

IGEL Universal Desktop Converter 3

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1. Wichtige Informationen

For rolling out **UDC3** via the **IGEL Deployment Appliance**, you need to have installed Deployment Appliance version 4.1.

2. General Information

The IGEL Universal Desktop Converter (UDC3) software allows the migration of existing PC and thin client hardware to create a functionally standardized IGEL Universal Desktop thin client infrastructure. In the process, the existing operating system is replaced by IGEL Universal Desktop Linux. The devices can then be administered via the IGEL Universal Management Suite (UMS).



Installing the IGEL Linux operating system via UDC3 destroys all data on the target device's mass storage device (hard disk, flash memory, SSD).

➔ This manual describes installation using UDC3. The installed system corresponds to IGEL Linux 10 and is described in detail in the *IGEL Linux 10* <http://edocs.igel.com/index.htm#10070.htm> manual.

2.1. Formatting and its Meanings

The following formatting is used in the document for the given purposes:

<i>Hyperlink</i>	Internal or external links
Proprietary names	Proprietary names of products, firms etc.
GUI text	Elements of text from the user interface
Menu > Path	Menu paths in systems and programs
Input	Program code or system inputs
<u>Keyboard</u>	Commands that are entered using the keyboard
<input checked="" type="checkbox"/>	Checked checkbox
<input type="checkbox"/>	Unchecked checkbox
Version 5.03.100	Firmware version

➔ Reference to other parts of the manual or other eDocs articles.



Note regarding operation



Warning: Important note which must be observed

2.2. Devices Supported by UDC3 und UD Pocket

Core Requirements for UDC 3

- CPU with 64-bit support
- ≥ 2 GB RAM



With devices that have 2 GB RAM and shared video memory, a maximum of 512 MB may be used as video memory.

- ≥ 2 GB Flash
- No VIA graphic adapter; VIA graphics support is discontinued in UDC3.

Devices Officially Supported by UDC3 and UD Pocket



For some of the devices listed here, Flash memory must be extended to ≥ 2 GB. For these devices, an appropriate note is added.

- **Acer**

Name	64-bit	RAM	Flash/HDD
Vertion N211OG	yes	16 GB	8 GB

- **Advantech-DLoG**

Name	64-bit	RAM	Flash/HDD
DLT-V6210 (IGEL OS 10.02.120 or higher)	yes	4 GB	32 GB
DLT-V7210	yes	4 GB	4 GB
DLT-V7212	yes	4 GB	4 GB

- **Dell / Wyse**

Name	64-bit	RAM	Flash/HDD
D10D	yes	2 GB	2 GB
D50D	yes	2 GB	8 GB
Z50D	yes	2 GB	2 GB
Z90Q7	yes	4 GB	16 GB

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- Fujitsu

Name	64-bit	RAM	Flash/HDD
Futro S720	yes	2 GB	2 GB
Futro S920	yes	2 GB	2 GB
Futro X913	yes	2 GB	≥ 2 GB (Flash upgrade may be needed)
Futro X923	yes	2 GB	2 GB

- HP

Name	64-bit	RAM	Flash/HDD
t520	yes	8 GB	8 GB
t610	yes	2 GB	≥ 2 GB (Flash upgrade may be needed)
t620	yes	16 GB	8 GB
t730	yes	16 GB	8 GB
t820	yes	16 GB	16 GB

- Intel

Compute Stick STK2m3W64CC (IGEL OS 10.02.120 or higher)	yes	4 GB	64 GB
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- Lenovo

ThinkCentre M700	yes	4 GB	500 GB
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- Onyx Healthcare

Name	64-bit	RAM	Flash/HDD
Venus-222	yes	4/8 GB	≥ 2 GB (Flash upgrade may be needed)

- Stone

Name	64-bit	RAM	Flash/HDD
N130 Notebook	yes	8 GB	750 GB

3. Licensing

You can distribute licenses for UDC3 to the devices using the IGEL Universal Management Suite (UMS).

- ➔ You will find instructions on the *Rolling Out Device-specific licenses* (<http://edocs.igel.com/10200794.htm>) best practice page.

