FIREBIRD accelerator board Manual

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 Firebird is an accelerator board for the Amiga© 500/1000/2000. 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 Firebird 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!
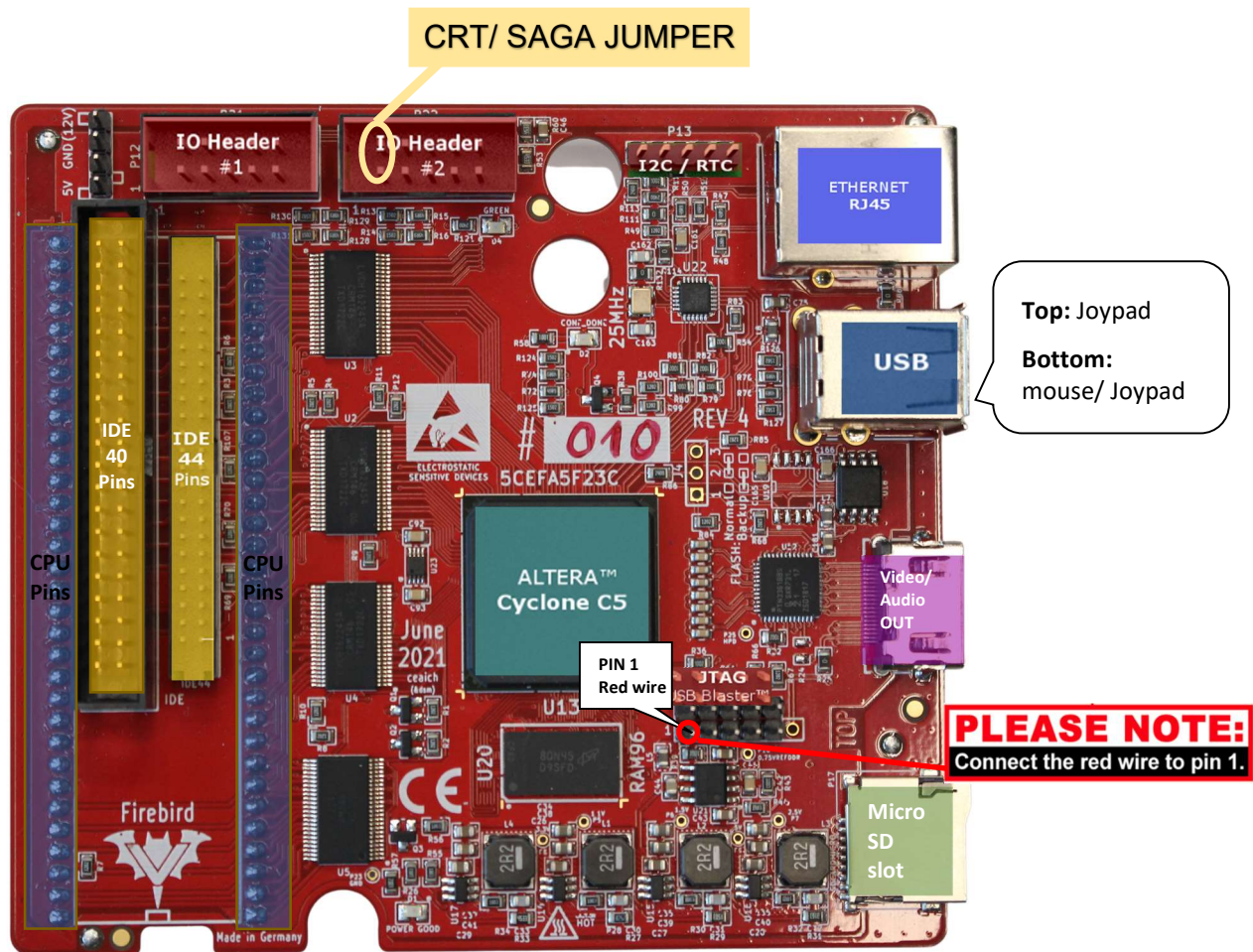
2) ROM/ kickstart / OS

The FIRBEBIRD 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 Firebird accelerator board comes with a CF-Adapter and optionally CF-Card with preinstalled ApolloOS. The Firebird uses the Apollo core which is compatible with the Motorola 68K processors while outclassing them in performance.

