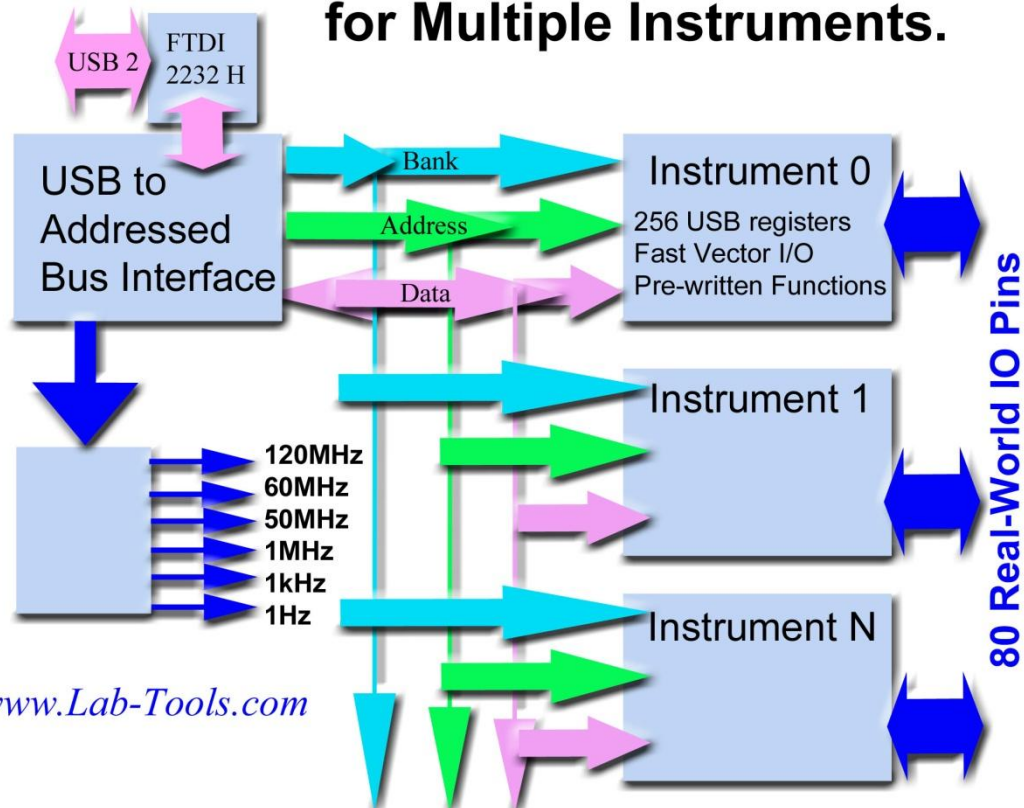




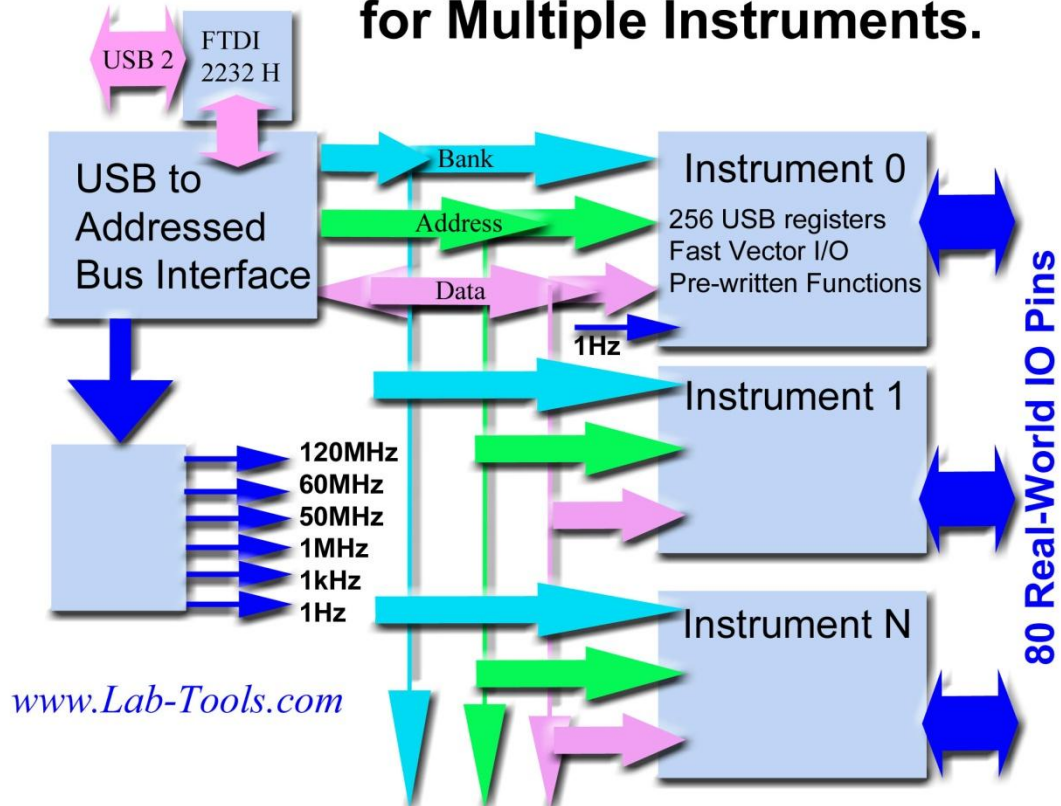
***Implementing a USB2 interfaced
FPGA based instrument.***

