

OLinuXino EEPROM content layout

Olimex Ltd

September 21, 2017

Contents

1	Introduction	2
2	Memory layout	2
2.1	Header	3
2.2	ID	3
2.3	Revision	3
2.4	Serial	4
2.5	Configuration	4
3	Codes	4
4	Revision	5

1 Introduction

2 Memory layout

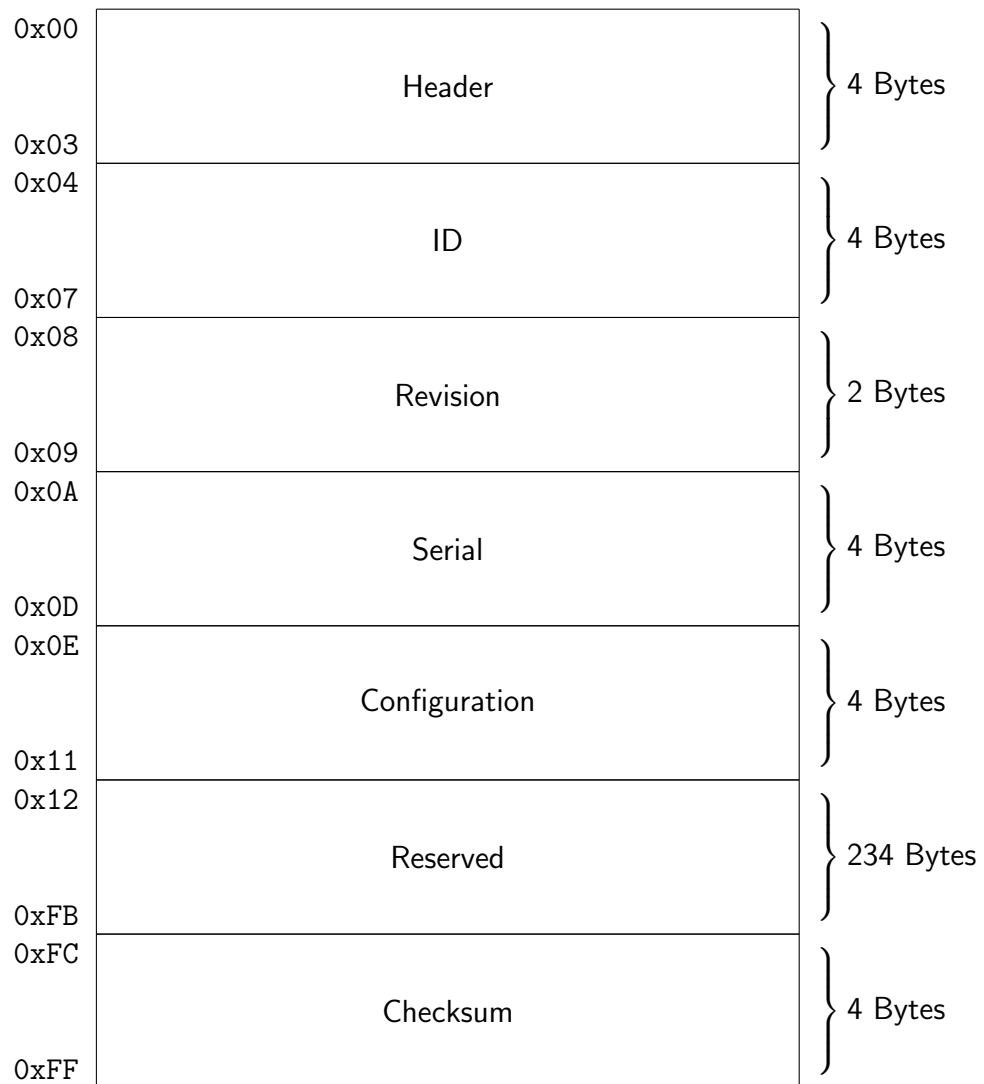


Figure 1: Memory layout schematic

2.1 Header

Header is 4 bytes long. It marks the beginning of configuration page. It is hard-coded and always should be the same.

0x00	0x55	} 0x4F4CAA55
0x01	0xAA	
0x02	0x4C	
0x03	0x4F	

2.2 ID

ID field is 4 bytes long. Value is stored as unsigned int.

0x04	Byte0	} 8918
0x05	Byte1	
0x06	Byte2	
0x07	Byte3	

2.3 Revision

This section is 2 bytes long. It stores board revision number in ASCII code: *C*, *J1*, etc.

0x08	Major	} "G5"
0x09	Minor	

Where:

- **Major** - General revision of the board, when there are big changes. For example: *A*, *B*, *C*, etc.
- **Minor** - When PCB is the same, but some values differ - resistors, capacitors, etc. If not used should be *00h*.

2.4 Serial

Serial number is hold as hexadecimal unsigned long int. It's sequential number.

0x0A	Byte0	} 0x12345678
0x0B	Byte1	
0x0C	Byte2	
0x0D	Byte3	

2.5 Configuration

This section is 4 bytes long. Here is stored board configuration - *NAND*, *eMMC*, etc.

0x0E	Storage	} 0x4E03
0x0F	Size	
0x10	RAM	
0x11	Grade	

Where:

- **Storage** - Describes if there is external storage chip.
- **Size** - Capacity of the device. Usable only if "Storage" is different from 0xFF.
- **RAM** - RAM capacity.
- **Grade** - Board grade.

3 Codes

Code	Description
------	-------------

0x00	Default value. No external storage.
0x45	eMMC chip.
0x4E	NAND chip.
0x53	SPI flash.

Table 1: Storage configuration codes

Code	Description
00	Size is 1B.
01	Size is 2B.
...	
10	Size is 1KB.
...	
20	Size is 1MB.
...	
30	Size is 1GB.
...	

Table 2: Size configuration codes

Code	Description
00	RAM is 1B.
01	RAM is 2B.
...	
10	RAM is 1KB.
...	
20	RAM is 1MB.
...	
30	RAM is 1GB.
...	

Table 3: RAM configuration codes

Code	Description
0x00	Commercial grade.
0x01	Industrial grade.

Table 4: Grade configuration codes

4 Revision

- Rev.A - 2 May 2017 - Initial release
- Rev.B - 1 Sep 2017 - Reworked layout