The Firebird is equipped with the following connectors: a micro SD slot, a video and digital audio output, two USB connectors for mouse or Joypad, a RJ45- Ethernet port, two expansion ports, a RTC connector, a 44-pin and a 40-pin IDE port for mass storage, a JTAG port for updating the core and a CPU connector for the Amiga© 500/1000/2000 processor.

The Power connector P12 is only for adding PWR to the FIREBIRD, not for powering other devices (normally not needed).
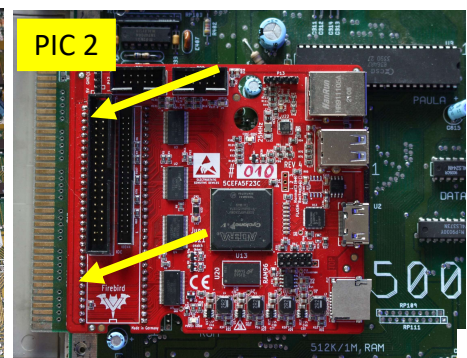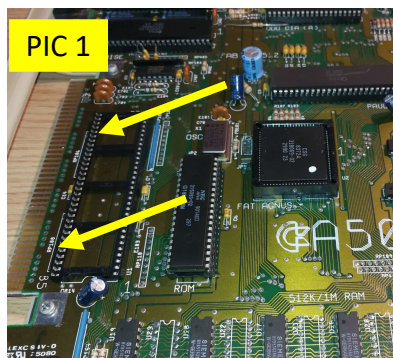
CRT/ SAGA JUMPER

Top: Joypad

Bottom: mouse/ Joypad

PIN 1 Red wire

PLEASE NOTE: Connect the red wire to pin 1.

4) Installation

Please be aware, that the components are electrosensitive 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.

1. If the CF adapter got loose while transport, press it with moderate pressure onto the IDE port of the Firebird. 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.

2. Insert the optional RTC module on the corresponding.

3. Turn off your Amiga© 500 and disassemble it. Remove the upper shielding plate. Remove carefully the 68000 CPU with a suitable tool. Put the Firebird accelerator board aligned with the now empty 68000 slot (PIC1).

Double check that all pins are correctly aligned.
Apply a uniform pressure where the two arrows points (PIC2).

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.
  Green stripes indicates bad CPU socket contact / or Chip memory error. Please doublecheck that the card is properly plugged.
- **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 FIREBIRD comes with a little red or yellow jumper. Two modes are possible:
  Mode CRT(Jumper = **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 = **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.
- Attached devices can also eat power and cause problems.
- Be aware attached external HDMI devices like switches can cause problems.

6) Flashing the board

The Firebird 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 (Ibrowse is in ApolloOS preinstalled)
- Download the **FIREBIRD_XX.jic** from:
  www.apollo-computer.com/download.html
- Open a CLI on your Amiga©.
- update your system by typing: ApolloFlash FIREBIRD_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 an 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 Firebird equiped 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 pusch to remove the SD card (not just pull).
Ethernet: The Firebird has ethernet support and drivers preinstalled in ApolloOS. You can use FTP and Web browsers (Ibrowse is preinstalled) for datatransfer 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 Firebird accelerator board comes fully tested and ready to use. Please mind that the electronic components/ chips on the Firebird are electrostatic sensitive devices and can be damaged by electrostatic discharge. Only handle the Firebird wearing an ESD protection wrist strap. Any damage due to electrostatic discharge is excluded from the warranty. The Firebird 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 can cause an electronic shock harming the device. Any mechanical or electrical damage to card is excluded from the 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 answred 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 Firebird users.
Here is the link **https://discord.gg/D9gQpXgE6y**