

An Effective Asynchronous Serial Communication Method
for Embedded Microcontrollers

Abstract

A method of realising asynchronous serial communication for embedded microcontrollers (50) which allows cost effective communication between data terminal equipment (20) and embedded microcontrollers, as the use of UART or built-in serial communication port are eliminated. This method also reduces the connection pins used.

This invention comprises an infrared remote control receiver (10), a data terminal equipment (20), a transceiver, a signal multiplexer (40) and an embedded microcontroller. The infrared remote control receiver sends demodulated infrared signals to one input port of the signal multiplexer, while the data terminal equipment sends formatted data to the other, via a serial communication channel and the transceiver. The multiplexer channels only one of the input data to the embedded microcontroller depending on the state of the strobe signal (53). The port of the embedded microcontroller that receives data from the multiplexer serves as both hardware interrupt port and data input port.

Figure 1

