AmigaONE X1000

FIRST CONTACT
AmigaONE X1000
keep this party going

AmigaONE X1000 First Contact System

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Limited Warranty and Disclaimers

The AmigaONE X1000 hardware carries a one year limited return-to-base warranty. This covers against product failure due to sub-standard manufacturing of the goods. The warranty does not cover: accidental damage, incorrect product installation, inappropriate product use, electrical surge damage, electrostatic discharge damage, product abuse, cosmetic damage and wear-and-tear. To initiate a claim under this warranty you will have to provide sufficient proof of your original purchase and contact us within the guarantee period. Where applicable, all returned goods must have intact and unbroken warranty seals with serial/model numbers matching our records of the original transaction. We reserve the right to repair all defective products returned to us during the guarantee period. All repairs are warranted for 3 months. We will refund the goods if we cannot repair or replace them while the product is still under warranty. We cannot be held liable for any consequential loss resulting from a product failure. The product warranty can only be claimed by the original purchaser of the product and is non-transferable to a third-party. We do not refund shipping costs or any costs associated to consequential loss arising from the failure of the product.

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Welcome

Thank you for purchasing the "First Contact" AmigaONE X1000 system, the most powerful "Next Generation Amiga" computer custom designed to run AmigaOS.

The AmigaONE X1000 is not like other computers. It is a culmination of efforts by real Amiga enthusiasts and developers to create modern desktop hardware for the Amiga Operating System. It is the natural evolution of the Amiga's PowerPC lineage and is based on the P.A. Semi Dual-core PA6T-1682M CPU and includes XENA, a "Software Defined Silicon" co-processor. Above all, it runs the latest version of the AmigaOS developed by Hyperion Entertainment which traces its roots directly back to the original Amiga 1000 released in 1985.

Your "First Contact" AmigaONE X1000 system is supplied with AmigaOS 4.1 Update 5 and a license for AmigaOS 4.2 which can be downloaded from the Hyperion Entertainment website when it is released.

We hope you get as much enjoyment from using your AmigaONE X1000 as we had designing and developing the system. All that remains to be said is:-

Let's "Keep this party going"

A-EON Technology

http://www.a-eon.com

Hyperion Entertainment

http://hyperion-entertainment.biz

Amigakit

http://www.amigakit.com

Varisys

http://www.varisys.co.uk

Introduction

Welcome to the pinnacle of Amiga Computing! A-EON Technology would like to thank you for purchasing your Amiga-ONE X1000 First Contact system. We hope that you have many hours of Amiga fun with your new system! This quick reference guide has been written to help you get up and running. For detailed technical information on the AmigaONE X1000 First Contact system please consult the Amiga-ONE X1000 Technical Reference Manual in-cluded in the Documentation directory on the AmigaOS 4.1 Installation CD.   This Quick Start guide does not cover AmigaOS 4.1 basics. Please refer to the documentation included on the AmigaOS 4.1 CD shipped with your system for information on configuring AmigaOS 4.1.

SYSTEM SPECIFICATIONS

The AmigaONE X1000 First Contact system includes as the centre piece the "Nemo" 2.1 X1000 motherboard. This board has been designed specifically to be the fastest next-generation Amiga ever made. The AmigaONE X1000 First Contact system includes as standard:

- The Nemo 2.1 motherboard
- P.A. Semi 1.8GHz dual core PowerPC
- 1GB DDR2 RAM
- Radeon HD4650 graphics card
- 500GB HDD
- DVD R/W optical drive
- Audio & Ethernet PCI cards
- AmigaOS 4.1 Update 5 pre-installed
- Special "XENA" XMOS chip

Please note that the motherboard audio and ethernet drivers are currently in de-velopment and will be available in the near future, so your system includes separate audio and ethernet PCI cards. Please read the section "How to get Support" for infor-mation on downloading the drivers when they become available. Once the drivers are

available you will be able to remove the PCI add-on audio and ethernet cards. Please be aware that drivers for the X1000 system are a work-in-progress and updates will be made available. See the "How to get Support" section for information on obtaining future updates.

