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SERIAL PORT FOR A HOST ADAPTER INTEGRATED CIRCUIT USING A SINGLE TERMINAL

ABSTRACT

A host adapter integrated circuit that contains data transfer modules has a serial port that uses a single serial port pin to communicate with a slave serial port input-output integrated circuit that interfaces to various resources that are included in a support circuit. The serial port forms a packet from each byte of information to be transferred from a module to the slave device by adding a start bit before the byte, followed by a parity bit at the end of the byte and followed by a stop bit. After transmitting the packet, the serial port waits for an acknowledge packet from the slave serial port input-output integrated circuit, for example for two clock cycles after transmission of the packet. For synchronous operation, a common oscillator drives the clock signal on the slave serial port input-output integrated circuit and host adapter integrated circuit. The serial port pin in the host adapter integrated circuit is connected to a shifter circuit in the serial port that serially clocks data from the serial port pin and passes the data parallelly to a bus in the host adapter integrated circuit and vice versa.

Figure 3

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