Sabtech Memory System (SMS)

The Sabtech Memory System (SMS) is a random access permanent data storage peripheral designed for military environments. The SMS features ubiquitous Secure Digital (SD) removable media popular in many consumer devices. The SMS is sealed against water and electro-magnetic interference (EMI) and is built to withstand high levels of shock and vibration. The SMS does not require air cooling and so there are no filters to replace.
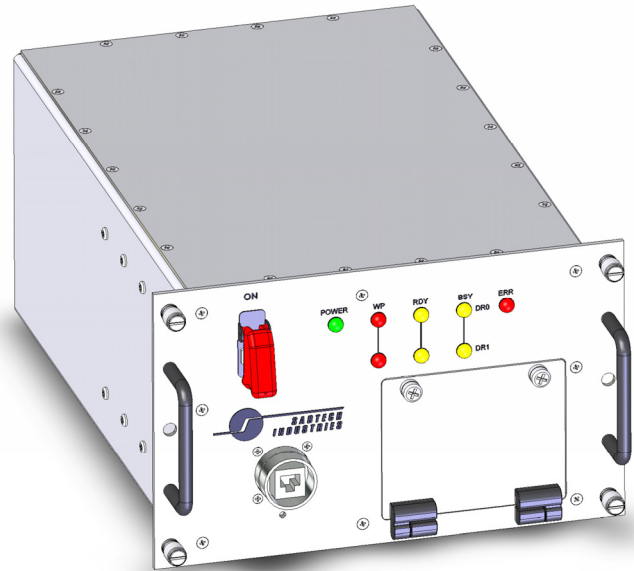
The SMS is designed as a drop in replacement for the Bubble Memory System (BMS) by MILTOPE. The original BMS requires bubble memory cassettes that are no longer available. The SMS is form, fit and function compatible with the original BMS making the transition to the SMS easy. In fact, the command set used by the SMS is identical to the BMS and therefore requires no changes to applications written for the BMS.

MEDIA OPTIONS

The SMS is available with a single or dual media bays. The BMS requires two media bays to store 512kb of memory. This amount of data fits on any SD card available today therefore only one bay is necessary, although two may be required for certain applications.

FILE SYSTEM OPTIONS

Two file system options are available. The first uses the FAT file system already present on SD media. This file system tends to be unreliable but can easily be duplicated in any Windows based computer with a SD card reader. The second option reformats the SD media to use the Extendable File System version 3 (ext3). This file system features full journaling so that the file system is protected from corruption. Using this file system requires a Linux based computer with an SD card reader to duplicate.

MEDIA TRANSFER

A system is available from Sabtech that hooks up to a BMS or SMS and transfers data from the BMS directly to an SMS or to a local SD card reader for use in an SMS.

I/O CAPABILITIES

The SMS connects to a controlling device, such as an AN/UYK-44 computer, via a parallel Navy Tactical Data Systems (NTDS) interface. Operating in 16 bit NTDS Type B mode, this interface is capable of transferring up to 250,000 words per second.

MAINTENANCE

The SMS has access panels for all internal components so that upgrading or servicing the equipment can be accomplished with minimal interference and without requiring special tools or equipment. An Ethernet port is available for in-field firmware upgrades but is not used for normal operation.

Your Data Communications Link

SABTECH INDUSTRIES

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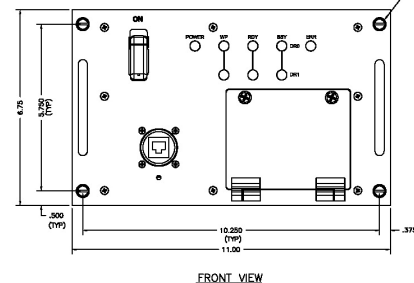
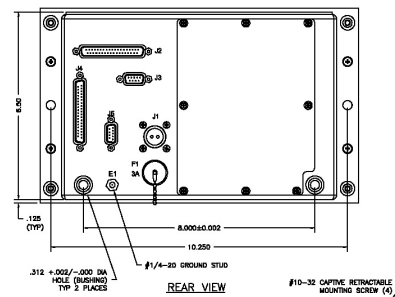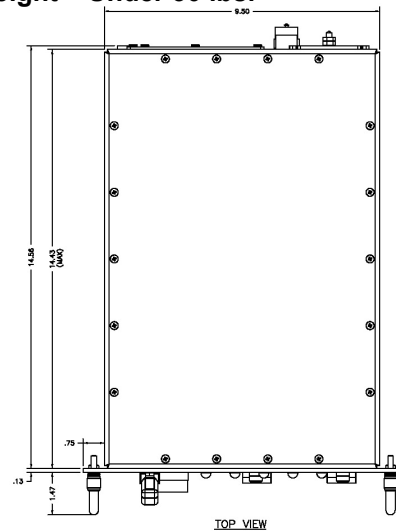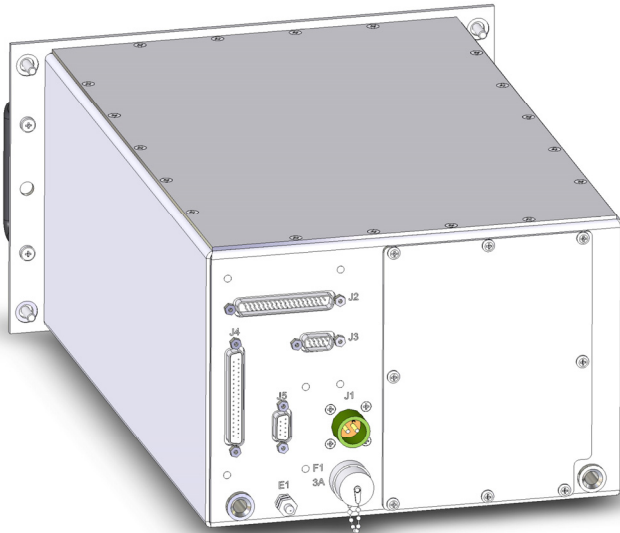# Sabtech Memory System (SMS)

I/O CAPABILITIES

- **NTDS – MIL-STD-1397C Type B, 16 Bit**
- **512kb of Permanent, Removable Storage**
- **96ms Maximum Access Time**
- **10ms Average Access Time**
- **24kb per second Minimum Transfer Rate**
- **200kb per second Average Transfer Rate**

POWER

- **Input: 28VDC**
- **Consumption: 100 Watts Maximum**
- **Connector: MS3402D12S-3P**

PHYSICAL

- **Single Integrated Unit**
- **Conduction Cooled**
- **6.5"H x 15.0"D x 11"W**
- **Weight – Under 30 lbs.**

TOP VIEW

REAR VIEW

FRONT VIEW

ENVIRONMENTAL

Temperature, Operating:	**0 to +55C**
Temperature, Non-Operating:	**-20 to +70C**
Shock:	**MIL-S-901D, Grade A, Class 1, Lightweight Type A**
Humidity:	**95% Relative, Non-Condensing**
Vibration:	**MIL-STD-167-1 (Max Frequency 33 Hertz)**
Altitude:	**Up to 50000 ft.**
EMI:	**MIL-STD-461, Class A4**
Salt, Fog:	**MIL-STD-810, Method 509**
Drip:	**MIL-STD-108 (45 Degrees)**
Fungus:	**MIL-STD-454 Requirement 4**
Sand, Dust:	**MIL-STD-810C, Method 510.1, Procedure 1 at 55 Max**

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