You may have purchased other peripherals or upgrades and, in addition, a Dual-Boot linux software configuration. Please refer to the section "How to get Support" for further information on additional items you may have purchased.

WHAT IS IN THE BOX?

In the box you will find your AmigaONE X1000 First Contact system, a power cable, the AmigaOS 4.1 Update 5 Installation CD and this Guide. In addition, there are additional guides and documentation, including Linux installation instructions and AmigaOS 4.1 Installation instructions in the Documentation drawer.

MOTHERBOARD FEATURES

The AmigaONE X1000 includes a large number of advanced on-board features.

A P.A. Semi PA6T-1682M PowerPC CPU running at up to 1.8GHz
An ATI SB600 Southbridge
4 SATA connectors
One PATA (IDE) connector
One CF (Compact Flash) slot
Onboard Gigabit Ethernet
8 rear USB 2.0 ports
Two PCIe x16 slots
Special "Xorro" slot
Two 5V 32-bit 33MHz PCI slots
S/P DIF and PC99 compatible Audio connectors
An XMOS XS1-L2 "XENA" SDS "Software Defined Silicon" chip
4 DIMM slots for standard 1.8V DDR2-800MHz memory
Three PCIe x1 slots (one in-line with the special "Xorro" slot)

In addition, the X1000 motherboard has headers for two RS-232 serial ports (mainly used only for debugging), two front USB ports, a front panel Audio connector, a CD audio connector, a PLD JTAG Header, various fan headers and a standard 24-pin ATX 2.3 power connector.
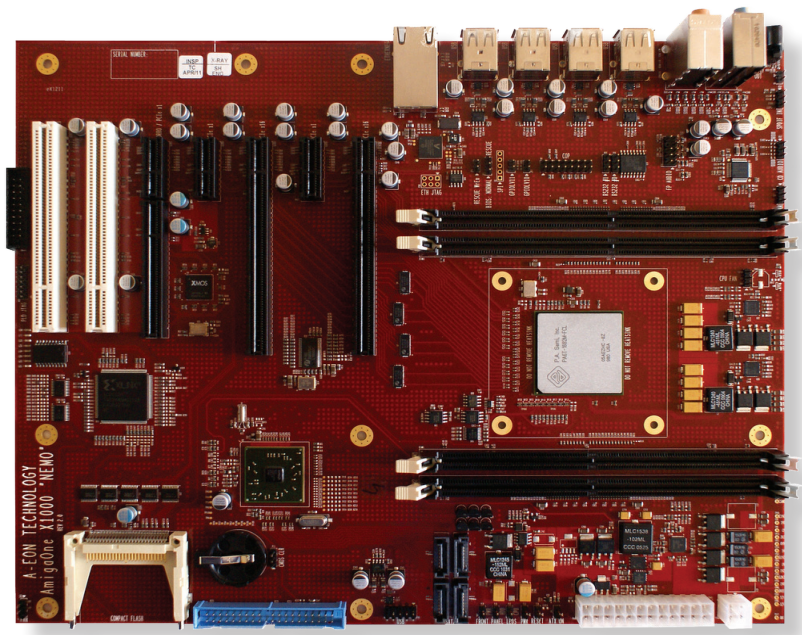
For detailed technical reference please refer to the AmigaONE X1000 Technical Reference Manual which is included on the AmigaOS 4.1 Installation CD. Look in the "Documentation" drawer. The Technical Reference Manual lists detailed Architecture information including CPU, Southbridge, DIMMS, XENA, and a listing of all connectors, switches, jumpers, and LEDs.   Detailed pinout listings are also available for the XENA connector, the PCIe/PCI slots, USB connectors, etc.

Getting ready for first start

Please ensure that you unpack your AmigaONE X1000 First Contact system carefully and set it on a flat surface. Make a quick visual inspection to ensure everything looks in place and nothing has come loose during shipment. Find a suitable place to put your system and connect your peripheral cables.

CONNECTING YOUR MONITOR

Connect your monitor's white DVI connector to the graphics card DVI connector in the expansion slot area at the rear of the X1000 case. Ensure the DVI connector is firmly attached to the X1000 DVI connector. If you are using a 15-pin blue VGA connector, ensure the connector is firmly attached to the back of the X1000 VGA connector.

