

PUP:Protect User Program

Description

This Immediate mode command allows the user to protect a user selectable portion of the nonvolatile memory from the bottom (0) up to the user defined limit. The user specifies the first writable nonvolatile memory address, and a lockout code.

If the first writable location is set to 0, the memory is not protected, and the lockout code is also cleared.

To protect user program, the user must supply a lockout code and the first writable memory location. Supplying a location of 65535 will lock all of the user space. Note: this prevents all writes to EEPROM in the protected user space, including saving registers. If the program saves registers, it is necessary that these registers are saved to unprotected space (at or above the first writable location).

Note: SilverDust I-Grade devices are sent from the factory with the Factory Block protected (63488 or 0xF800 and up for I-Grade SilverDust, 65280 or 0xFF00 for the M-Grade SilverDust, and the Silver Nuggets). The M-Grade SilverDust units are sent with the Factory Space unprotected by default, however, executing the PUP command, including executing it with both the lockout code and the starting location set to zero will enable protection of the Factory Block. In the case of setting both parameters to zero, the only effect will be to protect the Factory Space.

Updating the User Program (changing program or initialization) requires enabling the affected user space before downloading will be successful. This requires remembering the user assigned lockout code. It is thus highly advised to place it in the QCP remarks so that it is not forgotten.

NOTE: This is not intended as an absolute lockout against the determined, but as a means to prevent accidental or casual changes to the configuration.

If the device is busy, this command will NAK-Busy and not execute.

If the Lockout Code does not match, the command will NAK-Bad Lockout Code (NAK with a code of 9)

Note: A NAK –Bad Lockout Code error will be returned if an attempt is made to Store Program to a protected space.

Note: Attempting to save registers to protected space will set STATUS bits 14 and 12, as read by the POLL command, and the program will exit without completing the write.

Command Info

Command	Command Type/Num	Parameters	Param Type	Parameter Range
PUP SN na SD 05	Immediate Class B 33 (0x21) 1 word	Lockout Code	U16	0 to 65535
		1st NV Memory Address (first writeable address)	U16	0 to 65535

Example

Protect User Program below 1000.

@16 33 1234 1000 (CR)

Response

ACK only

QuickControl Example

Immediate (Host) Command