source while a desktop is configured to operate as a stationary device and does not typically have a stand alone power source.

[0018] Advantageously, a PC consistent with the invention is configured to operate in both a PC mode and a PDA mode. In the PC mode, a first operating system, e.g., a PC operating system such as Windows® provided by Microsoft, Inc, of Redmond, Wash., is run. As such, the PC **100** operates as such and can perform any and all of the PC's functions such as word processing, email, Internet access, etc. In PDA mode, a second mini operating system is run. Such a mini operating system (Mini-OS) generally has fewer instructions and takes up less memory than the PC operating system. Such a Mini-OS may be similar to Palm OS® provided by Palm Inc. of Santa Clara Calif., PocketPC provided by Microsoft, Inc. of Redmond, Wash., or MontaVista Linux® provided by Monta Vista Software, Inc, of Sunnyvale, Calif. Such a Mini-OS may take up much less memory than that required for the first operating system such as Windows®. When operating in PDA mode, the Mini-OS and related PDA application software is utilized to provide a smaller subset of PDA functions when compared to PC functions.

[0019] Advantageously, booting the Mini-OS for operation in PDA mode takes significantly less time than booting the first operating system for operation in PC mode. This is due in part to the Mini-OS having a smaller kernel and hence a simpler boot up routine than its counterpart PC operating system. This allows a user to access a host of PDA applications much faster than waiting for the longer boot up routine for the first operating system. The Mini-OS may take only a few seconds or less to boot, while the first operating system may take as long as minutes to boot. As such the boot up sequence for the first operating system can be as least five times longer than the boot up sequence for the second operating system, e.g., the Mini-OS.

[0020] While in PDA mode, video data may be output on a second video display **114**, e.g., a PDA display screen which may be a small LCD module, to display characters and graphics for different PDA applications. The PDA display screen **114** is smaller in size or surface area than the full display screen **118** which is typically utilized when operating the PC in PC mode. The PDA display screen **114** permits power savings since the entire full display screen **118** is not needed when the PC **100** is operating in PDA mode. However, PCs that are not concerned with such a power savings feature or desire the larger display screen **118**, may utilize the fall screen **118** in PDA mode. Elimination of the PDA display screen would also reduce initial PC **100** costs.

[0021] A PC **100** consistent with the invention may also be provided with PDA buttons **106**, **108**, **110**, **112** to complement typical keys found in a conventional keyboard **116**. Four buttons **106**, **108**, **110**, **112** are illustrated in **FIG. 1**, although there may be any number of buttons depending on the desired functionality. These PDA buttons **106**, **108**, **110**, **112** are similar to the PDA buttons on most PDAs enabling the user to control the PC **100** in PDA mode by using the provided buttons **106**, **108**, **110**, **112** to bring up different PDA applications or screens. The buttons **106**, **108**, **110**, **112** may be any type of buttons such as mechanical push buttons, slide buttons, dial buttons, electrical buttons, etc.

[0022] The Mini-OS may be triggered to operate in a variety of ways. For instance, an input device may provide an input mode signal to the PC indicating desired operation in PC mode or PDA mode. One exemplary input device may be power control buttons **102**, **104**. The first button or PC power on button **102** may be used to initiate a regular boot up sequence of the PC **100** in the PC mode by loading a PC operating system. The second button or PDA power on button **104** may be used to initiate the loading of the Mini-OS for operation in PDA mode. One power button may also be used that could distinguish a PC mode power up request from a PDA mode power up request depending on the time the power on button is depressed. Another way to trigger the loading of the Mini-OS is by coupling electronic devices, e.g., digital cameras, digital camcorders, and the like, to the PC **100** for downloading of digital information.

[0023] A traveler who may otherwise travel with a laptop and a PDA may advantageously only take the laptop and still have PDA functionality. Since the PDA functionality is incorporated into the PC **100**, it provides a direct link to the PC **100** and various systems of the PC. Hence, coupling of the PDA to a separate PC for transfer of data there between may be avoided. Such a PC **100** also gives the PDA applications access to the PC's more powerful processing circuit and larger mass storage devices, e.g., a hard disk drive, for new PDA applications that could not be supported by a PDA alone.

[0024] Turning to **FIG. 2, a** simplified block diagram of a PC **200** consistent with the invention including an integrated circuit (IC) **202** configured to provide PDA functionality to the PC is illustrated. The IC **202** is shown directly coupled to the Peripheral Expansion Bus **244**, which could be a variety of I/O buses in the PC **200** such as the Universal Serial Bus (USB), High Speed Serial Bus (IEEE 1394), Low Pin Count (LPC) bus, System Management Bus (SMBus), or even the PCI Bus **204**. The functionality of the IC **202** may also be embedded in a host of other circuits, e.g., in an embedded keyboard controller or any other manual input device controller **242**.

[0025] The PC **200** includes a central processing unit (CPU) **203**. An exemplary CPU may be, for example, a Pentium processor available from Intel Corporation for executing instructions and controlling operation of the PC **200**. The CPU **203** may be coupled to system memory **206** in a conventional manner through the host bridge **208**. In turn, the host bridge **208** may be further coupled to the system bridge **210** and PCI bus **204** in a conventional manner. A manual input device controller **242** allows a user to input data to the PC **200** through manual input devices **209** such as a keyboard, mouse, joystick, touch-pad, infrared remote control, and PDA buttons **106**, **108**, **110**, **112** as earlier detailed. The manual input device controller **242** may also be coupled to the PC power on button **102** and PDA power on button **104** functioning as input devices to provide an input signal to the PC indicating desired operation in either PC mode or PDA mode. The PCI bus **204** may be directly coupled to a variety of different controllers for controlling operation of associated peripheral devices. For example, a flash card controller **226**, a network controller **228**, and others may be directly coupled to the PCI bus **204**.

[0026] The PC **200** may also include a video subsystem **218** and an audio subsystem **220** which are coupled to the processing circuit **203**. A CD/DVD ROM drive **224** may be directly coupled to the system bridge **210** through an inte-