Galaxy TabPro S Guidance for Custom OS installation

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Pre-conditions for Customers Deployment Scenario

The following guidance is required for IT admin to consider in preparation of the Custom image.

Samsung is going to provide the drivers package which consists of three parts as below.

1. INF drivers
2. Non-INF drivers
3. Some essential applications

- Samsung Update is required to be installed. Some of the drivers can’t be delivered as the INF drivers. In addition, some applications, such as Samsung System Agent, are required for the best life-time of Samsung AMOLED display panel.
- All the “Essential” items are required to be installed to ensure stability and improved performance of the system.
- It’s recommended to update all the “Essential” items in Samsung Update to the latest when you create the Custom image to deploy to client PCs. This is beneficial to the individual users because they don’t have to install the items. It’s still recommended for the individuals to update the items regularly to get any upcoming stability fixes.
- We strongly recommend not deleting Samsung Update application for above reasons because non-INF drivers and applications cannot be updated by Windows Update but only by Samsung Update.

Support for PXE boot

- What is PXE boot?

  In computing, the Preboot eXecution Environment (PXE) specification describes a standardized client-server environment that boots a software assembly, retrieved from a network, on PXE-enabled clients. On the client side it requires only a PXE-capable network interface controller (NIC), and uses a small set of industry-standard network protocols such as DHCP and TFTP.

  (Source: Wikipedia)

- Ethernet Adapter for PXE

  For TabPro S, booting from the network (PXE boot) is only supported when you use an Ethernet adapter from Belkin. To boot from the network, the chipset in the Ethernet adapter must be detected and configured as a boot device in the BIOS of the TabPro S.

  Please refer to below [Table 1].

- BIOS installation file - WIN_P06HAB_000_ME_11_0_5_1000_PXEBoot.zip (ver. P06HAB)

  1. Unpack zip file and execute it then BIOS will be updated.
     The version from P06HAB will be working.
  2. P07HAB version has been applied on Samsung Update officially.
     You are able to get updated PXE boot file through the system without separate installation.

- How to do PXE boot

  1. Enter BIOS menu by pressing F2 when Galaxy TabPro S logo appears after power-on.
  2. Go to Boot panel in BIOS menu and enable PXE OPROM option.
  3. Change the boot order in Boot Device Priority menu to USB Network adapter.
TabPro S boots from network subsequently.
Alternatively, TabPro S can boot from network by pressing F12 when the logo appears after power-on.

**NOTE:** Using the F12 option does not permanently change the way in which your TabPro S attempts to boot. It only applies to the current boot process.

<table>
<thead>
<tr>
<th>Web site</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ <a href="http://www.belkin.com/us/F2CU040-Belkin/p/P-F2CU040/">http://www.belkin.com/us/F2CU040-Belkin/p/P-F2CU040/</a></td>
<td><img src="image" alt="USB-C to Gigabit Ethernet Adapter" /></td>
</tr>
<tr>
<td>✓ USB-C to Gigabit Ethernet Adapter</td>
<td></td>
</tr>
<tr>
<td>(Also Known as USB Type-C)</td>
<td></td>
</tr>
</tbody>
</table>

**Table 1 Belkin’s Ethernet Adapter**

- Formal purchase process in bulk
  - Please contact with Samsung Sales team in your country.

**Details**

**Structure of Drivers Package**

Drivers’ package includes INF drivers, non-INF drivers, and some essential applications. INF drivers are under **InfDrivers** folder and others are under **NonInfDrivers** folder. See [Figure 1]. The driver package, e.g. GalaxyTabProS_DriverPackage_160513.zip, can be downloaded from Samsung website.

![Figure 1 Directory of drivers’ package](image)
<table>
<thead>
<tr>
<th>Sub-folder</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>InfDrivers</td>
<td>INF drivers for automatic installation.</td>
</tr>
<tr>
<td>NonInfDrivers</td>
<td>Non-INF drivers and essential applications</td>
</tr>
</tbody>
</table>

**Table 2 Drivers Package**

1. INF drivers
INF drivers’ package is a collection of the drivers that can be installed automatically by Windows PnP manager, which can be imported to Microsoft Deployment Tool or System Center Configuration Manager. These drivers can be also installed and updated both by Windows Update and by Samsung Update.

