SMART ARM-based Microcontrollers

SAM G55 Xplained Pro

USER GUIDE

Preface

The Atmel® SAM G55 Xplained Pro evaluation kit is a hardware platform to evaluate the ATSAMG55J19 microcontroller.

This kit is supported by the Atmel Studio integrated development platform and provides easy access to the features of the Atmel ATSAMG55J19. It provides the information to integrate the device in a customer design.

The Xplained Pro MCU series evaluation kits include an on-board Embedded Debugger and external tools are not necessary to program or debug the ATSAMG55J19.

The Xplained Pro extension series evaluation kits offer additional peripherals to extend the features of the board and ease the development of customer designs.

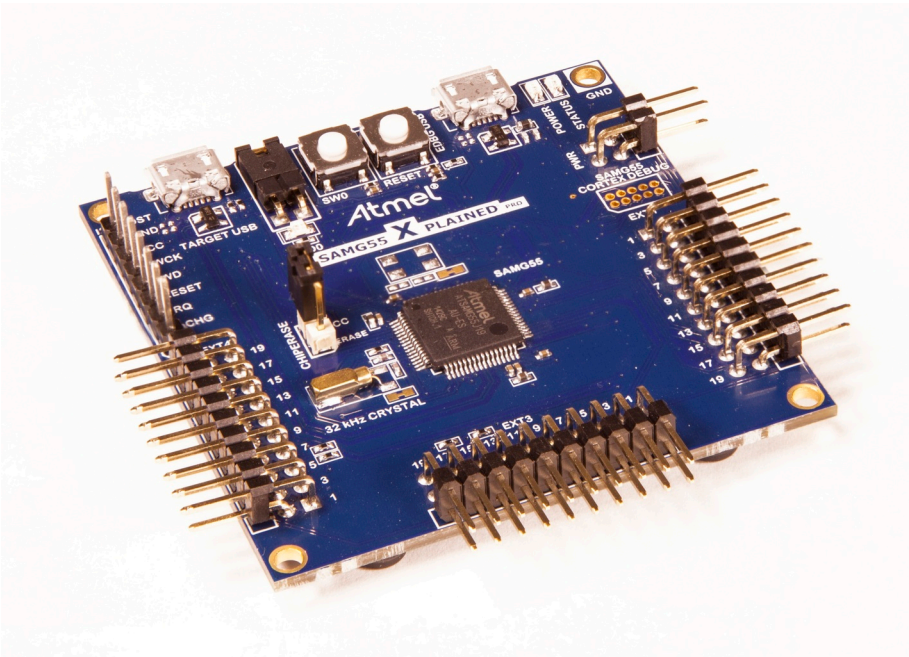


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1. Introduction

1.1. Features

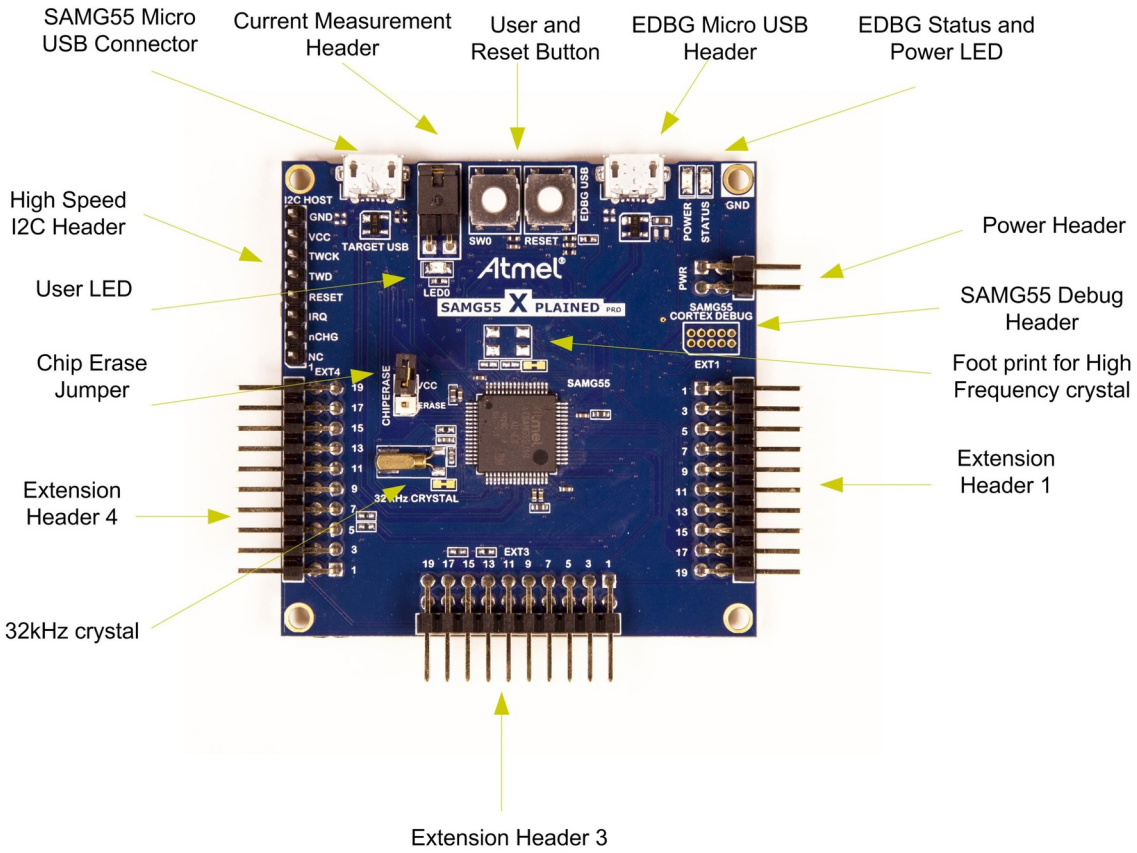
- Atmel ATSAMG55J19 microcontroller
- Embedded debugger (EDBG)
  - USB interface
  - Programming and debugging (target) through Serial Wire Debug (SWD)
  - Virtual COM-port interface to target via UART
  - Atmel Data Gateway interface (DGI) to target via USART or TWI
  - Four GPIOs connected to target for code instrumentation
  - Target USB connection with Host and Device support
- Digital I/O
  - Two mechanical buttons (including one reset button)
  - One user LED
  - Three extension headers
  - I^2C interface for SAM G55 high speed I2C slave
- Three possible power sources
  - External power
  - Embedded debugger USB
  - Target USB
- 32kHz crystal

