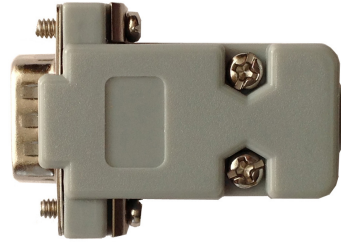


## RS232 Flash Memory SM50128/SM52048/SM54096

SM50128/SM52048/SM54096 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. Microsoft Windows virtual COM port device driver is provided. Windows application software can read the memory using COM port. A software tool, eeTerminal, is provided to manage the flash memory.

### Features:

- Non-volatile Flash memory
- RS232 interface write in
- USB interface read out
- Microsoft Windows virtual COM port device driver
- Memory access LED indication
- 5v power via USB connector
- ESD surge protected
- Available in 128k, 2048k, 4096k 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	Microsoft Windows virtual COM port device driver, eeTerminal.	
Part Number	SM50128	128k bytes
	SM52048	2048k bytes
	SM54096	4096k 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.

## DEVICE FUNCTIONS

- 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 from your Windows application software, or upload the data using eeTerminal.

### Device Driver Installation:

The software package is supplied in a compressed folder file named *USB\_COM\_1P\_Driver* or a CD. Here are the installation steps.

1. If you have file *USB\_COM\_1P\_Driver*, rename *USB\_COM\_1P\_Driver* to *USB\_COM\_1P\_Driver.zip*, extract all files to a file folder on your local disk or USB drive, double click *setup.exe* to start software installation.
2. If you have the software CD, insert the software CD into your computer's disc drive, the software installation will start automatically.
3. Follow the on-screen instructions until the setup wizard finishes.
4. Plug the adapter's USB cable to the computer's USB port.
5. Follow the on-screen instructions if any to complete the software installation.

### Use Your Windows Application Software with Flash Memory

Your Microsoft Windows application software must support Microsoft Windows COM port device. Your application can open the flash memory's virtual COM port and configure the flash memory's RS232 serial settings. Your application software reads from flash memory. It will not read from flash memory's RS232 port directly. Your application software can write to flash memory's RS232 port directly.

