**2.9 Three Color ESL image format**

**Revision History**

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| --- | --- | --- | --- |
| **Version** | **Date** | **Change Description** | **Author** |
| V1.0 | 2018/7/13 | Initial version | Ning |
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# Purpose

This article describes the ESL image encoding format, which is used to guide third parties to develop images that are generated by the tag generated by their own programs.

# ESL Image Format

129, 1

130,2

3

4

5

6

…

128

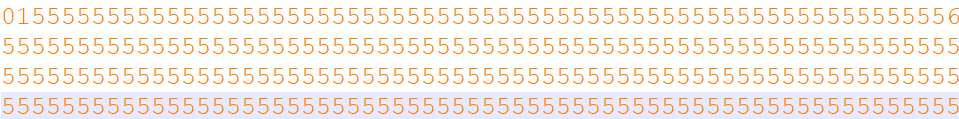
The display of the 2.9-inch electronic label is displayed from right to left and from top to bottom.

The resolution of the 2.9-inch electronic tag is 296\*128, which is equivalent to 37888 pixels. Each pixel adopts three-color display, corresponding to binary 00(black) , 01(white) and 10(red),. If byte encoding is used, it is equivalent to 1 byte and can represent 4 pixels. That is, it can be represented by 37888/4=9472 bytes.

Example 1: Need to do the following display

1) The top rightmost column (upper right corner) shows 3 black dots;

2) The bottom right column shows 1 red dot (lower right corner);



The above one line shows 32 bytes (128 pixels), which corresponds to a column of the 2.9-inch screen.

1) 01: Corresponding binary digit: 0000 0001, that is, the first 3 pixels are 00,00,00, which is black.

2) 56: Corresponding binary digit:

supplement:

1. We also attach a file "example.bmp" file in the attachment directory, and we also provide the mqtt message that include image content (example.bin.json).

