

Introduction

The CryptoAuth Trust Platform is a member of Microchip's CryptoAuthentication™ evaluation kits. This kit is used for exploring and developing solutions for the IoT space with a pre-provisioned ATECC608B Trust&GO, pre-configured TrustFLEX and fully customizable TrustCUSTOM products.

The Trust&GO and TrustFLEX products were developed to allow for an easy way to add hardware security to IoT Cloud solutions. Using the kit with the Microchip development tools and provisioning systems allows for customers with low volume projects to easily and readily implement secure authentication into their application.

This user guide provides a physical overview of the connections, components and features associated with the CryptoAuth Trust Platform development kit.

NOTICE

Previous versions of this board used the ATECC608A version of the devices. The ATECC608B devices operate identically to the ATECC608A versions of the device when used with the Trust Platform Design Suite. Pictures are for reference only.

Figure 1. CryptoAuth Trust Platform

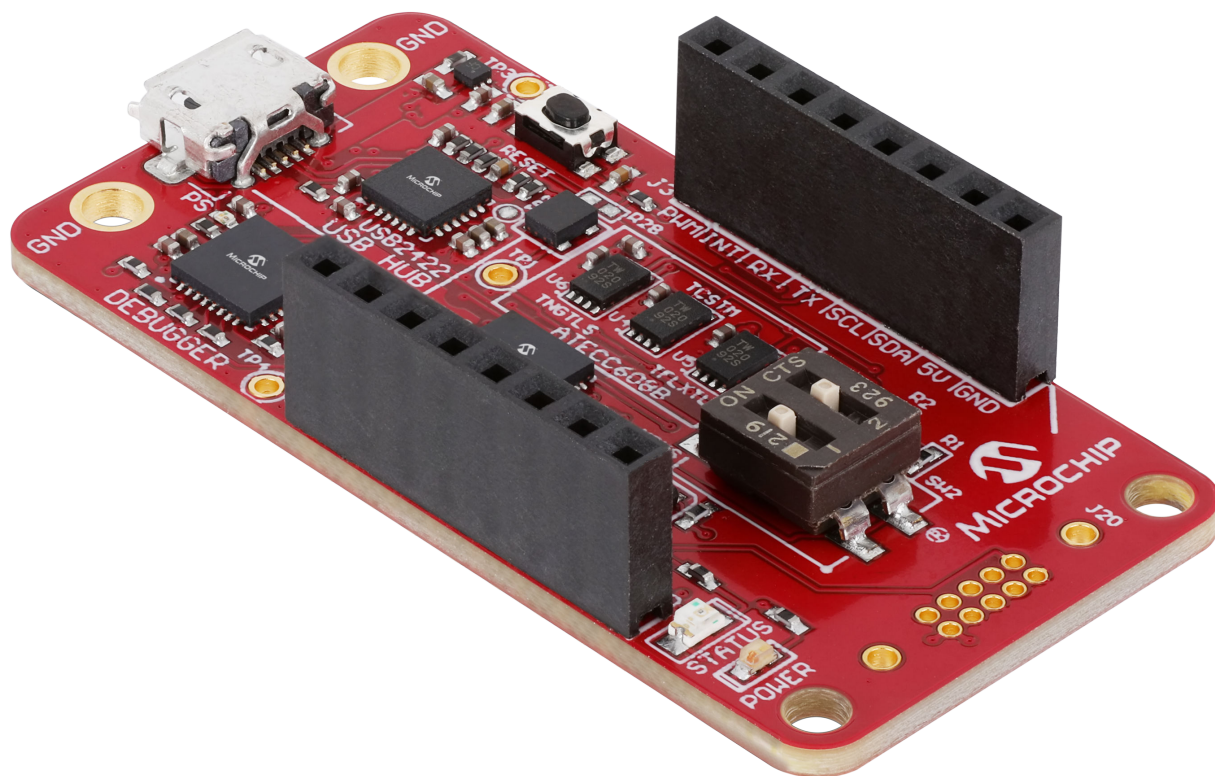


Table of Contents

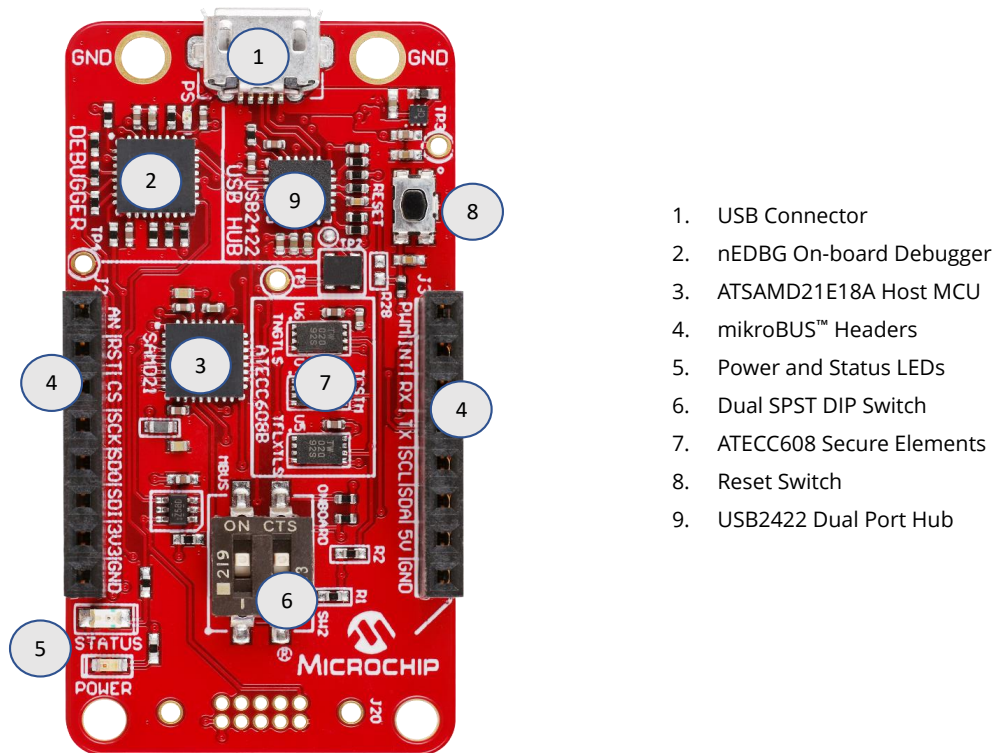
Introduction.....	1
1. Hardware Overview.....	3
1.1. Kit Ordering Code and Components.....	3
1.2. Functional Description.....	4
1.3. Hardware Documentation.....	5
2. mikroBUS™ and Click Add-On Boards.....	6
3. Software Requirements.....	8
3.1. Software Application Development.....	8
3.2. Firmware Upgrade.....	8
4. Document Revision History.....	10
Microchip Information.....	11