### Use eeTerminal with Flash Memory

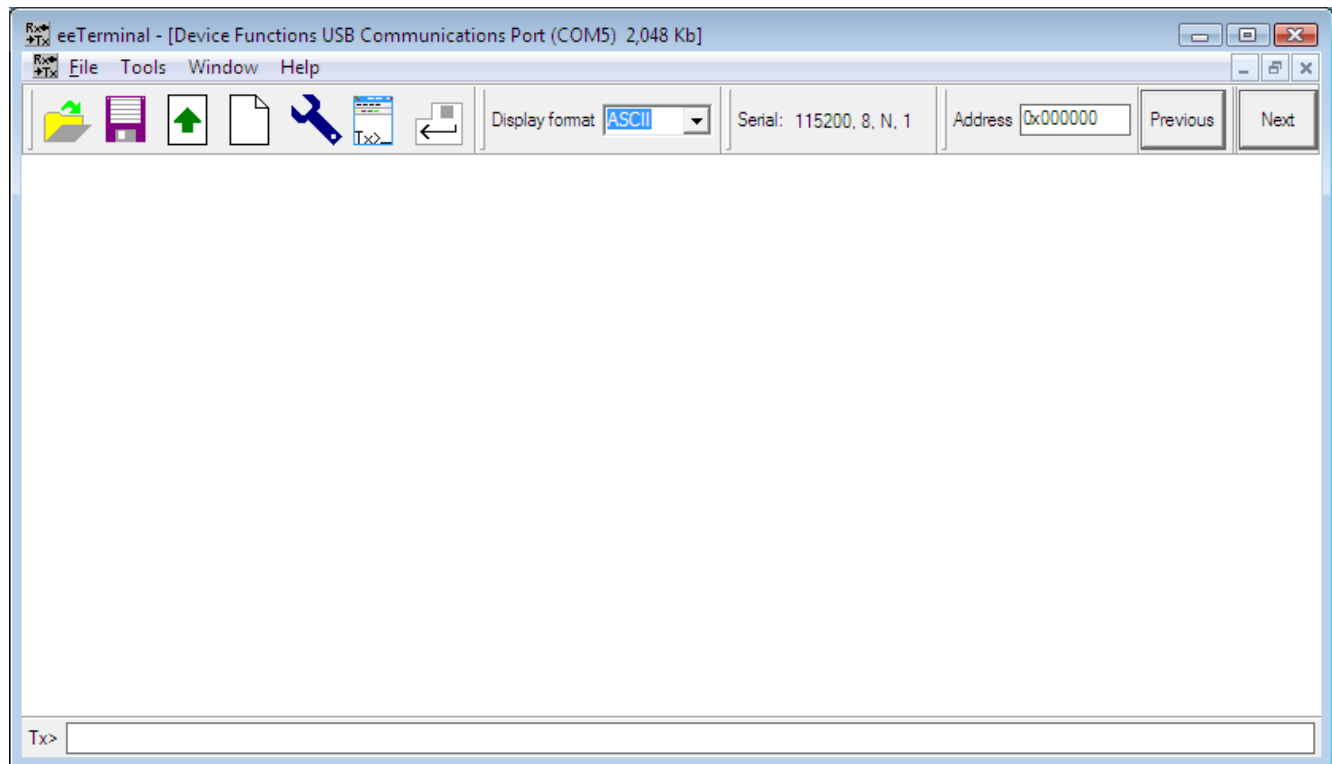




Figure 1

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 the flash memory device by its COM port number 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.

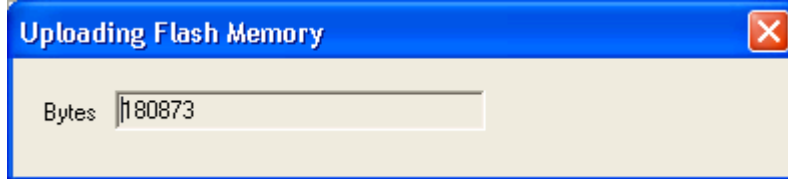




Figure 2

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.

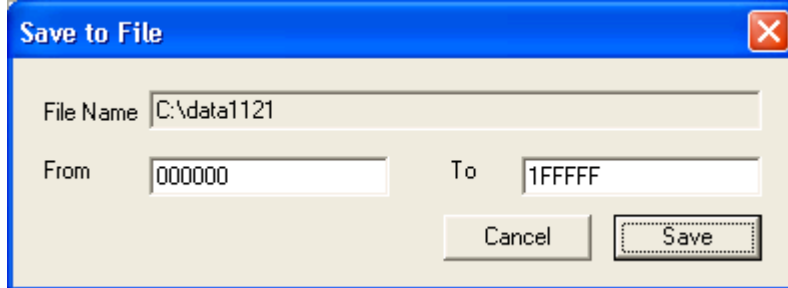



Figure 3

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.

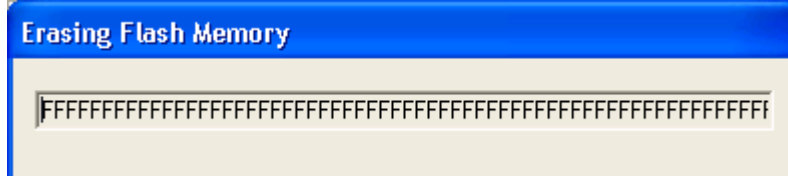



Figure 4

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.

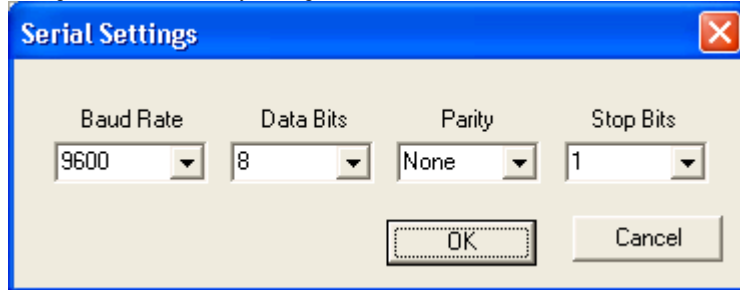






Figure 5

10. **Send Data in ASCII, HEX, or Decimal Formats.** Inside **eeTerminal**, data to be sent is represented as a sequence of bytes. It can be input in ASCII, Hexadecimal, or Decimal symbols. The input window Tx> is at the bottom of **eeTerminal** window. In ASCII mode, input each data byte as an ASCII character and press Enter to send the data, for example, "test string". To send carriage return-line feed with data, click  on the toolbar and this button will be displayed as  and carriage return-line feed will be added to data sequence when the ENTER key is pressed. Click  to disable this feature. In HEX mode, input each data byte as one hexadecimal digit (0 to 15) or two hexadecimal digits (16 to 255) and separate two data bytes by a space, for example, 5 F 1E. Press Enter to send the data. In Decimal mode, input each data bytes as one decimal digit (0 to 9) or two decimal digits (10 to 99) or three decimal digits (100 to 255), for example, 2 12 124. Press Enter to send the data. In HEX mode and Decimal mode, data can also be input as an ASCII string or an ASCII character. The ASCII string must be included in " " and an ASCII character must be included in ' ', for examples, "This is a software setting", 'S'. In HEX mode and Decimal mode,  has no effect and carriage return-line feed sequence will not be sent. The carriage return-line feed must be coded in data sequence if needed. Click the **Data format** dropdown list from toolbar to set the data format to ASCII, HEX, or Decimal.

## 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

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