

TEXAS INSTRUMENTS

UCD90320 Configuration Guide

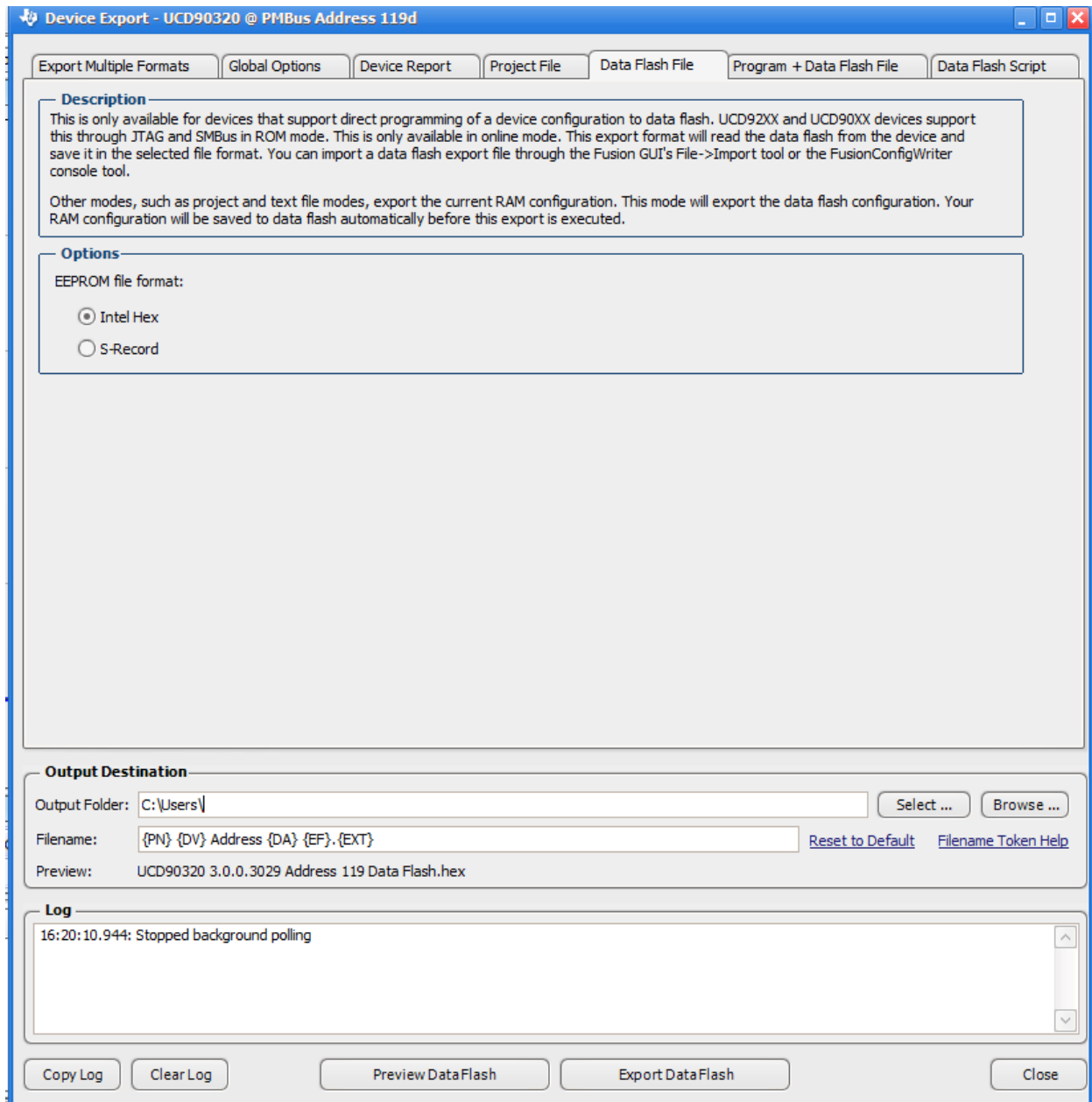
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Introduction

This document covers how to download the user configuration data into the Flash for UCD90320.

Export HEX file from Fusion GUI

The download guide need a input hex file which can be generated from Fusion GUI export function(File->Export) as shown below.



UCD90320 Configuration Map

Once the hex file is exported successfully, its content matches the below BANK map. Please follow the next section to transfer the content of the hex file to the device.

Offset	0x0	0x4	0x8	0xC
BANKA	Checksum_A (4 Bytes)	Config version (4 Bytes)	Config Data Size (4 Bytes)	1 st word of configuration
	2 nd word to end of configuration			
BANKB	Checksum_B (4 Bytes)	Config version (4 Bytes)	Config Data Size (4 Bytes)	1 st word of configuraiton
	2 nd word to end of configuration			

Note:

Config Data size does not include Checksum, Config Version, Config Data size, it shall be fixed at 0x19FC for RTM UCD90320.

Configuration Updating Guides

UCD90320 has two banks to store the user configuration. PARM_INFO (0xE2) and PARM_VALUE (0xE3) commands shall be used for the configuration download, they can be found at the PMBUS Command Reference Guide. PARM_INFO command is used to set the flash address, the relate offset shall always be used for this command; no absolute address should be used. PARM_VALUE (0xE3) is used to send the value stored in the address set by the PARM_INFO.

Please strictly follow below rules to download the configuration hex file into the device.

1. Starting the whole downloading processing from config_version which is at offset 0x4.
2. Keep downloading the rest configuration data (one word per transfer) following the offset order (0x8, 0xC, 0x10) until 0x19FC byte was downloaded
3. After all configuration data in the hex file were downloaded, the last thing is to download the checksum to the address with offset 0.
4. It is very important to follow these, otherwise configuration will mess up.

After the hex file is downloaded, it is recommended that host program issues below commands to clear the Blackbox Log, Fault log and Peak log to have a clean startup. The below table shows the command sets to clear the log.

PEC is included.

Command Type	Addr	Command Code	Payload
WriteByte	0x11	0x00	0xFF66
BlockWrite	0x11	0xED	0x050000000000EB
Pause	1500	Pausing 1,500.00 ms for Clear LOGGED_PAGE_PEAKS flash write	
WriteByte	0x11	0xEE	0x0000
Pause	1000	Pausing 1,000.00 ms for clear LOGGED_COMMON_PEAKS flash write	
BlockWrite	0x11	0xEA	0x25000 005
Pause	1000	Pausing 1,000.00 ms for Clear LOGGED_FAULTS flash write	
BlockWrite	0x11	0xB5	0x15000 12
Pause	1000	Pausing 1,000.00 ms for Clear BLACK_BOX_FAULT_INFO flash write	

If PEC is not required, please follow below tables.

[illegible]