ABRIDGED DATA SHEET

DS28C36 Evaluation System

Evaluates: DS28C36, DS2476

General Description

The DS28C36 evaluation system (EV system) provides the hardware and software necessary to evaluate the DS28C36 and DS2476. The EV system consists of five DS28C36/DS2476 devices in a 6-pin TDFN package, a DS9121AQ+ evaluation TDFN socket board, and a DS9481P-300# USB-to-I²C/1-Wire[®] adapter. The evaluation software runs on Windows[®] 10, Windows 8, and Windows 7 operating systems (64- and 32-bit versions). The EV system provides a handy user interface to exercise the features of the DS28C36 and DS2476.

EV System Contents

QTY	DESCRIPTION	
5	Includes five DS28C36Q+ DeepCover Secure Authenticators (6-pin TDFN)	
5	DS2476Q+ DeepCover Secure Coprocessor (6-pin TDFN)	
1	DS9121AQ+ socket board (6-pin TDFN)	
1	1 DS9481P-300# USB-to-I ² C/1-Wire Adapter	
1	USB Type-A to USB Mini Type-B cable	

Ordering Information appears at end of data sheet.

1-Wire and DeepCover are registered trademarks of Maxim Integrated Products, Inc.

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

Benefits and Features

- Demonstrates the Features of the DS28C36 DeepCover[®] Secure Authenticator
- Demonstrates the Features of the DS2476 DeepCover Secure Coprocessor
- I²C and 1-Wire Communication is Logged to Aid Firmware Designers Understanding of the DS2476 and DS28C36
- I²C/1W-USB Adapter Creates a Virtual COM Port on Any PC
- Fully Compliant with USB Specification v2.0
- Software Runs on Windows 10, Windows 8, and Windows 7 for Both 64-Bit and 32-Bit Versions
- 3.3V ±3% 1-Wire Operating Voltage
- Convenient On-Board Test Points and TDFN Socket
- Evaluation Software Available by Request
- Proven PCB Layout
- Fully Assembled and Tested

DS28C36 EV System

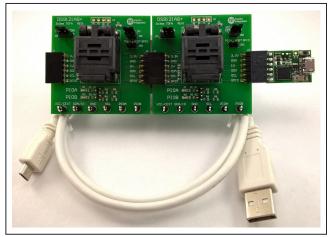


Figure 1. DS28C36EV with USB Cable



ABRIDGED DATA SHEET

DS28C36 Evaluation System

Evaluates: DS28C36 DS2476

Detailed Description of Software

The DS28C36 evaluation program user interface (Figure 13) has four tabs, General Commands, SHA2 Commands, ECDSA Commands, and Other Coprocessor Commands. The Setup section is used to make the device selections that apply to the General Commands, SHA2 Commands, ECDSA Commands, and Other Coprocessor Commands tabs. Here is a summary of the function of each tab:

• General Commands is used as the main tool to evaluate the DS28C36/DS2476 general functions to write or read from the user memory pages, cryptorelated memory pages, decrement counter, RNG, and protection registers.

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- SHA2 Commands is used to evaluate the DS28C36/DS2476 symmetric (SHA-256) security function commands.
- ECDSA Commands is used to evaluate the DS28C36/DS2476 integrated asymmetric (ECC-P256) security function commands.
- Other Coprocessor Commands is used to evaluate the DS2476 coprocessor that computes any required HMACs or ECDSA signatures with its additional command set to do any operations on the DS28C36. Note: Grayed out when DS28C36 is selected.

All tabs include a communications Log area consisting of an I²C Log or 1-Wire Log output.

ile <u>T</u> ools <u>H</u> elp Setup	<	General Commands SHA2 Commands ECDSA Command	ls Other Coprocessor Commands	
Adaptas Dant #	D00401D 300	Select Command Selec	ct Page	
Adapter Part # DS9481P-300		Command 🗸 User	Memory: Page 0 Start Address: 0000h 👻	
Status	Connected on COM6	Page Data		
Search Adapter	Search Devices			
DS2476 Device	✓ Select	Set Protection	Buffer	
FFFFFFFFFFFFF		SHA2/Simple Protectin ECDSA Protection	Buffer Data: LEN 1	
DS28C36 Device	Select	RP-Read Protect	00 00 00 00 00 00 00 00 00 00 00	
		WP-Write Protect	00 00 00 00 00 00 00 00 00 00	
	Colori	EM-EPROM Emulation Mode	00 00 00 00 00 00 00 00 00 00 00 00 00	
DS28E36 Devices D0731AC45698E2		APH-Authentication Write Protection HMAC	00 00 00 00 00 00 00 00 00 00	
50731A04003622		EPH-Encryption and Authenticated Write Protection H	00 00 00 00 00 00 00 00 00 00 00 00 00	
Select Device	Device Type DS2476		00 00 00 00 00 00 00 00 00 00 00	
ROM ID		Read RNG		
FFFFFFFFFFFF	FF	Read RNG Parameter (NBR#) 1	Execute Command	
MAN ID			Execute command	
0000				
g 🗹 Display I2C	Log			
(Dalay 10ma)				
<delay 10ms=""></delay>				×
S [77] [21] [AA] [0 <success></success>	00] [00] [00] [00] [E4] [3B] [4	46] [CC] [4B] [0B] [17] [7D] [00] [00] [00] [00] [00] [00] [00] [0	0] [00] [00] [00] [FF] [FF] [FF] [FF] [F	
	vith ROMID: FFFFFFFFFFFF	FFF		E
				-
			uthenticator EV Kit SoftwareRev: (1.5.0)	Connected on: COM

Figure 13. DS28C36 EVKIT Program (Default View Upon Opening)

ABRIDGED DATA SHEET

DS28C36 Evaluation System

Evaluates: DS28C36 DS2476

Ordering Information

PART	TYPE
DS28C36EVKIT#	EV System

#Denotes RoHS compliant.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Maxim Integrated: DS28C36EVKIT#