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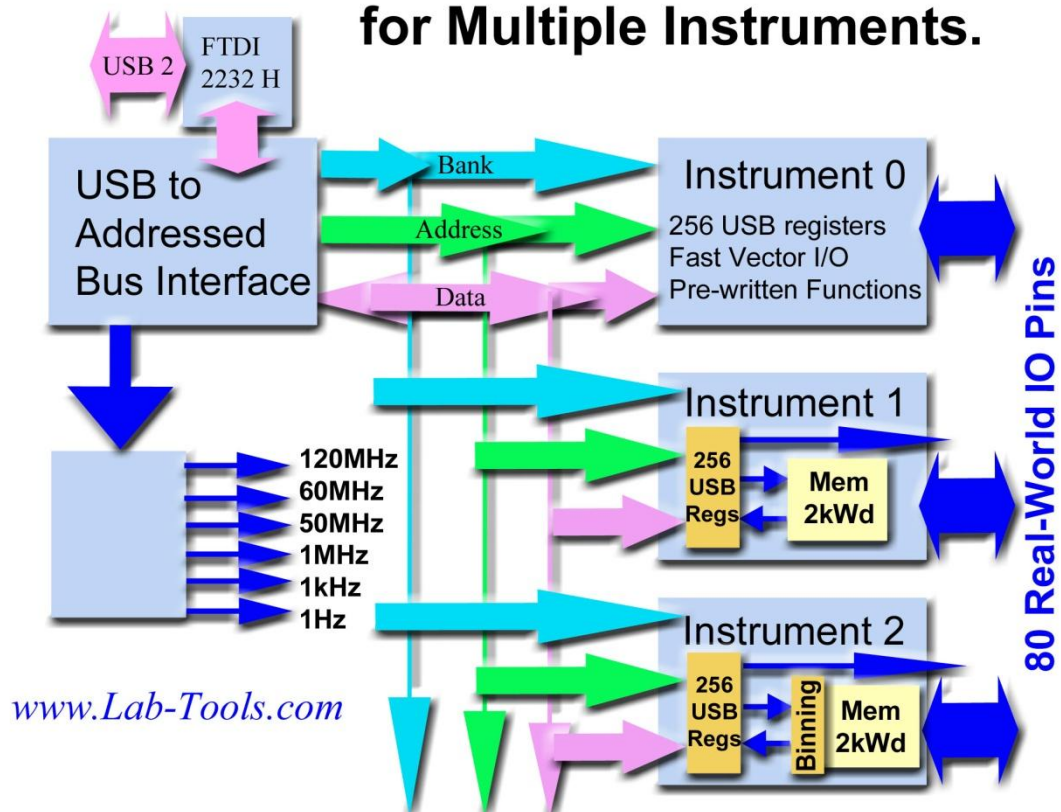
Modular Firmware Skeleton for Multiple Instruments.



