

# UTMC APPLICATION NOTE

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## UT22VP10 Universal RADPAL JEDEC File Re-mapping Software - User Guide Programming Algorithm Installation

### Introduction:

The following reviews the installation and use of re-map software for the UT22VP10 Universal RADPAL. To program the UT22VP10 with an industry standard JEDEC file, the user first re-maps the file to fit the UT22VP10 fuse map. UTMC supplies software to re-map JEDEC files for programming the UT22VP10 RADPAL; the executable re-map code is available on the Data I/O BBS (i.e., bulletin board). Figure 1 shows a diagram of this file remapping process. This software:

- Optimizes the fuse map configuration for the UT22VP10 by modifying unused product terms, while maintaining identical functionality
- Checks for unused output-enable product term
- Checks for unused preset or reset product terms
- Modifies the fuse map for the output macro-cell of the UT22VP10
- Updates the fuse map checksum and transmission checksum

The re-map executable code (REMAP.EXE), README file, and programming algorithm (ALG.EXT) are compressed in a file on the bulletin board called UT22VP10.exe. The user downloads file UT22VP10 from the BBS to a PC-compatible system using a modem. Executing file UT22VP10.exe, at the DOS prompt, expands the file UT22VP10 into three files: REMAP.EXE, README, ALG.EXT

### Installing Software

To install software:

1. Download compressed file UT22VP10.EXE from the Data I/O BBS to a PC-compatible system via modem.
2. Copy file UT22VP10.EXE into destination directory on computer.
3. Execute (i.e., de-compress) file UT22VP10.EXE at the DOS prompt by typing: **UT22VP10** ↓
4. File expands into a README file, REMAP.EXE, and ALG.EXT

### Using Software

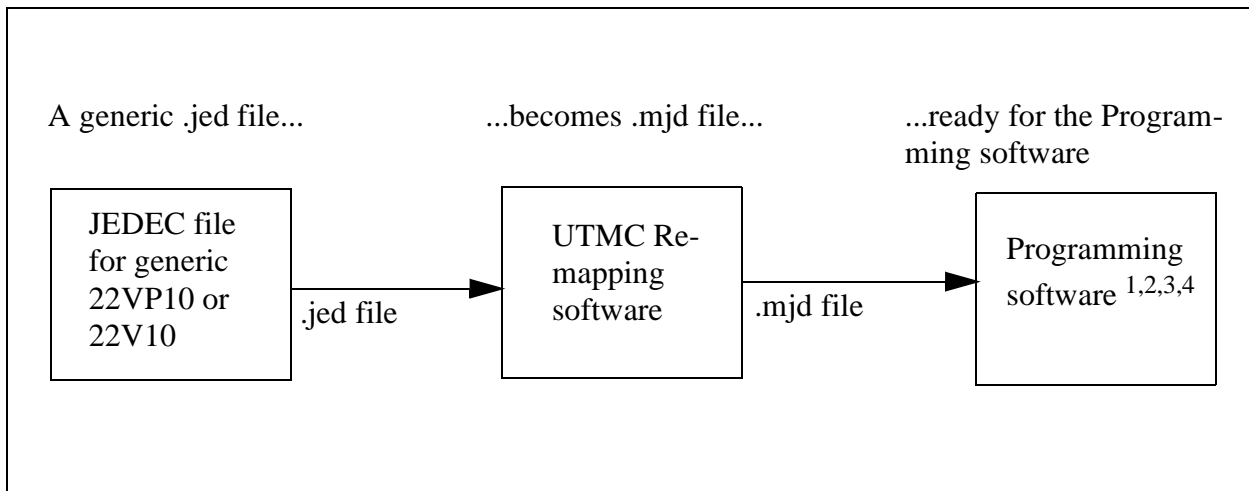
To use the software:

1. Rename the JEDEC file to a filename with a .jed extension.
2. Type:

**remap.exe [-p<package>] <filename>.jed**

where <package> is DIP24, FP24, or QFP28  
<filename> is the name of the .jed file you want to modify

The software will create a file named <filename>.mjd. Use this .mjd file as the JEDEC input file for the programming software.



**Figure 1. Diagram of the JEDEC File Re-mapping Process**

Notes:

Before processing or programming the UT22VP10:

1. Configure the PROMlink security option to blow the security fuse.
2. Due to technology limits, program the UT22VP10 RADPAL device only once.
3. Programming the security fuse eliminates the ability to verify the fuse map and read checksum. After the security fuse is programmed, you can still perform functional verification.
4. The executable code and programming algorithms for the UT22VP10 RADPAL software are available on the Data I/O BBS.
5. Programmer Pin Interface boards available from DATA I/O: Flatpack PPI-1006, quad-flatpack PPI-0562.

## Installing Programming Algorithm

Installation of the programming algorithm depends on the DATA I/O software environment. The following reviews installation into “HiTerm” and PROMlink software environments:

### “HiTerm Software”:

Load programming algorithm “ALG.EXT” into a 3.5 inch floppy

Insert diskette into DATA I/O floppy drive

From Main Menu

Choose: More Commands

From More Commands Menu

Choose: Configure Systems

Configure System Parameters Menu

Choose: Edit

Edit Parameter Menu

Choose: Programming

Edit Programming Parameters

Algorithm Type: “E”

Type F1 to Return to Main Menu

From Main Menu

Choose: Select Device “UTMC” - this command reads ALG.EXT from 3.5 inch floppy

Load preferred algorithm

- UTMC UT22VP10-FP

- UTMC UT22VP10-QFP

- UTMC UT22VP10

### “PROMlink vs. 6.0”:

Load programming algorithm “ALG.EXT” into a 3.5 inch floppy

Insert diskette into DATA I/O floppy drive

Choose menu Setup from main menu

then the following menus

Select Device

Device type: Extended\_ALG <OK> - *Select one from manufacturers list*

- UTMC UT22VP10-FP

- UTMC UT22VP10-QFP

- UTMC UT22VP10

Read floppy <OK> - this command reads ALG.EXT from 3.5 inch floppy

## Setting the Security Option

Setting the security option depends on the DATA I/O software environment. The following reviews installation into “HiTerm” and PROMlink software environments:

### “HiTerm Software”:

From Main Menu

Choose: *Program Device*

Set Security Fuse Data: “1”

Program Security Fuse : “Yes”

Return to Main Menu

### “PROMlink vs. 6.0”:

From Main Menu

Select: *Setup*

Under Setup choose: General Parameters

Set Security Option to: 3

Return to Main Menu

## Programmer Options

Data I/O supports RADPAL on the following programmers:

Unisite

Autosite (used with their handlers)

3900

2900

Data I/O no longer supports the 29B programmer