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Historie:

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1.0	First edition	28.10.2016	J. Tian

Connecting the Capacitive 7" EDT Display phyBOARD Upgrade Kit [KPEB-AV-02-070]

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1 Introduction

This Application Note provides a guide for how to connect the 7'' EDT display AC104 to Phytec phyBOARD SBCs which support use of the PEB-AV-02 Display Adapter. As of printing of this manual suitable phyBOARDS are phyBOARD-Wega AM335x, phyBOARD-Mira i.MX 6, phyBOARD-Segin i.MX 6UL and phyBOARD-Zeta i.MX 7.

In this Application Note the phyBOARD-Segin i.MX 6UL is used as an example to describe all steps necessary to connect the 7'' EDT display AC104 and to enable the display configuration in *barebox*, as well as to operate the software implemented in the phyBOARD.

2 Requirements

The following system requirements are necessary to successfully complete this Application Note. Deviations from these requirements may suffice, or may have other workarounds.

Hardware:

- phyBOARD-Segin Kit(PB-02013) (or another suitable phyBOARD Kit)
- PEB-AV-02 LCD Display Adapter for Glyn Displays
- 40 Pins FFC flex flat cable (WF061)
- 7'' EDT Display (AC104)
- AC power supply 12 V – 24 V DC/ min. 2.5 A

Software:

- phyBOARD-Segin-i.MX 6UL –ALPHA1 (or the appropriate BSP for your phyBOARD)

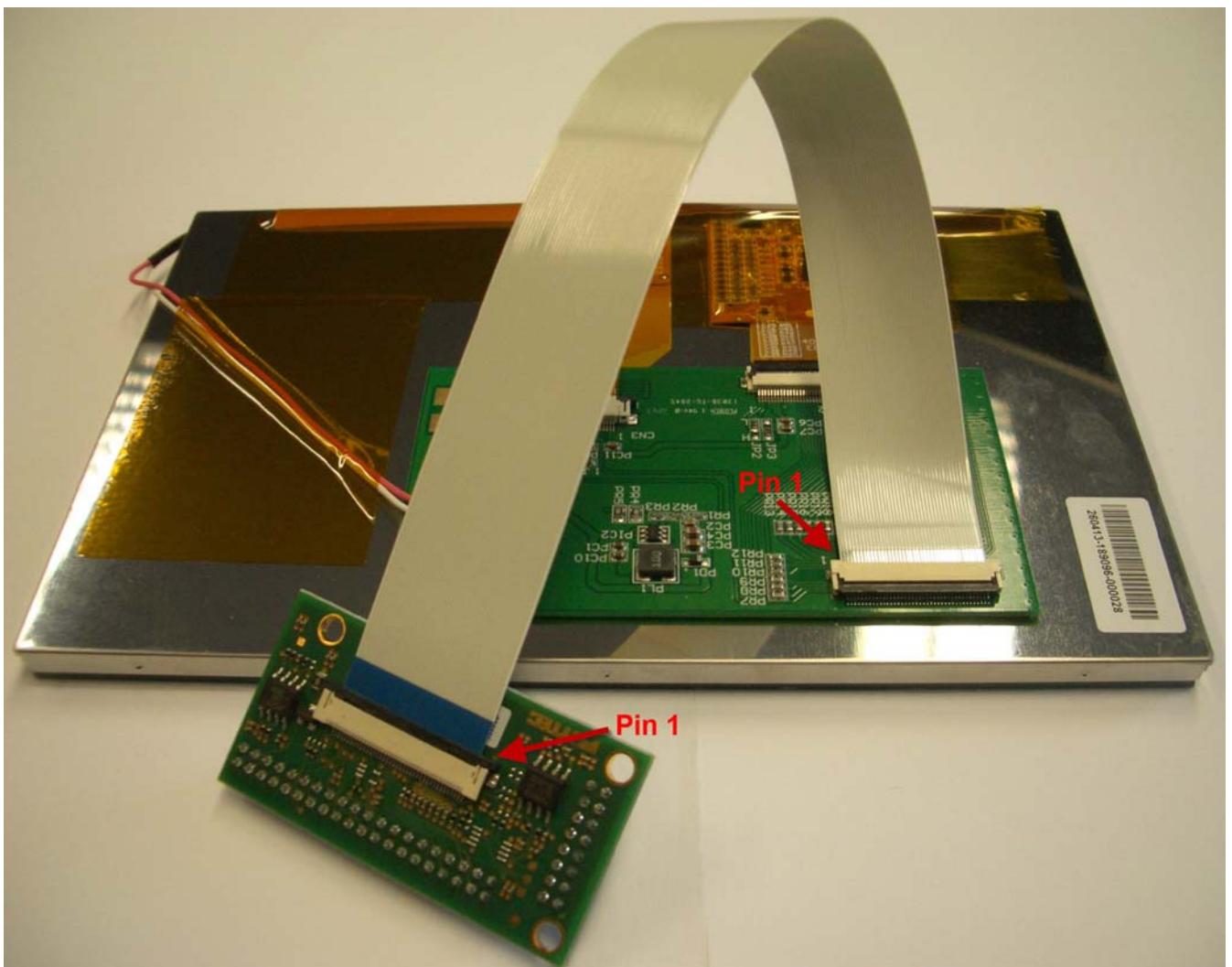
3 Getting Started

- Connect one end of the FFC flex flat cable to the underside of the 7" EDT display AC104. There is a delicate clamp you need to pull up slightly before sliding the cable in.

