

## **SIXNET IPm Application Development Kit (IADK)**

### **OVERVIEW:**

The software and documentation provided on this CD or web site allows you to develop IPm applications in either Linux or Windows. This cross-development platform will create Linux applications (for the IPm's Power PC target) from within an i386 platform.

### **Note 1:**

Use of the IPm Application Development Kit requires the purchase of the IPm Advanced License (option group 4) of the SIXNET I/O Tool Kit.

### **Note 2:**

The IPm Application Development Kit is designed for advanced users and OEMs that are already familiar with developing applications for embedded Linux systems. If you don't have these skills we recommend that you contact one of the IPm Resource Centers for assistance.

### **LINUX\_IADK:**

This kit allows you to develop your IPm applications in Red Hat 7.0 or higher.

### **WINDOWS\_IADK:**

This kit allows you to develop your IPm applications in Microsoft Windows. Please note that MSYS and MinGw must be installed first to establish the necessary emulation environment (see [iadk\\_install\\_guide.pdf](#) for details).

Note: Not all Linux capabilities are supported when using MSYS and WinGW. Accordingly, it may not be suitable for porting or developing some applications. We recommend only using the Windows\_IADK when you are writing your own IPm applications from scratch or when making modifications to existing applications that are known to be compatible with this emulation environment.

### **DEVELOPMENT FILES:**

'\*\*' = These files have changed since the previous release.

\*\* [sxiadk.tar.gz](#) Linux IADK with GCC compiler and utilities

[ppc\\_insight.tar.gz](#) (NEW!) Linux debugger files

[sxwiniadk.tar.gz](#) (NEW!) Windows IADK with compiler and utilities

\*\* [sxlib.tar.gz](#) SIXNET libraries to access the IPm's I/O

Note: Only supplied after purchase of an IPm Advanced Tool Kit license.

\*\* [sxsample.tar.gz](#) Contains two sample programs:  
    [oem\\_iodb.c](#) reads and writes I/O registers  
    [tst\\_serial.c](#) reads and writes to serial port

NECESSARY FILES for Windows IADK (not supplied by SIXNET):

MinGW: MinGW-2.0.0-3.exe or newer (download from [www.mingw.org](http://www.mingw.org))

MSYS: MSYS-1.0.9-2003.02.17-1.exe or newer (download from [www.mingw.org](http://www.mingw.org))

DOCUMENTATION FILES:

iadk\_intro.pdf This file gives an overview of the IADK

iadk\_install\_guide.pdf This file tells how to install the IADK.

iadk\_tutorial.pdf This is a step-by-step look at turning a supplied sample C file into a running IPm application

iadk\_use\_guide.pdf This is a description of how to use the IADK to compile, load and run your own IPm application

ipm\_io\_calls.pdf This document details each library call to access the IPm I/O registers. A C example is included for each library call.

ipm\_serial\_ports.pdf This document shows the names that map to each IPm serial port, and what modes the port should be set to in the SIXNET Tool Kit

IADK Revision History:

rev 1.2 (10Apr03) Note: The following changes require version 1.4 or newer IPm firmware. The latest firmware is available for download from [www.sixnet.com](http://www.sixnet.com).

- \* Development kit synced with target stations (both libraries and executables).
- \* A Windows version of the IADK is available.
- \* A graphical debugger (Insight) is available for use with the Linux IADK (remote debugging only).
- \* Linux IADK filename changed from "sxeldk.tar.gz" to "sxiadk.tar.gz"

rev 1.1 (10Feb03) Note: The following changes require version 1.2 or newer IPm firmware. The latest firmware is available for download from [www.sixnet.com](http://www.sixnet.com).

\* Added the following new I/O database function calls:  
IODBGetFile() IODBGetDescription()  
IODBMinMax() IODBMinMaxTag()  
IOBScaleTag() IODBGetFormat()  
IOBScale()

\* Improved the efficiency of the IOBRead() and  
IOBWrite() I/O database function calls.

The files 'sxmlib.tar.gz' and 'ipm\_io\_calls.pdf' contain  
all of the changes above. These are the only files that  
have changed from the original release.

rev 1.0 (10Sept02) Original release  
rev 2.0 (10Apr03)