

USB3 FPGA Host Communication

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USB 3.0 is the third major version of the Universal Serial Bus standard for interfacing computers and electronic devices. Among other improvements, USB 3.0 adds the new transfer rate referred to as SuperSpeed USB that can transfer data at up to 5 Gbit/s, which is about 10 times faster than the USB 2.0 standard.

The USB type C is reversible and can be plugged in either way – upside or downside. ... A USB type C port may support USB 3.1, 3.0 or even USB 2.0. USB 3.1 Gen1 is just a fancy name for USB 3.0, which provides speed up to 5Gbps while USB 3.1 Gen 2 is another name for USB 3.1 which provides a speed of 10Gbps.

USB 2.0 has 4 connector wires while USB 3.0 has a total of 9 connector wires. USB 2.0 offers a transfer rate of 480 Mbps and USB 3.0 offers speed up to 5 Gbit/s, which is 10 times faster. USB 2.0 devices are generally less expensive than USB 3.0 devices.

USB 2.0 ports are handy for keyboards, mouse controllers, and other non-drive uses. Because these devices do not need the speedy throughput, a keyboard or mouse connected to a USB 3.0 port would be a waste of the resource.

ABOUT THE AUTHOR

Suchitav Khadanga (Bangalore, India) is an electronics design engineer having more than 20 years of solid experience in wireless and semiconductor products. Throughout his professional career, he has designed and managed designs from concept to mass production on wireless and broadband RFICs and wireless consumer products, successfully worldwide in million units. He graduated with first class distinction from BU, India, where he studied microelectronics, analog and digital electronics, electromagnetic theory and microwave. After completing research on microelectronics and microwave in CEERI (Central Electronics engineering research institute), Pilani, India he is working in analog and wireless development companies since 1997. In his role he had worked in international locations with companies Intel, NXP, WIPRO. He had successfully completed projects in wireless communication, cellular communication, UWB, WLAN. His main area of work is analog and wireless communication, RFIC, high speed analog, CMOS process. He is now in RFIC technologies, Bangalore, India and working on design, development of next generation wireless products.

HE HAVE GOOD EXPERIENCE IN COMPLETE RF ASIC : ASIC TESTING- ASSEMBLY- BOND PAD- ESD PROTECTION- FULL CHIP LAYOUT- CIRCUIT DESIGN- EDA TOOLS .

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