The Microchip Website.....	11
Product Change Notification Service.....	11
Customer Support.....	11
Microchip Devices Code Protection Feature.....	11
Legal Notice.....	11
Trademarks.....	12
Quality Management System.....	13
Worldwide Sales and Service.....	14

1. Hardware Overview

The CryptoAuth Trust Platform consists of a Microchip SAM D21 microcontroller configured as the main MCU. It comes pre-programmed with Microchip`s Secure Computing Group (SCG) kit protocol. This protocol facilitates the communication between the CryptoAuthentication device(s) and the host MCU over the USB HID interface. The data transfer between the secure element(s) and the host MCU is indicated by the Status LED.

The trust platform consists of three secure elements: ATECC608B-TNGTLS ([Trust&GO](#)), ATECC608B-TFLXTLS Prototype ([TrustFLEX](#)) and ATECC608B-MAHDA ([TrustCUSTOM](#)). Each of the secure elements has a different I²C address that enables its communication with the host MCU, which eliminates the line contention issue.

Figure 1-1. CryptoAuth Trust Platform Board Components



1. USB Connector
2. nEDBG On-board Debugger
3. ATSAM D21E18A Host MCU
4. mikroBUS™ Headers
5. Power and Status LEDs
6. Dual SPST DIP Switch
7. ATECC608 Secure Elements
8. Reset Switch
9. USB2422 Dual Port Hub

1.1 Kit Ordering Code and Components

Ordering Information

Kit Name: [CryptoAuth Trust Platform Development Kit](#)

Ordering Code: DM320118

Availability: The kit will be available from Microchip Direct and multiple distributors.

