

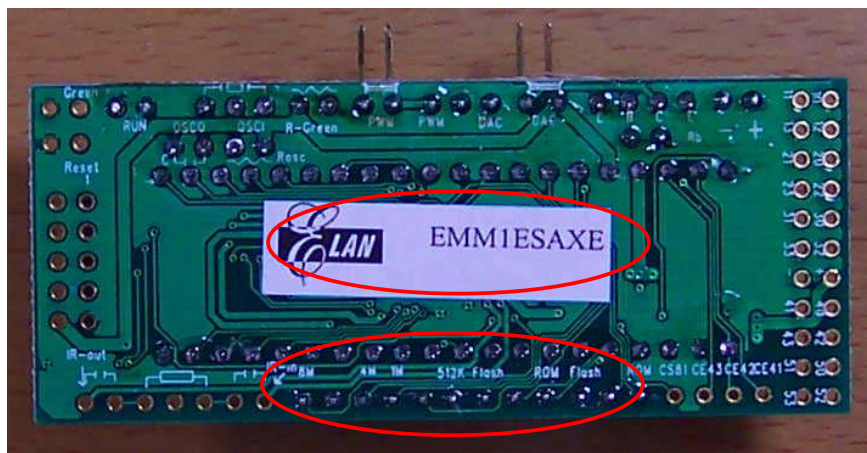
### EMMeSA v1.0 v.s. V1.1

Document Number : **AP-eSA-0005-v1**  
Date of Issue : **24 February 2004**  
Issue Version : **1**  
Supported Chips : **eSA015 ~ eSA120**  
Applicable Software : **Ver:1.1**

#### 1.0 : How to Identify the EMM Version?

1. Check the label & text under PCB.

- V1.1 : Product name is **EMMeSA xE (or EMM1eSaxE)** on the label  
The **pin information is itched** on both sides of the board.

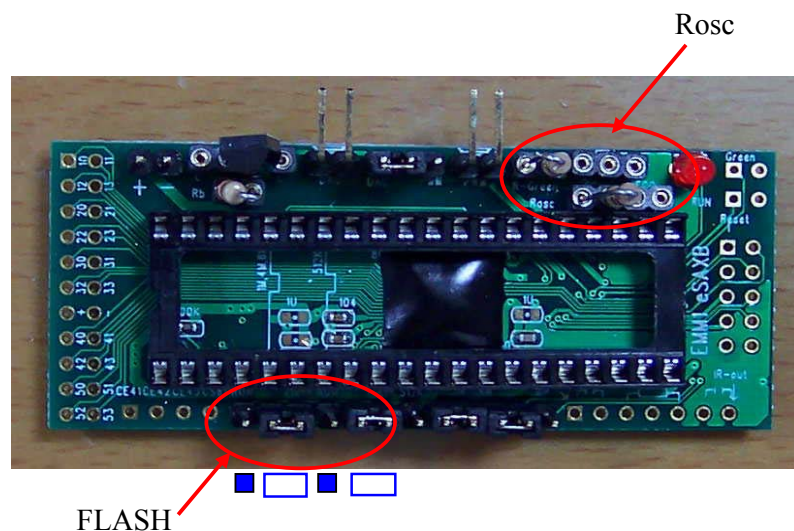
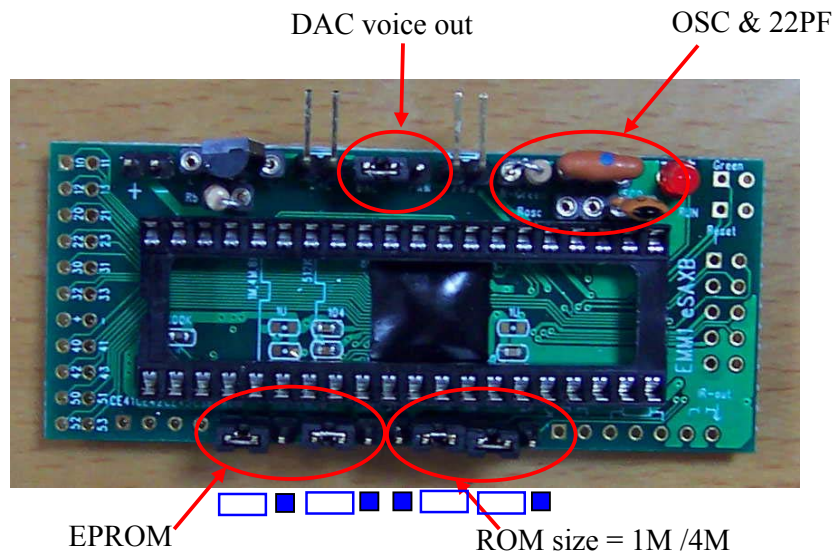


- V1.0 : Product name is **EMM1eSA xD** on the label  
The pin information is only shown on top side of the board.

#### 2.0 How to Use the EMMeSA :

1. The selected OSC type (X'tal or Rosc) must **match with that of the project's option setting.**  
**If different, the EMMeSA can't work!**
  - X'tal : Use 3.58MHz/4MHz Crystal or Resonator,  
User must add a 22pF capacitor between OSCO & GND pins.
  - Rosc : Use a 56K $\Omega$  (3.58MHz)/ 51K $\Omega$  (4MHz) resistor between OSCI & Vcc.
  - R-Green : Use a 1M  $\Omega$  resistor between OSCO & Vcc.

2. Select the ROM type (**Flash or EPROM**) by setting the Jumper position.
3. Select the ROM size (**512K/ 1M /4M**) by setting the Jumper position as follows (see Note next page):
  - 512K : Jump 512K/1M Jumper to 512K position, & the 4M/8M Jumper to 4M.
  - 1M : Jump 512K/1M Jumper to 1M position, & the 4M/8M Jumper to 4M.
  - 4M : Same as 1M, jump 512K/1M Jumper to 1M, & the 4M/8M Jumper to 4M.
4. Select the Voice out is **DAC or PWM** with by setting the Jumper position.
5. Select an appropriate Rb for DAC type voice out. 1.2KΩ is suggested.





# eSA Series

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## APPLICATION NOTES

### NOTE

*The EMMeSA only supports the 1M/2M EPROM for Vpp(#1)/PGMB(#31) = Lo, or don't care at Read mode.*

*It does not support the 1M/2M EPROM for Vpp(#1)/PGMB(#31) = Hi at Read mode.*