grated drive electronics (IDE) bus in a conventional manner. The drive **224** is configured to read digital data from an external digital storage medium such as a conventional audio CD for audio applications or a conventional DVD for video applications.

[**0027**] The video subsystem **218** and the audio subsystem **220** contain a variety of circuits known to those skilled in the art for interfacing audio and video data with the processing circuit **203** through the system bridge **210** and host bridge **208** such that proper video and audio output can be played on a video output device **232** and audio output device **234** respectively. The video output device **232** may be a CRT, LCD matrix display or the like, while the audio output device **234** may be speakers, headphones, and the like.

[**0028**] An audio input device, e.g., a microphone, may be utilized to input audio data to the audio subsystem **220**. The audio and video data to be displayed on the output devices **232**, **234** may be obtained from a number of sources including system memory **206**, CDs, DVDs, through electronic networking connections from other electronic storage sources, or from the audio input device.

[**0029**] The PC **200** receives power from a power source (not illustrated). For a desktop computer, the power source is typically conventional 120-volt AC power, which is converted to DC power by appropriate AC/DC converters. For a laptop, the power source may be a variety of standalone power sources such as a battery, solar cell, or the like. Batteries may include rechargeable batteries such as lithium, nickel-cadmium, or nickel-metal hydride.

[**0030**] Turning to **FIG. 3, a** block diagram of one exemplary embodiment for integrating an IC **302** consistent with the invention with various PC components of a PC to provide PDA functionality to the PC is illustrated. In general, the IC **302** may be configured to receive input instructions from the function keys **306**, to drive a small LCD module **314**, and to control the audio interface **312** between the system bridge and the audio subsystem **320** to generate sound effects. The function keys may be the PDA buttons **106**, **108**, **110**, **112** as earlier detailed enabling a user to bring up different PDA applications or screens when the PC is in operating in PDA mode.

[**0031**] As different function keys **306** are activated, an LCD controller interface of the IC send instructions or commands to the small LCD module **308** for different visual effects such as blinking and scrolling to meet different PDA application requirements. Since the LCD module **314** has a surface area that is less than the surface area of the normal size display screen **118**, it permits power savings compared to its larger display counterpart **114** typically used in PC operating mode. In addition, further power savings may be realized by having the IC **302** store information in its internal memory, and shutting down the rest of the PC system utilizing the control logic interface **310**. Again, the small LCD module **314** may not be required if the larger display screen **118** as illustrated in **FIG. 1** is used to display characters and graphics for different PDA applications.

[**0032**] Turning to **FIG. 4**, one exemplary embodiment of an IC **402** consistent with the invention is illustrated. Those skilled in the art will recognize that there are many other embodiments that may also be implemented in an IC **402** consistent with the invention. The IC **402** may include an embedded processor **404** that functions as the central processing unit for the IC **402**. The processor **404** executes commands in the non-volatile memory **412** and controls other internal IC components to perform necessary functions. The non-volatile memory **412** can be EEPROM, Flash Memory, or any type of solid-state memory. Such memory **412** stores programs for the embedded processor **404**. The memory **412** content can be changed or re-loaded by the PC system through the system bus interface **420**.

[**0033**] Random Access Memory (RAM) **414**, e.g., Static RAM (SRAM), may be used to store temporary data or information for the embedded processor **404**. A debugging and programming interface **418** may be used by the PC system to control the IC **402** to perform debugging operations or to load new programs in the non-volatile memory **412**. Security logic may also be required to prevent any unwelcome attempts to control the IC **402**.

[**0034**] An analog to digital converter (ADC) **406** may be used to accept an analog function key input. Such an analog key input may be generated by any variety of analog input devices such as mechanical slide or dial buttons. For example, the PDA buttons **106**, **108**, **110**, **112** may be such buttons. The ADC **406** converts the analog signal to a digital signal and provides the digital signal to the digital function key interface **416**, which performs function key decoding.

[**0035**] The digital inputs to the digital function key interface **416** may be originated from the digital function keys or from the ADC **406**. The keys may be decoded and sent to the embedded processor **404**. If the ADC **406** is utilized, the digital function key interface **416** can be used to generate the key output to the system digital function keys. The keys can be sent to the keyboard controller in the system and generate the scan code for the OS under PC mode.

[**0036**] The LCD controller interface **424** may be used to send video data to the LCD controller on the small LCD module. A generic serial interface may be provided so that the LCD Controller Interface **424** can support different LCD controller vendors. The audio interface **426** may be used to generate the appropriate handshakes between the IC **402** and the audio subsystem during PDA mode. In the PDA mode, the host audio interface signals will be blocked. However, in PC mode, the system host audio interface controls will be directly passed to the audio subsystem **426**.

[**0037**] Turning to **FIG. 5**, in conjunction with **FIGS. 3 and 4**, an exemplary sequence **500** for the power up of the mini-OS and initiation of PDA functions is illustrated. As illustrated at step **502**, the sequence **500** begins when the system is turned on. In step **504**, a determination is made whether the PDA operating mode is desired or not. This determination may be made in a number of ways by providing an input mode signal to the PC indicative of the desired operation mode. In one way, the PC may be equipped a PC power on button **102** and a PDA power on button **104** as illustrated in **FIG. 1** so that if a user activates the PDA button, it is determined that the PDA mode is desired. Alternatively, if a user activates the PC power up button **102**, it is determined that PC mode is desired and the system boots to normal PC operation mode at step **506**. Another way of determining whether PDA mode is desired is by automatically booting up the PC in PDA mode if an external digital device, e.g., a digital camera or camcorder is coupled to the PC for downloading of data. Yet another way