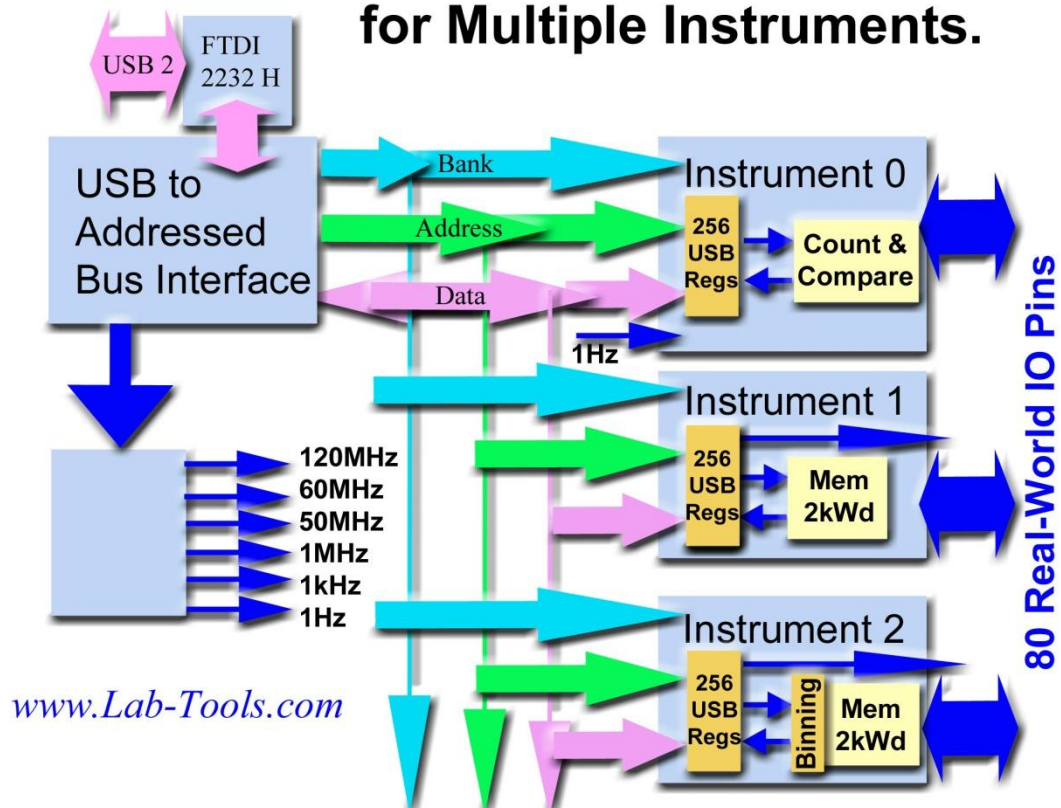
Modular Firmware Skeleton for Multiple Instruments.