4. Installation

4.1. Installation Requirements

In order to install the IGEL Linux operating system via UDC3, the target device must meet the following requirements:

- 64-bit-capable CPU
 - At least 2 GB RAM
 - At least 2 GB mass storage space: hard disk, flash memory, SSD, eMMC or NVME.
 - Intel, ATI/AMD or Nvidia graphics chip
- ➔ For information about supported graphics chip sets, see the *IGEL Linux 3rd Party Hardware Database* (<https://www.igel.com/linux-3rd-party-hardware-database/>).
- USB 3.0 or 2.0 port from which the device can boot (alternatively a DVD drive)
 - Ethernet or wireless adapter



Installing the IGEL Linux operating system via UDC3 destroys all data on the target device's mass storage device (hard disk, flash memory, SSD).

4.2. Create USB installation medium (Windows)

1. Download the Zip archive for UDC3 from myigel.biz:
 - For new devices, use the *standard installer* (http://myigel.biz/index.php?dir=IGEL_UNIVERSAL_DESKTOP_CONVERTER/UDC3_Stick_V10/).
 - For older devices or if you haven't been able to boot the installer at all (e.g. on Dell Wyse Dx0D), use the *legacy installer* (http://myigel.biz/index.php?dir=IGEL_UNIVERSAL_DESKTOP_CONVERTER/UDC3_Stick_V10/legacy/).
2. Unzip its contents into a local directory.

3. Connect a USB memory stick with at least 2 GB capacity to the computer.

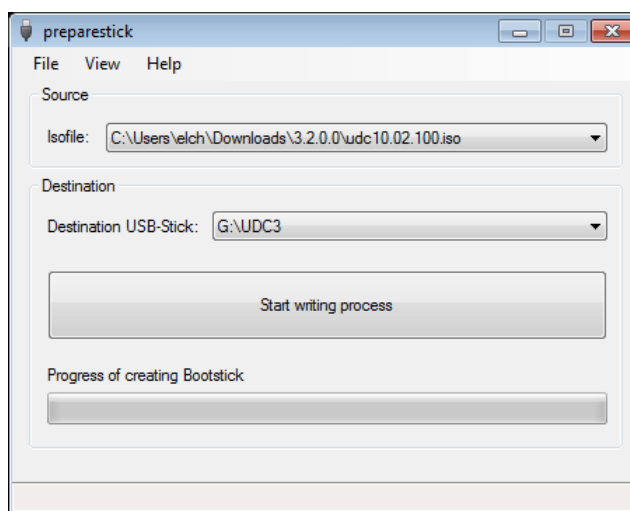


All existing data on the USB memory stick will be destroyed.

4. Double click the `preparestick.exe` file from the unzipped directory (for IGEL Linux 10.01: `UDC2Stick.exe` with similar operation).



If you are in the "administrators" group, the program will start after you have confirmed a dialog. If you are not in the "administrators" group, you must enter the administrator password to start the program.



The dropdown menü **Isofile** shows the ISO files contained in the unzipped directory.

5. Under **Isofile**, select the file `udc[version].iso`, for example, `udc10.02.120.iso`
6. Under **Destination USB stick**, select the USB storage medium on which you would like to save the installation data.



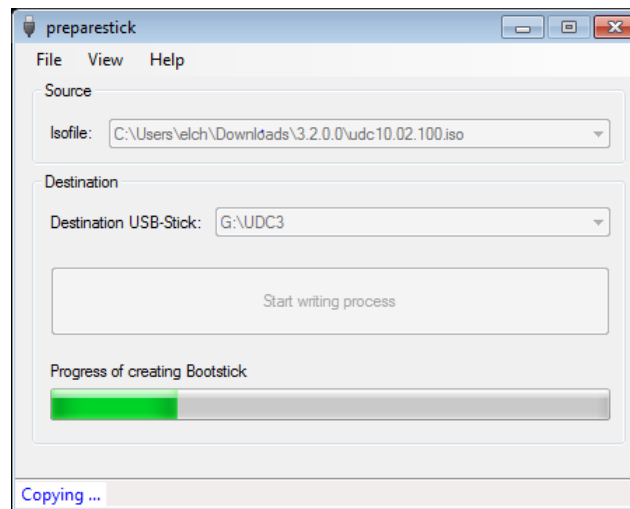
It is recommended that you only have one USB storage medium connected during this procedure. If you accidentally select the wrong medium, all data on it will be lost.



