



FRONTGRADE

APPLICATION NOTES

256kb PROM Programming Guide

For UT28F256QLE & UT28F256LVQLE/
UT28F256QLEL & UT28F256LVQLEL

6/5/2020

Version #: 1.1.0

PROM Programming Flow

Frontgrade Colorado Springs UT28F256QLE/L and UT28F256LVQLE/L **do not** require any Post-Program Conditioning.

Note:

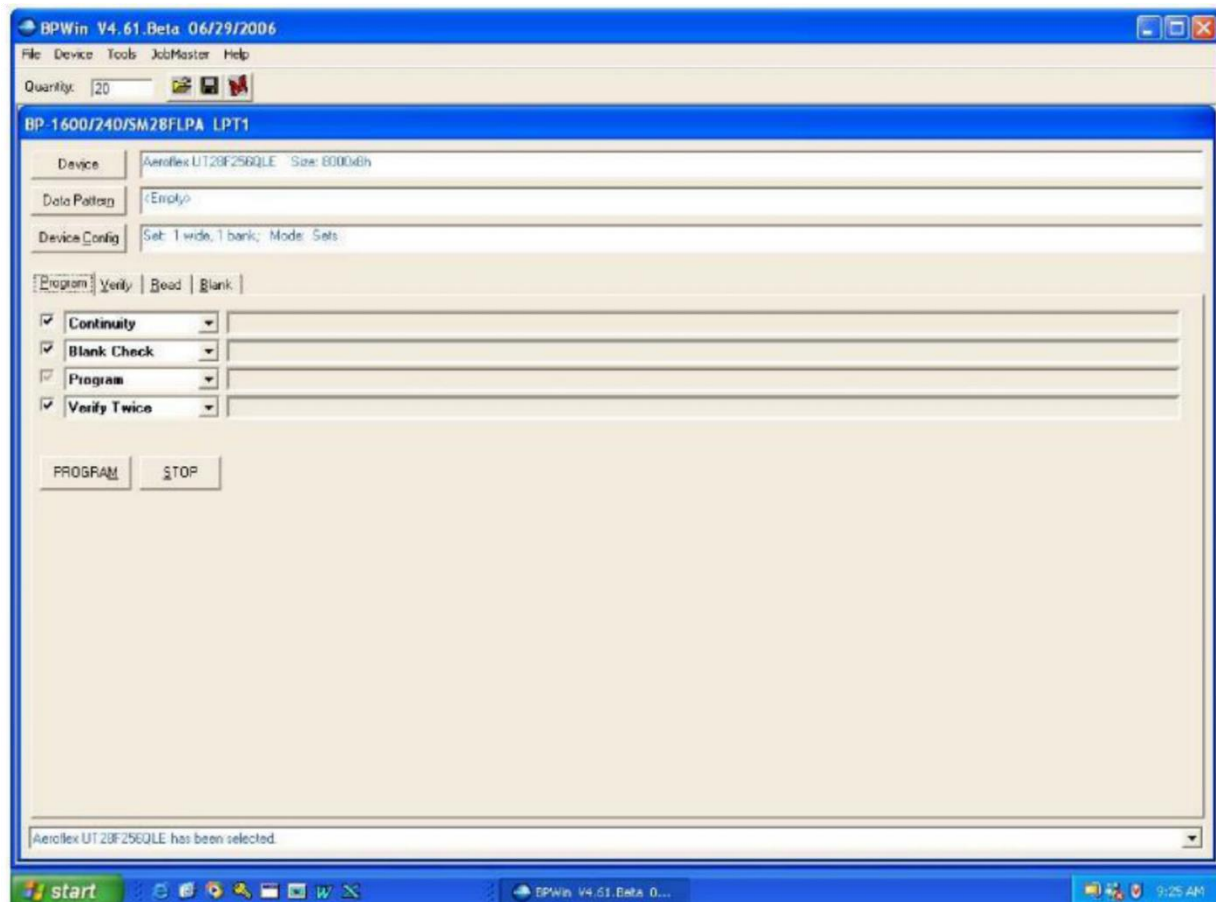
Many customers have purchased Frontgrade Legacy PROMs - **DO NOT** use the Post Programming kit that was provided with the Legacy PROMs. The UT28F256QLE/L and UT28F256LVQLE/L **will be damaged** if connected to the burn-in stimulus card.

