

Why Choose Single-Wire FRAM?

Single-wire FRAM memory combines the simplicity and reliability of the SDQ™ Single-Wire Serial Interface with the robustness of FRAM. Single-wire FRAM technology has many applications in fields that require product and equipment identification and information storage. Medical cables, disposable equipment, product attachments, server rack PCBs, battery packs, and other high-value peripherals can all benefit from single-wire FRAM devices.

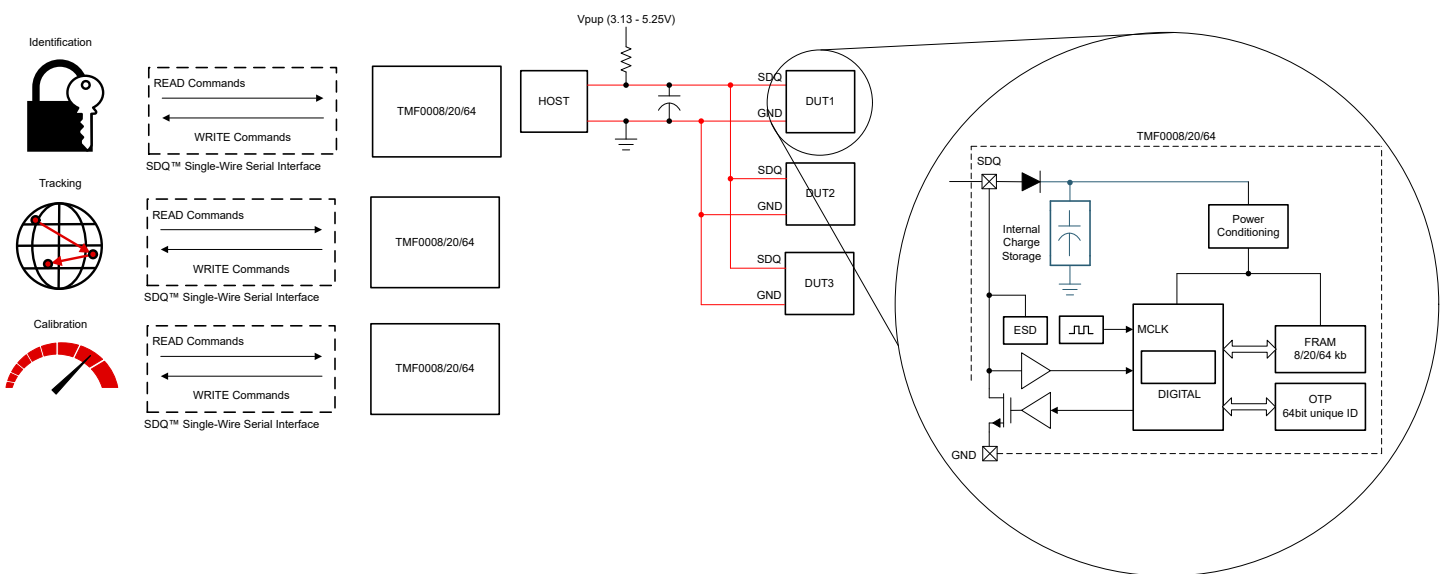


Figure 1. Operation of a Single Versus Multiple TMF0008/20/64 Devices

Design Considerations:

- The TMF family of devices enable identification for disposables and product peripherals
- 64-bit one-time programmable (OTP) ID
- Calibration data, date, or security-related information may be stored in FRAM
- Minimal standby current for tight power constraints
- Multiple pages allow different programming schema for different use-cases
- EPROM (OTP) mode and read-only mode can be enabled on a block by block basis
- High-speed, overdrive mode available for faster data transfer
- Available packages: DRS/DRP 6-pin WSON/VSON, LP 3-pin TO-92, PS 8-pin SOIC
- Need more assistance? Ask our engineers a question at [TI E2E™ design support forums](#)

Applications:

- Medical cables and disposable equipment identification
- Calibration, usage, and sterilization data for medical or testing instrumentation
- Battery, product peripheral, and hardware identification and counterfeit protection
- Asset tracking and identification

Table 1. Featured Devices

Device	TMF0008 ¹	TMF0020	TMF0064
Memory Capacity	8Kbit	20Kbit	64Kbit
Memory technology	FRAM	FRAM	FRAM
Power-off and standby current	7μA	7μA	7μA
Interface	SDQ™ Single-Wire Serial Interface	SDQ™ Single-Wire Serial Interface	SDQ™ Single-Wire Serial Interface
Temperature range (°C)	-10 to 85	-10 to 85	-10 to 85
Pin-to-pin compatible with packages	TO-92, TDFN, SO8	TO-92, TDFN	TO-92, TDFN

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¹ TMF0008 is the adapted device name for BQF0008

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