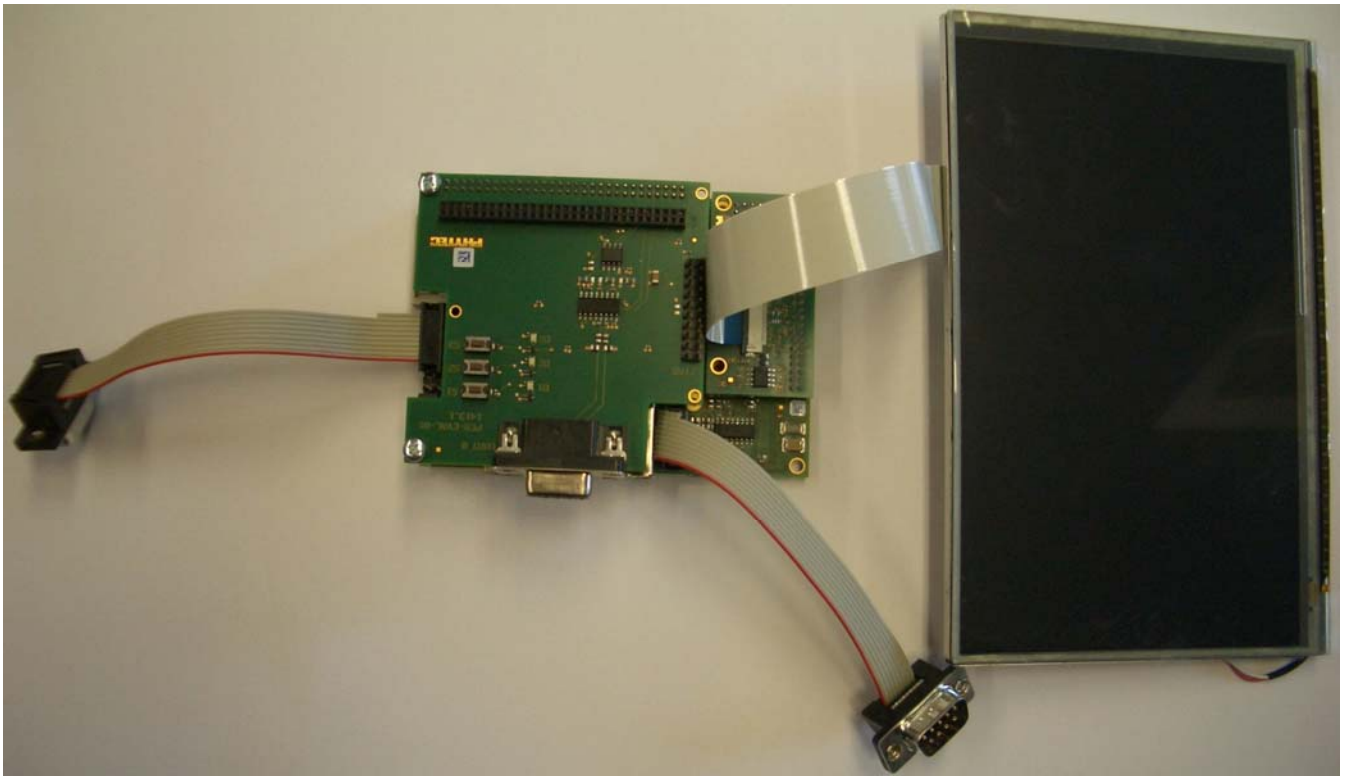


Be very careful when connecting the cable into the display connector, this kind of display connectors are easy to break if you use force!