CONNECTING YOUR KEYBOARD AND MOUSE

The AmigaONE X1000 supports the connection of a USB keyboard and mouse.

Please note: Your USB keyboard MUST be connected to the lower USB port closest to the Audio ports as per the diagram below:

Rear of A1-X1000 Nemo Motherboard

Connect USB keyboard here
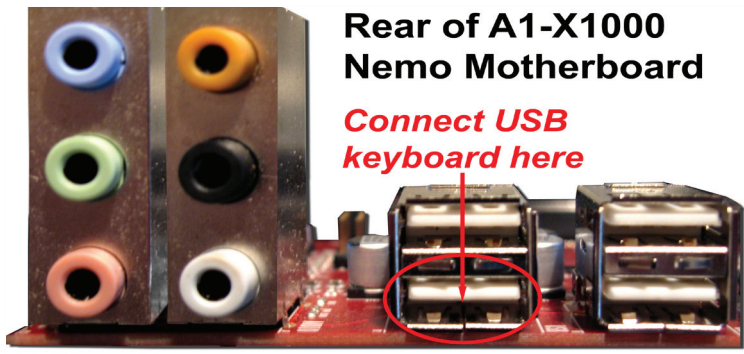
Your USB mouse can be connected to any of the other available USB ports.

It is not recommended to use 3rd party USB hubs, switch boxes, or extension cables. The X1000 system has enough USB ports to ensure all your devices can directly connect to the system.

Connecting Speakers and Network

Connect your speaker cable to the green audio-in jack on the rear of the PCI sound card. Remember that you should connect the speaker cable to the green audio jack of the PCI sound card and not the back of the X1000 motherboard. Connect your Network cable to the RJ45 connector to the PCI network card - not to the back of the X1000 motherboard. At a later date, when the motherboard sound and network drivers are ready, you will be able to move the cables to the motherboard ports.

Connecting the Power Cable

Connect the included power cable to the back of the X1000 power supply.

After you have plugged in all cables and verified all connections you are ready to power-on the AmigaONE X1000!

Boot Menu

When you first turn on your AmigaONE X1000 you will be presented with a boot menu and the X1000 logo.   Simply use the cursor keys on your keyboard to select which entry you want and press Enter. Or, type the number of the Operating system you wish to start. In the example shown AmigaOS 4.1 is option 0, and Debian Linux is option 1.   Please note that Debian Linux is an option that you would have chosen when you purchased your First Contact system.

If you press "F" you can exit the Boot Menu to the firmware prompt. Note that there should be no reason why you need to enter the Firmware. Refer to the "Firmware and Booting Guide" document on the CD for more information.

STARTING AMIGAOS 4.1

If you selected to start AmigaOS 4.1 from the Boot menu, the AmigaONE X1000 system will boot AmigaOS 4.1 from the hard disk. Before AmigaOS 4.1 loads, you will see a second boot menu which is the OpenFirmware AmigaBoot menu. That will allow you to select different AmigaOS 4.1 boot options or boot from the AmigaOS 4.1 CD. You can choose here to wait for the countdown timer to finish, at which point the default configuration will load, or you can choose an alternate configuration (such as booting from the AmigaOS 4.1 Boot CD, if inserted prior to power-on). After that, AmigaOS 4.1 will show a splash screen and, shortly after, the AmigaOS Workbench will present itself. You are now ready to begin exploring AmigaOS 4.1 on your AmigaONE X1000!

Tips and Tricks – Advanced Users

MEMORY

1. DIMM placement   - If you have only one memory DIMM (or "Stick"), it can be placed in any of the four memory slots by the CPU. But if you have two DIMM's, make sure that you have one each side of the CPU. This will allow memory access to be "interleaved", letting it access twice as much memory at one time. First use the inner pair of DIMM sockets (DIMM1 and DIMM3), then DIMM 2 and DIMM 4 if you have more DIMMs.

2. Maximum memory - While the AmigaONE X1000 hardware can access up to 8GB, currently AmigaOS can only address 2GB of memory. It is planned this limitation will be raised in upcoming versions of AmigaOS.

