CLIPSAL
INTEGRATED SYSTEMS

NOTE #: 06-032-1

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KEY WORDS:

APPLICATION NOTE

SHARING INTELLIGENT SOLUTIONS

Title:	CNI Programming
Products Applicable:	5500CN

ARP stands for Address Resolution Protocol. ARP functions are used to determine the hardware address of Ethernet devices on a network. ARP functions may be used to program the C-Bus Network Interface.

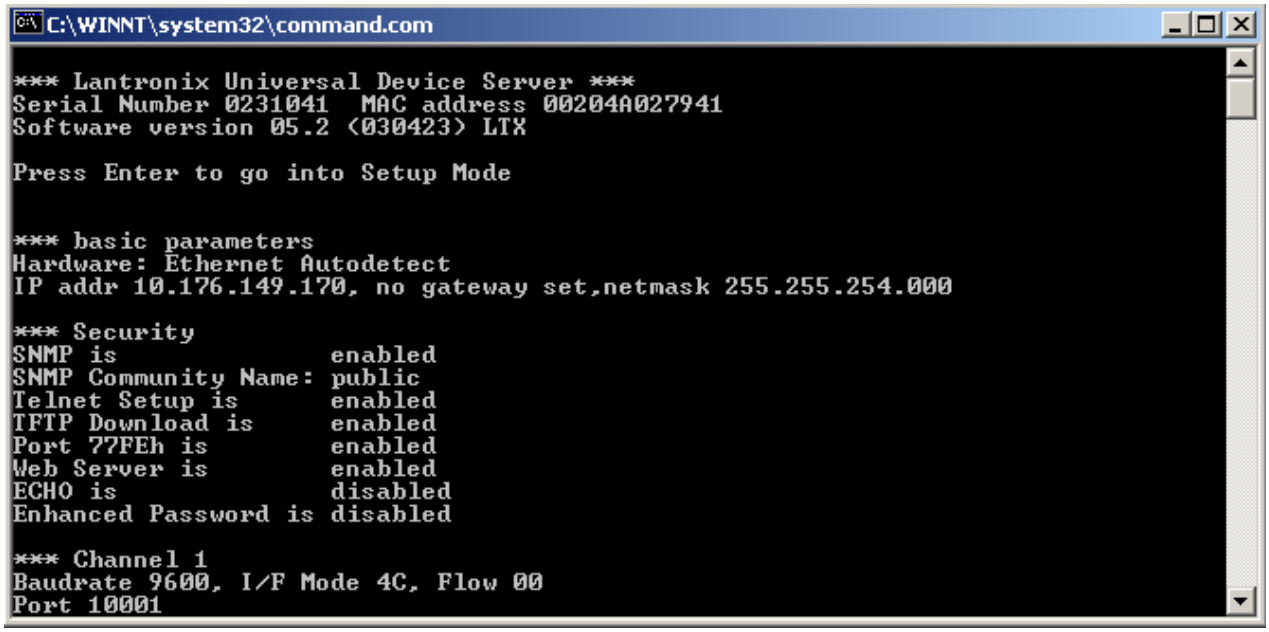
To begin to program a CNI using ARP functions, follow the steps listed below:

1) Ensure both CNI LED indicators are orange. This indicates that the CNI is correctly wired.
2) Configure your PC to a similar IP Address and Subnet Mask to the one you will assign to the CNI. Ensure that no other Ethernet device is using this address.
3) Open a Windows Command Prompt.
4) Type in *ipconfig* and press enter. This displays the IP Address and Subnet Mask of the PC, to ensure changes have taken effect.

Note: This example assumes that the IP Address you want to assign to the CNI is 10.120.120.120 with a Subnet Mask of 255.255.0.0. The CNI Ethernet address is 00-20-4A-62-5D-C2.

5) In the Windows Command Prompt, enter arp –s followed by the IP Address you are assigning to the CNI. After the IP address, enter the Ethernet address (which can be found on a sticker on the side of the CNI). The command should be constructed like the line below. Press enter.
   arp –s 10.120.120.120 00-20-4A-62-5D-C2
6) Type in the following command and press enter.
   telnet 10.120.120.120 1
7) You get an error message saying that a connection could not be made.
8) Type in the following command and press enter.
   telnet 10.120.120.120 9999

9) Press enter again within 5 seconds to continue, otherwise you will lose the telnet session connection. If a successful connection is made, you will see a screen similar to the one below.



10) You will see a menu. Type in 0 (Server Configuration) and press enter.
11) You will be prompted to enter in the IP Address parameter. To do this type in:

    10 then press enter

    120 then press enter

    120 then press enter

    120 then press enter.

12) Keep pressing enter until you see the parameter Netmask. This is where you define the Subnet Mask. Enter in the amount of bits corresponding to the Subnet Mask you are using and Press enter.

Subnet Mask	Bits
255.255.255.252	2
255.255.255.248	3
255.255.255.240	4
255.255.255.224	5
255.255.255.192	6
255.255.255.128	7
255.255.255.0	8
255.255.254.0	9

Subnet Mask	Bits
255.255.252.0	10
255.255.248.0	11
255.255.240.0	12
255.255.224.0	13
255.255.192.0	14
255.255.128.0	15
255.255.0.0	16
255.254.0.0	17

Subnet Mask	Bits
255.252.0.0	18
255.248.0.0	19
255.240.0.0	20
255.224.0.0	21
255.192.0.0	22
255.128.0.0	23
255.0.0.0	24

So for this example, type in 16 (for Subnet Mask 255.255.0.0) and press enter.

13) Keep pressing enter until you get to the main menu.
14) Once at the main menu, select 1 (Channel 1 Configuration) and press enter.
15) Keep pressing enter until you reach the Port Number parameter.
16) Type in the Port Number 10001 and press enter.
17) Keep pressing enter until you return to the main menu.
18) Press 9 to save and exit.

You should now be able to ping your CNI.

Technical Support and Troubleshooting

For technical assistance call: 1300 722 247 (Australia)
0800 888 219 (New Zealand)

CIS web site: http://www.clipsal.com/cis/