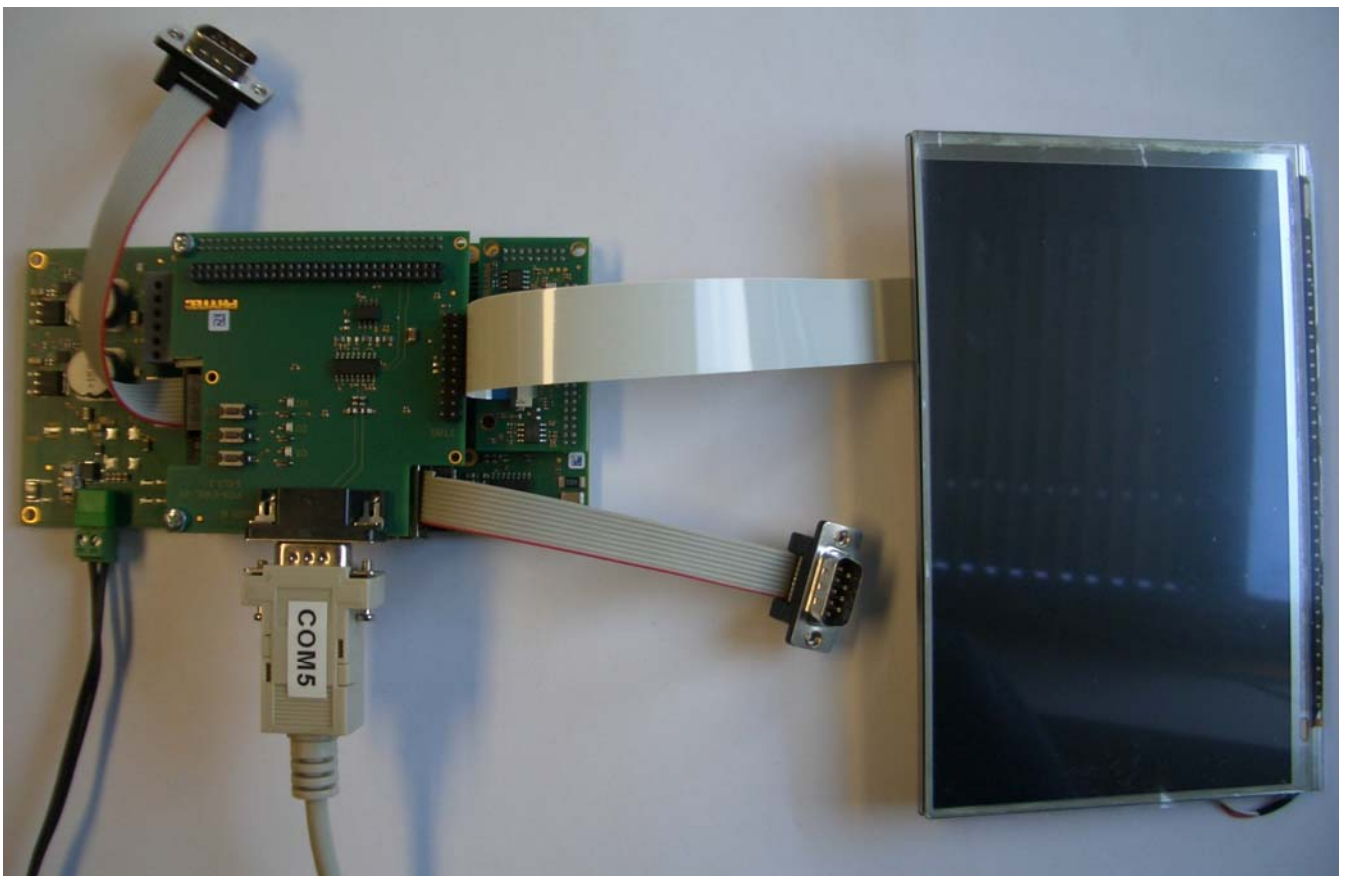
- Turn the display over, and connect the other end of FFC flex flat cable to PEB-AV-02 display adapter. Again, first pull the clamp out before pushing the cable in.



- Plug the PEB-AV-02 display adapter onto the phyBOARD-Segin. Turn the display so it is face up. It should look like the following.



- Connect the RS-232 cable between your host PC and the phyBOARD-Segin debug adapter as shown below.



- Start your favorite terminal software (e.g. *Minicom*, or *Tera Term*) on your host PC and configure it for 115200 baud, 8 data bits, no parity, and 1 stop bit (8n1) with no handshake.

- Connect the power supply to the power connector.

The BSP has already been configured to support the display but it must be enabled as an expansion by editing file *config-expansions* in the *barebox* environment. Please refer to the Yocto i.MX 6UL BSP Manual for more information.

- Open file *config-expansions* with:

```
bootloader$ edit /env/config-expansions
```

- Uncomment the following 2 lines by removing the # at the beginning of the line.

```
. /env/expansions/im6ul-phytec-segin-peb-av-02  
of_display_timings -S /soc/aips-  
bus@02100000/lcdif@021c8000/display@di0/display
```

- Save and exit the configuration file using **CTRL+D** and save the environment:

```
bootloader$ saveenv
```

- Restart the board, and watch the boot. The login prompt will be shown at the end of the booting process:

```
Yogurt (Phytec Example Distribution) phyBOARD-Segin-i.MX6UL-ALPHA1 phyboard-segin-  
imx6ul-1 ttymxc0  
phyboard-segin-imx6ul-1 login:
```



The default login account is *root* with an empty password.

Please contact our technical support, if you need additional information, or if you have any questions.

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