CryptoAuth Trust Platform Kit Contents and Requirements

The CryptoAuth Trust Platform Kit contains:

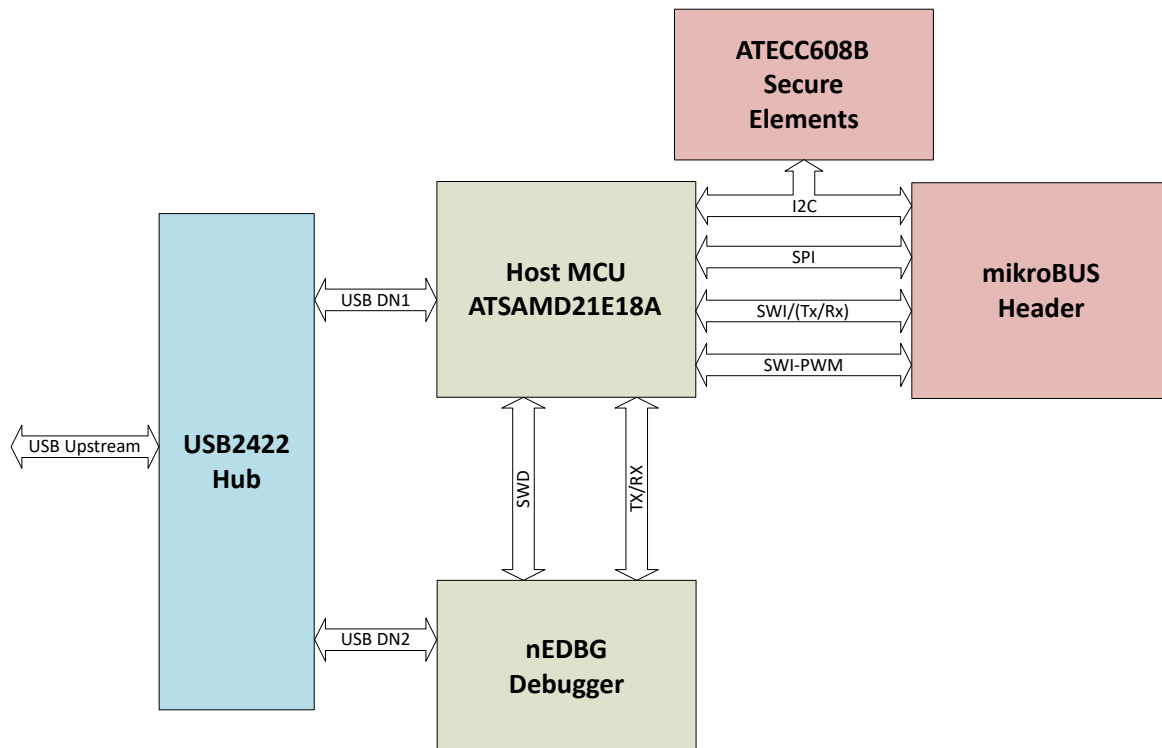
- CryptoAuth Trust Platform board

A micro USB cable (not included) is required to operate the board.

1.2 Functional Description

The block diagram below illustrates the major connections of the CryptoAuth Trust Platform. For additional details, refer to the board schematics referenced in [1.3. Hardware Documentation](#).

Figure 1-2. Block Diagram



Main Board Components

- **ATSAMD21E18A:** The Microchip SAM D21 is an ARM® Cortex M0+ based microcontroller. The MCU connects to the secure element via I²C. The mikroBUS header has I²C, SPI, UART, GPIO and analog connections to the microcontroller. This enables the possibility of using the CryptoAuth Trust Platform with many types of MikroElektronika Click boards™.

- **Secure Elements:**

The CryptoAuth Trust Platform contains three security ICs, as listed in the table below. Refer to the specific data sheets associated with each of these devices for more details.

Device	Default 7-bit I ² C Address	8-bit Programmed I ² C Address Value ⁽¹⁾
ATECC608B-TNGTLS	0x35	0x6A
ATECC608B-TFLXTLS	0x36	0x6C
ATECC608B-MAHDA	0x60	0xC0

Note:

1. This is the I2C_Address byte value programmed into the secure element device.
- **mikroBUS Header:** The mikroBUS header is a pre-defined header connection for all the MikroElektronika boards. This lets the user connect many types of Click sensors and add-on boards to the Trust Platform. The Trust Platform supports the following interfaces:
 - a. Serial Peripheral Interface (SPI) – Needed to support the TA100 and TA101 cryptography devices but can also support any mikroBUS board with a SPI interface.
 - b. I²C – Supports any mikroBUS or click board with an I²C Interface. Boards that are often combined with the Trust Manager are other Microchip mikroBUS cryptography boards, socket boards from mikroElektronika and Microchip and sensor boards used for IoT devices.
 - c. SWI - UART – Supports the proprietary Single Wire Interface (SWI) for devices such as the ATECC608 family of devices and the ATSHA204A.
 - d. SWI-PWM – Supports the SWI Interface with the Pulse Width Modulated signaling for the Microchip Authentication ICs for the SHA104, SHA105, SHA106, ECC204, ECC206, TA010
 - **GPIO Signals:** GPIO signals not used for any other purpose can be used as appropriate.
 - **DIP Switch:** The switch is used to select between the on-board Trust Platform devices and the mikroBUS header. The switches disconnect the SDA lines of the I²C interface to prevent conflict in case two I²C addresses are the same. Both switches can be enabled if all I²C addresses are unique on all devices connected to the board.

