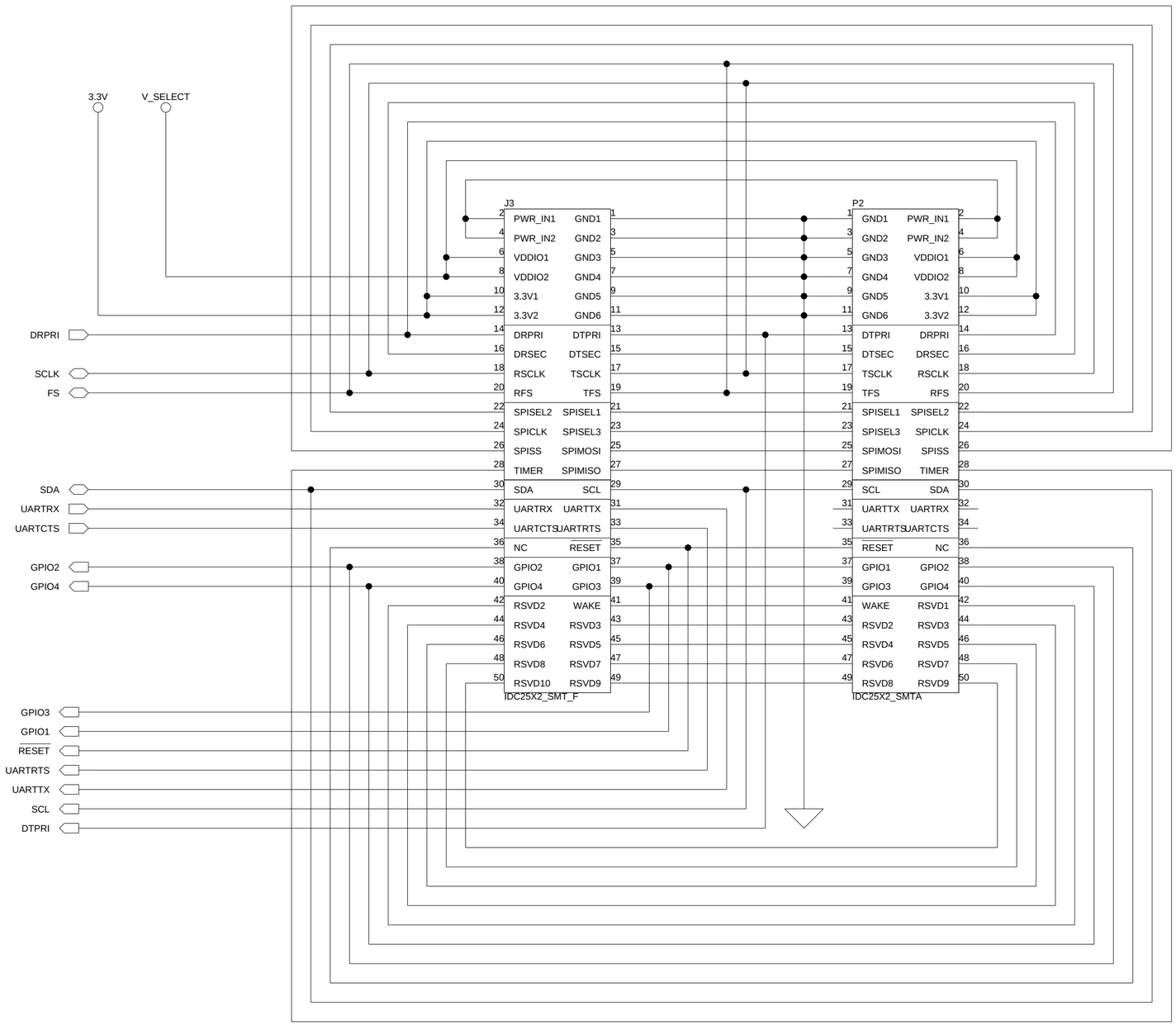


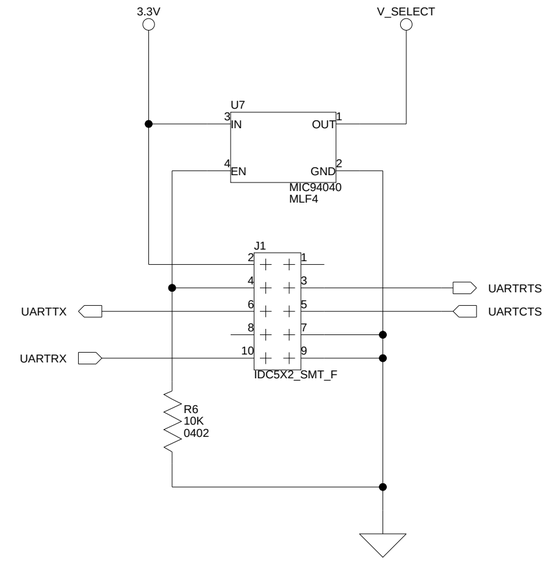


ANALOG DEVICES
20 Cotton Road
Nashua, NH 03063
PH: 1-800-ANALOGD

Title	BLUETOOTH EZ-EXTENDER MODULE	