Algorithm Download:

- Go to www.bpmmicro.com.
- Under software select Downloads.
- Register and then login
- Select BPWIN (approx. 56MB file size)
- Install BPWIN

Note:

Software versions 4.61 or higher are approved releases.



Programming:

To select a device hit the Device tab below and type in Frontgrade and then highlight the device type you want to program. To load data pattern hit the Data Pattern tab below.

Use default settings for Device Config. (Set 1 wide, 1 bank; Mode: Sets)

Be sure that Continuity, Blank Check and Verify are checked. Set Verify to Twice. Hit the **PROGRAM** tab to start programming the device

Programming times can vary from 60 to 240 minutes depending on the number of bits that will be programmed. If the device fails verify, discard the part. When programming is complete a security fuse is blown which will disable all test modes used during programming. Trying to program a second block will not work since the test modes have been disabled.

Reference Frontgrade Application Note "QLE Programming Notes" for more programming information.

Table 1: Algorithm Selector

Frontgrade UT28F256QLE & UT28F256QLEL Rev E, 5.0V	Frontgrade UT28F256LVQLE & UT28F256LVQLEL Rev E, 3.3V
UT28F256QLT45UCX	UT28F256LVQLEEC65UCX
UT28F256QLET45UPX	UT28F256LVQLEEC65UPX
UT28F256QLET45UWX	UT28F256LVQLEEC65UWX
5962-9689109QXX	5962-0151704QXX
5962-96891010QXX	5962-0151705QXX
5962-9689109VXX	5962-0151704VXX
5962-968910710VXX	5962-0151705VXX
UT28F256QLEL-45UPC	UT28F256LVQLEL-65UPC
UT28F256QLELL45UVC	UT28F256LVQLELL65UVC
UT28F256QLT45UCX	UT28F256LVQLEEC65UCX

Note:

The information in bold letters is the actual algorithm name. The information below each algorithm name are the products supported by that algorithm.

Rev. E material is identified by WE10A (3.3V), WE30E (3.3V), WE40E (3.3V), WE20A (5.0V), WE50E (5.0V), or WE60E (5.0V) on the package lid.

Socket Module:

SM28FLPA, used for both UT28F256QLE UT28F256QLEL and UT28F256LVQLE UT28F256LVQLEL

Programmers:

- *BP-1400 Full Support
- *BP-1400/84 Full Support
- BP-1410 Full Support
- BP-1410/84 Full Support
- *BP-1600 Full Support
- BP-1610 Full Support
- *BP-1700 Full Support
- BP-1710 Full Support
- *BP-2600 Full Support BP-2610 Full Support

* Programmer end of life by manufacturer, reference BPM Microsystems website www.bpmmicro.com and search end of life for more information.

BPM Microsystems Sales Support:

Email: inside_sales@bpmmicro.com

Phone: 1-713-688-4600

BPM Microsystems Technical Support:

Email: tech@bpmmicro.com

Phone: 1-800-225-2102 (US only)

713-688-4600 (outside the US)

Systems Technical Support UT28F256QLE/L AND UT28F256LVQLE/L PROM Alignment Within Carrier

The following diagram shows the alignment of the UT28F256QLE and UT28F256LVQLE PROMs within its carrier. It is very important that the PROM is properly aligned in the carrier during programming. If you attempt to program the PROM when it is not properly aligned, the BP Microsystems programmer will fail continuity check.

