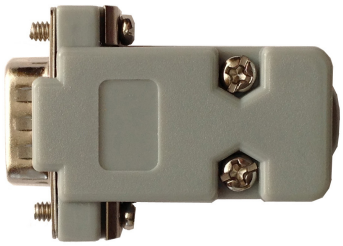
RS232 Flash Memory SM30128/SM30512/SM31024/SM32048

SM30128/SM30512/SM31024/SM32028 are non-volatile data storage devices. They have industry standard RS232 interface and USB 2.0 interface. The data from RS232 port will be saved in flash memory. The data can be transferred to computer using USB interface. The flash memory is erasable and rewritable. A software tool, eeTerminal, is provided to manage the flash memory.

Features:

- Non-volatile Flash memory
- RS232 interface write in
- USB interface read out
- Memory access LED indication
- 5v power via USB connector
- ESD surge protected
- Available in 128k, 512k, 1024k, 2048k bytes
- Utility software eeTerminal



Specifications:

USB	USB specification 2.0 compliant	
	USB full speed 12Mbps transmission	
	USB Micro-B receptacle connector	
RS232	Connector: DB9 male	
	Baud rate: 300bps to 115200bps	
	Parity: Even, Odd, None, Mark, Space	
	Data length: 5-bit, 6-bit, 7-bit, 8-bit	
	Stop bits: 1-bit, 2-bit	
Power	5v, maximum 22mA, typical 10mA.	
Software	Use eeTerminal to access flash memory from Microsoft Windows.	
Part Number	SM30128	128k bytes
	SM30512	512k bytes
	SM31024	1024k bytes
	SM32048	2048k bytes

System Requirements

Microsoft Windows 8, Windows 7, Windows Vista, or Windows XP

DB9 Connector Pin Descriptions

Pin #	Signal/Pin Connection	
1		1 - 4 - 6
2	Rx	
3	Tx	
4		1 - 4 - 6
5	GND	
6		1 - 4 - 6
7		7 - 8
8		7 - 8
9		NC

RS232 Data Logging

- Verify serial port setting. The serial settings are shown on the toolbar when use the device with eeTerminal. The flash memory's RS232 settings must match the data device's RS232 settings.

- Power up the flash memory and verify it is empty. Connect flash memory's USB port to a powered USB port. The LED will be solid on if the flash memory is empty. The LED will be flashing at 1/2Hz rate if the flash memory is not empty. Erase the memory using eeTerminal if it is not empty.
- Connect the flash memory's RS232 port to data device's RS232 port.
- Monitor logging status. The LED will be flashing at 5Hz rate when there are data saved to flash memory. The LED will be flashing at 1/2Hz rate when flash memory is full.
- Unplug flash memory's power when finish data logging.
- Upload the data using eeTerminal.