Size C	Board No. A0218-2008	Rev 1.1
Date 3-27-2009_11:41	Sheet 2 of 4	

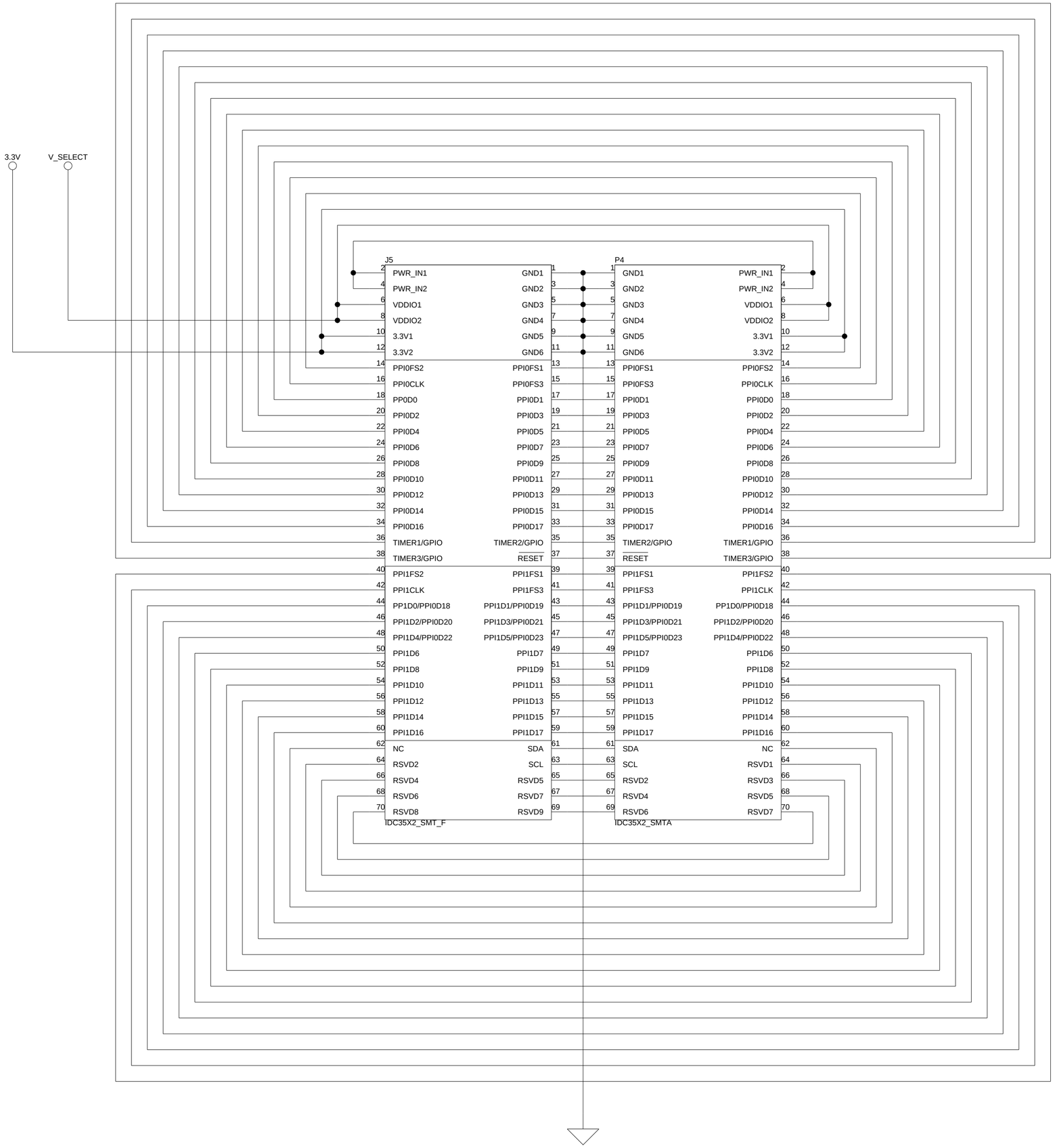
Download from Www.Somanuals.com. All Manuals Search And Download.