1.2. Kit Overview

The Atmel SAM G55 Xplained Pro evaluation kit is a hardware platform to evaluate the Atmel ATSAMG55J19.

The kit offers a set of features that enables the SAM G55 user to get started using the SAM G55's peripherals right away and to get an understanding of how to integrate the SAM G55 in their own design.

Figure 1-1. SAM G55 Xplained Pro Evaluation Kit Overview



2. Getting Started

2.1. Xplained Pro Quick Start

Steps to start exploring the Atmel Xplained Pro platform:

1. Download Atmel Studio.
2. Launch Atmel Studio.
3. Connect a USB cable (Standard-A to Micro-B or Micro-AB) between the PC and the DEBUG USB port on the kit.

When the Xplained Pro MCU kit is connected to your computer for the first time, the operating system will perform a driver software installation. The driver file supports both 32- and 64-bit versions of Microsoft® Windows® XP, Windows Vista®, Windows 7, Windows 8, Windows 10, and Windows Server 2012.

Once the Xplained Pro MCU board is powered the green power LED will be lit and Atmel Studio will auto detect which Xplained Pro MCU- and extension board(s) are connected. Atmel Studio will present relevant information like datasheets and kit documentation. The kit landing page in Atmel Studio also has the option to launch Atmel Software Framework (ASF) example applications for the kit. The SAM G55 device is programmed and debugged by the on-board Embedded Debugger and therefore no external programmer or debugger tool is needed.

2.2. Design Documentation and Relevant Links

The following list contains links to the most relevant documents and software for the SAM G55 Xplained Pro.

- **Xplained products** - Atmel Xplained evaluation kits are a series of easy-to-use evaluation kits for Atmel microcontrollers and other Atmel products. For low pin-count devices the Xplained Nano series provides a minimalistic solution with access to all I/O pins of the target microcontroller. Xplained Mini kits are for medium pin-count devices and adds Arduino Uno compatible header footprint and a prototyping area. Xplained Pro kits are for medium to high pin-count devices, they features advanced debugging and standardized extensions for peripheral functions. All these kits have on board programmers/debuggers which creates a set of low-cost boards for evaluation and demonstration of features and capabilities of different Atmel products.
- **Atmel Studio** - Free Atmel IDE for development of C/C++ and assembler code for Atmel microcontrollers.
- **Atmel sample store** - Atmel sample store where you can order samples of devices.
- **EDBG User Guide** - User guide containing more information about the on-board Embedded Debugger.
- **IAR Embedded Workbench® for ARM®** - This is a commercial C/C++ compiler that is available for ARM®. There is a 30 day evaluation version as well as a code size limited kick-start version available from their website. The code size limit is 16KB for devices with M0, M0+, and M1 cores and 32KB for devices with other cores.
- **Atmel Data Visualizer** - Atmel Data Visualizer is a program used for processing and visualizing data. Data Visualizer can receive data from various sources such as the Embedded Debugger Data Gateway Interface found on Xplained Pro boards and COM ports.
- **Hardware Users Guide in PDF format** - PDF version of this User Guide.
- **Design Documentation** - Package containing CAD source, schematics, BOM, assembly drawings, 3D plots, layer plots etc.

- **SAM G55 Xplained Pro on the Atmel website** - Atmel website link.

3. Xplained Pro

Xplained Pro is an evaluation platform that provides the full Atmel microcontroller experience. The platform consists of a series of Microcontroller (MCU) boards and extension boards, which are integrated with Atmel Studio, have Atmel Software Framework (ASF) drivers and demo code, support data streaming, and more. Xplained Pro MCU boards support a wide range of Xplained Pro extension boards, which are connected through a set of standardized headers and connectors. Each extension board has an identification (ID) chip to uniquely identify which boards are connected to an Xplained Pro MCU board. This information is used to present relevant user guides, application notes, datasheets, and example code through Atmel Studio.

3.1. Embedded Debugger

The SAM G55 Xplained Pro contains the Atmel Embedded Debugger (EDBG) for on-board debugging. The EDBG is a composite USB device of three interfaces; a debugger, Virtual COM Port, and a Data Gateway Interface (DGI).

Together with Atmel Studio, the EDBG debugger interface can program and debug the ATSAMG55J19. On SAM G55 Xplained Pro, the SWD interface is connected between the EDBG and the ATSAMG55J19.

The Virtual COM Port is connected to a UART on the ATSAMG55J19 and provides an easy way to communicate with the target application through terminal software. It offers variable baud rate, parity, and stop bit settings. Note that the settings on the ATSAMG55J19 must match the settings given in the terminal software.



