

30 November 2001, San Jose, California, USA
by sales@interniche.com ? 408.257.8014

OVERVIEW

InterNiche Technologies, Inc. is providing an Example Program for the Keil MCB167-Net evaluation board that shows some of the Ethernet and other connectivity capabilities of the Keil board and InterNiche's embedded TCP/IP stack, Web server, PPP, and NAT router software.

The example project can be found on the Keil CD-ROM under ..\MCB167Net\InterNiche. You also need:

- Keil MCB167 Net-Board with power-supply
- The Keil μ Vision2 C166 Evaluation Software (or Full Version)
- A 10Mbit-Ethernet Adaptor with 10BaseT-Jack
- A crossover cable, or a hub and connecting cables
- Browser (e.g. Microsoft Internet Explorer 5, Netscape Communicator 4.7)
- Modem and necessary connecting cables

SETTING UP THE MCB167-NET BOARD

1. Make certain that the jumpers on the board are set to the default settings.
2. Connect the board to the PC via serial cable (which is shipped with the board). On the PC-side plug the cable into Comm Port 1 (if possible); use an adapter if the PC only has 25-pin jacks. On the MCB167-Net use the COM jack.
3. Connect the Ethernet cable to B2 on the MCB167-Net and to the Ethernet-card in the PC via a crossover cable.
OR
Connect both the MCB167-Net and the PC via 10-baseT Ethernet cables to a hub or switch.

(A crossover cable is an 8-wire cable with RJ45 connectors on both ends. You may buy this cable from any network accessories dealer.)

4. Power up the board with the power-supply.

SETTING UP THE SOFTWARE REQUIREMENTS

1. If you haven't already done so, install the μ Vision2 C166 evaluation software from the Keil CD-ROM.
2. Install the InterNiche Demo project. Simply copy the files you find on the CD under `..\MCB167Net\InterNiche` to `C:\Keil\MCB167NET\INTERNICHE`.

RUNNING THE INTERNICHE DEMO APPLICATION

1. Open the project in μ Vision2
Choose: **Project – Open Project: \MCB167NET\INTERNICHE\KEILDEMO.UV2**

(The project is setup for Monitor communication with COM1. You can change this setting in the dialog with **Project – Options for Target – Debug – Keil Monitor-166 Settings**.)

The program is already translated; you can directly start the debugger. μ Vision2 will download the Monitor and the program to the MCB167-Net board.

2. To download
Choose: **Debug – Start/stop Debug Session**
The download will take a while.
3. If a serial window is not visible
Choose: **View – Serial Window**
4. Start program execution
Choose: **Debug – Go**
5. In the serial window you are prompted to enter an IP Address for the Ethernet connection.

```

InterNiche Technologies Portable TCP/IP Demo for MCB167, v1.8
Unable to open NV Parameters file "webport.nv"
Creating sample file
nv_defaults: set net 0 IP to 0.0.0.0
nv_defaults: set net 1 IP to 192.168.7.1
Warning: unusual dial timeout value: 0 seconds.
Enter an IP address for the Ethernet interface, or 0.0.0.0
to get an address via DHCP (default 0.0.0.0): _
    
```

Enter an IP Address
or
Press Enter to accept default, 0.0.0.0

Enter 0.0.0.0 if the IP Address is to be assigned via DHCP and sk your Network Administrator for the IP Address assigned to the Ethernet Mac Address, BC:9A:56:34:12. You will need this in order to establish your browser link to the demo.

