Original keyboard connector: DIN-5
The PS/2 Mini-DIN 6 Connector

The PS/2 Keyboard and Mouse Interface – p. 4/16
Synchronous Serial Interface

Like RS-232, but with a clock. Odd parity, one start, one stop. Keyboard-to-host shown: keyboard initiates everything.
Codes (Keyboard to Host)

- **00/FF**: Error or buffer overflow
- **F0**: Key-up
- **FA**: Acknowledge
- **EE**: Echo response
- **FE**: Resend
- **E0**: Extended code coming
Host brings Clock low, then Data low to indicate transfer to keyboard, then releases Clock (rises).

Keyboard starts generating clock signals. Host supplies serial data, changing after each falling edge. After stop bit, host releases Data. Keyboard pulls Data low for one more clock signal to indicate it received the byte.
Commands (Host to Keyboard)

ED  LED control

Caps lock  Num lock  Scroll lock

EE  Echo
Keyboard will respond with EE

F0  Set scan code set
Keyboard will respond with FA and wait for another byte 01–03. 00 leaves scan code unchanged.

F3  Set key repeat rate
Keyboard responds with FA and waits for second byte, indicating repeat rate.
F4 Enable keyboard
   Responds with FA, clears buffer, enables scanning.

F5 Disable keyboard
   Responds with FA, disables keyboard.

FE Resend
   Retransmit the last byte.

FF Reset Keyboard
Three bytes sent every time mouse moves or button clicked:

<table>
<thead>
<tr>
<th>MSB</th>
<th>LSB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>X</td>
</tr>
<tr>
<td>Overflow</td>
<td>Sign</td>
</tr>
<tr>
<td>1</td>
<td>Middle</td>
</tr>
<tr>
<td></td>
<td>Right</td>
</tr>
<tr>
<td></td>
<td>Left</td>
</tr>
<tr>
<td>X movement</td>
<td></td>
</tr>
<tr>
<td>Y movement</td>
<td></td>
</tr>
</tbody>
</table>

Movement values are since last transmission: 9-bit two’s-complement (signed) numbers.

Many more variants, modes, and other junk.