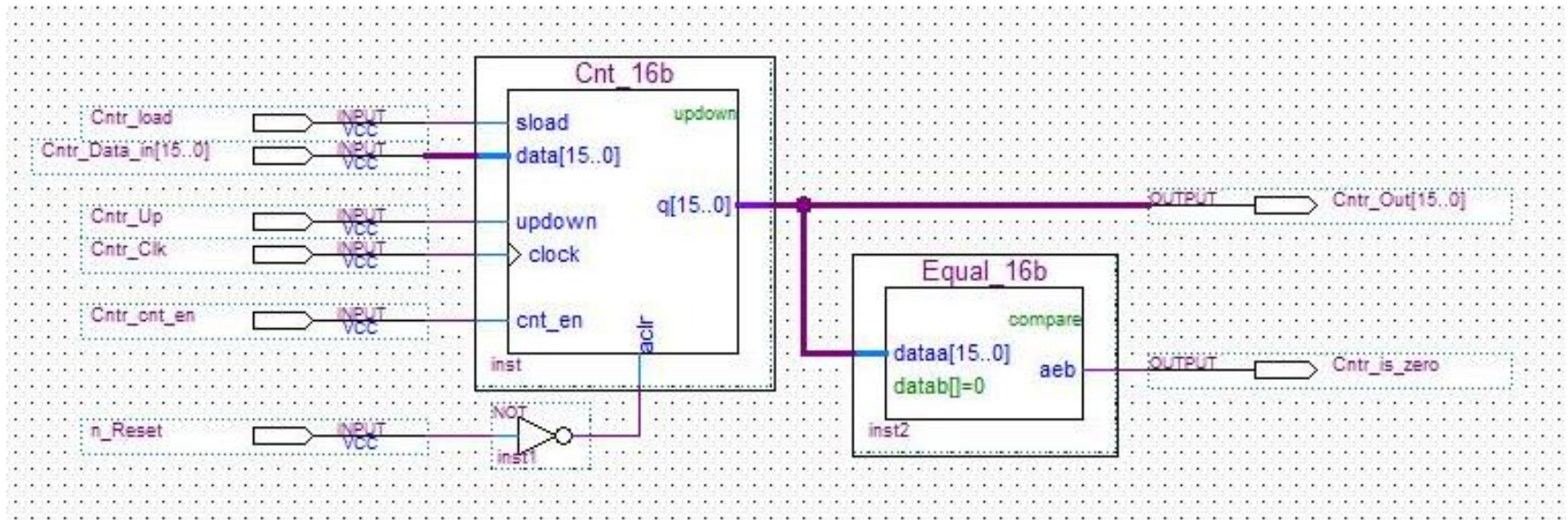
Modular Firmware Skeleton for Multiple Instruments.



Modular Firmware Skeleton for Multiple Instruments.

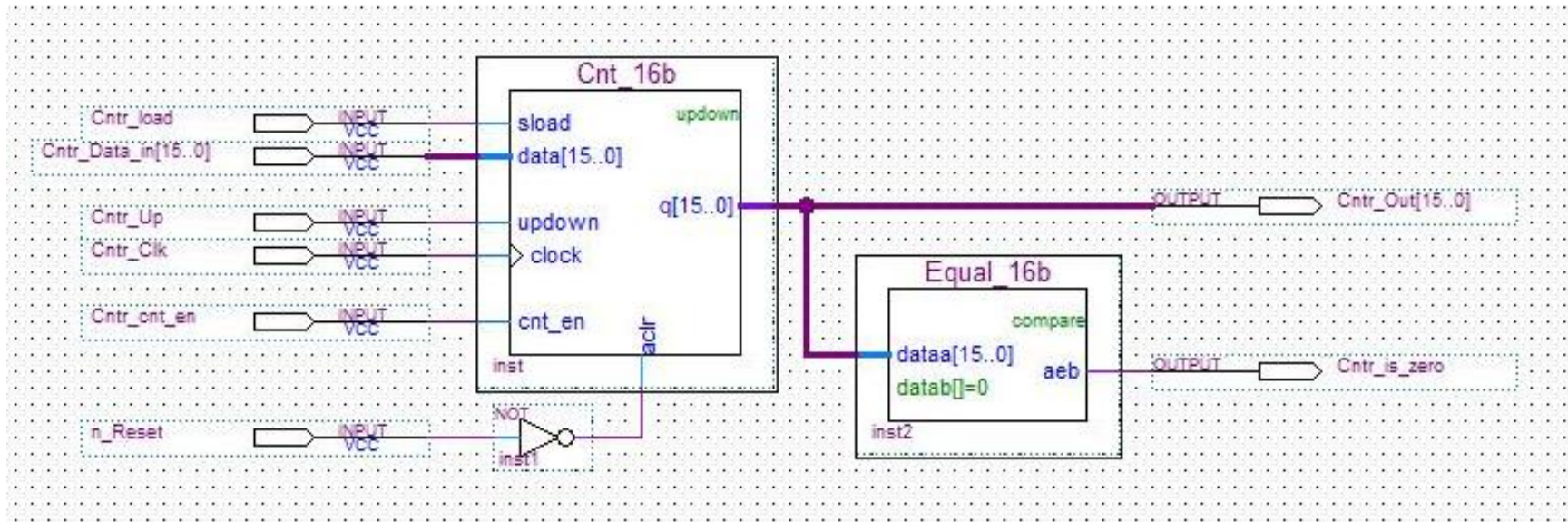


16 Bit Counter with “Equal to 0” Comparator



16 Bit Counter with “Equal to 0” Comparator

How do we interface this over the USB to a PC ?



