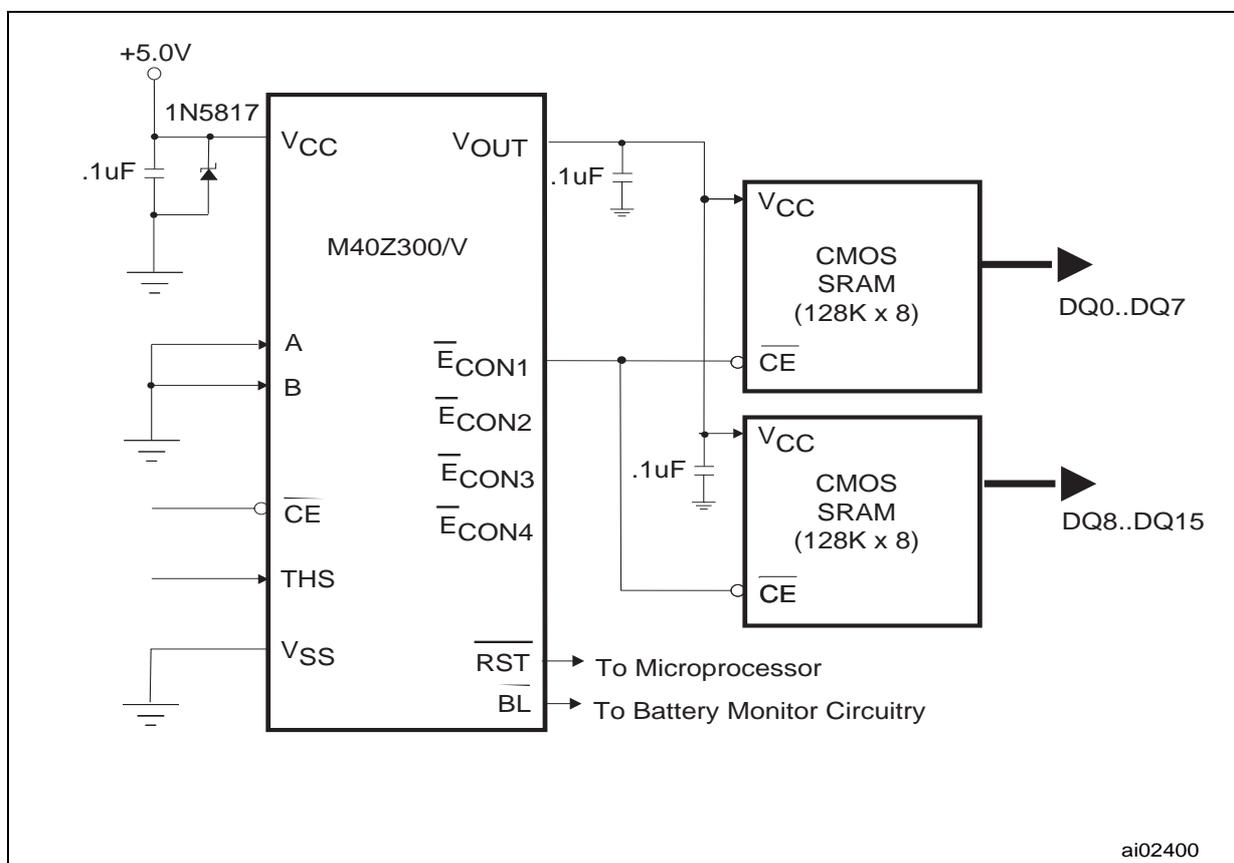


A Controller to Gain NVRAM Functionality from Two 128K x 16 Blocks of SRAM

The M40Z300, from STMicroelectronics, can be used to make SRAM devices behave like non-volatile RAM (NVRAM). When the supply voltage, V_{CC} , falls below the preset threshold level, the device locks out further writes to the RAM, switches to the battery supply, and sends a signal to the reset circuit. Figure 1 shows the arrangement for controlling two "128K x 16" devices.

Figure 1. Block diagram for 128 Kx16 battery backed SRAMs



As soon as V_{CC} is found to be below the threshold value, the M40Z300 performs four vital functions:

1. It switches the SRAM devices to being write protected
2. It switches the SRAM devices to being powered by the battery
3. It drives the reset line, \overline{RST} , low
4. It drives the \overline{BL} line low if ever the internal battery voltage is found to be less than 2.5 volts.

AN1021 - APPLICATION NOTE

If you have any questions or suggestions concerning the matters raised in this document, please send them to the following electronic mail address:

apps.nvram@st.com

Please remember to include your name, company, location, telephone number and fax number.

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