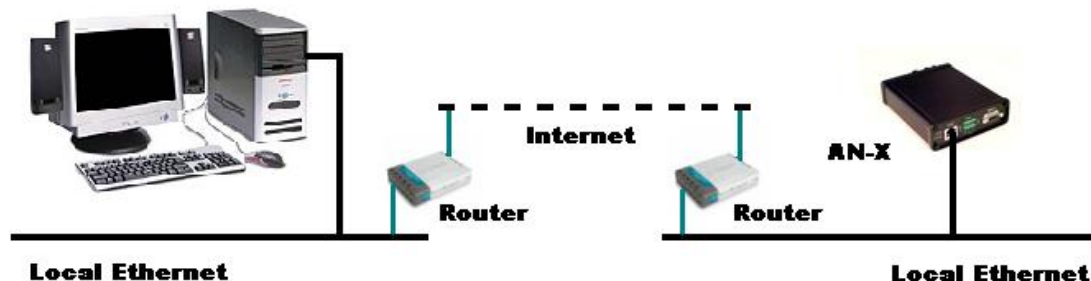


# AN-X Application Note

## Remote Access



This technical note describes how to use AnxInit to perform operations such as downloading firmware to an AN-X on a remote Ethernet network. Some details will depend on your particular network configuration and the hardware you are using.

**It may not be possible to perform these operations in all situations!**

### ***Requirements***

- AnxInit version 1.13.5 or above
- IP address of computer that is running AnxInit or the IP address of the router that connects the computer to the Internet
- IP address of the AN-X and the IP address (on the Internet) of the router that connects AN-X to the Internet

### ***Before you begin...***

AnxInit uses port 42888 to access the AN-X module.

On the Ethernet network that contains the AN-X module, you must configure the router that connects the AN-X module to the Internet to pass packets to port 42888 to the AN-X module.

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## Remote Access

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If the computer running AN-X is connected to the Internet through a router, you must route packets to port 42888 to the computer running AnxInit, so that it receives replies from the AN-X module

Details on how to do this depend on your network hardware. You and you alone are responsible for getting this working!

### **Procedure**

Run AnxInit

Select *Utilities/Select An AN-X*. The Set Ethernet & IP Address dialog appears.



For the *Ethernet MAC Address*, enter 00-0c-1a-00-00-00, not the MAC address of the AN-X. This tells AnxInit that it's a remote AN-X

For the *IP Address*, enter the IP address on the Internet of the router that the destination AN-X is connected to.

Click OK. AnxInit displays the message "Remote Mode, No ARP Entry" in its log area to indicate that the selected AN-X is remote.

