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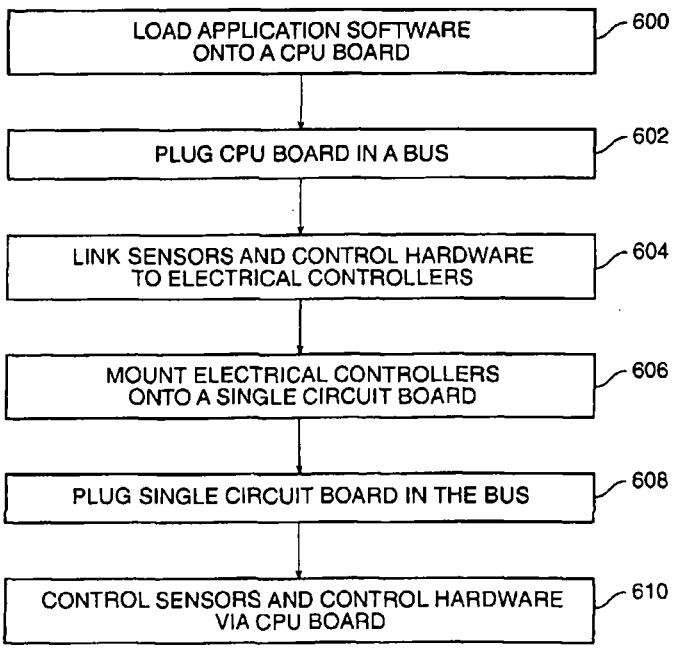
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(54) Title: INTEGRATED ELECTRONIC HARDWARE FOR WAFER PROCESSING CONTROL AND DIAGNOSTIC



(57) Abstract: A central controller for use in a semiconductor manufacturing equipment integrates a plurality of controllers with an open architecture allowing real-time communication between the various control loops. The central controller includes at least one central processing unit (cpu) executing high level input output (i/o) and control algorithms and at least one integrated i/o controller providing integrated interface to sensors and control hardware. The integrated i/o controller performs basic i/o and low level control functions and communicates with the CPU through a bus to perform or enable controls of various subsystems of the semiconductor manufacturing equipment. A method for controlling a plurality of sensors and a plurality of control hardware for use in a semiconductor manufacturing equipment loads an application software onto a cpu board that is plugged in a bus. Sensors and control hardware are linked to electrical controllers that are mounted onto a single circuit board which occupies an address block in a memory space of the bus. The single circuit board is then plugged in the bus and the sensors and control hardware are controlled via the application software.

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