Switch Settings		What is Enabled	
SW2_1	SW2_2	mikroBUS Header	On-Board Devices
ON	ON	Yes	Yes
OFF	ON	No	Yes
ON	OFF	Yes	No
OFF	OFF	No	No

- **nEDBG Debugger:** The debugger is used to program and flash the host MCU. Debug information can also be read back from the host MCU through the debugger interface. When plugged into the system and opened with MPLAB[®] X IDE, the nEDBG debugger will display with a serial number of MCHP3311xxxxxxx.
- **USB Hub:** The Microchip USB2422 is a dual-port USB hub. The hub passes data between the upstream port and the downstream devices. The downstream devices are the debugger and the host MCU.

1.3 Hardware Documentation

Additional documentation for the kit can be found on the Microchip Website for the [DM320118](#).

This includes:

1. Board Design Documentation including Schematics and 3D Views
2. Gerber Files
3. CryptoAuth Trust Platform User's Guide (DM320118)
4. Trust Platform Design Suite Tools

2. mikroBUS™ and Click Add-On Boards

The mikroBUS connector has emerged as a defacto industry-standard add-on board form factor. The CryptoAuth Trust Platform board has a single mikroBUS host connector. Having this capability dramatically expands the usefulness of this board for developing and prototyping new applications. All of the boards listed below were developed by Microchip or MikroElektronika with support from Microchip.

Table 2-1. mikroBUS Add-On Boards

Board Name	Devices Supported	Manufacturer	Description
ATECC608_TRUST DT100104⁽²⁾	ATECC608B-TNGTLS ATECC608B-TFLXTLS ATECC608B-MAHDA	Microchip	The ATECC608B Trust board provides additional sample units for doing development work. This board was developed as an alternative to using socketed boards. Each of the devices can be individually selected using the on-board DIP switches.
TA010 CRYPTOAUTO EV74C12A	TA010	Microchip	The TA010 CryptoAuto board
ECC204 CRYPTOAUTH EV92R58A	ECC204	Microchip	The ECC204 CryptoAuth board
TA100-24 EV39Y17A	TA100	Microchip	The TA100-24 socket board for the 24 VQFN device
TA100-08 AC164167	TA100 and TA010	Microchip	The TA100-08 was developed as an 8-pin SOIC socketed solution for configuring and provisioning CryptoAuto™ devices. These devices may be used to mount to early prototype or production boards.
Contact 3 EV27Y72A	RBH parts	Microchip	The 3 Lead Contact board was developed as an 3 Lead RBH socketed solution for configuring and provisioning CryptoAuth™ devices. These devices may be used to mount to early prototype or production boards.
VSNF socket EV98D91A	SHA106	Microchip	The uVSNF 2 Lead Contact board was developed as a 2 Lead uVSNF socketed solution for configuring and provisioning the SHA106. These devices may be used to mount to early prototype or production boards.
Secure UDFN Click	All Microchip CryptoAuthentication devices	MikroElektronika	The secure UDFN Click board™ was developed as an 8-pin UDFN socketed solution for configuring and provisioning CryptoAuthentication™ devices. These devices may be used to mount to early prototype or production boards.
Secure SOIC Click	All Microchip CryptoAuthentication devices	MikroElektronika	The secure SOIC click board was developed as an 8-pin SOIC socketed solution for configuring and provisioning CryptoAuthentication devices. These devices may be used to mount to early prototype or production boards.
WiFi 7 Click	ATWINC1510	MikroElektronika	This is the WiFi® module utilizing the ATWINC510. The board supports IEEE® 802.11 b/g/n protocols and communicates over the SPI interface.
Secure 4 Click⁽¹⁾	ATECC608A	MikroElektronika	This has a generic ATECC608A secure element with an I ² C interface. This device is a previous version of the ATECC608B TrustCustom device that is mounted on the CryptoAuth Trust Platform board.
Secure Click⁽¹⁾	ATECC508A	MikroElektronika	This has a generic ATECC508A secure element with an I ² C interface.
Secure 3 Click	ATSHA204A	MikroElektronika	This has a generic ATSHA204A secure element with an I ² C interface. The device has a cryptographic coprocessor with symmetric secure hardware-based key storage.
Secure 6 Click	ATSHA204A	MikroElektronika	This has a generic ATSHA204A secure element with a SWI interface. The device has a cryptographic coprocessor with symmetric secure hardware-based key storage.

