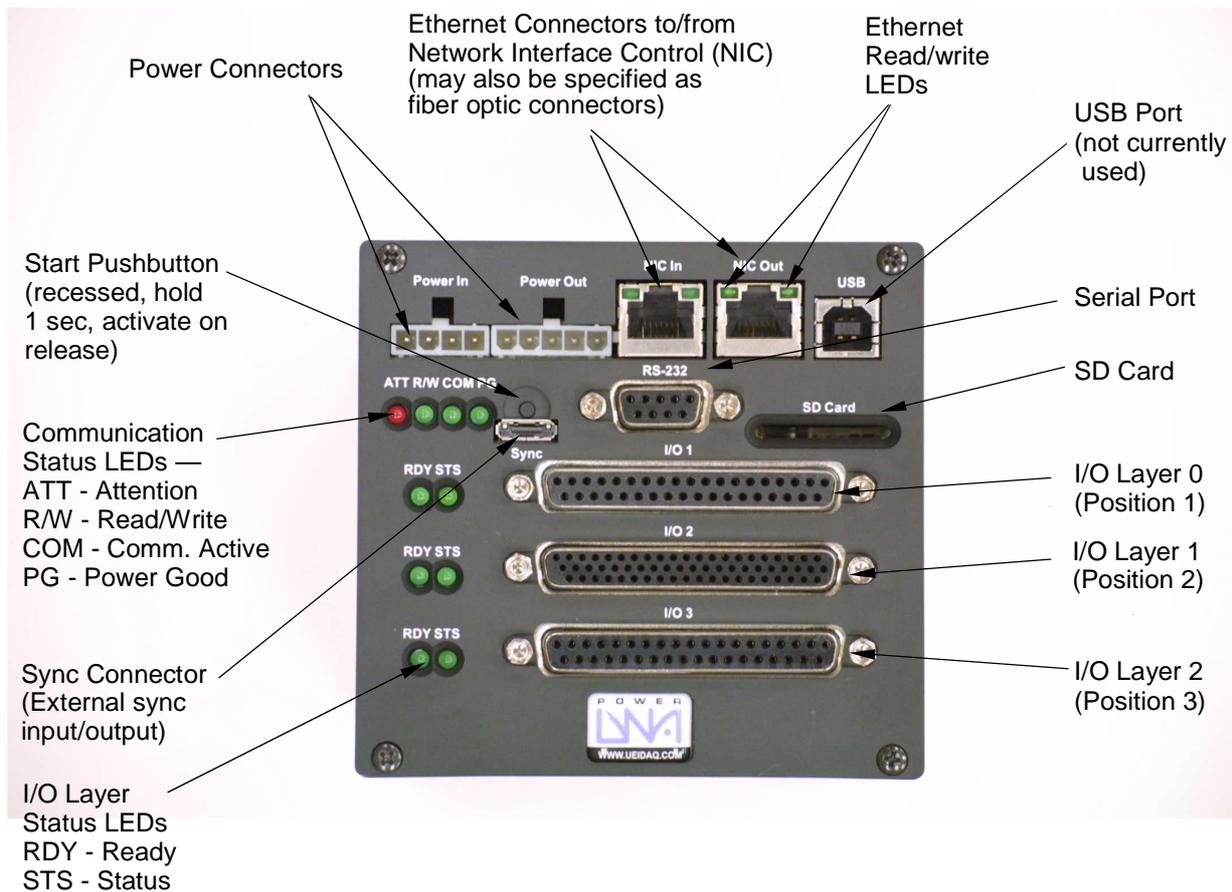


UEIPAC Quick Start

STEP 1:Unpack and verify package contents.

- UEIPAC Cube
- 24V DC Power Supply
- Ethernet Cable
- Serial (RS-232) Cable
- UEIPAC SDK CD-ROM

Please do not “power up” or connect your Ethernet cable to the PowerDNA cube until instructed to do so. The front panel of the PowerDNA Cube is shown in the figure below.



STEP 2:Connect the serial port.

Connect the serial cable to the serial port on the UEIPAC and the serial port on your PC.

You will need a serial communication program:

- Windows: ucon, MTTY or HyperTerminal.
- Linux: minicom or cu (part of the uucp package).

The UEIPAC uses the serial port settings: 57600 bits/s, 8 data bits, 1 stop bit, and no parity.

