

## Advantech AE Technical Share Document

<b>Date</b>	3/9/2022	<b>Release Note</b>	■Internal □External
<b>Category</b>	■FAQ □SOP	<b>Related OS</b>	Windows CE7, ubuntu, Android
<b>Abstract</b>	How to recover the OS from WinCE to Linux or Android?		
<b>Keyword</b>	Windows CE7, ubuntu, Android, TPC-71W		
<b>Related Product</b>	TPC-71W		

### ■ Problem Description:

If you follow the original installation instructions to install the ubuntu or Android onto a TPC- 71W with CE 7 installed, the TPC-71W will not boot.

20200603

### ■ Problem Analysis:

Because the Linux boot loader was deleted when installing CE 7, TPC-71W will not boot even if the dip-switch (SW3- 1 OFF\_2 ON) is selected.

### ■ For Ubuntu installation:

Create an Ubuntu 16.04 installation USB stick

Boot an X86 device to Ubuntu 16.04 USB stick

Open terminal

Connect Micro SD to your x86 device

Find out what device the uSD is

```
#sudo lsblk
```

Copy "TPC-71W-N21PA-r1-Ubuntu1604-20200603.tar.gz" to your x86 device and unzip it.

```
#tar -xvf TPC-71W-N21PA-r1-Ubuntu1604-20200603.tar.gz
```

**Note: Please do not use newer version than TPC-71W-N21PA-r1-Ubuntu1604-20200603.tar.gz, otherwise the SD card you created may not boot with TPC-71W.**

**Image can be downloaded from PLM, or you can contact PAE for help.**

The next step is only for recovering the OS from WinCE to Linux. The file of mksd\_recovery-linux\_boot-from-sd.sh is to rebuild the Linux boot partition.

Copy the "mksd\_recovery-linux\_boot-from-sd.sh" to /TPC-71W-N21PA-xx-ubuntu.2020xxxxx/scripts

Run following command in folder /TPC-71W-N21PA-xx-ubuntu.2020xxxxx/scripts

```
./mksd_recovery-linux_boot-from-sd.sh /dev/sdb ubuntu16044
```

(assuming Micro SD is on /dev/sdb)

Eject the SD card, then insert SD card into TPC-71W

Set SW3—1: OFF, 2: ON to boot from SD card

Common user: advantech, passwd : 123

Super user: root, passwd: 123456

In the terminal, enter following command

```
#/mk_inand/scripts/mkspi-advboot.sh
```

```
#./ mkinand-linux.sh /dev/mmcblk0 ubuntu16044
```

#sync

Power off, remove SD card then set SW3—1: ON, 2: OFF

Power On the TPC to start booting from eMMC

#### ■ **For Android installation:**

If the current OS in TPC-71W is WinCE, and you want to install Android on it, you have to install ubuntu first and then install Android.

If you have followed above steps to install Ubuntu on your TPC-71W, you can continue the following steps to install Android.

Create an Ubuntu 16.04 installation USB stick

Boot an X86 device to Ubuntu 16.04 USB stick

Open terminal

Connect Micro SD to your x86 device

Find out what device the uSD is

#sudo lsblk

Copy “TPC-71W-N21PA-r1-Ubuntu1604-20200603.tar.gz” to your x86 device and unzip it.

#tar -xvf TPC-71W-N21PA-r1-Ubuntu1604-20200603.tar.gz

**Note: Please do not use newer version than TPC-71W-N21PA-r1-Ubuntu1604-20200603.tar.gz, otherwise the SD card you created may not boot with TPC-71W.**

**Image can be downloaded from PLM, or you can contact PAE for help.**

Run following command in folder /TPC-71W-N21PA-xx-ubuntu.2020xxxxx/scripts

./mk\_sd\_recovery-linux\_boot-from-sd.sh /dev/sdb ubuntu16044

(assuming Micro SD is on /dev/sdb)

Eject the SD card, then insert SD card into TPC-71W

Set SW3—1: OFF, 2: ON to boot from SD card

The above steps are mainly to start TPC-71W from SD card and enter Linux environment.

Next, we are going to install Android onto emmc storage.

Then copy “ “TPC-71W-N21PA\_Android\_6\_yyyy\_mm\_dd.tar.gz” to your x86 device and unzip it.

Common user: advantech, passwd : 123

Super user: root, passwd: 123456

In the terminal, enter following command

#cd TPC-71W-N21PA\_Android\_6\_yyyy\_mm\_dd/scripts/scripts/

#!/mkmmc-in-ubuntu.sh /dev/mmcblk0

#!/addLogo-in-ubuntu.sh /dev/mmcblk0

Power off, remove SD card then set SW3—1: ON, 2: OFF

Power On the TPC to start booting from eMMC