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Certificate of Volatility for Ettus Research Daughterboards

This document describes all memory types present on the Ettus Research daughterboards listed below and how to remove all user data, if any, from the device.

This document applies to the following daughterboards:

Part Number	Model Name	Component Locations
782760-01	CBX-40	A) U017, U022
783353-01	CBX-120	A) U017, U022
782759-01	WBX-40	A) U0202, U403
783352-01	WBX-120	A) U0202, U403
782761-01	SBX-40	A) U017, U022
783351-01	SBX-120	A) U017, U022
783774-01	UBX-40	A) U038, U039 - B) U037
783775-01	UBX-160	A) U038, U039 - B) U037

Note: The part numbers listed above are shipping kit part numbers and do not appear on the product's silkscreen.

Memory Types

This section contains information on the memory components used on the daughterboards listed above, including details on the size, type, purpose, location, volatility, and the required sanitization procedure.

The daughterboards listed above only use non-volatile memory (see table below) which requires specific sanitization procedures to clear it of its contents.

Memory Type & Model	Memory Size	Volatile	Purpose/Contents	Location	Sanitization Procedure
EEPROM - Microchip 24LC024 or equivalent	2 Kbits	No	Model, revision & serial number. Contains no user data.	A	1
CPLD – Altera EPM570T100C5N	8 Kbits UFM	No	User Flash Memory is empty	B	2
	570 LE	No	Logic cells do not contain user data.		

Sanitization Procedures

1) EEPROM Sanitization

Although the onboard EEPROM can be cleared, it is not necessary as it does not contain any user data. However, if desired, our technical support can provide a program (uhd_device_eraser.cpp) that will clear the contents of all permanent storage on a USRP device, including both the motherboard and daughterboard.

Alternatively, you can use the "usrp_burn_db_eeprom" utility to delete hardware-specific fields:

```
$ usrp_burn_db_eeprom --args=<device address> [--slot=<slot>] --unit=RX --id=""
```

```
$ usrp_burn_db_eeprom --args=<device address> [--slot=<slot>] --unit=RX --serial=""
```

```
$ usrp_burn_db_eeprom --args=<device address> [--slot=<slot>] --unit=RX --rev=""
```

```
$ usrp_burn_db_eeprom --args=<device address> [--slot=<slot>] --unit=TX --id=""
```

```
$ usrp_burn_db_eeprom --args=<device address> [--slot=<slot>] --unit=TX --serial=""
```

```
$ usrp_burn_db_eeprom --args=<device address> [--slot=<slot>] --unit=TX --rev=""
```

Recovery Procedure

To recover your daughterboard, you must re-burn the information deleted by the sanitation procedure:

```
$ usrp_burn_db_eeprom --args=<device address> [--slot=<slot>] --unit=RX --id=<your device ID>
```

```
$ usrp_burn_db_eeprom --args=<device address> [--slot=<slot>] --unit=RX --serial=<your device serial>
```

```
$ usrp_burn_db_eeprom --args=<device address> [--slot=<slot>] --unit=RX --rev=<your device revision>
```

```
$ usrp_burn_db_eeprom --args=<device address> [--slot=<slot>] --unit=TX --id=<your device ID>
```

```
$ usrp_burn_db_eeprom --args=<device address> [--slot=<slot>] --unit=TX --serial=<your device serial>
```

```
$ usrp_burn_db_eeprom --args=<device address> [--slot=<slot>] --unit=TX --rev=<your device revision>
```

Note: Ettus Research will not be held responsible for reprogramming devices that have been rendered inoperable following sanitization procedures described on this document.

2) CPLD Sanitization

The Altera USB Blaster with JTAG Adapter cable and Altera Quartus II software is required to clear the CPLD. This hardware and software is provided by Altera through its distributors.