Info: The virtual COM port in the EDBG requires the terminal software to set the data terminal ready (DTR) signal to enable the UART pins connected to the ATSAMG55J19. If the DTR signal is not enabled the UART pins on the EDBG is kept in high-z (tristate) rendering the COM port unusable. The DTR signal is set automatically by some terminal software, but it may have to be manually enabled in your terminal.

The DGI consists of several physical interfaces for communication with the host computer. Communication over the interfaces is bidirectional. It can be used to send events and values from the ATSAMG55J19 or as a generic printf-style data channel. Traffic over the interfaces can be timestamped on the EDBG for more accurate tracing of events. Note that timestamping imposes an overhead that reduces maximal throughput. Atmel Data Visualizer is used to send and receive data through DGI.

The EDBG controls two LEDs on SAM G55 Xplained Pro; a power LED and a status LED. The table below shows how the LEDs are controlled in different operation modes.

Table 3-1. EDBG LED Control

Operation mode	Power LED	Status LED
Normal operation	Power LED is lit when power is applied to the board.	Activity indicator, LED flashes when any communication happens to the EDBG.
Bootloader mode (idle)	The power LED and the status LED blinks simultaneously.	
Bootloader mode (firmware upgrade)	The power LED and the status LED blinks in an alternating pattern.	

For further documentation on the EDBG, see the EDBG User Guide.

3.2. Hardware Identification System

All Xplained Pro compatible extension boards have an Atmel ATSHA204 CryptoAuthentication™ chip mounted. This chip contains information that identifies the extension with its name and some extra data. When an Xplained Pro extension is connected to an Xplained Pro MCU board the information is read and sent to Atmel Studio. The Atmel Kits extension, installed with Atmel Studio, will give relevant information, code examples, and links to relevant documents. The table below shows the data fields stored in the ID chip with example content.

Table 3-2. Xplained Pro ID Chip Content

Data field	Data type	Example content
Manufacturer	ASCII string	Atmel'\0'
Product Name	ASCII string	Segment LCD1 Xplained Pro'\0'
Product Revision	ASCII string	02'\0'
Product Serial Number	ASCII string	1774020200000010'\0’
Minimum Voltage [mV]	uint16_t	3000
Maximum Voltage [mV]	uint16_t	3600
Maximum Current [mA]	uint16_t	30

3.3. Power Sources

The SAM G55 Xplained Pro kit can be powered by several power sources as listed in the table below.

Table 3-3. Power Sources for SAM G55 Xplained Pro

Power input	Voltage requirements	Current requirements	Connector marking
External power	5V ±2% (±100mV) for USB host operation. 4.3V to 5.5V if USB host operation is not required.	Recommended minimum is 1A to be able to provide enough current for connected USB devices and the board itself. Recommended maximum is 2A due to the input protection maximum current specification.	PWR
Embedded debugger USB	4.4V to 5.25V (according to USB spec.)	500mA (according to USB spec.)	DEBUG USB
Target USB	4.4V to 5.25V (according to USB spec.)	500mA (according to USB spec.)	TARGET USB

The kit will automatically detect which power sources are available and choose which one to use according to the following priority:

1. External power.
2. Embedded Debugger USB.
3. Target USB.

Info: External power is required when 500mA from a USB connector is not enough to power the board with possible extension boards. A connected USB device in a USB host application might easily exceed this limit.

3.4. Xplained Pro Headers and Connectors

3.4.1. Xplained Pro Standard Extension Header

All Xplained Pro kits have one or more dual row, 20-pin, 100mil extension header. Xplained Pro MCU boards have male headers, while Xplained Pro extensions have their female counterparts. Note that all pins are not always connected. All connected pins follow the defined pin-out description in the table below.

The extension headers can be used to connect a variety of Xplained Pro extensions to Xplained Pro MCU boards or to access the pins of the target MCU on Xplained Pro MCU boards directly.

Table 3-4. Xplained Pro Standard Extension Header

Pin number	Name	Description
1	ID	Communication line to the ID chip on an extension board
2	GND	Ground
3	ADC(+)	Analog to digital converter, alternatively positive part of differential ADC
4	ADC(-)	Analog to digital converter, alternatively negative part of differential ADC
5	GPIO1	General purpose I/O
6	GPIO2	General purpose I/O
7	PWM(+)	Pulse width modulation, alternatively positive part of differential PWM
8	PWM(-)	Pulse width modulation, alternatively negative part of differential PWM
9	IRQ/GPIO	Interrupt request line and/or general purpose I/O
10	SPI_SS_B/ GPIO	Slave select for SPI and/or general purpose I/O
11	I^2C_SDA	Data line for I^2C interface. Always implemented, bus type.
12	I^2C_SCL	Clock line for I^2C interface. Always implemented, bus type.
13	UART_RX	Receiver line of target device UART
14	UART_TX	Transmitter line of target device UART

Pin number	Name	Description
15	SPI_SS_A	Slave select for SPI. Should preferably be unique.
16	SPI_MOSI	Master out slave in line of serial peripheral interface. Always implemented, bus type.
17	SPI_MISO	Master in slave out line of serial peripheral interface. Always implemented, bus type.
18	SPI_SCK	Clock for serial peripheral interface. Always implemented, bus type.
19	GND	Ground
20	VCC	Power for extension board

3.4.2. Xplained Pro Power Header

The power header can be used to connect external power to the SAM G55 Xplained Pro kit. The kit will automatically detect and switch to any external power if supplied. The power header can also be used as supply for external peripherals or extension boards. Care must be taken not to exceed the total current limitation of the on-board regulator when using the 3.3V pin.

