The Diagram set at the end of this specification shows the data circulation among the main modules of the Mouse.

After the USB cable connection at the microcomputer, the Microcontroller loads the firmware of the LaserStream Sensor in order to work with a resolution of 800/1600 DPI and reads its working status to assure that the whole programming was correctly recognized.

The ADNS-7050 is based on **LaserStream™** Technology. It contains an Image Acquisition System (IAS), a Digital Signal Processor (DSP), and a four wire serial port. The recommended Serial Port Clock Frequency is 1 MHz. The IAS acquires microscopic surface images via the lens and illumination system. These images are processed by the DSP to determine the direction and distance of motion. The DSP calculates the Δx and Δy relative displacement values which are then communicated to an external microcontroller HT82M99E.It reads the Δx and Δy information from the sensor serial port and then translates the data into USB and into the PC.

The ADNS-7050 and the associated components are intended to comply with Class 1 Eye Safety Requirements of IEC 60825-1. In order to stay below the Class 1 power requirements, we program registers through measure devices to achieve an output power as close to 506uW as possible without exceeding it.

The HT82M99E works with a 6 MHz clock. The HT82M99E converts the information of received position from the sensor and go over to the Microcomputer (obeying the protocol established). It also supervises the activation of the right, left, central and DPI button of the mouse, showing its activation/deactivation to the Microcomputer.

The scroll buttons are monitored by the Microcontroller; if the user simply press one of the scroll buttons, the Microcontroller send to the Microcomputer (through the HT82M99E) an order to scroll the screen with the configuration of the panel control. So do other buttons.