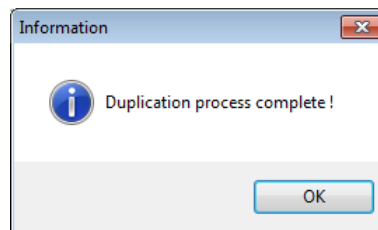
Generally speaking, the list of available USB storage media is refreshed automatically. If, however, you would like to refresh it manually, click on **View > Refresh USB Device List**.

7. Click on **Start writing process**.

In the program window, the progress of the process is shown.



When the process is finished, a message window is displayed.



8. Close the message window and the program.
9. After about 3 seconds, remove the USB memory stick.



If you remove the USB memory stick immediately, there is a possibility that the writing process has not been completed. In this case, the data on the memory stick gets corrupted.

4.3. Create USB installation medium (Linux)

1. Download the Zip archive for UDC3 from myigel.biz:
 - For new devices, use the *standard installer* (http://myigel.biz/index.php?dir=IGEL_UNIVERSAL_DESKTOP_CONVERTER/UDC3_Stick_V10/).
 - For older devices or if you haven't been able to boot the installer at all (e.g. on Dell Wyse DxOD), use the *legacy installer* (http://myigel.biz/index.php?dir=IGEL_UNIVERSAL_DESKTOP_CONVERTER/UDC3_Stick_V10/legacy/).
2. Unzip the contents of the Zip archive into a local directory, either with a graphical tool or with the `unzip` command.

From this directory, you will need the `udc10.02.120.iso` (or `udc10.02.120_legacy.iso`) file to create a bootable medium.
3. Connect a USB memory stick with at least 2 GB capacity to the computer.



All existing data on the USB memory stick will be destroyed.

- Open a terminal emulator and enter the command `dmesg` to determine the device name of the USB memory stick.

Example output:

```
[...]
[19514.742229] scsi 3:0:0:0: Direct-Access      JetFlash Transcend 8GB
1100 PQ: 0 ANSI: 6
[19514.742805] sd 3:0:0:0: Attached scsi generic sg1 type 0
[19514.744688] sd 3:0:0:0: [sdb] 15425536 512-byte logical blocks: (7.89
GB/7.35 GiB)
[19514.745370] sd 3:0:0:0: [sdb] Write Protect is off
[19514.745376] sd 3:0:0:0: [sdb] Mode Sense: 43 (0) 00 00 00
[19514.746040] sd 3:0:0:0: [sdb] Write cache: enabled, read cache:
enabled, doesn't support DPO or FUA
[19514.752438] sdb: sdb1
```

In this example, the device name searched for is `/dev/sdb`.



Ensure that you have determined the correct device name. Use of the `dd` command in the next step can destroy your operating system if you use the wrong device name.

- The following command writes the installation data to the USB memory stick:

```
dd if=udc10.02.120.iso of=/dev/sdX bs=1M oflag=direct
```

Replace `sdX` with the device name of the USB memory stick that you have determined.

When the `dd` command has terminated, you can see the terminal emulator input prompt again.

- Wait for about 3 seconds after the `dd` command has terminated, and remove the USB memory stick.



If you remove the USB memory stick immediately, there is a possibility that the writing process has not been completed. In this case, the data on the memory stick gets corrupted.

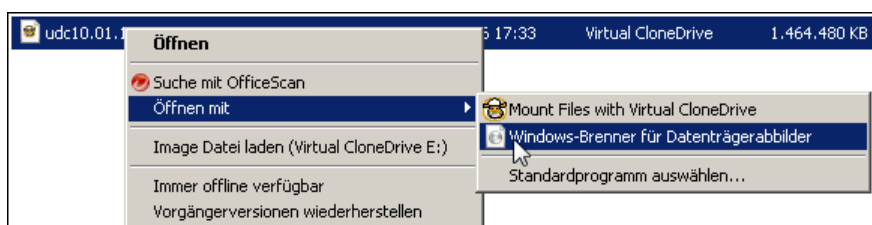
The USB memory stick for UDC3 installation is ready for use.