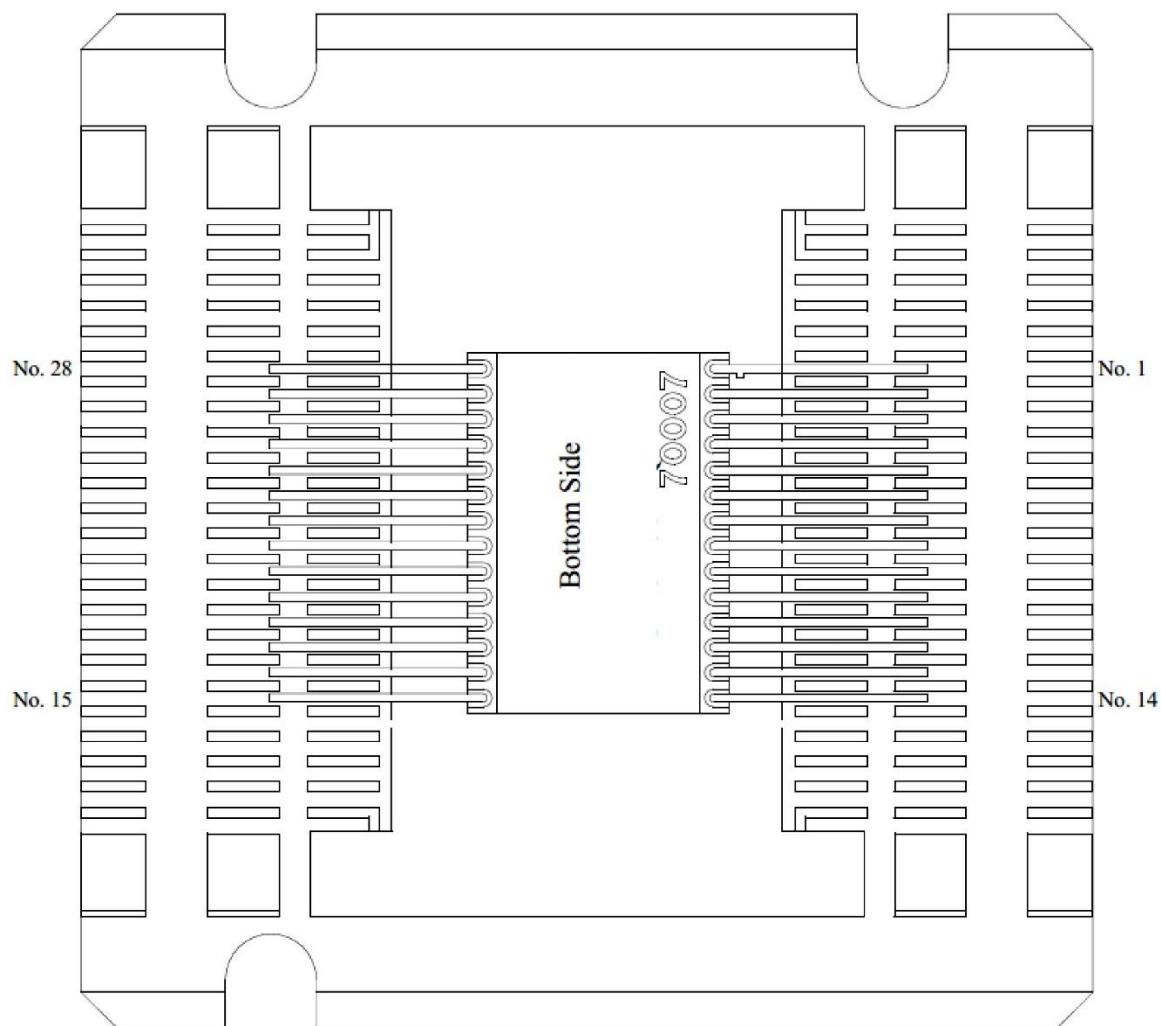


Figure 1. Diagram of the UT28F256QLE/L and UT28F256LVQLE/L PROM 28-Pin Flat Pack in Carrier

Revision History

Date	Revision #	Author	Change Description	Page #
04/07/2011	1.0.0	MJL	Initial Revision Tracking Revision	
06/05/2020	1.1.0	MJL	Converted format to current Frontgrade Template. Added UT28F256QLEL and UT28F256LVQLEL product for Suntek. Updated the BPM Microsystem programmer end of life notes	

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