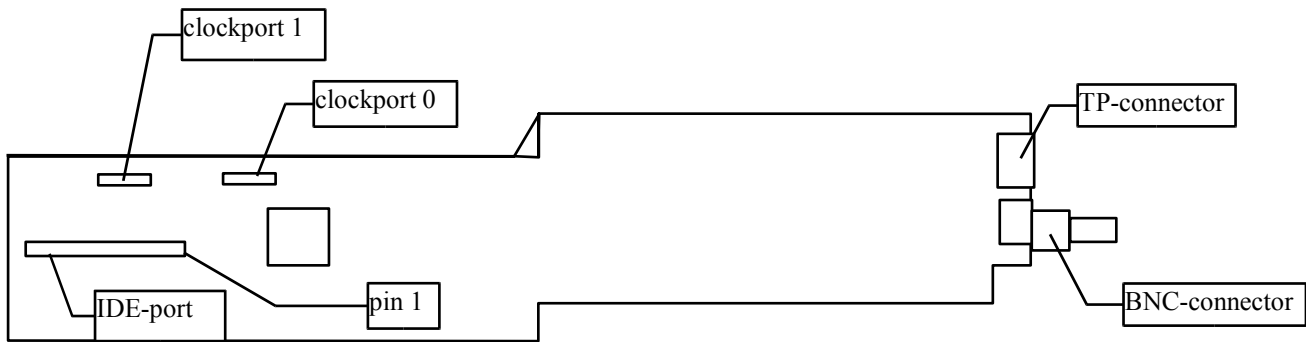


# X-Surf 3cc installation



## Hardware installation

Insert the card into a free Zorro-2, Zorro-3 or Fast-Z2 Slot. If the card is being used in a Zorro-3 or a Fast-Z2 slot, it's acting as a Zorro-2 card anyway (automatic identification as a Zorro-2 card).

If you connect a Silversurfer to the board, mind the correct orientation! The card has to face to the top of the card, so it does not cover the X-Surf. Most other Clock-port expansions have to be connected in a way that they cover the X-Surf, better you'll check with the vendor of the clock-port add-on before you break anything! Please use silversurfer.device V2.104 or higher or the VarIO software (preferably). Check [www.jschoenfeld.de](http://www.jschoenfeld.de) regularly for updates.

Please refer to the IDE-port on the X-Surf as an „emergency IDE port“ only. The timing is not configurable (i.e. only new harddrives will work), and you cannot boot from this port. If these features are needed, please consider buying a Buddha Flash controller.

All connectors can be used at the same time, there are no conflicts between them. That means, the maximum configuration of your X-Surf 3cc is: two IDE/Atapi devices and two clock-port devices (like Silversurfer and Delfina).

## Software installation

Start the installation script from the included CD by clicking on it's icon and follow the instructions on the screen. The IDE-drivers and all the necessary files will be installed on your computer automatically.

Your TCP/IP stack (Miami or Genesis) will be configured automatically. If you start your TCP/IP stack by clicking on „StartEthernet“, no additional adjustments are necessary.

To increase performance, there are MNI drivers for Miami. This driver will access the hardware without taking the reroute via the Sana-II driver. This way, a significant increase of performance is reached. The MNI driver is included on the CD in the directory `amiga/miamidx`. It works for both versions of Miami.

The directory „testboard“ contains a test program for the X-Surf. The basic functions and memory of the card are being tested. You should only run this program with the `x-surf.device` **closed** (that means „not in use“). It may confuse the driver! After running the program, we recommend to restart the system.

Drivers for NetBSD and Linux are published on the website [www.jschoenfeld.de](http://www.jschoenfeld.de) under „support“.

For instructions on how to configure a Windows-PC that shall be networked with your Amiga, please read the instruction file on the installation CD. The instructions are in HTML format, so they can be viewed with any internet browser.

## **Connecting to a network**

This sheet does not try to be a complete manual on how to setup and wire a LAN (local area network). If you don't have experience in setting up a network, refer to books dealing with this. Instead, we're trying to give you some basics that may make such a book easier to understand.