- Next you are prompted to enter a subnet mask.

```
Enter a subnet mask for the Ethernet interface
(default 255.0.0.0): _
```

Enter a subnet mask
or
Press Enter to accept default, 255.0.0.0

- Finally you are prompted to choose the serial port speed. We highly recommend staying with the default speed of 9600 Baud.
The serial window displays:

```
Enter serial port speed (one of 1200, 2400, 3600, 4800,
9600, 19200) (default 9600): _
```

- After pressing Enter you will see:

```
Preparing to start with:
Ethernet IP address 10.0.0.115
Ethernet subnet mask 255.0.0.0
Serial port speed 9600 bps

If this is correct, press Enter only;
otherwise, type something else and press Enter to re-configure: _
```

- After pressing Enter again you have 15 seconds to swap serial cables for your PPP connection.

```
Disconnect the MCB167/NET serial port from its current
connection and connect it to a modem -- the modem handler
will start in about 15 seconds.
```

Note the flashing LEDs on the Keil MCB167-Net board. When the right most LED is continuously lit and the other LEDs flash from left to right the application is running.

This demo is set to run for approximately one hour. After that the modem will hang up if connected. The LED status lights will change their pattern to blink in pairs signifying that the demo is no longer active. To continue evaluating the demo you will have to re-launch the application.

BROWSING THE INTERNICHE DEMO

- Launch your Browser and enter the IP Address of the board in the browser address line. This is the IP address you entered in step 5 of Running the Demo Application instructions in the previous section.

You are now browsing the InterNiche embedded Web Server and our HTML Demo.

2. Click on the Set ISP Dialup Characteristics button.



The first time you click on the Set ISP Dialup Characteristics button you are prompted for a user name and password.

3. Enter “**guest**” for the user name and “**guest**” for the password.

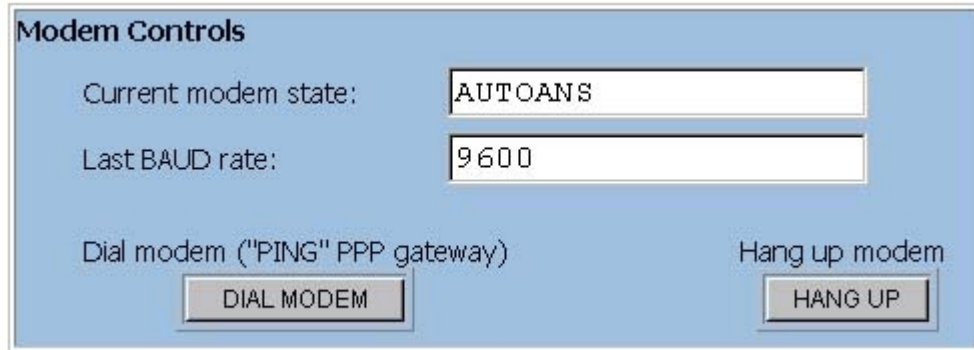
4. Click OK which brings up the ISP Setup window.

3. Enter your ISP connection information and click on the Set User Info button.

4. Click on the Modem Control button.



5. Click on the Dial Modem button.



5. Click on the Modem Control button again and notice that the Current Modem State field now displays “CONNECTED” instead of “AUTOANS”.

If you find it necessary to hang up and redial, note that the Current Modem State field needs to display “AUTOANS” not simply “IDLE” before you can redial successfully.

If you experience initial problems with your PPP connection, we recommend doing a hang up and redial before any other troubleshooting.

Now you are ready to exercise the full demo package.

If you configure another machine on your network to recognize the Keil MCB167-Net board running the InterNiche software demo as its Default Gateway, you can also connect to the Internet through the InterNiche embedded NATRouter.

Copyright © 2001 Keil Software, Inc. All rights reserved.

In the USA:
Keil Software, Inc.
 1501 10th Street, Suite 110
 Plano, TC 75074
 USA

Sales: 800-348-8051
 Phone: 972-312-1107
 FAX: 972-312-1159

E-mail: sales.us@keil.com
 support.us@keil.com

Internet: <http://www.keil.com/>

In Europe:
Keil Elektronik GmbH
 Bretonischer Ring 15
 D-85630 Grasbrunn b. Munchen
 Germany

Phone: (49) (089) 45 60 40 - 0
 FAX: (49) (089) 46 81 62

E-mail: sales.intl@keil.com
 support.intl@keil.com