3. Virtual Memory with 2GB RAM - With the above 2GB limitation on AmigaOS memory addressing, there is no need for to create and use a SWAP partition if you have 2 GB of memory (or more) installed in your AmigaONE X1000.

PERIPHERALS

1. Keyboard - For your keyboard to be recognized by the CFE firmware, it must be plugged directly into the first (bottom) USB connector (next to the twin Audio towers). Your mouse isn't used by the firmware and can go anywhere.

2.   PCI cards - The AmigaONE X1000 includes two "conventional" PCI slots (the furthest from the CPU). All PCI cards to be used in those slots must be able to tolerate 5 volt signal levels. They should have a slot in the edge connector away from the rear mounting plate. If they also have a slot towards the mounting plate, that means they can work on 3.3 volt signals too, but they must have the 5V slot. Please refer to "Conventional PCI" entry on Wikipedia.

3.   Ethernet and Audio - Drivers for onboard Ethernet and Audio are currently being developed. Until they are available, please use the Ethernet and Audio PCI cards provided with your AmigaOne X1000. Once the new drivers for the motherboard Ethernet and Audio has been released, then you will be able to remove the provided cards.

HARD DRIVES AND OPTICAL DRIVES

1.   Optical & Hard Drive Connections - In order to be recognized by the firmware, the CD/DVD drive must be connected to port 0 (labeled "SATA 0" on the motherboard) and the hard drive connected to port 1 (labeled "SATA 2"). If you connect them the other way around, the firmware/loader will always load Kickstart modules from the first unit (if it is there), making it impossible to boot from the CD unless it is unit 0. Additional hard drives can be connected to the other ports, they won't be recognized by the firmware for booting, but can be used by AmigaOS.

2.   Hard Drive Requirement - The AmigaONE X1000 requires a Hard Drive be attached to be able to boot. The AmigaOS bootloader program will refuse to start and will send the machine into an endless reboot loop if a hard drive is not present.

DEBUGGING

1.   Problems During AmigaOS Booting - In case the computer repeatedly freezes after the CFE Boot Menu, ×on AmigaOS splash screen, this problem can problem can be diagnosed by adding the following command at the beginning of the "startup-sequence" script in the System:S/ directory:

set echo on

This command will cause each command in the script to be displayed in a console window, allowing you to see the progress and any hold up in the execution of this script.

2.   Serial Cable Debugging - While no connector is provided on the rear of the motherboard, there are two headers marked "RS232 #0" and "RS232 #1" on the Amiga-ONE X1000 motherboard. You can buy a cable from Amigakit or make one up easily that will connect to those connectors and provide a standard 9 pin serial connection. Contact AmigaKit for further information or to purchase a serial cable.

With that connector, it is possible to use a standard "null modem" serial cable and connect your AmigaONE X1000 to another computer's serial port. With that connection and "terminal" program it is then possible to observe and save debugging data AmigaOS and its applications may be generating. In the event of a crash, this information can be invaluable to developers in isolating and identifying the source of bugs.

Miscellaneous

1.   Installation Program Text Gadgets - During testing it seemed a number of users needed to remember to press ENTER after entering / changing contents of the text gadgets. Example: when setting up your monitor settings during AmigaOS installation. Without the confirmation, some installations were not successful.

2.   Turning Off Your AmigaONE X1000 - The AmigaONE X1000 uses a typical power system like one would find most modern PC's. As such, one needs to hold the power button down on the case for approximately 4 secs to cause the machine to shut down. Normally you do not need to switch off the power supply (at the bottom rear of the machine) unless you're opening or unplugging the machine.

3.   Battery backed up clock - You can set your AmigaONE X1000's clock using Time preferences in Sys:Prefs.

4.   Multiple Kickstart Configurations - AmigaOS uses "kickstart" files to load the actual operating system into memory. As in previous AmigaOS4 machines, it is possible to configure multiple bootable systems. Please refer to the included Amiga Booting Guide for more information configuring this.

Troubleshooting

Q: I am not getting any signal to the Monitor, there is no image or boot menu appearing?