.....continued

Board Name	Devices Supported	Manufacturer	Description
mikroBUS Shuttle	Click expansion boards	MikroElektronika	The mikroBUS Shuttle is a small add-on board that can be used to expand the mikroBUS to multiple mikroBUS connectors.
Shuttle Click	Click expansion boards	MikroElektronika	The Shuttle Click is a socket expansion board that provides an elegant solution for stacking up to four Click boards.

Notes:

1. Not recommended for new designs.
2. A previous version of the board used ATECC608A devices.

3. Software Requirements

The CryptoAuth Trust Platform can be used in a variety of ways. These include:

1. As a development tool in conjunction with Microchip's Trust Platform Design Suite of use case tools.
2. As a development and demonstration platform for Microchip predefined applications.
3. As a development platform to develop your own applications using Microchip's Python®-based tools or C-based tools.

Various software tools are available to work with the CryptoAuth Trust Platform.

3.1 Software Application Development

The following tools are useful for developing or modifying applications.

Trust Platform Design Suite

The [Microchip Trust Platform Design Suite](#) of use case tools are based on Jupyter Notebooks and Python programs to allow a developer to quickly define and develop applications for the Trust Platform products.

The Microchip Trust Platform Design Suite provides the ability to interoperate with the on-board ATECC608B CryptoAuthentication devices or CryptoAuthentication devices attached through the mikroBUS header. The tool provides an easy way to select from available device options and generate the required configuration files needed for provisioning. The tool can also be used to develop applications utilizing the CryptoAuth Trust Platform.

MPLAB X IDE

[MPLAB X](#) is an Integrated Development Environment (IDE) that works on Windows®, macOS® and Linux® environments. The tools can be used to develop new embedded applications using the on-board SAM D21 microcontroller. The tool will automatically make use of the on-board nEDBG debugger to program the SAM D21 microcontroller. The debugger can also be used to provide debug information back from the host microcontroller to a terminal window through a COM port.

Microchip Studio

[Microchip Studio](#) is an Integrated Development Environment (IDE) that works on Windows environments. The tools can be used to develop new embedded applications using the on-board SAM D21 microcontroller. The tool will automatically make use of the on-board nEDBG debugger to program the SAM D21 microcontroller. The debugger can also be used to provide debug information back from the host microcontroller to a terminal window through a COM port.

CryptoAuthLib

CryptoAuthLib was developed to make working with Microchip's CryptoAuthentication devices a simple and straightforward process. CryptoAuthLib was designed with a Hardware Abstraction Layer (HAL) to make it easily extensible to other microcontrollers. Both C and Python versions of the library are available. The Python version of the library is maintained by Microchip and available through the PythonPackage Index website (pypi.org). The most recent version of CryptoAuthLib can be found on Microchip's GitHub site.

- [CryptoAuthLib - Python](#)
- [CryptoAuthLib - GitHub](#)

3.2 Firmware Upgrade

New firmware for the CryptoAuth Trust Platform may be available periodically with new features or enhancements. In addition, specific applications developed by Microchip may be made available for

use with this development board. The latest version of the firmware and information about other applications will be found on the [DM320118](#) product page.

Two Microchip tools exist for upgrading the firmware of the CryptoAuth Trust Platform development kit. Firmware upgrades are done in the standard way using both tools and are not described in more detail here. Both of these options use the nEDBG on-board debugger. These options are:

- MPLAB X IPE (Integrated Programming Environment) – This tool is provided as part of the MPLAB X IDE download.
- Microchip Studio – Integrated Design Environment

NOTICE

Upgrading to the latest version of the tools is recommended. Older versions of the tool may not recognize the nEDBG debugger or the specific kit information.