Table 3-5. Xplained Pro Power Header

Pin number	Pin name	Description
1	VEXT_P5V0	External 5V input
2	GND	Ground
3	VCC_P5V0	Unregulated 5V (output, derived from one of the input sources)
4	VCC_P3V3	Regulated 3.3V (output, used as main power supply for the kit)

4. Hardware User Guide

4.1. Connectors

This chapter describes the implementation of the relevant connectors and headers on SAM G55 Xplained Pro and their connection to the ATSAMG55J19. The tables of connections in this chapter also describes which signals are shared between the headers and on-board functionality.

4.1.1. Xplained Pro Standard Extension Headers

The SAM G55 Xplained Pro headers EXT1, EXT3, and EXT4 offer access to the I/O of the microcontroller in order to expand the board by connecting extensions to the board. All these headers comply with the Xplained Pro standard extension header specification. The headers have a pitch of 2.54mm.

Table 4-1. Extension Header EXT1

Pin on EXT1	SAM G55 pin	SAM G55 Peripheral Function	Shared Functionality
1 [ID]	-	-	Communication line to ID chip on extension board.
2 [GND]	-	-	GND
3 [ADC(+)]	PA17	AD0	
4 [ADC(-)]	PA18	AD1	
5 [GPIO1]	PA26	GPIO	UART0 RTS
6 [GPIO2]	PA25	GPIO	UART0 CTS
7 [PWM(+)]	PA00	TIOA0	
8 [PWM(-)]	PA23	TIOA1	
9 [IRQ/GPIO]	PA24	WKUP11	
10 [SPI_SS_B/GPIO]	PA29	GPIO	
11 [TWI_SDA]	PB10	TWD4	
12 [TWI_SCL]	PB11	TWCK4	
13 [USART_RX]	PA09	USART RXD (URXD0)	
14 [USART_TX]	PA10	USART TXD (UTXD0)	
15 [SPI_SS_A]	PA11	SPI NPCS0	
16 [SPI_MOSI]	PA13	SPI MOSI	EXT3 connector
17 [SPI_MISO]	PA12	SPI MISO	EXT3 connector
18 [SPI_SCK]	PA14	SPI SCK	EXT3 connector
19 [GND]	-	-	GND
20 [VCC]	-	-	VCC

Table 4-2. Extension Header EXT3

Pin on EXT3	SAM G55 pin	SAM G55 Shared Functionality	Shared Functionality
1 [ID]	-	-	Communication line to ID chip on extension board.
2 [GND]	-	-	GND
3 [ADC(+)]	PA19	AD2	
4 [ADC(-)]	PA20	AD3	
5 [GPIO1]	PA30	GPIO	
6 [GPIO2]	PB15	GPIO	
7 [PWM(+)]	PA01	TIOB0	
8 [PWM(-)]	PB13	GPIO	
9 [IRQ/GPIO]	PB03	WKUP13	
10 [SPI_SS_B/GPIO]	PA15	GPIO	
11 [TWI_SDA]	PB08	TWD4	
12 [TWI_SCL]	PB09	TWCK4	
13 [USART_RX]	PB01	USART6 RXD	EDBG (DGI USART)
14 [USART_TX]	PB00	USART0 TXD	EDBG (DGI USART)
15 [SPI_SS_A]	PA05	SPI NPCS1	
16 [SPI_MOSI]	PA13	SPI MOSI	EXT1 connector (SPI MOSI)
17 [SPI_MISO]	PA12	SPI MISO	EXT1 connector (SPI MISO)
18 [SPI_SCK]	PA14	SPI SCK	EXT1 connector (SPI SCK)
19 [GND]	-	-	GND
20 [VCC]	-	-	VCC

Table 4-3. Extension Header EXT4

Pin on EXT4	SAM G55 pin	SAM G55 Peripheral Function	Shared Functionality
1 [ID]	-	-	Communication line to ID chip on extension board.
2 [GND]	-	-	GND
3 [ADC(+)]	-	-	
4 [ADC(-)]	-	-	
5 [GPIO1]	PA31	GPIO	PCK2
6 [GPIO2]	-	-	
7 [PWM(+)]	-	-	

Pin on EXT4	SAM G55 pin	SAM G55 Peripheral Function	Shared Functionality
8 [PWM(-)]	-	-	
9 [IRQ/GPIO]	PB14	-	
10 [SPI_SS_B/GPIO]	-	-	
11 [TWI_SDA]	PB10	TWD4	EDBG and EXT1 connector (TWI)
12 [TWI_SCL]	PB11	TWCK1	EDBG and EXT1 connector (TWI)
13 [USART_RX]	-	-	
14 [USART_TX]	-	-	
15 [SPI_SS_A]	-	-	
16 [SPI_MOSI]	-	-	
17 [SPI_MISO]	-	-	
18 [SPI_SCK]	-	-	
19 [GND]	-	-	GND
20 [VCC]	-	-	VCC

4.1.2. High Speed TWI Interface

The extension connector marked with "Host I^{2}C" targets I^{2}C hosts that want to connect to the SAM G55 high speed I^{2}C slave interface. Besides I^{2}C communication, a GPIO and the SAM G55 reset are available. The GPIO can serve as a IRQ to the host and the reset can be used by the host to reset the SAM G55.

Table 4-4. SAM G55 High Speed I^{2}C Slave Interface

Pin on I^{2}C Connector	Pin on SAM G55	SAM G55 Peripheral Function	Shared Functionality
1	-	-	
2	PA01	NCHG	TIOB0
3	PA16	GPIO	WKUP7
4	RESET	Reset	
5	PA03	TWD0	
6	PA04	TWCK0	
7	-	-	VCC
8	-	-	GND

4.1.3. Current Measurement Header

An angled 1x2, 100mil pin-header marked with MCU current measurement is located at the upper edge of the SAM G55 Xplained Pro. All power to the ATSAMG55J19 is routed through this header. To measure the power consumption of the device remove the jumper and replace it with an ammeter.

