

## Differences in FM25160 and FM25C160

### 16K SPI FRAM Devices



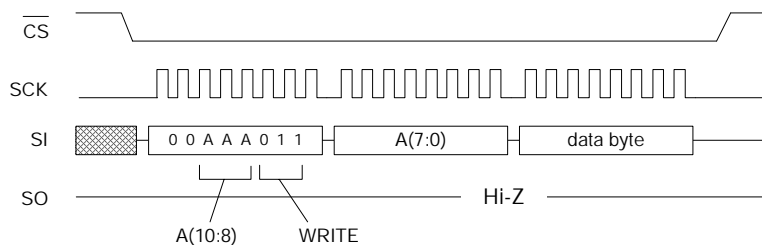
## DESCRIPTION

There are differences between the FM25160 and FM25C160 SPI 16Kb FRAM devices. The FM25160 operates up to 1.8MHz and supports Mode 0 clocking, whereas the FM25C160 operates at speeds up to 20MHz and supports Modes 0 and 3. The biggest difference between the two parts is one of addressing. Both parts require an 11-bit address for read and write op-codes, but the original 25160 uses one-byte addressing whereas the newer 25C160 uses two-byte addressing. The 25160 places the upper 3 address bits into the op-code.

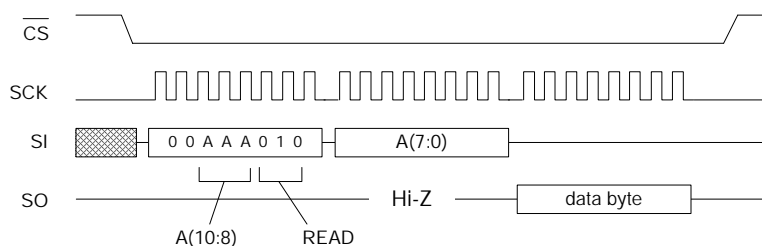
## DROP-IN REPLACEMENT OR NOT

Although packaging and pinouts are compatible, the FM25C160 is not a direct replacement for the FM25160 since the system firmware is not compatible between the two. For example, a single byte write is three bytes for the 25160 and four bytes for the 25C160, excluding the WREN op-code.

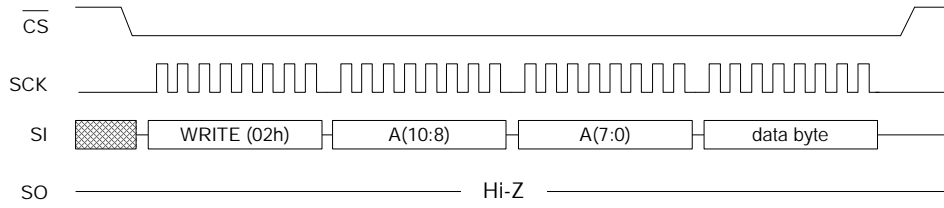
## EXAMPLES



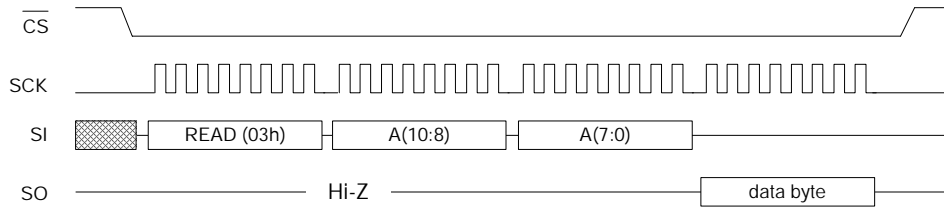
**Figure 1. FM25160 Single Byte Write**



**Figure 2. FM25160 Single Byte Read**



**Figure 3. FM25C160 Single Byte Write**



**Figure 4. FM25C160 Single Byte Read**