4. Document Revision History

Revision C (January 2024)

- [1.2. Functional Description](#): Updated Block Diagram and information to indicate supports for SWI-PWM interface
- [2. mikroBUS and Click Add-On Boards](#): Updated List of supported kits

Revision B (November 2020)

- Update for ATECC608B devices

Revision A (September 2019)

- Initial release of this User's Guide

Microchip Information

The Microchip Website

Microchip provides online support via our website at www.microchip.com/. This website is used to make files and information easily available to customers. Some of the content available includes:

- **Product Support** – Data sheets and errata, application notes and sample programs, design resources, user’s guides and hardware support documents, latest software releases and archived software
- **General Technical Support** – Frequently Asked Questions (FAQs), technical support requests, online discussion groups, Microchip design partner program member listing
- **Business of Microchip** – Product selector and ordering guides, latest Microchip press releases, listing of seminars and events, listings of Microchip sales offices, distributors and factory representatives

Product Change Notification Service

Microchip’s product change notification service helps keep customers current on Microchip products. Subscribers will receive email notification whenever there are changes, updates, revisions or errata related to a specified product family or development tool of interest.

To register, go to www.microchip.com/pcn and follow the registration instructions.

Customer Support

Users of Microchip products can receive assistance through several channels:

- Distributor or Representative
- Local Sales Office
- Embedded Solutions Engineer (ESE)
- Technical Support

Customers should contact their distributor, representative or ESE for support. Local sales offices are also available to help customers. A listing of sales offices and locations is included in this document.

Technical support is available through the website at: www.microchip.com/support

Microchip Devices Code Protection Feature

Note the following details of the code protection feature on Microchip products:

- Microchip products meet the specifications contained in their particular Microchip Data Sheet.
- Microchip believes that its family of products is secure when used in the intended manner, within operating specifications, and under normal conditions.
- Microchip values and aggressively protects its intellectual property rights. Attempts to breach the code protection features of Microchip product is strictly prohibited and may violate the Digital Millennium Copyright Act.
- Neither Microchip nor any other semiconductor manufacturer can guarantee the security of its code. Code protection does not mean that we are guaranteeing the product is “unbreakable”. Code protection is constantly evolving. Microchip is committed to continuously improving the code protection features of our products.

Legal Notice

This publication and the information herein may be used only with Microchip products, including to design, test, and integrate Microchip products with your application. Use of this information in any other manner violates these terms. Information regarding device applications is provided only for your convenience and may be superseded by updates. It is your responsibility to ensure

that your application meets with your specifications. Contact your local Microchip sales office for additional support or, obtain additional support at www.microchip.com/en-us/support/design-help/client-support-services.

THIS INFORMATION IS PROVIDED BY MICROCHIP "AS IS". MICROCHIP MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL, STATUTORY OR OTHERWISE, RELATED TO THE INFORMATION INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTIES RELATED TO ITS CONDITION, QUALITY, OR PERFORMANCE.

IN NO EVENT WILL MICROCHIP BE LIABLE FOR ANY INDIRECT, SPECIAL, PUNITIVE, INCIDENTAL, OR CONSEQUENTIAL LOSS, DAMAGE, COST, OR EXPENSE OF ANY KIND WHATSOEVER RELATED TO THE INFORMATION OR ITS USE, HOWEVER CAUSED, EVEN IF MICROCHIP HAS BEEN ADVISED OF THE POSSIBILITY OR THE DAMAGES ARE FORESEEABLE. TO THE FULLEST EXTENT ALLOWED BY LAW, MICROCHIP'S TOTAL LIABILITY ON ALL CLAIMS IN ANY WAY RELATED TO THE INFORMATION OR ITS USE WILL NOT EXCEED THE AMOUNT OF FEES, IF ANY, THAT YOU HAVE PAID DIRECTLY TO MICROCHIP FOR THE INFORMATION.

Use of Microchip devices in life support and/or safety applications is entirely at the buyer's risk, and the buyer agrees to defend, indemnify and hold harmless Microchip from any and all damages, claims, suits, or expenses resulting from such use. No licenses are conveyed, implicitly or otherwise, under any Microchip intellectual property rights unless otherwise stated.

