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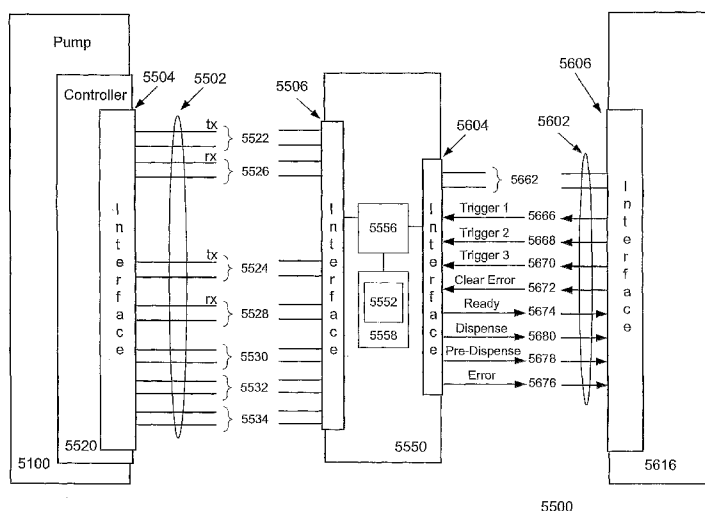
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(54) **Title:** I/O SYSTEMS, METHODS AND DEVICES FOR INTERFACING A PUMP CONTROLLER



(57) **Abstract:** Embodiments of the present invention provide I/O systems, methods, and devices for interfacing pump controller(s) with control device(s) which may have different interfaces and/or signaling formats. In one embodiment, an I/O interface module comprises a processor, a memory, and at least two data communications interfaces for communicating with a pumping controller and a control device. The I/O interface module can receive discrete signals from the control device, interpret them accordingly and send the packets to the pump controller. The pump controller reads the packets and takes appropriate actions at the pump. The I/O interface module can interpret packets of data received from the pump controller and assert corresponding discrete signals to the control device. The I/O interface module is customizable and allows a variety of interfaces and control schemes to be implemented with a particular multiple stage pump without changing the hardware of the pump.