Tech-note

Getting Started with UniOP B Series Panels

This document contains all you need to know to get quickly started with the new B-generation UniOP panels.

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Tn213
Ver. 1.00
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1 The New Hardware Platform

The new “B” series of eTOP products feature a completely new hardware platform called “T2003”. The “T2003” CPU board uses a new 200 MHz 4131 MIPS processor.

The “B” series uses a new Firmware Type called FW60.

1.1 New Features Available in the T2003 Platform

The new hardware platform brings up to the product a set of interesting new features:

- support for 64K color systems on panels with TFT display
- support for 256 colors on panels with STN display
- support for 8 levels of gray on panels with monochrome display
- 32MB Internal Memory Card and optional SSFDC External card
- Video Input Option for panels with TFT displays
- Backlight dimming for panels with TFT display

2 Support for 64K Colors

The support for 64K colors is available only on units with TFT display.
The high colors option can be used only on:

- imported images
- video input windows

All the other project objects, such as text and touch elements, support 256 colors.

3 The FW60 Memory Architecture

The memory organization of the new T2003 hardware platform is explained in the schematic reported in Figure 1.

The picture shows the relation between the external SSFDC memory card contents and the related memory storage on the panel.

The reference to the picture may be usefull to understand the following part of this document, with particulare care to the chapter about the Internal Memory.

