

ICEDRAKE accelerator board Manual English

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European Union Regulatory Notice

This product complies with the following EU Directives:

- Low Voltage Directive 2006/95/EC
- EMC Directive 2004/108/EC



1) Disclaimer

The Icedrake is an accelerator board for the Amiga© 1200. The installation of this product requires the opening of your computer for installation and cable management. Neither the manufacturer nor the reseller can under no circumstances be held responsible for any damage caused during assembly. The Icedrake ships with the Apollo-ROM, no third party copyrighted material is part of this product.

Notice: If you want to dispose of this equipment, please follow your country rules for electronic disposal!

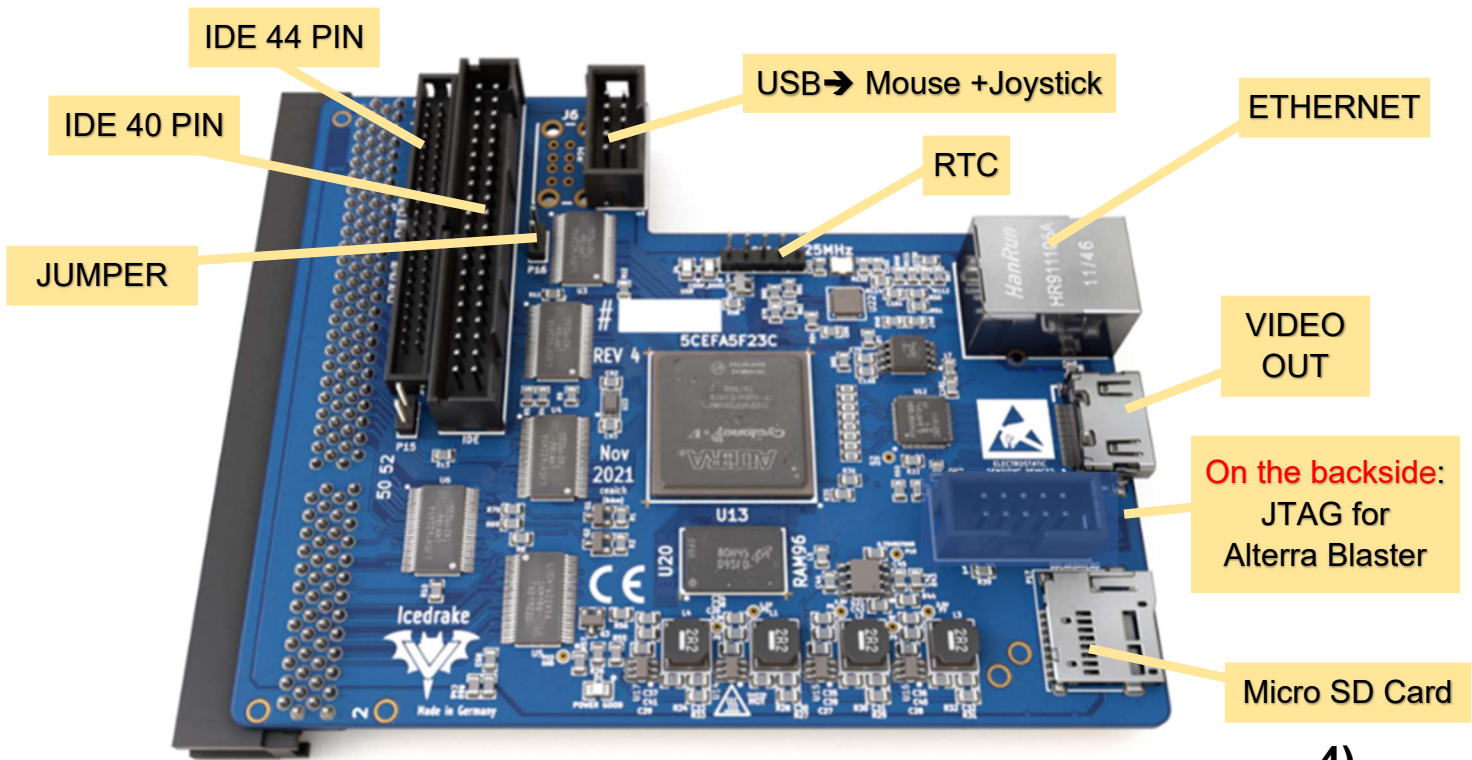
2) ROM/ kickstart / OS

The Icedrake comes preinstalled with the latest Apollo-ROM. The Apollo-ROM allows you to run ApolloOS and the latest Coffin distro, by just plugging a CF Card in. You can also use any other Amiga OS like 3.2 or even Emutos. We recommend the Apollo bootloader for booting each ROM and OS you want. If you need help, please contact us on discord