Caution: Removing the jumper from the pin-header while the kit is powered may cause the ATSAMG55J19 to be powered through its I/O pins. This may cause permanent damage to the device.

4.2. Peripherals

4.2.1. Crystals

The SAM G55 Xplained Pro kit contains a 32kHz crystal mounted on it along with a footprint for a second crystal. The crystal circuit has a cut-strap next to it which can measure the oscillator safety factor. This is performed by cutting the strap and adding a resistor across the strap. More information about oscillator allowance and safety factor can be found in application note AVR4100.

Table 4-5. External 32.768kHz Crystal

Pin on SAM G55	Function
PA07	XIN32
PA08	XOUT32

The additional crystal's pins are shared with the TWI lines in EXT3. Remove the 0Ω resistors R307 and R306 before mounting this crystal.

Table 4-6. Footprint for Additional Crystal

Pin on SAM G55	Function
PB09	XIN
PB08	XOUT

4.2.2. Mechanical Buttons

The SAM G55 Xplained Pro contains two mechanical buttons. One button is the RESET button connected to the SAM G55 reset line and the other is a generic user configurable button. When a button is pressed it will drive the I/O line to GND.

Table 4-7. Mechanical Buttons

Pin on SAM G55	Silkscreen Text
NRST	RESET
PA02	SW0

4.2.3. LED

An yellow LED is available on the SAM G55 Xplained Pro board. The LED can be activated by driving the connected I/O line to GND.

Table 4-8. LED Connections

Pin on SAM G55	LED
PA06	Yellow LED0

4.2.4. USB

There is an USB available on the SAM G55 Xplained Pro board that can act as both host and device. It has a micro usb connector with the silk screen TARGET USB.

Table 4-9. USB Connections

Pin on SAM G55	USB
PA22	DP
PA21	DM
PB02	USB ID

4.3. Embedded Debugger Implementation

The SAM G55 Xplained Pro contains an Embedded Debugger (EDBG) that can be used to program and debug the ATSAMG55J19 using Serial Wire Debug (SWD). The Embedded debugger also provides a Virtual Com port interface over UART, an Atmel Data Gateway Interface over UART and TWI, and it monitors four of the SAM G55 GPIOs. Atmel Studio can be used as a front end for the Embedded Debugger.

4.3.1. Serial Wire Debug

The Serial Wire Debug (SWD) uses two pins to communicate with the target. For further information on how to use the programming and debugging capabilities of the EDBG, see the EDBG user guide.

Table 4-10. SWD Connections

Pin on SAM G55	Function
PB07	SWD clock
PB06	SWD data
PB05	SWD trace data

4.3.2. Virtual COM Port

The Embedded Debugger act as a Virtual Com Port gateway by using one of the ATSAMG55J19 UARTs. For further information about using the Virtual COM port see the EDBG user guide.

Table 4-11. Virtual COM Port Connections

Pin on SAM G55	Function
PA28	UART TXD (SAM G55 TX line)
PA27	UART RXD (SAM G55 RX line)

4.3.3. Atmel Data Gateway Interface

The Embedded Debugger features an Atmel Data Gateway Interface (DGI) by using either UART or TWI. The DGI can be used to send a variety of data from the SAM G55 to the host PC. For further information about using the DGI interface see the EDBG user guide.

Table 4-12. DGI Interface Connections Using USART

Pin on SAM G55	Function
PB00	USART TXD (SAM G55 TX line)
PB01	USART RXD (SAM G55 RX line)
PB13	USART CLK

Table 4-13. DGI Interface Connections Using TWI

Pin on SAM G55	Function
PB10	SDA (Data line)
PB11	SCL (Clock line)

Four GPIO lines are connected to the Embedded Debugger. The EDBG can monitor these lines and time stamp pin value changes. This enables to accurately time stamp events in the SAM G55 application code. For further information about configuring and using the GPIO monitoring features see the EDBG user guide.

Table 4-14. GPIO Lines Connected to EDBG

Pin on SAM G55	Function
PA02	GPIO0
PA06	GPIO1
PA24	GPIO2
PB14	GPIO3

4.4. Jumper Description

The SAM G55 Xplained Pro contains two jumpers that can be used to configure the functionality of the board. You can locate the jumpers in the kit overview picture at the start of the user guide.

Related Links

Kit Overview on page 3

4.4.1. Chip Erase Jumper

When this jumper is placed on the CHIPERASE header the SAM G55 performs a chip erase after the next power toggle of the board. For normal operation, this jumper should be placed such that only one of the pins of the CHIPERASE header is connected and no contact is made between the two pins.

5. Appendix

5.1. Getting Started with IAR

IAR Embedded Workbench® for ARM® is a proprietary high efficiency compiler not based on GCC. Programming and debugging of Xplained Pro kits are supported in IAR™ Embedded Workbench for ARM using the common CMSIS-DAP interface. Some initial settings have to be set up in the project to get the programming and debugging to work.

The following steps will explain how to get your project ready for programming and debugging:

1. Make sure you have opened the project you want to configure. Open the **OPTIONS** dialog for the project.
2. In the category **General Options**, select the **Target** tab. Select the device for the project or, if not listed, the core of the device.
3. In the category **Debugger**, select the **Setup** tab. Select **CMSIS DAP** as the driver.
4. In the category **Debugger**, select the **Download** tab. Check the check box for **Use flash loader(s)** option.
5. In the category **Debugger** > **CMSIS DAP**, select the **Setup** tab. Select **System (default)** as the reset method.
6. In the category **Debugger** > **CMSIS DAP**, select the **JTAG/SWD** tab. Select **SWD** as the interface and optionally select the **SWD speed**.

