

### Statement of Volatility for APC Smart-UPS model with “SURT” or “SURTA” prefix.

The Smart-UPS does not contain any user addressable non-volatile memory.

The UPS does contain a 2k EEPROM but this memory is only addressed by the internal microprocessor. It is not accessible to the user for any random memory storage operation. It only stores specific and limited parameters that are needed by the firmware for proper UPS operation.

#### The memory inside Smart-UPS units can be broken down as follows:

- 256 Bytes of On-Chip Data RAM for internal MPU registers. Not accessible to peripherals.
- 16KB of On-Chip EPROM for UPS Firmware. Firmware data is fused and one-time program only. It cannot be rewritten or modified after programmed.
- 2KB of on-board EEPROM used by the MPU to store operating parameters. Data can only be stored into the EEPROM by the MPU. The EEPROM is not directly accessible to the user.

When in factory-program mode, it can accept a limited number of user-selectable choices related to the unit's functionality. That subset can only be programmed through APC PowerChute software, APC Network Enhancement devices, or a Hyperterminal session by an operator with the proper knowledge of commands and settings, both limited in number.

A few of these fields can accept free text, such as UPS\_SN (14 ASCII characters), UPS\_IDEN (8 ASCII characters), Date of Manufacture (8 ASCII characters), Date of Last Battery Replacement (8 ASCII characters).

#### Main UPS Microprocessor:

- 6kbytes of ROM which is filled and locked in manufacturing. No portion of this memory can be changed as all write fuses are blown in manufacturing.
- 256 bytes of RAM

#### The USB microprocessor contains:

- 16kbytes of ROM which is filled and locked in manufacturing.
- 256 bytes of RAM

#### The external EEPROM contains:

- 256kbits of nonvolatile memory that contain UPS calibration/configuration information.

#### Acronym Definitions:

RAM: Random Access Memory.

MPU: Microprocessor Unit.

EPROM: Erasable Programmable Read-Only Memory.

EEPROM (or E2PROM): Electrically Erasable Programmable Read-Only Memory.

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