Trademarks

The Microchip name and logo, the Microchip logo, Adaptec, AVR, AVR logo, AVR Freaks, BesTime, BitCloud, CryptoMemory, CryptoRF, dsPIC, flexPWR, HELDO, IGLOO, JukeBlox, KeeLoq, Kleer, LANCheck, LinkMD, maXStylus, maXTouch, MediaLB, megaAVR, Microsemi, Microsemi logo, MOST, MOST logo, MPLAB, OptoLyzer, PIC, picoPower, PICSTART, PIC32 logo, PolarFire, Prochip Designer, QTouch, SAM-BA, SenGenuity, SpyNIC, SST, SST Logo, SuperFlash, Symmetricom, SyncServer, Tachyon, TimeSource, tinyAVR, UNI/O, Vectron, and XMEGA are registered trademarks of Microchip Technology Incorporated in the U.S.A. and other countries.

AgileSwitch, ClockWorks, The Embedded Control Solutions Company, EtherSynch, Flashtec, Hyper Speed Control, HyperLight Load, Libero, motorBench, mTouch, Powermite 3, Precision Edge, ProASIC, ProASIC Plus, ProASIC Plus logo, Quiet-Wire, SmartFusion, SyncWorld, TimeCesium, TimeHub, TimePictra, TimeProvider, and ZL are registered trademarks of Microchip Technology Incorporated in the U.S.A.

Adjacent Key Suppression, AKS, Analog-for-the-Digital Age, Any Capacitor, AnyIn, AnyOut, Augmented Switching, BlueSky, BodyCom, Clockstudio, CodeGuard, CryptoAuthentication, CryptoAutomotive, CryptoCompanion, CryptoController, dsPICDEM, dsPICDEM.net, Dynamic Average Matching, DAM, ECAN, Espresso T1S, EtherGREEN, EyeOpen, GridTime, IdealBridge, IGaT, In-Circuit Serial Programming, ICSP, INICnet, Intelligent Paralleling, IntelliMOS, Inter-Chip Connectivity, JitterBlocker, Knob-on-Display, MarginLink, maxCrypto, maxView, memBrain, Mindi, MiWi, MPASM, MPF, MPLAB Certified logo, MPLIB, MPLINK, mSiC, MultiTRAK, NetDetach, Omniscient Code Generation, PICDEM, PICDEM.net, PICKit, PICtail, Power MOS IV, Power MOS 7, PowerSmart, PureSilicon, QMatrix, REAL ICE, Ripple Blocker, RTAX, RTG4, SAM-ICE, Serial Quad I/O, simpleMAP, SimpliPHY, SmartBuffer, SmartHLS, SMART-I.S., storClad, SQI, SuperSwitcher, SuperSwitcher II, Switchtec, SynchroPHY, Total Endurance, Trusted Time, TSHARC, Turing, USBCheck, VariSense, VectorBlox, VeriPHY, ViewSpan, WiperLock, XpressConnect, and ZENA are trademarks of Microchip Technology Incorporated in the U.S.A. and other countries.

SQTP is a service mark of Microchip Technology Incorporated in the U.S.A.

The Adaptec logo, Frequency on Demand, Silicon Storage Technology, and Symmcom are registered trademarks of Microchip Technology Inc. in other countries.

GestIC is a registered trademark of Microchip Technology Germany II GmbH & Co. KG, a subsidiary of Microchip Technology Inc., in other countries.

All other trademarks mentioned herein are property of their respective companies.

© 2019-2024, Microchip Technology Incorporated and its subsidiaries. All Rights Reserved.

ISBN: 978-1-6683-3725-7

Quality Management System

For information regarding Microchip's Quality Management Systems, please visit www.microchip.com/quality.