Use eeTerminal with Flash Memory

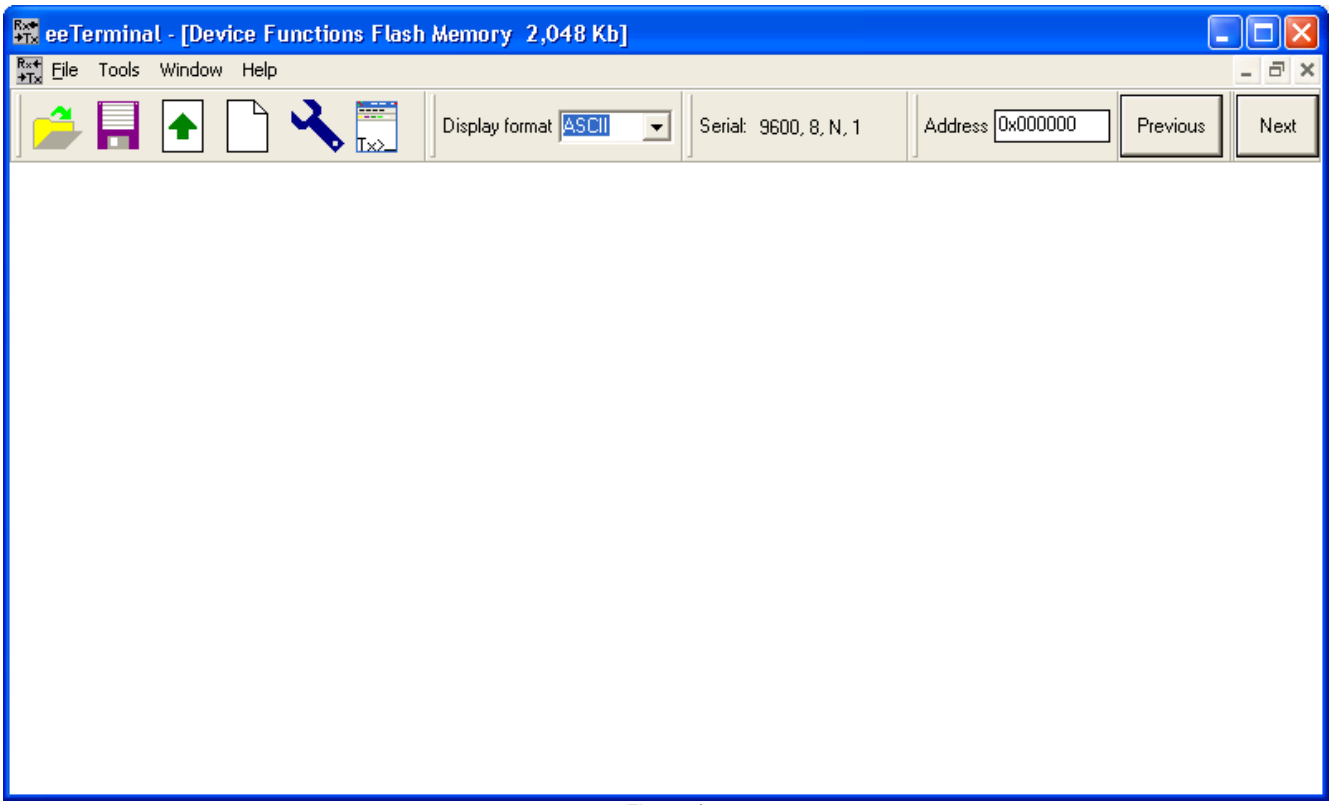


Figure 1

Connect flash memory's USB port to computer's USB port. Start **eeTerminal** application by double clicking **eeTerminal** icon  .

1. **Open Device.** To open a flash memory device, select **File** from menu bar, and select **Open Device**. eeTerminal lists all compatible devices in a pop-up window. Select **Device Functions Flash Memory** from the list and click **Open** button. A memory access window, as Figure 1, will open. To open another device, click  on the toolbar or use **Open Device** from menu bar. Each device has its own window within **eeTerminal.** Window arrangement tools are under **Window** menu. The device windows can be placed side by side horizontally or vertically within **eeTerminal**.
2. **Close Device.** Select **File** from menu bar and select **Close**, or click on the windows Close button.
3. **Upload Data.** Click  on the toolbar. A window, as Figure 2, will pop up. It shows the number of bytes uploaded from flash memory. The eeTerminal will update the display window when the uploading process is completed.

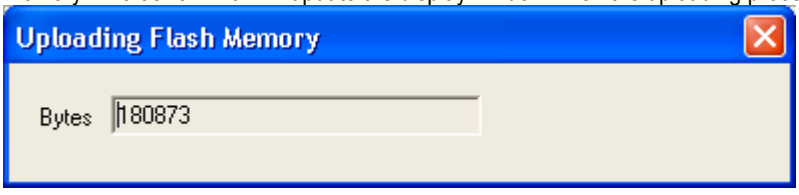


Figure 2

4. **Display format.** eeTerminal supports data display in ASCII, HEX, and Decimal. Click on the selection box next to **Display format** on the toolbar to change between ASCII, HEX, and Decimal.