Figure 5-1. Select Target Device

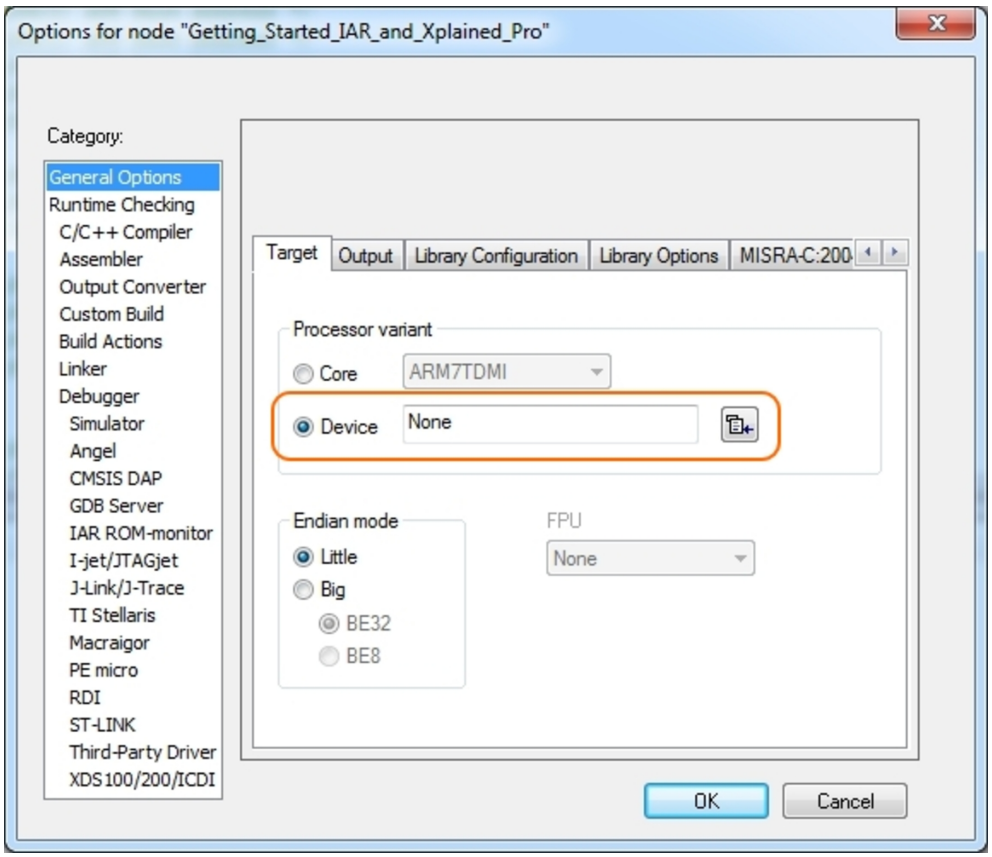


Figure 5-2. Select Debugger

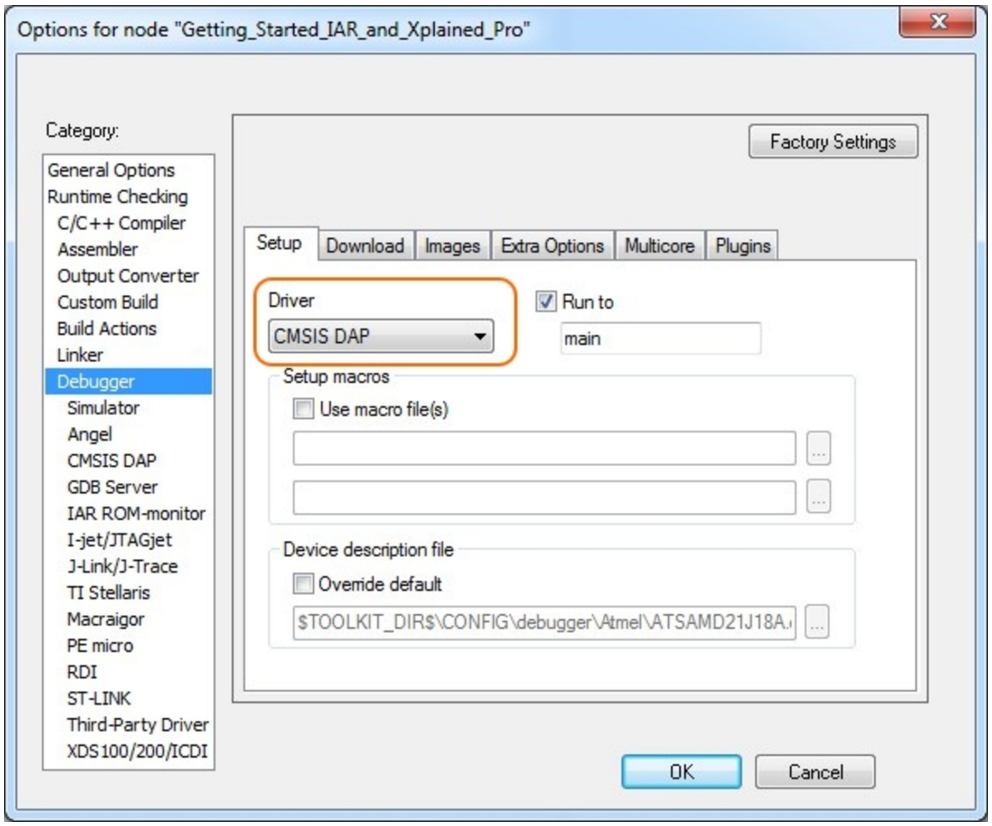


Figure 5-3. Configure Flash Loader

