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Multi-axis vs multiple axis

Sometimes the terminology can be a bit confusing. In some applications there are multiple points of motion control, I/O, pumps, and other devises. These points of control are often independent from each other and controlled in independent ways. Other times some points of control are dependent on other actions, such as a vertical motion (Z) is dependent on horizontal axes (X & Y) getting to the destination before Z can move up/down. And then the pump and/or valve is dependent on all three axes getting to their destination before dispensing material.

The use of independent control for each of these points can result in a jerky movement, long pauses between steps and sometimes disjointed behaviour. An example: the X-axis is put into motion, then the Y-axis, then the system program needs to monitor when both are at their location before sending the Z-axis in motion, and so on. The system program can get cumbersome and slow due to the independent interaction of each of the points of control. With a multi-axis motion controller, the axes can be commanded to move to their destination together and the controller creates a fluid motion without the need for monitoring. The motion controller can tie-in I/O for valves, pumps, sensors, etc. and control the complete system while providing feedback to the host computer as needed. This creates a very fluid system operation, and the system program can monitor these actions without continuous poling for status.

OMS Motion's multi-axis controllers can control up to 10-axes of motion, fully synchronous and coordinated while incorporating I/O to control a complete system. The axes can be split into groups of coordinated motion, or some coordinated and some independent, or all independent. OMS controls are very flexible and capable and will elevate your overall system performance. Visit www.OMSmotion.com for more about our products.

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