5. **Browse data.** To check information at a specific location, type its address (in HEX format) in the **Address** box on the toolbar. Use **Previous** and **Next** button on the toolbar to move backward and forward page by page.

6. **Open File.** Click  on the toolbar to open a file, or select **File** from menu bar and select **Open File** to open a file.

7. **Save to File.** To save data to a file, click  on the toolbar, or select **File** from menu bar and select **Save to File**. eeTerminal provides an interface to select a file name. After successfully select a file name, a window, as Figure 3, will pop up. The default is to save the whole flash memory to a file. To save only part of the flash memory to a file, modify the starting address in **From** box and ending address in the **To** box. Click **Save** to save the file. Click **Cancel** to exit without saving a file.

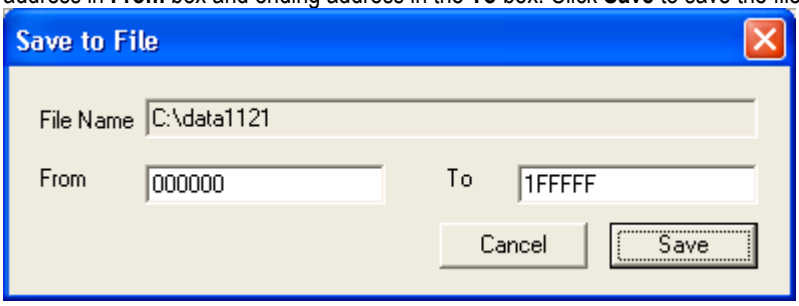


Figure 3

8. **Erase Flash Memory.** Click  on the toolbar. A window, as Figure 4, will pop up. It shows that a flash memory erasing process is in progress. The eeTerminal will update the display window when the erasing process is completed.

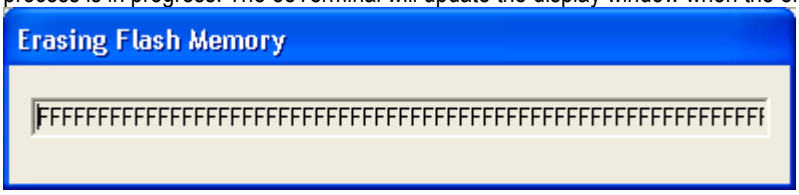


Figure 4

9. **Configuration.** Click  on the toolbar. A window, as Figure 5, will pop up. Select the required serial settings and click **Ok** to save the new settings. The serial information on the toolbar will also reflect the new settings. Click **Cancel** to exit configuration without any changes.

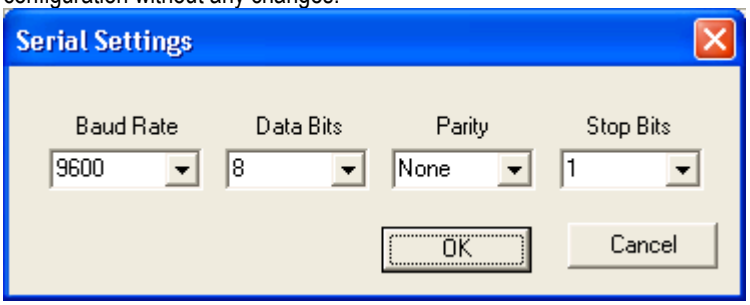


Figure 5

Environmental Conditions

Operating temperature range	-20°C TO +65°C
Storage temperature range	-40°C TO +85°C
Relative humidity	0% to 90%, non-condensing

Readable and User Friendly Display

The standard eeTerminal displays the raw data in its binary format. We can customize eeTerminal to display the raw data in a more readable and user friendly format, such as graphic display. You can email us your requests at info@devicefunctions.com.