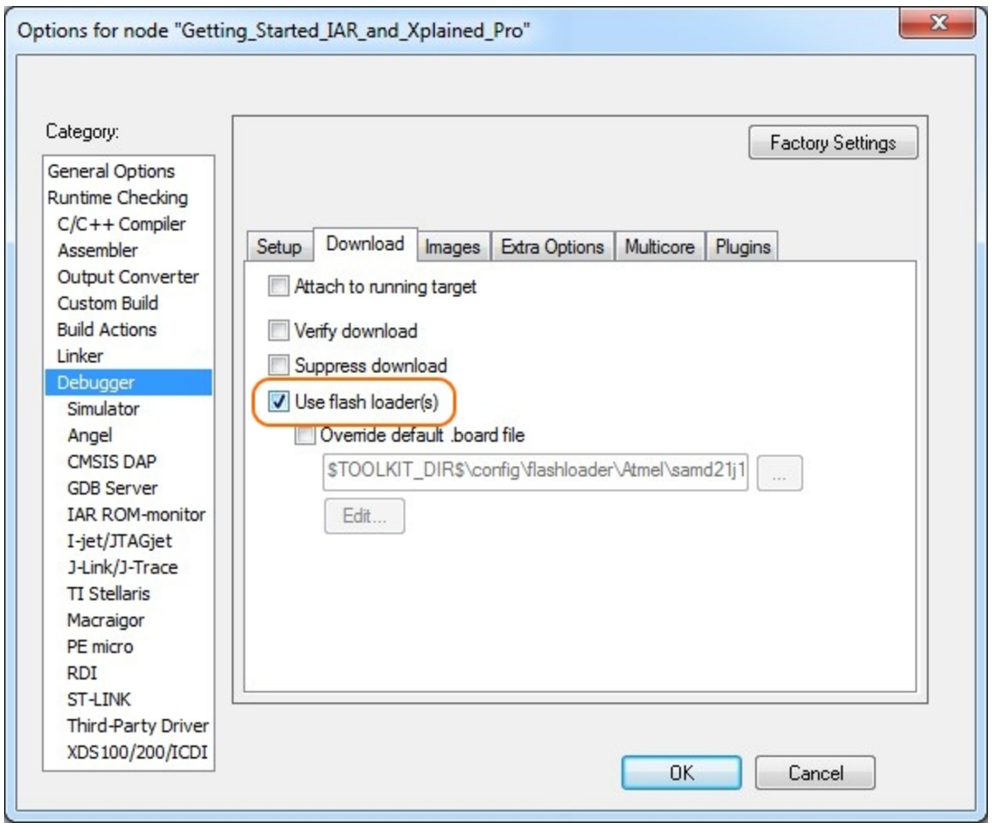


Figure 5-4. Configure Reset

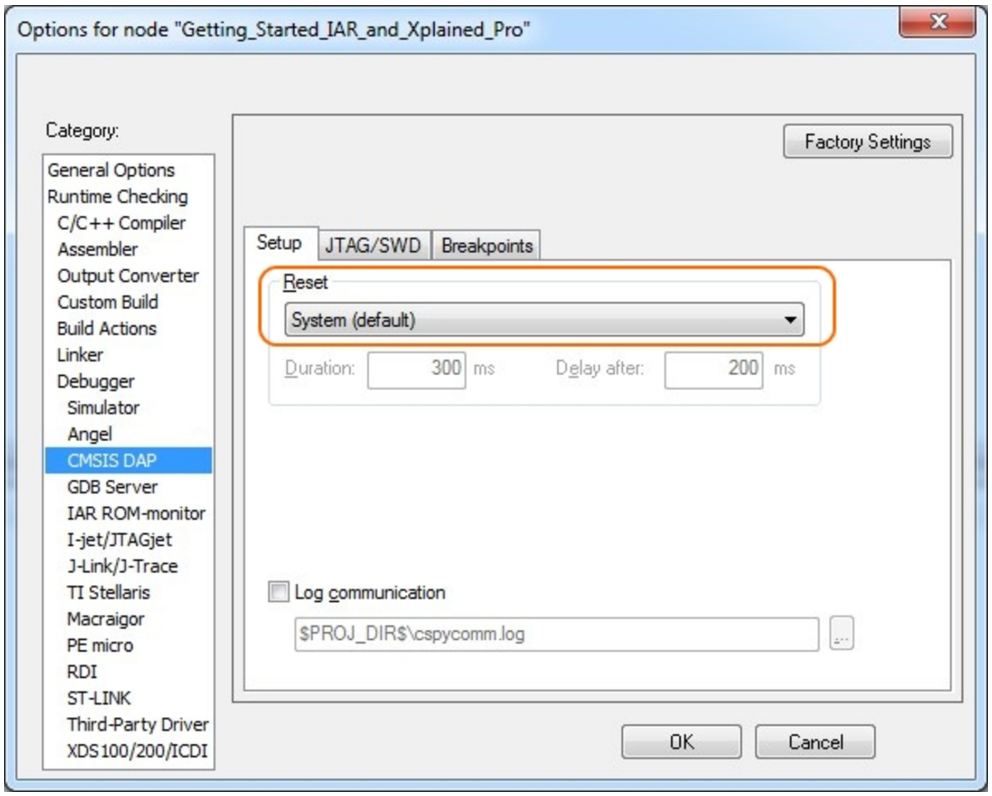
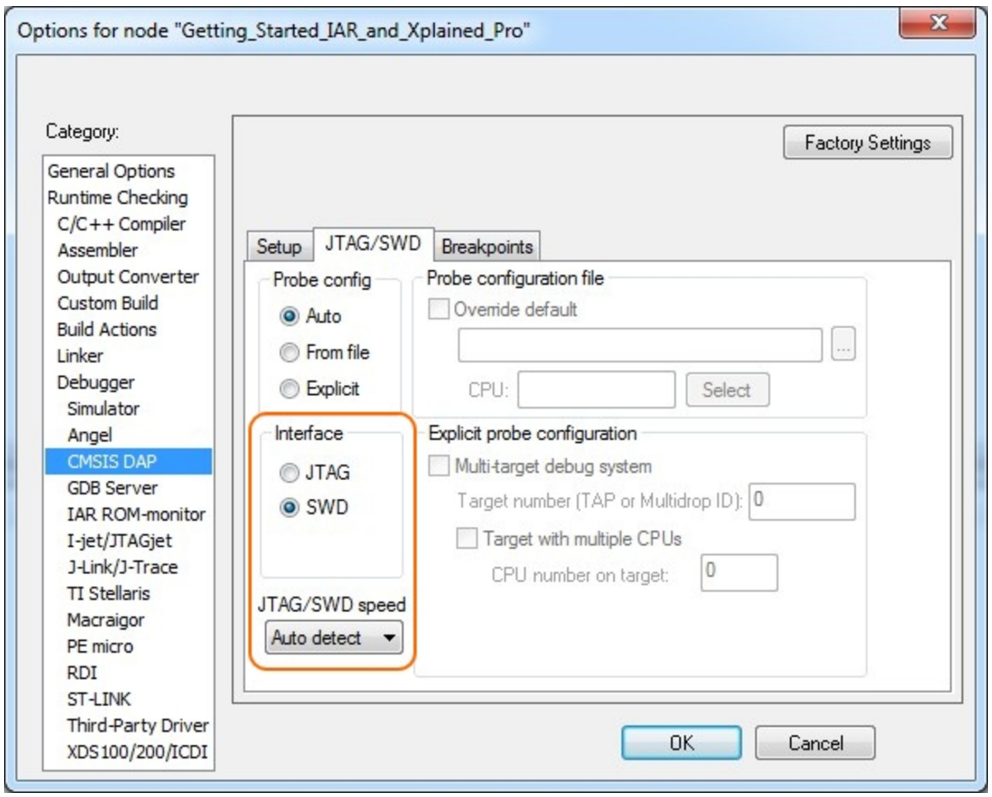