2. Non-INF drivers and essential applications
Some of the drivers are not type of INF drivers and can’t be installed simply by OS PnP manager. These non-INF drivers and some of essential applications must be installed manually and updated by Samsung Update.

3. Samsung Galaxy Settings
Galaxy Setting application is necessary in order to change the display dimming time-out value, which is set to 5 minute by default.

**System Requirements**
An OS image is deployed using DISM tool in Microsoft ADK. Windows 10 version 1511 is supported. Windows 7, Windows 8.x is not supported. 64bit OS is supported and 32bit OS is not supported.

**Install Instructions**
The driver package must be installed and updated as the following steps.

1. The INF drivers package
Deploy the INF drivers package automatically using SCCM or MDT.

2. Non-INF drivers and essential applications
Install the non-INF drivers and essential applications by running `installer.exe` in NonInfDriver folder.

3. Update to the latest using Samsung Update
Samsung Update gets installed as an essential application in the step above because it’s the only way to update non-INF drivers and essential applications. The drivers and essential applications can be updated as below:

   - Select all apps, and Samsung Update to run Samsung Update.
   - Just click “One Click” icon in the [Figure 2] below to update all the Essential items in single step. This updates all the drivers and essential applications.
Figure 2 Samsung Update
Attachments

Details on drivers package

Details of each INF drivers, non-INF drivers, and some essential applications are described in this section.

1. INF drivers
INF drivers are in the InfDrivers folder of GalaxyTabProS_DriverPackage_160513.zip and categorized into the sub-folders as in the following [Table 3].

<table>
<thead>
<tr>
<th>Sub-folders</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio</td>
<td>Sound driver</td>
</tr>
<tr>
<td>Camera</td>
<td>Intel 2D Imaging driver(Camera driver)</td>
</tr>
<tr>
<td>GNSS</td>
<td>Location driver using Global Navigation Satellite System</td>
</tr>
<tr>
<td>Graphics</td>
<td>Intel graphics driver</td>
</tr>
<tr>
<td>MobileBroadBand</td>
<td>Built-in LTE baseband chipset driver (Only for the model with LTE)</td>
</tr>
<tr>
<td>NFC</td>
<td>Proximity driver using Near Field Communication</td>
</tr>
<tr>
<td>System</td>
<td>Button, DPTF, ME Interface, Panel, RapidStorageTechnology, Sensors, Serial I/O, etc</td>
</tr>
<tr>
<td>WLAN</td>
<td>Wireless LAN driver</td>
</tr>
</tbody>
</table>

Table 3 INF drivers’ package

2. Details on non-INF drivers and Essential Applications
The drivers and applications in the following [Table 4] are installed manually by running install.exe under NonInfDrivers folder. These items are only updated by Samsung Update and not by Windows Update.

<table>
<thead>
<tr>
<th>Items</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel chipset driver</td>
<td>Intel chipset driver is a program that drives some components of Intel chipset. Installation of a chipset driver is recommended to ensure stability and improved performance of the system. The installation may request for reboot.</td>
</tr>
<tr>
<td>Grip sensor reset service</td>
<td>Grip sensor reset service is necessary for better WIFI/LTE RF sensitivity.</td>
</tr>
<tr>
<td>Intel Rapid Storage Technology</td>
<td>Intel Rapid Storage Technology increases performance and reliability for storage device ensuring an optimal PC storage solution.</td>
</tr>
<tr>
<td>Bluetooth driver</td>
<td>Bluetooth driver is required for Bluetooth H/W.</td>
</tr>
<tr>
<td>Samsung System Agent</td>
<td>Samsung System Agent provides essential system management function and is required for better life-time of AMOLED display panel. For example, Display Dimming feature is included in Samsung System Agent.</td>
</tr>
<tr>
<td>Galaxy Settings</td>
<td>Galaxy Setting application to change the display dimming time-out value.</td>
</tr>
</tbody>
</table>

Table 4 Non-INF drivers