There are two styles of network wiring, thin Ethernet (BNC) and twisted-pair (TP). Your X-Surf 3cc supports both of them: twisted-pair (TP) and BNC wiring. The latter is remarkably cheap, but the disadvantage is that all computers „talk“ on one wire, so full-duplex transfers are not possible. The more computers you connect to a BNC network, the smaller the performance will become, because collisions will reduce bandwidth. Therefore, TP wiring is recommended.

TP wiring is slightly more expensive, and it requires a Switch or a Hub. The difference between Switch and Hub is that a Switch allows more than one point-to-point connection, while a Hub only allows two computers to talk at a time, making the other ones wait. Usually, a Hub is so fast in switching between the connections that you'll only notice a difference in networks with a lot of computers that cause a lot of traffic. Hubs got very cheap in the past, they start at about 20US\$. No matter if you're using a Switch or a Hub, the advantage over BNC is that collisions won't occur, and full-duplex transfers are possible, giving you the maximum bandwidth of 20Mbit.

## **Basic rules of BNC-wiring**

Check every computer (node) in the network for these three rules, then your network should work fine:

1. **Every** networking card has a T-piece connected to it. Never connect a cable directly to the X-Surf!
2. **Do not connect a 2nd T-piece** to the first T-piece.
3. There must be **exactly two terminators** in the whole network (one on each end)

An open end on a T-piece or less than two terminators will cause problems. You might be able to make a setup a ring of cables that looks nice, but it won't work. A T-piece is not included with every X-Surf 3cc, because this type of wiring is hardly used these days.

## **Basic rules of TP-wiring**

When buying TP cables, check if you get the right ones! There are two types of cables: Crossover and straight cables. Crossover-cables are only needed if you want to network exactly two computers (not more!). As soon as you have a third computer in the network, none of them may use a crossover-cable!

Connect every computer to the Hub/Switch. If Computer A wants to talk to Computer B, this is done via the Hub. The Hub is the middle of a star-shaped network.

You can check the connection between networking card and the Hub by looking at the LINK LEDs of the Hub and the X-Surf: About two seconds after powering up, the green LED on the X-Surf and the corresponding LED on the port of the Hub must be on. The Link-LEDs give you a simple way to check cables. A TP cable may be hot-plugged, that means, you don't have to switch the computer off before connecting or disconnecting a cable.

## **Routing, PPPoE drivers**

Many high-speed internet services are provided through Cable- or DSL modems. The most common protocol used for this is PPPoE. A driver that supports this protocol is provided for free download on [www.jschoenfeld.de](http://www.jschoenfeld.de) in the support section.

If you want to share an internet connection with other computers, it is recommended not to connect the DSL/cable modem to the hub. Instead, the routing computer should have a second networking card that connects directly to the DSL/cable modem. This reduces traffic that goes through the hub/switch, and it keeps other machines from „sniffing“ the login procedure, because this is done through so-called broadcast packets that can be seen by all computers connected to the same hub.

Any number of X-Surf cards is supported in one Amiga. The individual card is selected by the unit number of the x-surf.device, no further configuration is necessary.

## **CE compliance**

We declare under our sole responsibility that the product X-Surf 3cc Ethernet is in conformity with the following standards or standardization documents:

IEC 1000-4-4 BURST, IEC 1000-4-2 ESD, contact-discharge 6KV, DIN EN 50081-1 Fachgrundnorm Störfestigkeit, DIN EN 50082-1 Fachgrundnorm Störaussendung

according to the provisions of the regulations 89/336/EEC. Only use shielded cables. Using the wrong cables may cause harmful interference. Close the computer case and tighten all screws, especially the screw that holds the metal bracket of the card. With the documents used, using the card in environments with life support systems is not allowed. This product is designed and manufactured for the European market only. If it's sold outside this market, the importer is responsible for compliance with local regulations of manuals, product warranty and electro-magnetic interference.