**Design Document for Keypad Driver**

 

# Outline

This document describes the keypad driver in Linux kernel of MVF TOWER BOARD (XTWR-VF600) with MVF SoC. PTB16 and PTB17 are used as GPIO key for this board, and raised events are notified to each application via input device.

# Existing code to be changed

## Source

* Key definition

arch/mach-mx6/board-mx6q\_sabreauto.c

## Modifications

* Change in key definition
* arch/mach-mvf/board-twr\_vf600.c

1. Define the key used for this board (key code is tentative)

static struct gpio\_keys\_button mvf\_buttons[] = {

GPIO\_BUTTON(PTB16, KEY\_MENU, 1, "back", 0),

GPIO\_BUTTON(PTB17, KEY\_BACK, 1, "menu", 0),

};

1. Define the key (that is defined above) as a platform resource

static struct gpio\_keys\_platform\_data mvf\_button\_data = {

.buttons = mvf\_buttons,

.nbuttons = ARRAY\_SIZE(mvf\_buttons),

};

1. Configure GPIOkey driver to be able to detect such resource

static struct platform\_device mvf\_android\_button\_device = {

.name = "gpio-keys",

.id = -1,

.num\_resources = 0,

.dev = {

.platform\_data = &mvf\_button\_data,

}

};

# API of new functions

None

# Expected register settings

Port for key input must be configured as GPIO input.

# Expected functionality and usage

Key event is MENU button event for PTB16, and BACK button event for PTB17.

# Any other pertinent information

Set CONFIG\_KEYBOARD\_GPIO on in kernel configuration.