



ASIC/2-7540 USB Ethernet

Affects: ASIC/2-7540

Date: 14 March 2006

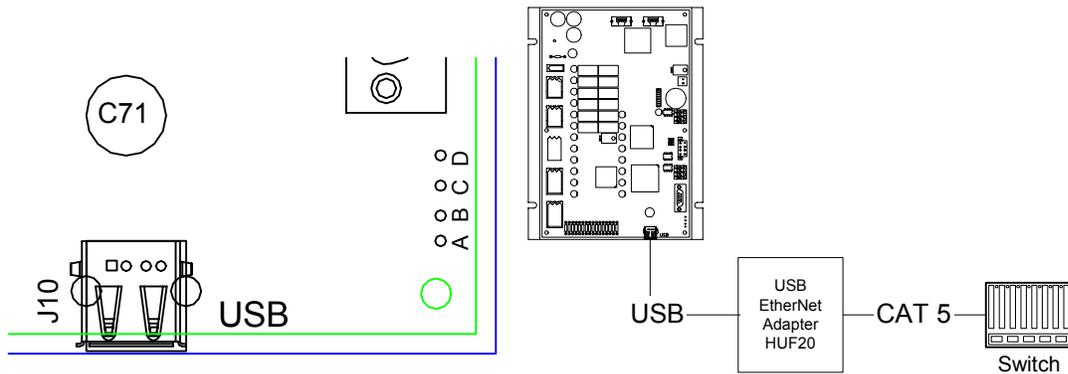


Note No. TE-031

USB Ethernet Devices

The ASIC/2-7540 has a USB Host port that allows the controller to communicate with certain USB Devices. The USB device communicates directly to the ASIC/2-7540 independent of the System or Local RS-485 busses . The ASIC/2-7540 does NOT support ASI message pass-through from the USB device to the System or Local busses.

CAUTION: Do Not HOT SWAP USB Devices! It can result in reset of the controller, and in some cases loss of configuration memory.



The USB Ethernet device is configured with IP Address and Port information in the System Object of the controller. Ethernet Notify messages are enabled in the Notify Object. The Ethernet Adapter obtains its power and IP Address and other configuration information from the controller. It can be directly plugged into the USB adapter or on a short USB extension cable. It connects to the Ethernet Switch using a standard CAT 5 Ethernet cable.

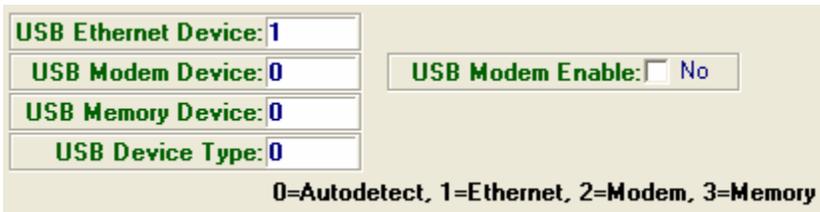
The ASIC/2-7540 FW754a1.3 and later supports specific USB Ethernet Devices. On reset of power, the controller detects the presence of a USB Device. It can autodetect specific USB devices:

USB Ethernet Device: Hawking HUF11, Hawking HUF2, LinkSYS USB100M

USB Modem: Best Data 56USB-P

Other devices may work, but are not guaranteed: You may tell the controller to assume a specific device type by setting the parameter USB Device Type; 0=Autodetect, 1=Ethernet, 2=Modem, 3=Memory

The status of the USB Devices is shown on the IP Config view of the system object parameter view screen, A2-SYS.pvs



Configuring IP Addresses

The IP Address, IP Port, IP Subnet Mask and IP Gateway Address to be used by the USB Ethernet adapter are configured in the system object IP Config view. The USB Ethernet adapter reads these values.

System	System Bus	Local Bus	IP Config	Diagnostics
IP Address: 192.168.1.67		IP Port: 3001		
IP Subnet Mask: 255.255.255.0				
IP Gateway: 192.168.1.1				
IP Monitor: 192.168.1.105		IP Monitor Port: 2001		

If the device has been recognized, and is connected on the network, you should be able to “ping” the device. Use the “ping” command from a DOS command window with the `-t` option to continuously try to find the device. Hit Ctrl-C to end the command once it is found. It will usually respond within about 30 seconds.

```
C:\ C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\mashuri>ping 192.168.1.67 -t
Pinging 192.168.1.67 with 32 bytes of data:
Reply from 192.168.1.67: bytes=32 time=10ms TTL=128
Reply from 192.168.1.67: bytes=32 time=9ms TTL=128
Reply from 192.168.1.67: bytes=32 time=8ms TTL=128
Reply from 192.168.1.67: bytes=32 time=8ms TTL=128
Reply from 192.168.1.67: bytes=32 time=8ms TTL=128
Reply from 192.168.1.67: bytes=32 time=9ms TTL=128
Reply from 192.168.1.67: bytes=32 time=8ms TTL=128
Reply from 192.168.1.67: bytes=32 time=10ms TTL=128
Ping statistics for 192.168.1.67:
    Packets: Sent = 8, Received = 8, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 8ms, Maximum = 10ms, Average = 8ms
Control-C
^C
```

Troubleshooting the IP Connection

An ASIC/2-7540 that is talking continuously (or at least every few minutes) will probably never present a problem. However, after extended periods of network inactivity, the 7540 may become non-responsive. For example, you may not be able to connect to the device with "Find It" in Expert, even though you were just talking to it 30 minutes ago. This also may occur the first time you put your 7540 on the network. To recover, use the “ping” command with the `-t` option to continuously try to find the device. By doing a continuous ping, you force all of the routers/switches/hubs to refresh their Address Resolution Protocol, ARP, entries for your controller.

Notify from USB-Ethernet.

The ASIC/2-7540 can send the IP/UDP packet with the Notify message over the Ethernet to the IP Monitor Address at the IP Monitor Port defined in the System object where ASI Monitor software is running.

IP Monitor: 192.168.1.105	IP Monitor Port: 2001
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When IP Notify Enable is set for an instance of the Notify object, then a notify message is sent to the USB-Ethernet adapter instead of to the system bus. Notify Destination address should be set to 23264 [0x5AE0]. If Notify Post Self Enable is yes, then it also gets posted to its own Notify log.

If you have any further questions please contact: ASI Controls Technical Support
support@asiccontrols.com, or call 925-866-8808