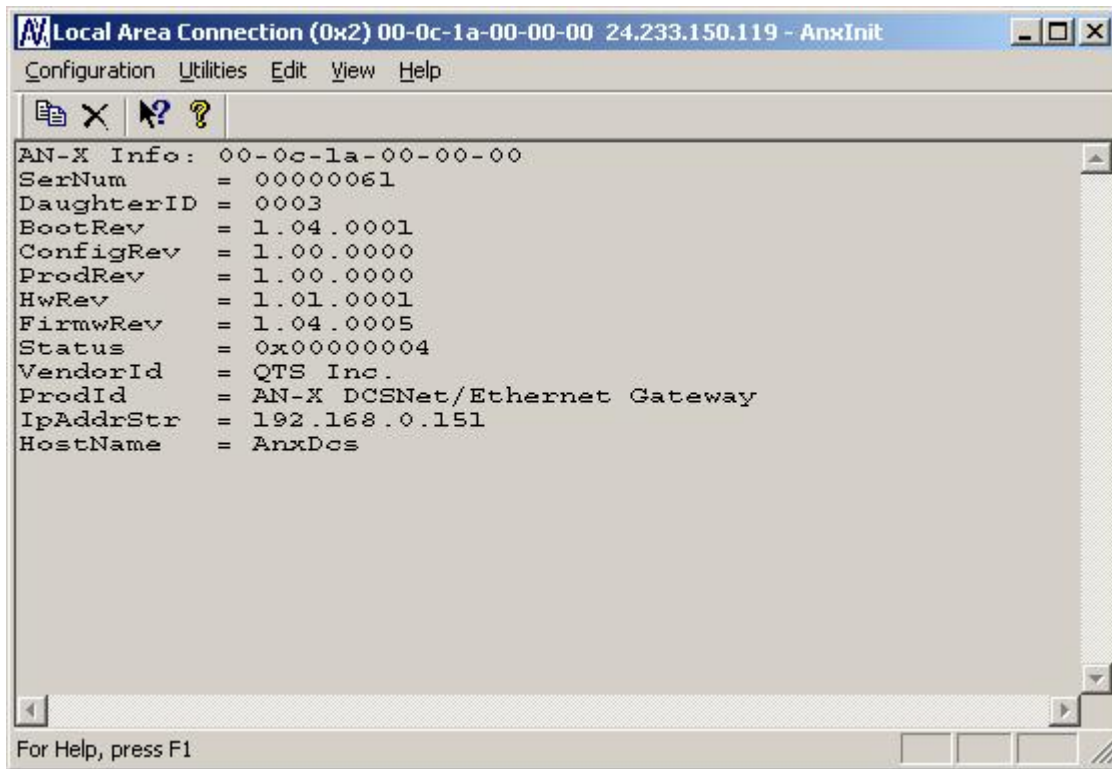
Select *Utilities/AN-X Info*.

If everything is working correctly, details of the destination AN-X should appear in the AN-X init log area. If that doesn't happen, recheck the IP addresses and network setup at each end before you proceed.

If the AN-X Info command succeeds, you can proceed to perform other operations.

## Remote Access

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The screenshot shows a terminal window titled "Local Area Connection (0x2) 00-0c-1a-00-00-00 24.233.150.119 - AnxInit". The window contains the following text:

```
AN-X Info: 00-0c-1a-00-00-00
SerNum    = 00000061
DaughterID = 0003
BootRev   = 1.04.0001
ConfigRev = 1.00.0000
ProdRev   = 1.00.0000
HwRev     = 1.01.0001
FirmwRev  = 1.04.0005
Status    = 0x00000004
VendorId  = QTS Inc.
ProdId    = AN-X DCSNet/Ethernet Gateway
IpAddrStr = 192.168.0.151
HostName  = AnxDcs
```

At the bottom of the window, it says "For Help, press F1".

### ***Things you can do...***

You can use the following commands on the remote AN-X:

- AN-X Info
- Download firmware
- Patch firmware
- Update flash (leaves AN-X in boot mode)
- Read kernel parameters (leaves AN-X in boot mode)
- Run config mode
- Restart AN-X

If the command leaves the AN-X in boot or config mode, you must perform a *Restart AN-X* command to restart it in production mode.

The Restart AN-X command doesn't provide any feedback as to when it's complete or whether it succeeded. Allow sufficient time to pass, then do an AN-X Info command to confirm that the AN-X has restarted.

### ***Things you can't do...***

The following commands won't work on a remote AN-X:

- Configuration menu IP and firmware wizards
- Change the IP address
- Locate All AN-X modules (shows local Ethernet network only)

### ***Determining the AN-X Mode of Operation***

To determine the current mode of operation, issue the command *Utilities/AN-X Info* and examine the Status field

AN-X Mode	Status Value
Boot	0x00000001
Config	0x00000002
Production	0x00000004

### ***Restoring the Configuration***

After some operations, such as updating the firmware, you will need to reload the configuration files to the remote AN-X. To do that, you have to be able to access the web interface on the remote AN-X. Configure the router that connects the AN-X to the Internet to pass packets for port 80 to the AN-X module. The details of how to do that will depend on the hardware you are using.

Run your browser and connect to the IP address of the router that the AN-X is connected to. You should see the introductory web interface screen. You should now be able to configure the automation network, any scheduled data configuration and any AN-X to AN-X communication, as well as viewing the current configuration, network and logs.

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