Worldwide Sales and Service

AMERICAS	ASIA/PACIFIC	ASIA/PACIFIC	EUROPE
<p>Corporate Office 2355 West Chandler Blvd. Chandler, AZ 85224-6199 Tel: 480-792-7200 Fax: 480-792-7277 Technical Support: www.microchip.com/support Web Address: www.microchip.com</p> <p>Atlanta Duluth, GA Tel: 678-957-9614 Fax: 678-957-1455</p> <p>Austin, TX Tel: 512-257-3370</p> <p>Boston Westborough, MA Tel: 774-760-0087 Fax: 774-760-0088</p> <p>Chicago Itasca, IL Tel: 630-285-0071 Fax: 630-285-0075</p> <p>Dallas Addison, TX Tel: 972-818-7423 Fax: 972-818-2924</p> <p>Detroit Novi, MI Tel: 248-848-4000</p> <p>Houston, TX Tel: 281-894-5983</p> <p>Indianapolis Noblesville, IN Tel: 317-773-8323 Fax: 317-773-5453 Tel: 317-536-2380</p> <p>Los Angeles Mission Viejo, CA Tel: 949-462-9523 Fax: 949-462-9608 Tel: 951-273-7800</p> <p>Raleigh, NC Tel: 919-844-7510</p> <p>New York, NY Tel: 631-435-6000</p> <p>San Jose, CA Tel: 408-735-9110 Tel: 408-436-4270</p> <p>Canada - Toronto Tel: 905-695-1980 Fax: 905-695-2078</p>	<p>Australia - Sydney Tel: 61-2-9868-6733</p> <p>China - Beijing Tel: 86-10-8569-7000</p> <p>China - Chengdu Tel: 86-28-8665-5511</p> <p>China - Chongqing Tel: 86-23-8980-9588</p> <p>China - Dongguan Tel: 86-769-8702-9880</p> <p>China - Guangzhou Tel: 86-20-8755-8029</p> <p>China - Hangzhou Tel: 86-571-8792-8115</p> <p>China - Hong Kong SAR Tel: 852-2943-5100</p> <p>China - Nanjing Tel: 86-25-8473-2460</p> <p>China - Qingdao Tel: 86-532-8502-7355</p> <p>China - Shanghai Tel: 86-21-3326-8000</p> <p>China - Shenyang Tel: 86-24-2334-2829</p> <p>China - Shenzhen Tel: 86-755-8864-2200</p> <p>China - Suzhou Tel: 86-186-6233-1526</p> <p>China - Wuhan Tel: 86-27-5980-5300</p> <p>China - Xian Tel: 86-29-8833-7252</p> <p>China - Xiamen Tel: 86-592-2388138</p> <p>China - Zhuhai Tel: 86-756-3210040</p>	<p>India - Bangalore Tel: 91-80-3090-4444</p> <p>India - New Delhi Tel: 91-11-4160-8631</p> <p>India - Pune Tel: 91-20-4121-0141</p> <p>Japan - Osaka Tel: 81-6-6152-7160</p> <p>Japan - Tokyo Tel: 81-3-6880-3770</p> <p>Korea - Daegu Tel: 82-53-744-4301</p> <p>Korea - Seoul Tel: 82-2-554-7200</p> <p>Malaysia - Kuala Lumpur Tel: 60-3-7651-7906</p> <p>Malaysia - Penang Tel: 60-4-227-8870</p> <p>Philippines - Manila Tel: 63-2-634-9065</p> <p>Singapore Tel: 65-6334-8870</p> <p>Taiwan - Hsin Chu Tel: 886-3-577-8366</p> <p>Taiwan - Kaohsiung Tel: 886-7-213-7830</p> <p>Taiwan - Taipei Tel: 886-2-2508-8600</p> <p>Thailand - Bangkok Tel: 66-2-694-1351</p> <p>Vietnam - Ho Chi Minh Tel: 84-28-5448-2100</p>	<p>Austria - Wels Tel: 43-7242-2244-39 Fax: 43-7242-2244-393</p> <p>Denmark - Copenhagen Tel: 45-4485-5910 Fax: 45-4485-2829</p> <p>Finland - Espoo Tel: 358-9-4520-820</p> <p>France - Paris Tel: 33-1-69-53-63-20 Fax: 33-1-69-30-90-79</p> <p>Germany - Garching Tel: 49-8931-9700</p> <p>Germany - Haan Tel: 49-2129-3766400</p> <p>Germany - Heilbronn Tel: 49-7131-72400</p> <p>Germany - Karlsruhe Tel: 49-721-625370</p> <p>Germany - Munich Tel: 49-89-627-144-0 Fax: 49-89-627-144-44</p> <p>Germany - Rosenheim Tel: 49-8031-354-560</p> <p>Israel - Ra'anana Tel: 972-9-744-7705</p> <p>Italy - Milan Tel: 39-0331-742611 Fax: 39-0331-466781</p> <p>Italy - Padova Tel: 39-049-7625286</p> <p>Netherlands - Drunen Tel: 31-416-690399 Fax: 31-416-690340</p> <p>Norway - Trondheim Tel: 47-72884388</p> <p>Poland - Warsaw Tel: 48-22-3325737</p> <p>Romania - Bucharest Tel: 40-21-407-87-50</p> <p>Spain - Madrid Tel: 34-91-708-08-90 Fax: 34-91-708-08-91</p> <p>Sweden - Gothenberg Tel: 46-31-704-60-40</p> <p>Sweden - Stockholm Tel: 46-8-5090-4654</p> <p>UK - Wokingham Tel: 44-118-921-5800 Fax: 44-118-921-5820</p>