A: Please verify all cable connections. Double check the monitor is working on another computer, if possible. Check for any bent pins on the monitor cable. Re-seat the cable to your DVI or VGA port to ensure it is properly fitted.

Q: My AmigaONE X1000 will not turn on.

A: Ensure you have properly hooked up the power cable and that it is firmly connected, both to your wall outlet and the rear of the X1000.

The normal procedure is to first turn on the power switch on the power supply module (at the bottom rear of the computer - you should hear its fan start running). Then you press the power switch on the case to start the computer (it should light up).

In some cases, if you have been reconfiguring components within your computer and there is not enough electrical load on power supply, it may not turn on. In this case, you should make sure you also have a hard drive and/or optical drive connected.

Q: My keyboard isn't working in the CFE firmware?

A: Ensure it is connected to the proper USB port, which is the bottom port beside the Audio connectors on the rear of the X1000 motherboard. See "Getting Ready for First Start" at the beginning of this guide. Alternatively unplug your USB keyboard and plug it back in.

How to get Support

AMIGAKIT OFFICIAL AMIGAONE X1000 DISTRIBUTOR

If you need specific AmigaONE X1000 support please contact the AmigaONE X1000 distributor, AmigaKit. They can be reached online at http://www.amigakit.com/support. On the website click on the Support link and login. If you do not have a customer login, please create one. You will be able to submit a technical support request using this method.

OFFICIAL HYPERION SUPPORT FORUMS

Hyperion Entertainment has official support forums for AmigaOS 4.1 specific questions. In order to gain access to the forums you need to register your copy of AmigaOS 4.1 on the Hyperion website. Go to http://www.hyperion-entertainment.biz and click on "Create an Account". Enter your AmigaOS 4.1 serial number.   After your account is validated you will get access to download AmigaOS updates and gain forum access.
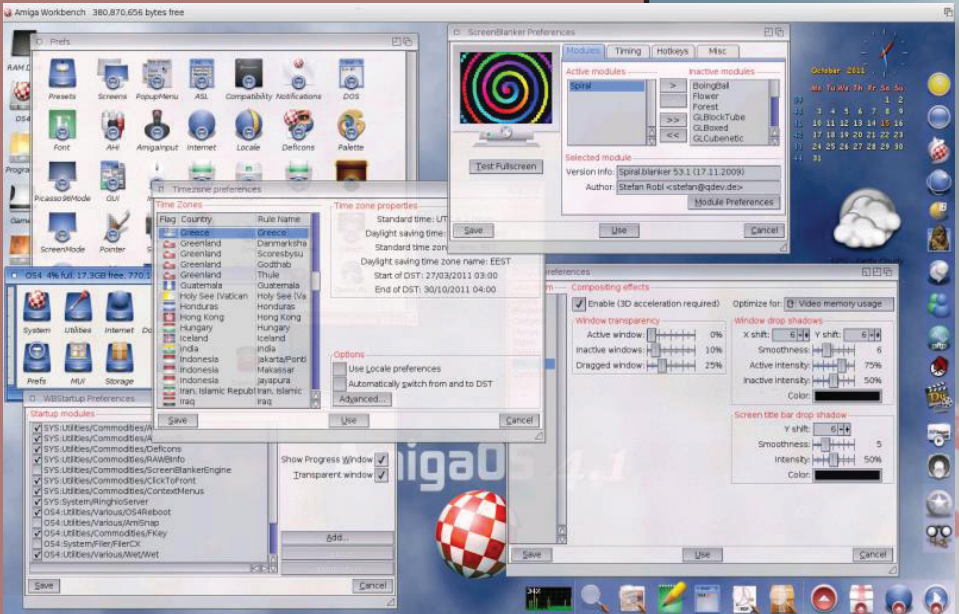
The forums are located at http://forum.hyperion-entertainment.biz and can even be browsed without creating an account.

OFFICIAL AMIGAOS WEBSITE

You may visit the official AmigaOS website at http://www.amigaos.net. Here you will find useful information about AmigaOS.

Additional documentation is located on the AmigaOS 4.1 CD in the Documentation drawer.

AmigaOS

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