3) Description

The Icedrake uses the Apollo 68080 CPU which is compatible with the Motorola 68K processors while outclassing them in performance.

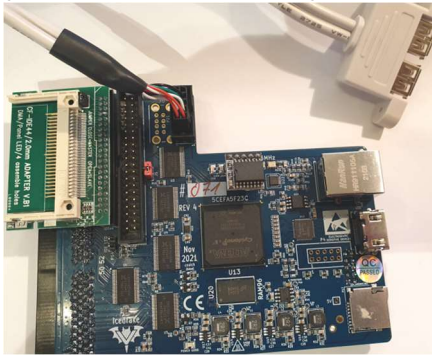
The Icedrake is equipped with the following connectors: a micro SD slot, a video and digital audio output, two USB headers for mouse or Joypad, a RJ45- Ethernet port, a RTC connector, a 40-pin IDE port for mass storage, a 44 pin to connect other hardware, a JTAG port for updating the core and a Amiga© 1200 compatible expansion port connector.



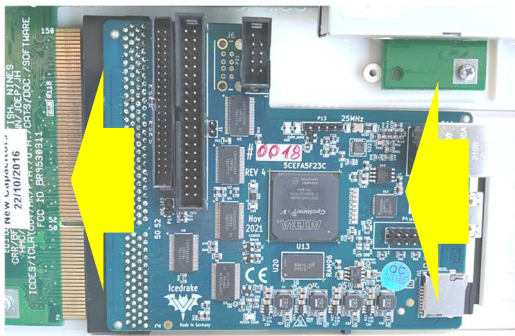
4)

Installation

Please be aware, that the components are electro-sensitive and must be handled with care. For installation not bend or force the components. Use an anti-static workplace and discharge yourself of your static electricity before you start. Turn off your Amiga© 1200 and disassemble it.



The CF adapter is preinstalled, please verify if it fits tightly and securely after transport. If it is loose, please press, with moderate pressure, the supplied CF-adapter onto the IDE port. Either use a soft pad or hold both parts in your hand. Make sure you plug the CF adapter correctly (pin to pin) onto the IDE connector.



Insert the optional RTC module on the corresponding header and also attach the supplied USB cable, the RTC and all other cables you want to lead to the edge of the case. The accelerator can now be installed in the Amiga©.

Turn off your Amiga© 1200 and disassemble it. Place the ICEDRAKE in front of the expansion connector, and apply a gentle pressure to insert the card.



The A1200 Commodore expansion port is a bit “tricky” to use and to place the card correctly in the plastic case, be careful and take time for this procedure. Pass the cables of the extensions you wish to use through the hatch under the floppy disk drive at the back of the machine. If necessary, remove the floppy disk drive to facilitate the operation.

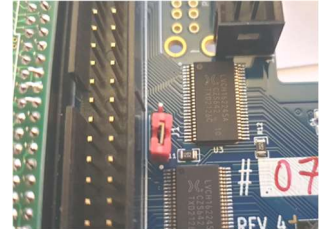
5) How to use & good to know:

- **Self test:** At power ON, the screen will change color quickly; this is a normal self test of the system and Amiga Mainboard.
- **Ethernet:** DMA accelerated Ethernet; drivers are included in ApolloOS.
- **USB:** The Apollo-computer-shop sells compatible USB devices. For other USB mice and Joypad look at the periraphel list, at:
www.apollo-computer.com.

- **Boot drives:** boot from IDE/CF. You can also use microSD card for data exchange.

