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UART or USART

Universal **A**synchronous **R**eceiver / **T**ransmitter

Universal **A**synchronous / **S**ynchronous **R**eceiver / **T**ransmitter

A UART is a logic IC that typically converts parallel data to an asynchronous (async) serial stream or its reverse. Some UARTs also incorporate data buffers, serial clock circuits and control line logic/signals. The most common type of UARTs people are familiar with have been used in personal computers as asynchronous serial ports for MODEMs, printers and terminals. In addition to the UART, there is a similar IC called a USART. This IC also includes additional circuitry to support synchronous (sync) serial communications.

The terms async and sync serial differ in the way they are transmitted. Sync serial has the transmitter and receiver clocked at exactly the same rate so it is clear where every bit of data is located in the serial stream. Async serial differs in that the transmitter and receiver only need to be close in clock speed and the receiver samples the incoming data stream to determine where the start of the serial data occurs and where the data bits are.

Unregulated power supply

A Power Supply Unit (PSU) in which there is no controlled stabilisation of the voltage output applied electronically. The voltage supplied by a loaded PSU is therefore lower than one which has no load connected due to the increase in output current having a variety of effects, principally through impedance or resistance in the PSU components.

USB

The shorthand term used to denote a standard Universal Serial Bus developed to allow the interconnection of many peripheral devices such as mice, keyboards, joysticks, scanners etc., to a computer such as IBM compatible and Apple PCs. Developed by collaboration amongst leading companies in the computer and electronics industry, the specifications are standardized by the USB Implementers Forum (USB-IF). Most USB interfaces today are USB type 1, 2 or 3. Higher values are faster. USB 3 has recently become more readily available and offers speeds up to 5Gbps.

USB interface include at least two data lines and two power lines. This allows not only data transfer but a power connection for a device plugged into the USB port.
http://www.usb.org

USI

The Universal Serial Interface is a multi purpose hardware resource which provide the basic hardware for various serial communications and is faster and more reliable than implementing it in software.. A little more information of it's use in MERG is at: Arduino Use of SPI and USI