4.4. Create DVD installation medium

The `udc10.02.120.iso` (or `udc10.02.120_legacy.iso`) file in the installation directory for UDC3 is a so-called hybrid image. It can not only be copied onto USB storage devices but can also be used to create a bootable DVD.

Burn ISO image (Windows)

- In Explorer, open the directory that contains the ISO file.
- Right-click on the ISO file.
- Select **Burn disc image**.



Burn ISO image (Linux)

Under Linux, various burning programs with a graphical user interface or for the command line are available.

- The *Ubuntu Wiki* (<https://help.ubuntu.com/community/BurningIsoHowto>) explains how to burn an ISO image onto a DVD using a number of programs.

4.5. Boot settings

UDC3 works on systems with BIOS and UEFI.

It is essential that your system supports booting from USB storage media. This may already be enabled, or you may have to enable it yourself. The required key presses for this may vary from vendor to vendor. However, here are some hints:

- While the device is booting, try pressing **F12** (in general), **F10** (Intel devices) or **F9** (Hewlett-Packard devices) in order to access a list of boot devices and select UD Pocket.
- If the above does not work, access the BIOS settings via pressing **Del**, **F1** or **F2** during boot and activate booting from USB storage media and/or change the boot order.
- See the BIOS/UEFI documentation for your system for details of how to boot from USB storage media.



If your system uses Secure Boot, disable this feature. Otherwise, you will not be able to boot UDC3.



If UDC3 fails to boot in UEFI mode, try it in legacy/BIOS mode. IGEL Linux will then be installed in legacy/BIOS mode.



For older devices or if you haven't been able to boot the installer at all (e.g. on Dell Wyse Dx0D), use the *legacy installer* (http://myigel.biz/index.php?dir=IGEL_UNIVERSAL_DESKTOP_CONVERTER/UDC3_Stick_V10/legacy/).

4.6. Installation procedure

1. Connect the prepared USB memory stick to the target device and switch the target device on.
2. Select one of the following options from the boot menu:
 - **UDC installation:** Boots the system with just a few messages from the USB memory stick and launches the installation program. (Default)
 - **UDC installation (verbose):** Boots the system from the USB memory stick and shows the Linux boot messages in the process.
 - **UDC Installation (Vesa only):** Fallback mode to be used if the graphical boot screen cannot be displayed.
 - **Memtest86+:** Memory test, only available in legacy/BIOS mode. This option does not carry out an installation.
 - **EFI debug shell:** Available only in UEFI boot mode. If the hardware in use is EFI capable, boot problems can be analyzed with that.
3. **Choose your language:** Select the language for the installation process.
4. Confirm that you agree to the **license agreement**.
5. **Installation program:** Here, you can configure settings for the installation process and start it. Check the **target drive** to ensure that the system is installed on the desired drive.



The installation will destroy all existing data on the target drive.

The following options are available:

- **Migrate old settings:**
 - Carries over the settings from a previously installed IGEL Linux 10 system. (Default)
- **Force legacy installation** (only available after UEFI boot)
 - The legacy/BIOS version of IGEL Linux will be installed, even if the system was booted in UEFI mode.



Remember to set the system to legacy/BIOS mode after installation.

- UEFI booting results in a UEFI installation, and legacy/BIOS booting in a legacy/BIOS installation. (Default)
- **Edit:** Open the IGEL setup where you can configure settings for the system to be installed.
 - **Reset:** Resets all changes to the setup made with **Edit**.
 - **Install firmware:** Starts the installation process.
 - **Cancel:** Cancels configuration for the installation and shuts down the device.
6. Click on **Install firmware**.
 7. The installation program will set up IGEL Linux on the target drive. If you see the **IGEL Universal Desktop Converter build finished successfully** message, the installation is complete. Click on **Reboot** at the bottom of the installation window.
 8. Remove the USB memory stick.
 9. Close the message window.