Run your serial terminal program and configure the serial communication settings accordingly.

STEP 3:Power-up the UEIPAC.

Connect the DC output of the power supply (24VDC) to the "Power In" connector on the UEIPAC and connect the AC input on the power supply to an AC power source.

You should see the booting process on your screen:

```
U-Boot 1.1.4 (Jan 10 2006 - 19:20:03)
```

```
CPU:   MPC5200 v1.2 at 396 MHz
       Bus 132 MHz, IPB 66 MHz, PCI 33 MHz
```

```
Board: UEI PowerDNA MPC5200 Layer
I2C:   85 kHz, ready
DRAM:  128 MB
Reserving 349k for U-Boot at: 07fa8000
FLASH: 4 MB
In:    serial
Out:   serial
Err:   serial
Net:   FEC ETHERNET
```

```
<lots of messages...>
```

```
init started: BusyBox v1.13.3 (2009-04-29 09:50:58 EDT)
starting pid 784, tty '': '/bin/mount -a'
starting pid 785, tty '': '/sbin/ifconfig lo 127.0.0.1 up'
starting pid 786, tty '': '/sbin/route add -net 127.0.0.0 netmask 255.0.0.0
lo'
starting pid 787, tty '': '/etc/rcS'
loading modules
  pdnabus
  pdnadev
Starting Network...
Checking Network Configuration:           [ OK ]
Loading Static Network Interface:        [ OK ]
Checking Network Connection:             [ OK ]
Starting inetd...                         [ OK ]
Starting local script...PowerDNA Driver, version 2.0.0
```

Address	Irq	Model	Option	Phy/Virt	S/N	Pri	LogicVer
0xc9080000	66	254	1	phys	0043844	0	02.0f.30
0xc9090000	66	255	1	phys	0044433	0	02.0f.30
0xc90b0000	66	201	100	phys	0034169	0	02.0d.02
0xc90c0000	66	207	1	phys	0034557	0	02.0d.02

[OK]

starting pid 827, tty '/dev/ttyS0': '-/bin/sh'

BusyBox v1.13.3 (2009-04-29 09:50:58 EDT) built-in shell (ash)
 Enter 'help' for a list of built-in commands.

~ #

You can now navigate the file system and enter standard Linux commands such as ls, ps, cd

STEP 4:Configuring the IP Address.

Your PowerDNA cube is configured at the factory with the IP address 192.168.100.2 to be part of a private network.

You can change the IP address using the following command:

```
setip <new IP address>
```

This command changes the current IP address and stores it in a file so that the new IP address will be used next time the system is powered-up.

STEP 5:Connecting through Telnet.

Once the IP address is configured, you shouldn't need the serial port anymore. You can use telnet to access the exact same command line interface.

Type the following command on your host PC, then login as "root". The password is "root".

```
telnet <Cube's IP address>
```

Type the command "exit" to logout.

STEP 6:Setting up your Development System

A development system is composed of the software tools necessary to create an embedded application targeting Linux on a PowerPC processor.

The development tools can run on a Linux PC or on a Windows PC using the Cygwin environment.

It contains the following:

- GCC cross-compiler targeting the PowerDNA IO module PPC processor.
- GNU toolchain tools such as make.
- Standard Linux libraries such as glibc.
- PowerDNA library to access the various PowerDNA data acquisition devices

Windows Host

If you don't have Cygwin already installed, download and run the installer "setup.exe" from <http://www.cygwin.com>.

Running setup.exe will install or update Cygwin. We need the packages from the following categories:

- Archive: tools to create and read archives files such as zip, bx2 and tar.
- Admin: administration tools and disk utilities.
- Devel: Development tools such as make and gcc.
- Net: Network utilities such as ftp, tftp and telnet.

Insert the "UEIPAC SDK" CDROM in your CD drive. Then open a cygwin command line shell.

Go to the CD's root directory (the example below assumes that the CD-ROM is the D: drive) and run the installation script:

```
cd /cygdrive/d
./install.sh
```

Linux Host

Insert the "UEIPAC SDK" CDROM in your CD drive. You might need to mount it if your Linux distribution doesn't detect the CDROM automatically.

To mount it, type:

```
mount /dev/cdrom /mnt/cdrom
cd /mnt/cdrom
```

Run the installation script

```
./install.sh
```