



lib_otpinfo: OTP reading library

Publication Date: 2025/3/11

Document Number: XM-006391-UG v2.2.0

IN THIS DOCUMENT

1	Introduction	2
2	Usage	2
3	API	2

1 Introduction

lib_otpinfo provides functions for reading data from the one-time programmable (OTP) memory of an xCORE device. Specifically, the provided functions enable reading the serial number, board identifier, and Ethernet MAC addresses, if programmed into the OTP memory. It links against the [OTP library included in the XMOS tools](#) and calls its functions to read from OTP memory. This library is for use with *xcore-200* series (XS2 architecture) or *xcore.ai* series (XS3 architecture) devices only, previous generations of *xcore* devices (i.e. XS1 architecture) are not supported.

2 Usage

lib_otpinfo is intended to be used with the [XCommon CMake](#), the XMOS application build and dependency management system.

To use this library, include **lib_otpinfo** in the application's `APP_DEPENDENT_MODULES` list, for example:

```
set(APP_DEPENDENT_MODULES "lib_otpinfo")
```

Applications should then include the `otp_board_info.h` header file:

```
#include "otp_board_info.h"
```

The ports used by OTP memory are the same on every tile. They need to be declared with the [OTPPorts type](#):

```
on tile[0]: OTPPorts otp_ports = OTP_PORTS_INITIALIZER;
```

Where `OTP_PORTS_INITIALIZER` is the standard initialiser for the `OTPPorts` structure and is defined in XMOS Tools `lib_otp`.

3 API

The following functions can then be used to obtain information from the OTP that has been set via XBURN:

```
int otp_board_info_get_mac(REFERENCE_PARAM(OTPPorts, ports), unsigned
                           index, char mac[6])
```

Read a MAC address from the board information written at the end of the OTP memory.

Parameters

- ▶ **ports** – Ports used to access the OTP memory.
- ▶ **index** – Index of the MAC address to retrieve.
- ▶ **mac** – Array to write the MAC address to.

Returns

Returns 1 on finding a mac address at index 'index', 0 if no mac address present

```
int otp_board_info_get_serial(REFERENCE_PARAM(OTPPorts, ports),  
                             REFERENCE_PARAM(unsigned, value))
```

Read a serial number from the board information written at the end of the OTP memory.

Parameters

- ▶ **ports** – Ports used to access the OTP memory.
- ▶ **value** – Variable to store the serial number to.

Returns

Returns 1 if serial number present in the OTP memory, 0 if no serial number found.

```
int otp_board_info_get_board_identifier(REFERENCE_PARAM(OTPPorts,  
                                                       ports),  
                                       REFERENCE_PARAM(unsigned,  
                                                       value))
```

Read the board identifier from the board information written at the end of the OTP memory.

Parameters

- ▶ **ports** – Ports used to access the OTP memory.
- ▶ **value** – Variable to store the board identifier to.

Returns

Returns 1 if bitmap present in the OTP memory, 0 if no serial number found.



Copyright © 2025, All Rights Reserved.

XMOS Ltd. is the owner or licensee of this design, code, or Information (collectively, the "Information") and is providing it to you "AS IS" with no warranty of any kind, express or implied and shall have no liability in relation to its use. XMOS Ltd makes no representation that the Information, or any particular implementation thereof, is or will be free from any claims of infringement and again, shall have no liability in relation to any such claims.

XMOS, XCORE, VocalFusion and the XMOS logo are registered trademarks of XMOS Ltd. in the United Kingdom and other countries and may not be used without written permission. Company and product names mentioned in this document are the trademarks or registered trademarks of their respective owners.

