

Device Bay

Application Overview

The Device Bay system is a standard method of providing a bay which can be utilized for a multitude of applications. Applications for Device Bay include FDD (120MB) and HDD portable storage, network adapters, smart battery, CD-ROM, Smart Card Reader, DVD, PDAs, and USB hubs. Features of the bays include easy access, automatic configuration, and hot swapping.

Problem/Solution

The system bay internal system power is analogous to today's 5V/12V 4-pin PC power connector. For safety reasons the receptacle is in the bay. For protection (both mechanical and electrical), the plug connector in a device is recessed (2.0mm for a DB32 form-factor). Per the Device Bay specification, the bay may provide additional overcurrent protection provided it meets all the other bay power requirements (current, voltage, etc). The Device Bay specification cites that this is certainly applicable for high-availability situations (servers, industrial, etc). Overcurrent protection should also be considered because devices can provide an externally accessible (IEEE 1394 and/or USB) native bus connector.

Device Selection

Maximum continuous operating currents range from 0.8A to 3.5A depending on implementation and bus voltage. Devices in the miniSMD, SMD, RGE, RHE, and RUE series are typically used for these applications.

Figure 1. Typical Schematic

