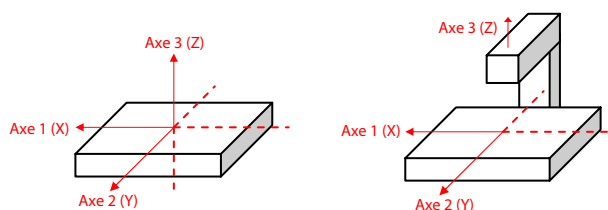


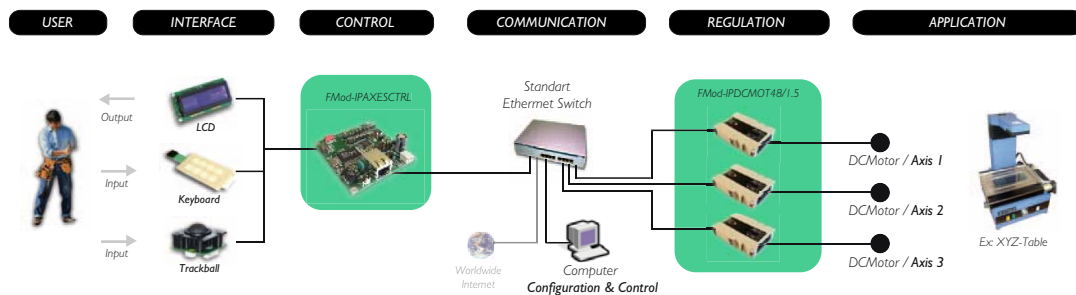
Control a motorized XYZ table with the FMod-IPAXESCTRL

Electrically motorized tables are used in different industrial fields, from watch manufacturers to laboratory microscopes, passing by quality control departments. For those that use DC Motors (brushed) and need a simple way to have a flexible and cost effective solution, this document presents how it is possible to control a motorized table with the FiveCo Ethernet products (1 axes control board and 3 motor control boards).

In the market, there are 2 kinds of XYZ table, in which each axis is driven by a motor, here you can find a simple drawing showing these two types:

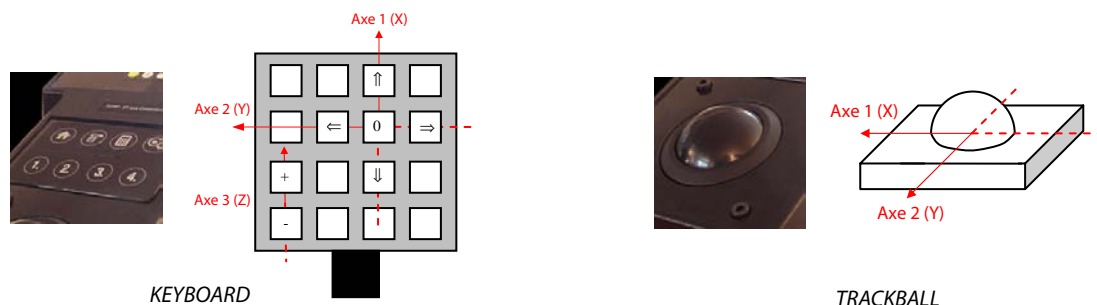


In this case, the 4 boards are connected as follow (proposition to control 3 axes):



The axes control board (FMod-IPAXESCTRL) can manage a keyboard, a trackball and a LCD display. The PC is only used in the initial configuration step, especially to set the regulation parameters. Afterwards, the user can manage the axes in two ways: using the keyboard and/or the trackball. The system allows a very accurate position control by using different zoom-factors, achieving micrometric precision positioning defined also by the mechanical specification of the table, the motor encoder, and the rate of the motor gear-reducer.

The trackball can be used to control the X and Y axes. Every movement of the ball is directly interpreted by the FMod-IPAXESCTRL card, then sent to the motor control cards (FMod-IPDCMOT48/1.5, one for each axis) and immediately repeated by the motors moving the table. The third axis (N°3 - Z) is driven by the keyboard buttons(+/-).



Keyboard and Trackball that can be connected to the IPAXESCTRL card to control the table's movements.