



CTAN001: Product Selection Guide for Cactus Industrial-Grade Flash-Storage Products

Covered Products: All

1. Introduction

Cactus Technologies Limited offers industrial-grade CompactFlash memory cards, PC Card ATA cards, 2.5" Flashdrive ATA drives and 40/44-pin DOM for industrial and embedded applications.

This document is a guide for designers and purchasers to select the most suitable Cactus product for their application.

2. Product Overview

Cactus Technologies products uses model codes to indicate its product type, storage capacity, configuration and transfer mode support.

A general model code is specified as below:

KTXYZ-20n(A/B)

T indicates product type:

C ----- CompactFlash Card
 P ----- PC Card (PCMCIA) ATA Card
 D ----- 2.5" Flashdrive
 M ----- 40/44-pin Disk-On-Module

X is card capacities:

32M ----- 32MB

64M ----- 64MB

128M ----- 128MB

256M ----- 256MB

512M ----- 512MB

1G ----- 1GB

2G ----- 2GB

4G ----- 4GB

8G ----- 8GB

16G ----- 16GB

Note: the maximum capacity for CF card is 8GB.

Y is card configuration

R ----- Removable-mode

F ----- Fixed-mode

Notes:

1. Removable mode is not available in 2.5" Flashdrive and DOM as they do not support hot-plugging.
2. -203/4 CF/PCMCIA products always report to the system as fixed-mode device under True IDE mode, and the card configuration parameter applies to PCMCIA memory and I/O modes.

Z is temperature

Blank ----- Standard temperature (0° C to +70° C)

I ----- Extended temperature (-45° C to +90° C)

n is advanced transfer mode support

Odd number (1/3) ----- PIO mode 4 and Multi-word DMA mode 2 available

Even number (2/4) ----- advanced transfer modes unavailable

For DOM, **A** or **B** indicates pin out model

A ----- 40-pin female connector
compatible with standard ATA socket

B ----- 44-pin female connector

Examples:

KC512MR-201	512MB CF Removable
KC1GRI-201	1GB CF Removable Extended Temp
KP128MFI-201	128MB PC Card ATA Fixed Extended Temp
KP8GF-202	8GB PC Card ATA Fixed without DMA
KM512MF-202A	40-pin 512MB DOM without DMA
KM128MFI-201B	44-pin 128MB DOM Extended Temp
KD2GF-201	2GB 2.5" Flashdrive

3. Product Selection Guide

Designers and buyers can follow these steps to select the appropriate product for a new design or replacing existing flash-storage product in an existing system:

1. Select the desired form factor.

The Cactus 2.5" Flashdrive is mechanically and electrically interchangeable with standard 2.5" IDE hard disk drives.

The Cactus DOM is available as 40-pin and 44-pin sockets.

2. Select the required operating temperature range.
3. Select configuration for CF and PC Card ATA products.

If the system does not support booting

from removable media, please select fixed-mode (F) products, otherwise removable-mode (R) products should be used.

Some operating systems (e.g. Microsoft Windows) do not support installation to removable media and fixed-mode products must be used for successful installation.

4. Determine the required ATA data transfer modes.

We recommend -1/3 products for best performance with PIO Mode 4 and Multi-Word DMA mode 2 support. However, for legacy systems without advanced transfer mode support, -2/4 products should be used to prevent compatibility issues between Cactus product and the system interface.

5. Select product capacity fitting to the application and maximum capacity supported by the host system.

Some legacy systems have maximum capacity limits (e.g. older PC BIOSes with 540MByte or 2.1GByte disk capacity limit) and we recommend products with the closet capacity to the limit to be used for these cases to prevent compatibility problems.

We recommend designers to adopt the -203 product for new and existing designs, as it incorporates multiple improvements in terms of functionality and compatibility. By default, the -203/4 product always reports itself as fixed ATA device under True IDE mode, and as removable ATA device under PCMCIA mode. This configuration has the widest compatibility with different host systems.

The standard shipping configuration for Cactus products contains single FAT-formatted partition for capacities less than 2GB and single FAT32-formatted partition for capacities greater than 2GB.

4. Version History

Version	Date	Change
1.00	29 August 2006	Initial Version
1.01	12 October 2006	Added product code for DOM in Section 2.
1.02	29 December 2006	Added descriptions for -3 /4 products