- **Video OUT** The Icedrake comes with a little red or yellow jumper. Two modes are possible:

Mode CRT(Jumper "J1" = **open**) your Amiga will run games on its Amiga video out. This is ideal for running game on your old CRT Amiga 1084 monitor - and you will have high resolution workbench with 16bit audio over HDMI.



Mode SuperAGA (Jumper "J1" = **closed**) This enables full Super AGA. In this mode you have more Chipmemory 6MB, and enhanced Chipmemory speed = over 50 times faster. This mode allows you to benefit from higher quality Audio and Video than Amiga could before - but in this mode the CRT display is disabled

Running in Super-AGA will allow you to play AGA games on HDMI screen, will increase your Chip memory will enable you to play 16bit and thereby removes previous limitation on music and graphic

- **instability Problems**

- Old Amiga PSU can cause stability problems.
- Some Amiga 1200 PCB have signal problem on expansion port. This well known problem causes a number of accelerator cards to crash. The solution is called "timing fix", find out more on discord.
- Attached devices can also eat power and cause problems.
- Be aware attached external HDMI devices like switches can cause problems.

- **Possible Screen Modes:**

SAGA supports up to 1920x1080 / 1280x1024 / 1280x720 resolutions. Please note not every Monitor likes every Amiga screen mode.

6) Flashing the board

The Icedrake accelerator board can be updated to benefit the latest core improvements, such as new features, speed or compatibility improvements.

➔The recommended way to install the FlashRom:

- Go with your Amiga© on the Internet (lbrowse is in ApolloOS preinstalled)
- Download the **ICEDRAKE_XX.jic** from:
www.apollo-computer.com/download.html
- Open a CLI on your Amiga©.
- update your system by typing: **ApolloFlash ICEDRAKE_XX.jic**
- Confirm the operation by typing 'YES' (in CAPS) and RETURN.
- Wait until flashing is finished.

- Power Off your Amiga© and wait 30 seconds.

- Power On your Amiga©.

➔ **Using the JTAG USB-Blaster: Only for experts!!!**

The USB blaster allows to flash a core when the card does not boot anymore after a flash error. Please consult the picture to see where and how to connect the JTAG. **Plug in the wrong way, might destroy your board!**

7) Data transfer

Micro SD-Slot: You can use the microSD card to transfer files from another computer to the Icedrake equipped Amiga©. ApolloOS and some AmigaOS distributions already have the integrated support of the microSD. Please be aware that the SD slot is a popp plug with a spring, always push to remove.

Ethernet: The Icedrake has ethernet support and drivers preinstalled in ApolloOS. You can use FTP and Web browsers (lbrowse is preinstalled) for data transfer downloads. SMB can be used to mount windows shares. You can use **ApolloExplorer** to copy data to/from the Amiga over network.

USB: USB for Data transfer is not yet supported!

8) Terms of warranty

The Icedrake accelerator board comes fully tested and ready to use. Please mind that the electronic components / chips on the Icedrake are electrostatic sensitive devices and can be damaged by electrostatic discharge. Only handle the Icedrake wearing an ESD protection wrist strap.

- Any damage due to electrostatic discharge is excluded from the warranty.
- The Icedrake comes with a fully tested IDE-CF adapter. Usage of other adapter or devices is on the risk of the user.
- Mind that wrong inserting/plugin of IDE-adapters or Expansions/ JTAG can cause an electronic shock harming the device.
- Any mechanical or electrical damage to card is excluded from the warranty.
- Any damage which is caused by the JTAG to the FPGA is excluded from warranty.
- The SD slot is fragile and needs to be handled with care. Any mechanical damage to the port is excluded from warranty.

9) Software installation & support

- Visit our homepage <http://www.apollo-computer.com> to be informed about the whole Apollo-Family and use **support** to find the latest core, ApolloOS image and e.g., video guides.
- On <http://www.apollo-core.com> developers find many useful information for coding. In the **FORUM** FAQ are answered and you find information about many different Amiga topics.
- If you need help, don't hesitate to contact us. We invite you in our **discord-channel**, which is specially created for Icedrake users. Here is the link <https://discord.gg/D9gQpXgE6y>

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