

USB3 FPGA Host Communication

SUCHITAV KHADANGA

ANALOG RF IC CONSULTANT

Bangalore, India-560042

Email:



USB3 FPGA Host Communication

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 .

[31]Akbarzhon Madaminov, “Recommendation Systems”, Engpaper Journal

[32]Aathi oli.S , “REVIEW PAPER ON PHISHING ATTACKS”, Engpaper Journal

[33]Rania Fernando, “IoT based – Street Light Controlling System”, Engpaper Journal

[34]K. SAI BHARGAV, V. RAJENDRA, “Study on Data Structures for Machine Learning”, Engpaper Journal

[35]Brunndha P, Guruprasad K N, Amith V Hiremath,Sirisha R, Chandrakanth G Pujari , “Face Detection Based Smart Attendance System Using Haar Cascade Algorithm”, Engpaper Journal

[36]Afsana Nadaf , “RFID BASED LIBRARY MANAGEMENT SYSTEM”, Engpaper Journal

[37]Mr. Vedant Thube, Neha Thakur, Mr. Siddhesh Balsaraf,Ms. Priyanka Hanchate, Dr. S. D. Sawarkar , “Accident Prevention using Eye Drowsiness & Yawning Detection”, Engpaper Journal

[38]Abhishek A Hishobkar, Rutuja Gaonkar, Jagdish Chintamani , “DIGITAL DIARY”, Engpaper Journal

[39]Pooman Suryavanshi, Aryan Ghadge, Manali Kharat , “TAXI SERVICE for VISUALLY IMPAIRED”, Engpaper Journal

[40]Mr. Pankaj yadav, Shila Jawale, Mr. Ashutosh Mahadik, Ms. Neha Nivalkar, Dr. S. D. Sawarkar , “NEWS ARTICLES CLASSIFICATION”, Engpaper Journal

[41]Rahul Chavan, Manvee Bhoir, Gaurav Sapkale, Anita Mhatre, “Smart Tourist Guide System”, Engpaper Journal

[42]Rutik Desai, Akash Jadhav,Suraj Sawant ,Neha Thakur , “Accident Detection Using ML and AI Techniques”, Engpaper Journal

[43]Anagha Vishe,Akash Shirsath, Sayali Gujar, Neha Thakur , “Student Attendance System using Face Recognition”, Engpaper Journal

- [44]Ms.Sayali Patekar, Shila jawale, Ms.Pranali Kurhade, Mr.Shubham Khamkar , “Smart Classroom Application”, Engpaper Journal
- [45]DOSHI SAKSHI, DEVYANI CHAUDHARI, POOJA GAIKWAD, RUTUJA CHABUKSWAR,MRS. SUJATA KOLHE, “TOURISM SIMPLIFIED THROUGH VOICE”, Engpaper Journal
- [46]Afreen Fathima,Samreen Jameel, Pathan Ahmed khan , “ACCIDENT DETECTION AND ALERTING SYSTEM”, Engpaper Journal
- [47]Suman Zareen, Tuba Masood, Pathan Ahmed khan, “E-Commerce Web Application with Augmented Reality”, Engpaper Journal
- [48]Lok Shan CHAN, “Selection of Waterfall and Agile Methodologies in Software Testing”, Engpaper Journal
- [49]Barve Rutu, “CLOUD COMPUTING SYSTEM FOR GAMING”, Engpaper Journal
- [50]Harshvardhan Singh, “Machine Learning: Fake News Blocking”, Engpaper Journal
- [51]M.Al Batahari, “SERVERS ROOM MONITORING SYSTEM USING IOT”, Engpaper Journal
- [52]AYUSHI ANKITA RAKSHIT, “VIRTUAL MASTER USING PYTHON”, Engpaper Journal
- [53]Baldeep Kaur, “REAL TIME SLEEP DROWSINESS DETECTION USING FACE RECOGNITION”, Engpaper Journal
- [54]Suchitav Khadanga, “Two Stage CMOS Operational Amplifier From Specification to Design”, Engpaper Journal
- [55]nidhi sharma, “Introduction to Remote Sensing”, Engpaper Journal
- [56]Rohith N Reddy, “COVID-19 Detection using SVM Classifier”, Engpaper Journal
- [57]Swapnil Kole, “COVID-19 Database on Consortium Blockchain”, Engpaper Journal
- [58]TejalLengare, PallaviSonawane, PrachiGunjal, ShubhamDhire, Prof.Shaikh.J.N , “Accident Detection & Avoidance System in Vehicles”, Engpaper Journal
- [59]Abhishek Pawshekar, Deepti More, Akash Khade, Pratiksha Wagh, Ganesh Ubale, “Augmented Reality: to converting and placing object into 3D model”, Engpaper Journal
- [61]Prof.Ubale.G.S, Pranjal Adhav,Pooja Gaikwad, Sushama Nadavade ,Pooja Kale , “Iot based Bridge Monitoring System”, Engpaper Journal
- [62]Divya Deewan, Priyanka Maheshwari, Sanjay Jain, “A REVIEW OF BATTERY-SUPERCAPACITOR HYBRID ENERGY STORAGE SYSTEM SCHEMES FOR POWER SYSTEM APPLICATION”, Engpaper Journal
- [63]Prof.Ansari.M.B, Pranjal Adhav,Pooja Gaikwad,Sushama Nadavade,Pooja Kale, “Survey on MyHelper IOT based Bridge Monitoring System”, Engpaper Journal
- [64]Shreyas.S.J, Saddam hussain, Chaithra E, “COMPARATIVE STUDY ON SEISMIC RESPONSE OF MASONRY INFILLED RC FRAME BUILDINGS AND MIVAN BUILDINGS WITH DIFFERENT PERCENTAGE OF WALL OPENINGS”, Engpaper Journal
- [65]Yusuf Ali Hassan, “Somali Power-Grid Significant Challenges”, Engpaper Journal
- [66]Ahmed N. Elhefnawy, “Refractive IR Objective Optical Design Operating in LWIR band For Military Observation Applications”, Engpaper Journal
- [67]S MANJULA, D SELVATHI and SUCHITAV KHADANGA, “Design of low-power CMOS transceiver front end for 2.4-GHz WPAN applications”, Engpaper Journal
- [68]Suchitav Khadanga, “Fabrication of MEMS Pressure Sensor on thin film membrane”, Engpaper Journal

[69]Suchitav Khadanga and Dr. K.R.Suresh Nair, “An Introduction to Bluetooth”, Engpaper Journal

[70]Suchitav Khadanga and S. Ahmad, “DESIGN AND FABRICATION OF LOW COST MICROWAVE OSCILLATOR”, Engpaper Journal

[71]Ameen Ahmed, Noushad S, Suchitav Khadanga, K.R.Suresh Nair, P.K.Radhakrishnan, “DEVELOPMENT OF LOW PHASE NOISE SMALL FOOT PRINT SURFACE MOUNT VOLTAGE CONTROLLED OSCILLATOR”, Engpaper Journal

[72]Suchitav Khadanga , “Synchronous programmable divider design for PLL Using 0.18 um cmos technology”, Engpaper Journal

[73]Kavya.G.R, Shivaraju.G.D, Dr. T V Mallesh, S R Ramesh, “PROGRESSIVE COLLAPSE RESISTANCE OF FLAT SLAB BUILDING”, Engpaper Journal



[https://www.engpaper .com](https://www.engpaper.com)