The system will shut down and then boot IGEL Linux.

5. Setup Assistant

When you start an unconfigured thin client, you will be welcomed by the **Setup Assistant** application. This takes you through the most important initial configuration steps.



The Setup Assistant starts automatically after booting IGEL OS if all of the following requirements are met:

- The device is not yet configured.
- No IP address for the Universal Management Suite (UMS) was transferred using the DHCP option 224.
- No UMS can be accessed under the DNS name `igelrmserver`.

5.1. Using the “Setup Assistant ” function

Setup Assistant buttons:

- **Next:** Go to the next configuration step.




From IGEL Linux Version 10.03.100, the button is labeled **Skip** if the configuration step can be omitted; if you click on **Skip**, nothing will be changed in the current configuration step. If the configuration is edited, the button label will switch to **Next**.

- **Back:** Go back to the previous step
- **Cancel:** Exit the Setup Assistant without saving changes to the configuration (changes to time and date will however remain effective).



If the **Activate your UD Pocket** (UD Pocket Demo) or **ICG Agent Setup** configuration steps fail, adjust the network settings of your device:

- If you require a system-wide proxy, start the setup  and configure the proxy settings under **Network > Proxy**. You will find a description in the *Proxy* (<http://edocs.igel.com/index.htm#11108.htm>) chapter of the manual.

If you require wireless networking, set up *Cafe Wireless* (<http://edocs.igel.com/index.htm#8908.htm>) on your device. From IGEL Linux Version 10.03.100, wireless setup is integrated into the Setup Assistant.

Language

- **Language:** Select the language for the user interface.

Keyboard layout

- **Keyboard layout:** Select the keyboard layout. The selected layout applies for all parts of the system including emulations, window sessions and X11 applications.

Time zone continent/area

- **Timezone continent/area:** Select the continent/area for your location.

Possible values:

- General: Under **Location**, you can select a GMT time zone.
- Africa... Pacific: Under **Location**, you can select a city for the selected continent/area.

- **Location:** Select your location or time zone.



Location: Summer time adjustment is taken into account here. Example: If you select "Berlin", the device will switch between summer time and normal time in accordance with the German adjustment rules.

Timezone: The GMT time zones specify by how many hours the time zone for a particular location differs from the Greenwich time zone. The preceding symbol is used in accordance with the POSIX format. Examples: For New York City, select "GMT+5" which means "5 hours west of Greenwich". For Moscow, select "GMT-3" which means "3 hours east of Greenwich".

Time and date

- **Date:** Select the current date.
- **Time:** Set the current local time.
- **Apply:** Sets the system clock according to what is entered above.



Wireless (if wireless adapter is available)


This configuration step is available if your UD Pocket was supplied with IGEL Linux Version 10.03.100 and if a wireless adapter was found when starting the device. The device will search for available WLAN access points as soon as the configuration step is opened. The wireless access points found will be listed. You can then connect to your desired wireless access point.



If you carry out the wireless configuration and exit the Setup Assistant by selecting **Finish**, the connection will be saved and wireless will be permanently enabled.

If you skip this configuration step or cancel the configuration, wireless will not be permanently enabled.

- **Wireless regulatory domain:** In the first selection menu, select the world region (example: **Europe**) in which you are situated and in the second one the country (example: **Germany**).
- : Searches again for wireless access points.
- : Opens a dialog which allows you to enter the wireless name (SSID) of a hidden wireless access point.
- (Name of a wireless access point in the list): Click on your desired wireless access point and enter your access data in the dialog.

Once the connection is established, the symbol  will be shown in the **Connected** column.

ICG Agent Setup (optional)

If your system administrator has given you access data for IGEL Cloud Gateway, you can connect the thin client to the gateway here.

➡ You will find instructions for this under Using ICG Agent Setup.

Otherwise, do not touch this page and click on **Skip** or **Next**.

Finish

- **Finish:** Saves all settings and closes the Setup Assistant. If you have changed the language, the X11 graphics system will restart (the screen will go black for a short time).

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