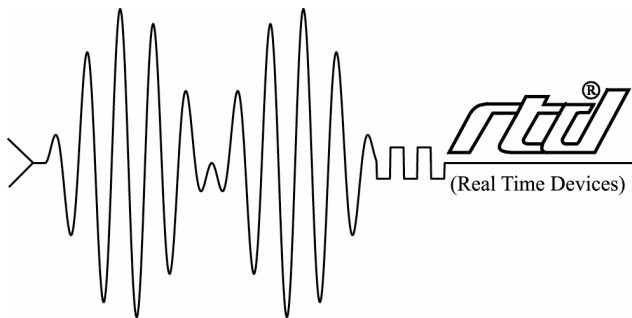


# APPLICATION NOTE

## Resolving CM6109 Linux Kernel Module Problems



RTD Embedded Technologies, Inc.  
*"Accessing the Analog World"®*

SWM-640020016  
rev A

ISO9001 and AS9100 Certified

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# APPLICATION NOTE

## Resolving CM6109 Linux Kernel Module Problems

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**RTD Embedded Technologies, Inc.**

103 Innovation Boulevard  
State College, PA 16803-0906

Phone: +1-814-234-8087

FAX: +1-814-234-5218

E-mail

sales@rtd.com

techsupport@rtd.com

web site

<http://www.rtd.com>

## Revision History

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## Introduction

You may encounter a kernel module problem when using built-in Linux support for the CM6109 PCMCIA PC Card Carrier utilityModule. This manifests itself as 1) an unusable PCMCIA device after it is plugged into the utilityModule, and 2) the presence of system log error messages, generated by the `cardmgr` command, regarding the inability to locate certain kernel driver modules.

Depending upon the Linux distribution/release and the specific PCMCIA device used, you may or may not experience the above mentioned problem. Most Red Hat distributions are known to exhibit this behavior.

This document provides some tips on how to resolve this shortcoming and get your device working when using the Linux PCMCIA functionality.

## Getting the Device Working

Certain Linux distributions and/or releases do not include some of the less widely used PCMCIA client drivers, for example the memory card drivers. The kernel modules associated with these drivers are absent, which causes the error messages about missing kernel modules.

SourceForge (<http://www.sourceforge.net>) hosts an open source project called `pcmcia-cs` which provides extra PCMCIA client drivers. To obtain the source code, visit the SourceForge web site, perform a search for the `pcmcia-cs` project, follow the project link to its home page, and download the latest `pcmcia-cs` tar file. At the time this document was written, the latest version was `pcmcia-cs-3.2.8.tar.gz`; this version will be assumed for the remainder of this application note.

Once you have obtained the tar file, extract it. This creates a directory `pcmcia-cs-3.2.8/` in the current directory. Within `pcmcia-cs-3.2.8/` is a directory named `clients/`. You need to build the source code in this directory to create the drivers. Please see the README files in `pcmcia-cs-3.2.8/` for instructions on how to build and install this software.

After installing the drivers in the kernel module directory (usually `/lib/modules/`), load the drivers into the currently running kernel. Determine which module(s) you need and issue an appropriate `insmod` or `modprobe` command. Note that you may have to load additional PCMCIA kernel modules into the kernel to satisfy unresolved symbols in the client drivers. Subsequent to loading all necessary kernel modules, the `cardmgr` command should recognize and configure your device.

## Final Note

At the time this document was created, the `pcmcia-cs` code seems to have compile issues under some 2.6 kernels. Please contact the person(s) responsible for the `pcmcia-cs` project for assistance in this case.