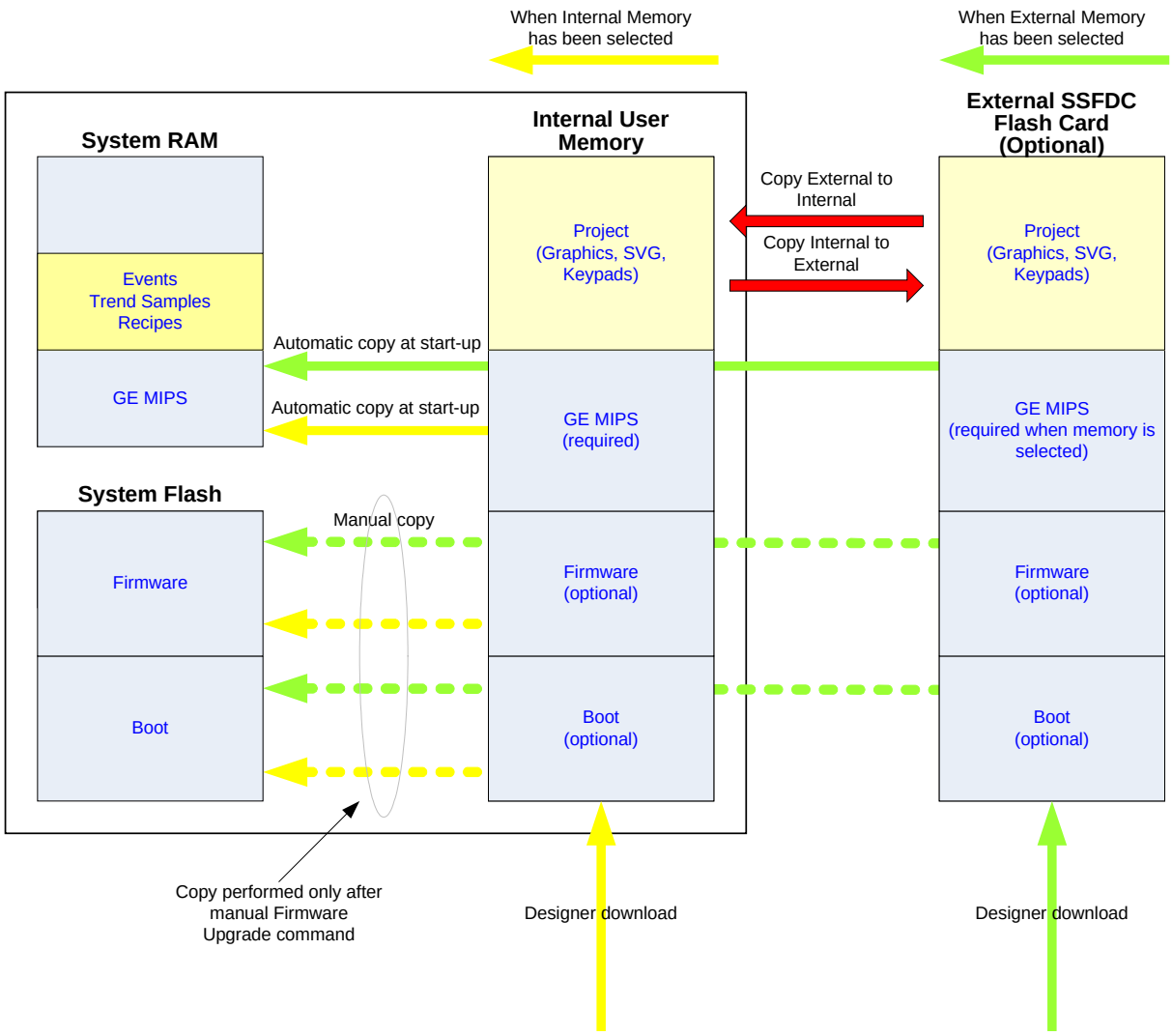

Figure 1

4 The Internal Memory

The "B" series units have a 32 MB internal Flash memory dedicated to project file elements and firmware files in the same way as the SSFDC card is used on the T2000platform.

This memory will be the standard storage location for both user application and firmware files.

The SSFDC socket is still present in the T2003 CPU and can hold an additional SSFDC memory card.

Note: *B-series units are delivered* ***without*** *the SSFDC card in the external socket.*

The Firmware Type 60 includes some new controls to handle the two memory locations.

At any time only one memory can be considered "active". The firmware will then run the project and the firmware components only from the active memory.

The memory selection can be done using a special memory setup menu activated in Configuration Mode by pressing and holding down for 2 seconds the **right** arrow key.

The menu is shown in Figure 2.

```
Memory setup
Select Format Copy Exit

-> Panel Memory  -  32MB, 2% used
   Flash Card    -  32MB, 6% used
```

Figure 2

When the menu is activated a cursor will blink over one of the four available options: Select, Format, Copy and Exit.

Select	selection the active memory
Format	formatting the active memory
Copy	copy from the active memory to the other one
Exit	exit from the Memory Setup menu to Configuration Mode

To Select a memory type, place the blinking cursor over he “Select” option and confirm with OK; the blinking cursor will move the memory indicator represented with the arrow -> symbol; the cursor can be moved using the up/down keys; once selected the desired memory type, confirm with OK.

When doing a Copy process all the contents of the source memory will be copied to the destination memory. The currently active memory location is always considered as the source.

4.1 Firmware 60 Files

Firmware Type 60 is composed by only 3 files; please note this is different from the older FW58:

- Boot
- Firmware
- MIPS

The MIPS file is the only one that must always be present in the active user memory either this is the internal memory either it is the flash card.
The Firmware Upgrade menu will only show the Boot and the Firmware components; they are the only two components the system will need to copy from the active user memory to the internal System Flash (see Figure 1).

5 Video Input Option

The Video Input option will be available for the following units:

eTOP10B
eTOP19B
eTOP20B
eTOP33B
eTOP39B
eTOP40B
eTOP50B
ePAD33B
ePAD33BT

The VMO10 module is delivered as a separated product and requires installation by the user. Please refer to the product datasheet Tn209 and to the installation guide for specific information about specification and installation.

6 Backlight Dimming

The T2003 platform for units with TFT display adds the possibility to use the dimming function for the display backlight.
The brightness of the backlight can be controlled using the macro commands shown in Figure 3.