ANALOG DEVICES	20 Cotton Road Nashua, NH 03063 PH: 1-800-ANALOGD	
Title	BLUETOOTH EZ-EXTENDER LS CONNECTOR	
Size C	**Board No.** A0218-2008	**Rev** 1.1
Date 3-27-2009_11:41	**Sheet** 3 **of** 4	

Download from Www.Somanuals.com. All Manuals Search And Download.



ANALOG DEVICES
20 Cotton Road
Nashua, NH 03063
PH: 1-800-ANALOGD

Title	BLUETOOTH EZ-EXTENDER PPI CONNECTOR		
Size C	**Board No.** A0218-2008		**Rev** 1.1
Date 3-27-2009_11:41		**Sheet** 4 **of** 4	

Download from Www.Somanuals.com. All Manuals Search And Download.

I INDEX

A

architecture, of this EZ-Extender, 2-2

B

bill of materials, A-1
Bluetooth module, 1-5, 2-2
Bluetooth module default config jumper (JP5), 2-6
board schematic (Bluetooth EZ-Extender), B-1

C

configuration, of this EZ-Extender, 1-4
configuration switch (SW1), 2-3
connectors
  diagram of locations, 2-8
  J1 (STAMP UART), 2-9
  J3 (expansion interface), 2-9
  J5 (expansion interface), 2-10
  P2 (expansion interface), 2-10
  P3 (USB), 2-11
  P4 (expansion interface), 2-11
contents, of this EZ-Extender package, 1-2
customer support, xii

D

default configuration, of this EZ-Extender, 1-3

E

EDR module, 1-5, 2-3
example programs, 1-6
expansion interface II
  overview, 1-6
  J3 connector, 2-9
  J5 connector, 2-10
  P2 connector, 2-10
  P4 connector, 2-11

F

flash memory interface, 1-4

J

jumpers
  diagram of locations, 2-5
  JP1 (TWI flash address config), 2-6
  JP2 (TWI flash write protect), 2-6
  JP3-4 (soft reset config), 2-6
  JP5 (Bluetooth module default config), 2-6
  JP6 (UART receive data jumper), 2-6

L

LED1 (power), 2-7

N

notation conventions, xvi

P

power LED (LED1), 2-7
product overview, x

Download from Www.Somanuals.com. All Manuals Search And Download.

S

schematic, of Bluetooth EZ-Extender, B-1
setup, of this EZ-Extender, 1-3, 1-4
soft reset config jumpers (JP3-4), 2-6
STAMP UART connector (J1), 2-9
supported products, xiii
switch, SW1 (configuration), 2-3
system architecture, of this EZ-Extender, 2-2

T

TWI flash address config jumper (JP1), 2-6
TWI flash write protect jumper (JP2), 2-6

U

UART
  interface, 1-4, 1-6
  receive data jumper (JP6), 2-6
USB
  connector (P3), 2-11
  interface, 1-5

V

voltage translator, 2-2

W

WT12 Bluetooth module, 1-6
WT12 module, 1-5, 2-3

Download from Www.Somanuals.com. All Manuals Search And Download.

Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com