

IGEL UD7

HARDWARE MANUAL

VERSION 1.1 - October 2018



Information

Copyright

This publication is protected under international copyright laws. All rights reserved. With the exception of documentation kept by the purchaser for backup purposes, no part of this manual – including the products and software described in it – may be reproduced, manipulated, transmitted, transcribed, copied, stored in a data retrieval system or translated in any form or by any means without the express written permission of IGEL Technology GmbH.

Copyright © 2018 IGEL Technology GmbH. All rights reserved.

Disclaimer

The specifications and information contained in this manual are intended for information use only, are subject to change at any time without notice and should not be construed as constituting a commitment or obligation on the part of IGEL Technology GmbH. IGEL Technology GmbH assumes no responsibility or liability for any errors or inaccuracies that may appear in this manual, including any pertaining to the products and software described in it. IGEL Technology GmbH makes no representations or warranties with respect to the contents thereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose.

Warranty

After purchase, just register with us online, and all your IGEL thin clients UD2, UD3, UD6 and UD7 will be upgraded from a standard 2-year to a 5-year hardware warranty, according to our end customer hardware warranty declaration, at no additional cost.

The UD Pocket, UD9, IZ2 and IZ3 series will be upgraded to a 3-year hardware warranty. The warranty upgrade does not cover any additional hardware options.



Find further information on our website under www.igel.com/product-warranty

IGEL is a registered trademark of IGEL Technology GmbH. All hardware and software names are registered trademarks of the respective manufacturers. Errors and omissions excepted. Subject to change without notice.

IGEL Technology GmbH
Hanna-Kunath-Str. 31
28199 Bremen, Germany
Tel.: +49 421 52094 0
Fax: +49 421 52094 1499
info@igel.com

Hardware Reference

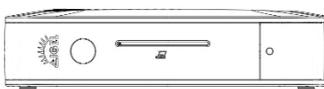
IGEL UD7 (IGEL-H850C)
Document Version 1.1 – October 2018

Safety Instructions



Read these instructions carefully and save them for future reference.

- Disconnect this equipment from mains supply before cleaning. Don't use liquid or sprayed detergent for cleaning. Use moisture sheet or cloth for cleaning.
- Before opening the device, first switch it off and then disconnect the power plug. Observe the specification in the user manual.
- The warranty will be invalidated if the device is damaged during the installation or replacement of system expansions.
- Lay this equipment on a reliable surface when installed. A drop or fall could cause injury.
- Make sure power adapter and power cord are placed in a way that people cannot step on them. Do not place anything over the power adapter or power cord.
- All cautions and warnings on the equipment should be noted.
- If the equipment is not used for long time, disconnect the equipment from mains supply to avoid being damaged by transient overvoltage.
- Make sure that no objects or liquids get inside the device (danger of electric shock, fire, short circuit).
- If one of the following situations occurs, get the equipment checked by a service personnel:
 - The power adapter, power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well or you cannot get it work according to user manual.
 - The equipment has been dropped or damaged.
 - The equipment has obvious signs of breakage.
- Do not leave this equipment in an unconditioned environment. Storage temperature below -20 °C (-4 °F) or above 60 °C (140 °F) may cause damage of the equipment.
- Do not use this equipment in an unconditioned environment. Unless otherwise stated in the technical specifications operational conditions may not exceed the following limits, it may damage the equipment:
 - Vertical usage:
Temperature: 0 °C to 35 °C, 32 °F to 104 °F
Humidity: 10 % to 80 %, non-condensing
 - Horizontal usage (only with optional rubber feet, no VESA mount):
Temperature: 0 °C to 35 °C, 32 °C to 95 °F
Humidity: 10 % to 80 %, non-condensing
- Note that even in closed rooms local temperatures may increase, for instance in case the device is exposed to strong sun radiation. Protect the device from external heat sources.
- Ensure that air is free to circulate through the product. Do not use in a poorly ventilated place. Do not cover it with a cloth or place it on soft ground. Surrounding objects of the device may block the air flow. Keep a minimum distance of 20 cm around the device for sufficient ventilation.
- Horizontal usage with optional rubber feet: Tilt the housing to the left so that the power button is one the left-hand side:



- Gloss warning for devices without display: This device is not intended for use in the direct field of view at visual display workplaces. To avoid incommoding reflexions at visual display workplaces this device must not be placed in direct field of view.
- Lithium battery caution:
 - The Lithium battery (button cell) installed in the device may only be replaced by authorised, specially trained personnel.
 - Contact your supplier or the manufacturer for servicing and repairs.
 - Danger of explosion if battery is incorrectly replaced.
 - Dispose of used batteries according to the manufacturer's instructions.
- Excessive sound pressure from ear-/headphones can cause hearing damage/hearing loss. Adjustment of the volume control as well as the equalizer to other settings than the centre position may increase the ear-/headphones output voltage and therefore the sound pressure level. The use of factors influencing the ear-/headphones output other than those specified by the manufacturer (e.g. operating system, equalizer software, firmware, driver) may increase the ear-/headphones output voltage and therefore the sound pressure level.
- UL 62368: This equipment must be grounded. The power cord for the equipment must only be connected to socket-outlets providing earthing connection.
- Visit www.igel.com for the latest product information and safety instructions updates.
- Specific Safety Instructions for UD9:
 - To avoid damage or malfunction, do not use hard or abrasive objects for touching the LCD module.
 - Do not exert pressure on the LCD module.
 - Use a soft dry cloth without chemicals for cleaning, because the surface of polarizer is very soft and easily scratched.
 - It is dangerous that moisture come into or contacted the LCD module, because moisture may damage LCD module when it is operating.
 - If the liquid crystal material leaks from the panel, it should be kept away from the eyes or mouth. In case of contact with hands, skin or clothes, it has to be washed away thoroughly with soap.
 - When fixed patterns are displayed for a long time, remnant image is likely to occur.
 - Do not leave the LCD module facing the sun.



Visit kb.igel.com/hardware for more information.

Connections



Part List

- Thin Client Unit
- Foot
- Power Supply with integrated DC Cable
- AC Power Cord
- DVI-VGA-Adapter

Power Connection Note

- Connect all accessories e. g. mouse, keyboard, screen (not part of the equipment), and Ethernet.
- Connect the AC power cord with the receptacle of the Power Supply.
- Connect the other end of the AC power cord with a suited mains socket.
- Connect the DC cable with the DC In receptacle on the rear side of the Thin Client.
- Switch on the Thin Client by use of the power button on the front side.

Technical Specifications

System

Available Operating Systems	IGEL OS 10 (LX) or Microsoft Windows 10 IoT (W10)
Management	IGEL Universal Management Suite included
Processor	AMD RX-216GD 1.6 GHz (Dual-Core) up to 3.0 GHZ (Boost-Mode)
Chipset	AMD R-Series

Memory

RAM	4 GB
Storage	4 GB (LX) or 32 GB (W10)

Graphics

Chipset	Radeon R5 Series
Video Memory	64-512 MB Shared Memory
Ports	3x DisplayPort 1.2, Multi-Stream-Transport (so-called Daisy Chain) support depends on configuration, official support is not given.
Supported Resolutions	2x max. 3840x2160 @60Hz; 1x max. 2560x1600 @60Hz or 3840x2160 30Hz

Network

Ethernet	10/100/1000 Base-T
WLAN	Optional, via Connectivity Bar

Audio

Chipset	Realtek High Definition Audio (ALC662)
Ports	1x line-out, 1x mic-in, 1x DisplayPort (Intel HD Audio)
Speakers	1x internal

Peripheral Interfaces

PS/2	1x keyboard
Serial	1x
Parallel	1x optional, via Connectivity Bar or USB-to-Parallel adapter
USB 2.0	3x back, 1x optional: anti-theft USB, via Connectivity Bar
USB 3.0	2x front
Security Lock	1x back

Dimensions and Weight

Device (DxWxH), vertical	232 mm x 68 mm x 227 mm (without foot stand) 232 mm x 99 mm x 242 mm (with foot stand)
Packaging (DxWxH)	297 mm x 366 mm x 125 mm
Weight	1.60 kg (with foot stand and external power adapter)

Environmental Conditions



Strictly follow safety instructions and respect environmental conditions!

Cooling	fanless convection
Operating Temperature	0 °C – 40 °C (vertical without VESA) 0 °C – 35 °C (vertical with VESA) 0 °C – 35 °C (horizontal with rubber feet)
Operating Humidity	20 % – 80 % non-condensing

Electrical Data

Power Supply	external
Power Supply AC Input	100 – 240 VAC / 50 – 60 Hz
Power Supply DC Output	12 V / 3 A External Power Adapter (A140-1120300N & FSP036-RHAN2)
Power Consumption	5.7 W (idle) / 1,2 W (sleep) / < 0.8 W (off) (@230 V, 50 Hz)

Typical Energy Consumption (ENERGY STAR)

E_{TEC}	23.1 kWh (per year)
$E_{TEC,max}$	33 kWh (per year)

Options for Device Mounting



For mounting options visit also kb.igel.com/hardware.

VESA Mount	for mounting on the back of a monitor (VESA75, VESA100) Vertical mounting only!
Rubber feet	for horizontal placement of the device

Connectivity Bar

Option 1	1x serial port and anti-theft USB port
Option 2	1x serial port and 802.11a/b/g/n 2.4 GHz, 5 GHz WiFi

Optional Accessories

Additional Graphics Card	For the use of a fourth monitor via 1x DisplayPort 1.2 (max. 2560x1600)
Built-in Smartcard Reader	for secure smartcard-based authentication
USB-to-Serial Adapter	for connecting peripherals that require a serial port
USB-to-Parallel Adapter	for connecting printers that require a parallel port
DisplayPort to DVI Adapter	for connecting a monitor that requires a DVI port
Shared WorkPlace	it allows user-dependent configuration based on setting profiles
Multimedia Codec Pack (only IGEL OS UD)	required for multimedia redirection and full multimedia functionality

Additional Graphics Card

With this optional graphics card the parallel use of up to four digital monitors at 60Hz by DisplayPort, two in 4K and two in 2K is possible.