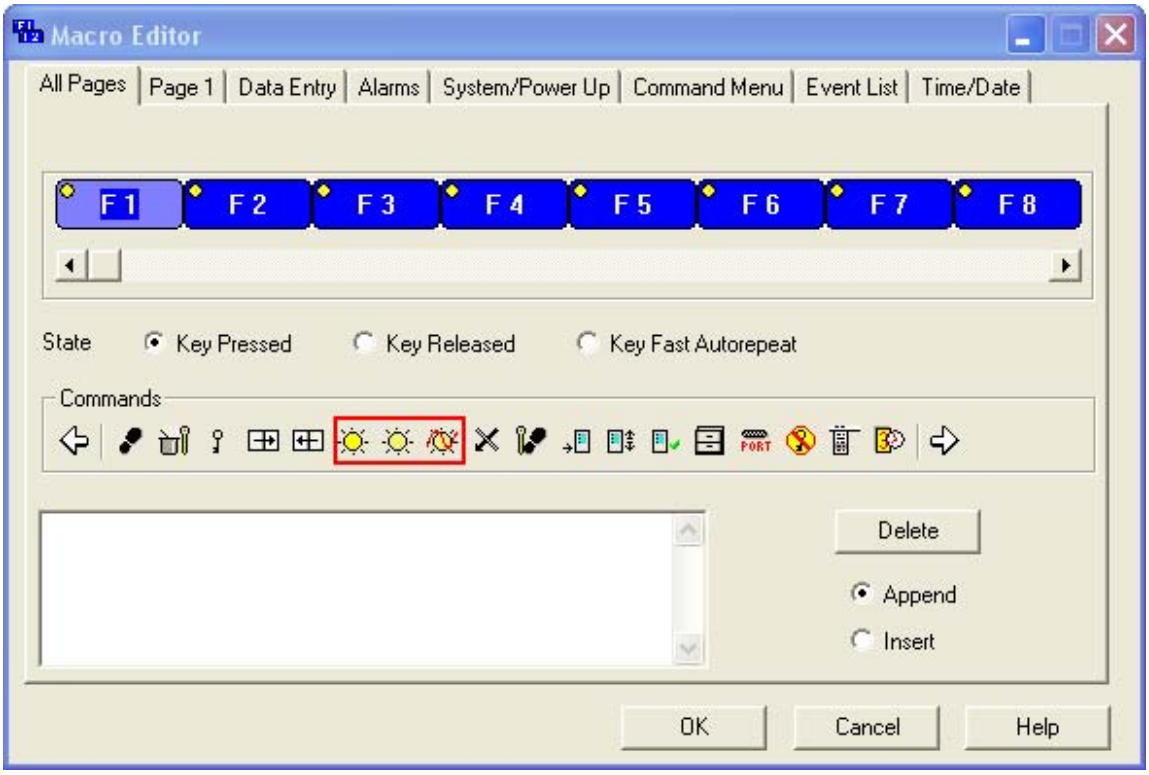

Figure 3

The brightness can be decreased, increased and changed in cycle with steps using the macro "Dimming" identified by the following icon: .

The display brightness can be reduced up to 2% of the maximum value.

7 Compatibility Issues

The “B generation” units are delivered without removable memory card; user memory is the internal 32MB Flash memory as a factory setting.

From the point of view of transferring a new project file to the panel, there are no differences in handling the download whether you use internal memory or Flash card. The memory selection is done in Configuration Mode and no settings are required at Designer level.

The “Copy” option of the Memory Setup menu can be used to transfer the entire contents of an external SSFDC card to the internal flash. The external card must be of course prepared with proper firmware files, Type 60, and correct project matching the hardware type, according to the Designer Panel Setup selection.

SSFDC cards already programmed for units with firmware type 58 are not compatible with “B” series panels.
In the same way, memory cards prepared for units with firmware type 60 are not compatible with units using T2000 hardware platform.

The project stored on a memory card suitable for use with firmware 58 units cannot be copied to the internal memory of a “B” series unit. The copy option operates only for the entire memory contents.

Any “B” series unit to be used as a replacement of existing Firmware 58 panels must be completely prepared at early stage and must be sent to site ready for installation.