Figure 5-5. Configure Interface



5.2. Connecting a SAM-ICE to an Xplained Pro Board

Xplained Pro kits featuring a 10-pin 50mil debug connector can use external debug tools like SAM-ICE™ or Atmel-ICE instead of the built-in EDBG. Devices using SWD interface on-board will have a connector with the pinout compatible with the Cortex Debug Connector.

You can connect the SAM-ICE to the debug connector on an Xplained Pro using either an Atmel-ICE adapter, SAM-ICE adapter, or a 10-pin 50-mil header to squid cable. When using a squid cable, see the table and figures below for how to connect the SAM-ICE to the Xplained Pro board.

Table 5-1. Squid Cable Connections

Squid Cable pin	SAM-ICE pin
1 (VCC)	1 (VTref)
2 (SWDIO/TMS)	7 (TMS)
3 (GND)	4 (GND)
4 (SWCLK/TCK)	9 (TCK)
5 (GND)	6 (GND)
6 (SWO/TDO)	13 (TDO) (1)
7 (Not used)	
8 (Not used)	
9 (Not used)	
10 (RESET)	15 (RESET)

Note:

1. Optional, if the device has this functionality.

Figure 5-6. SAM-ICE using a Squid Cable



Figure 5-7. SAM-ICE using an Atmel-ICE Adapter



Important:
If contention with the on-board EDBG occur, power the Xplained Pro board from another input like the external power header or from the target USB. Physically removing the connection between the EDBG and the debug header by removing 0Ω resistors, where available, or cutting the tracks to the EDBG can also be done.

6. Hardware Revision History and Known Issues

6.1. Identifying Product ID and Revision

The revision and product identifier of Xplained Pro boards can be found in two ways; either through Atmel Studio or by looking at the sticker on the bottom side of the PCB.

By connecting an Xplained Pro MCU board to a computer with Atmel Studio running, an information window will pop up. The first six digits of the serial number, which is listed under kit details, contain the product identifier and revision. Information about connected Xplained Pro extension boards will also appear in the Atmel Kit's window.

The same information can be found on the sticker on the bottom side of the PCB. Most kits will print the identifier and revision in plain text as A09-nnnn\rr, where nnnn is the identifier and rr is the revision. Boards with limited space have a sticker with only a QR-code, which contains a serial number string.

The serial number string has the following format:

"nnnnrrssssssssss"

n = product identifier

r = revision

s = serial number

The product identifier for SAM G55 Xplained Pro is A09-2393.

6.2. Revision 3

Revision 3 of SAM G55 Xplained Pro is the initial released version, there are no known issues.

7. Document Revision History

Doc. rev	Date	Comment
42389B	04/2016	Added appendix
42389A	02/2015	Initial Document Release

8. Evaluation Board/Kit Important Notice

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Mailing Address:

Atmel Corporation
1600 Technology Drive
San Jose, CA 95110
USA







Atmel Corporation 1600 Technology Drive, San Jose, CA 95110 USA **T:** (+1)(408) 441.0311 **F:** (+1)(408) 436.4200 | **www.atmel.com**

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