Specifications:

AMD Embedded Radeon™ E9173 discrete GPU

Expands UD7 with a 4th DisplayPort (2560x1600) for configurations with 4 monitors!



Please note:

The original graphics card AMD E9173 has 1x DisplayPort und 2x miniDP ports.

Our model has an adapted slot-bracket, where the 2x miniDP are covered. They are also turned off electrical, so just one DisplayPort is usable.

General Information

- Multi-Stream-Transport (Daisy Chain) depends on configuration and support is limited.
- When using DisplayPort to DVI adapter, only active adapters are supported.

Regulatory Compliance Information

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded interface cables must be used in order to comply with emission limits.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

TÜV-GS Statement

This device is not intended for use in the direct field of view at visual display workplaces. To avoid incommoding reflexions at visual display workplaces this device must not be placed in the direct field of view.

ENERGY STAR Information

IGEL Thin Clients with a Microsoft Windows® or Linux operating system have been shipped enabled for power management. The display Sleep mode will be activated after 6 minutes (IGEL OS) / 10 minutes (Windows) of user inactivity (default setting). The standby settings can be managed via the BIOS and local setup. The activation from the standby or Off mode can be done locally (by moving of the mouse or pressing a key on the key board) and via the Ethernet connection (Wake-On-LAN).

Energy Star Program

Power managing your ENERGY STAR qualified computer can save up to 340 kWh annually or 25€ (\$35) per year. These energy savings are equivalent to:

- Preventing over 225 kg (500 lbs) of CO₂ emissions per year
- Planting over 185 m² (2,000 sq ft.) of forest

To learn how to power manage your computers at your office all at once through network solutions, please go to: www.energystar.gov.

ENERGY STAR is the government-backed program that helps us all save money and protect our environment with energy-efficient products and practices (www.energystar.gov/powermanagement).

WEEE and Battery Waste Note

In accordance with EU directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE) and Directive 2006/66/EC for waste batteries, customers and manufacturers are responsible for returning and recycling their old equipment and batteries. IGEL now offers a convenient return service.

As of August 15, 2005, all IGEL Thin Clients sold bear the WEEE and battery waste seal. All Thin Clients labelled with this sticker are taken back and disposed of immediately at no charge (including the battery). For IGEL customers, this means better service and greater convenience, because IGEL Technology handles the professional recycling of all Thin Clients (including the lithium battery).

Report disposal online: Under the heading, "Waste Management WEEE" on the IGEL Homepage (www.igel.com) there is an online form that must be filled in for the old IGEL units to be picked up. Such information as the address, series number, contact person, number of units to be removed and the desired disposal date are urgently required for the smooth processing of waste.

Pickup: Immediately after sending in your data, you will receive from the IGEL Service Center a notice of confirmation of receipt. Then an IGEL service employee will contact you to arrange a date to pick up the unit.

IGEL WEEE Number: DE 79295479 / WEE/GE4266QU.

This product contains no postconsumer recycled plastic (0 %) and no renewable / biobased plastic materials (0 %). The packaging material contains the following recycling content: Corrugated cardboards between 33 % and 69 %, plastic bags 0 %.

RoHS and REACH Note

This product of IGEL Technology GmbH fulfils the requirements of the EU directive 2011/65/EU on the Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS). The product is marked accordingly.

The EU Regulation 1907/2006 for Registration, Evaluation, Authorisation and restriction of Chemicals (REACH) shall improve the protection of human health and the environment from the risks that can be posed by chemicals. IGEL fulfils this regulation by informing customers and partners about materials on the Candidate List of Substances of Very High Concern (SVHC) in our products in a concentration above 0.1 % weight by weight (w/w).



Find current information about SVHC materials on our website under www.igel.com/terms-conditions

Ericom PowerTerm Terminalemulation

Lern How to Activate the Ericom PowerTerm Terminalemulation of Your IGEL Thin Client

To use your Ericom PowerTerm Terminalemulation you need a free license key from IGEL. To get to the activation form please register yourself at our support and ticket system here: www.igel.com/powerterm.

After successful registration you have access to free technical support, and to the IGEL Service- and Repair-Center as well as to the license activation form.

To activate your PowerTerm license please fill out the license activation form. Enter the total number and MAC addresses of the devices to be activated. The following link provides a step-by-step description on how to use the UMS to extract a list of MAC addresses for a large number of devices: www.igel.com/powerterm_mac

You will receive the required license keys via email from our IGEL service team. Using the Universal Management Suite (UMS) you can then remotely deploy the licenses to the devices in your network.