Bank 0 Instrument - USB Interface :<=> 16 bit Counter & Comparator

5 x USB Byte-wide Registers

Address

08

Cntr_Data_in_L_REG

09

Cntr_Data_in_U_REG

Data

10

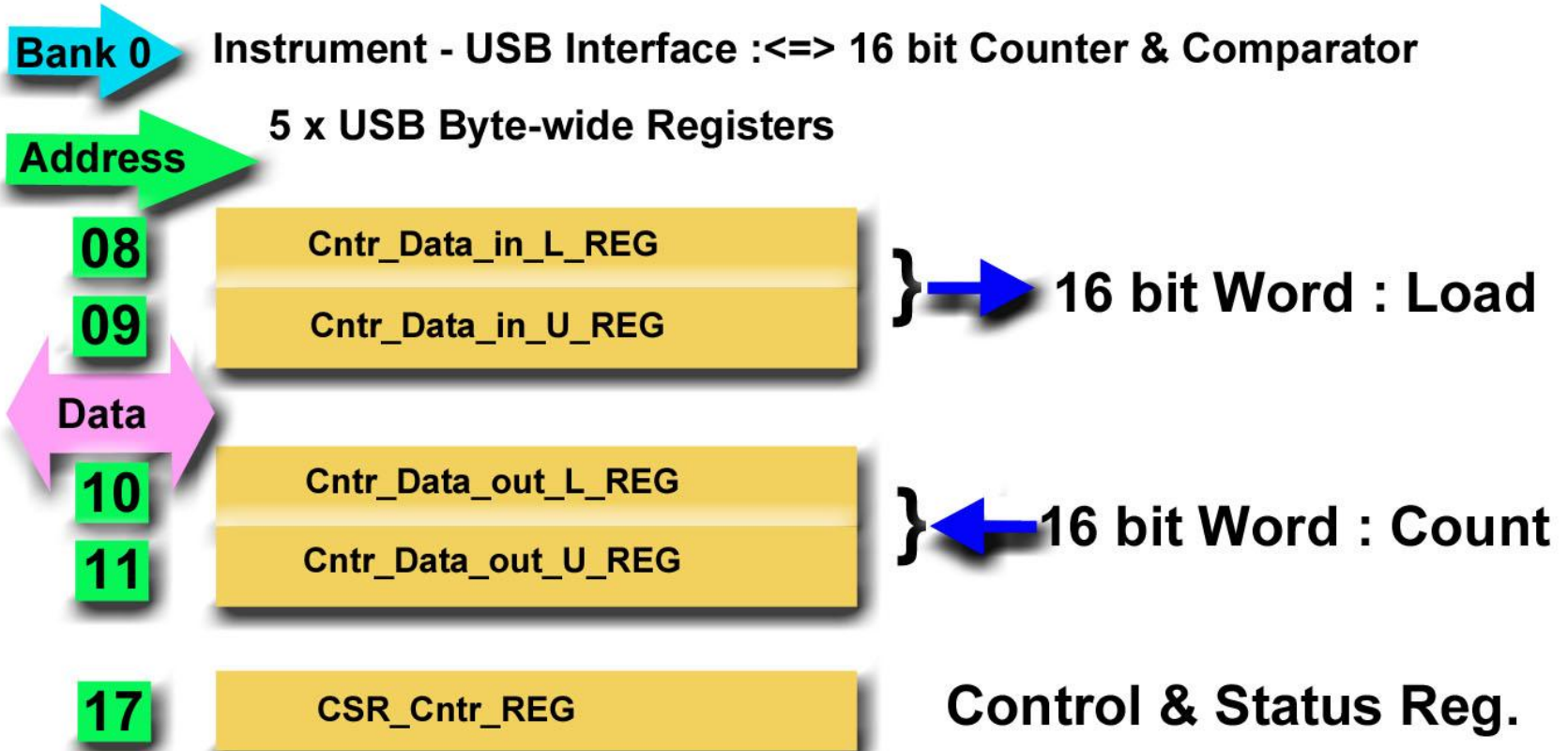
Cntr_Data_out_L_REG

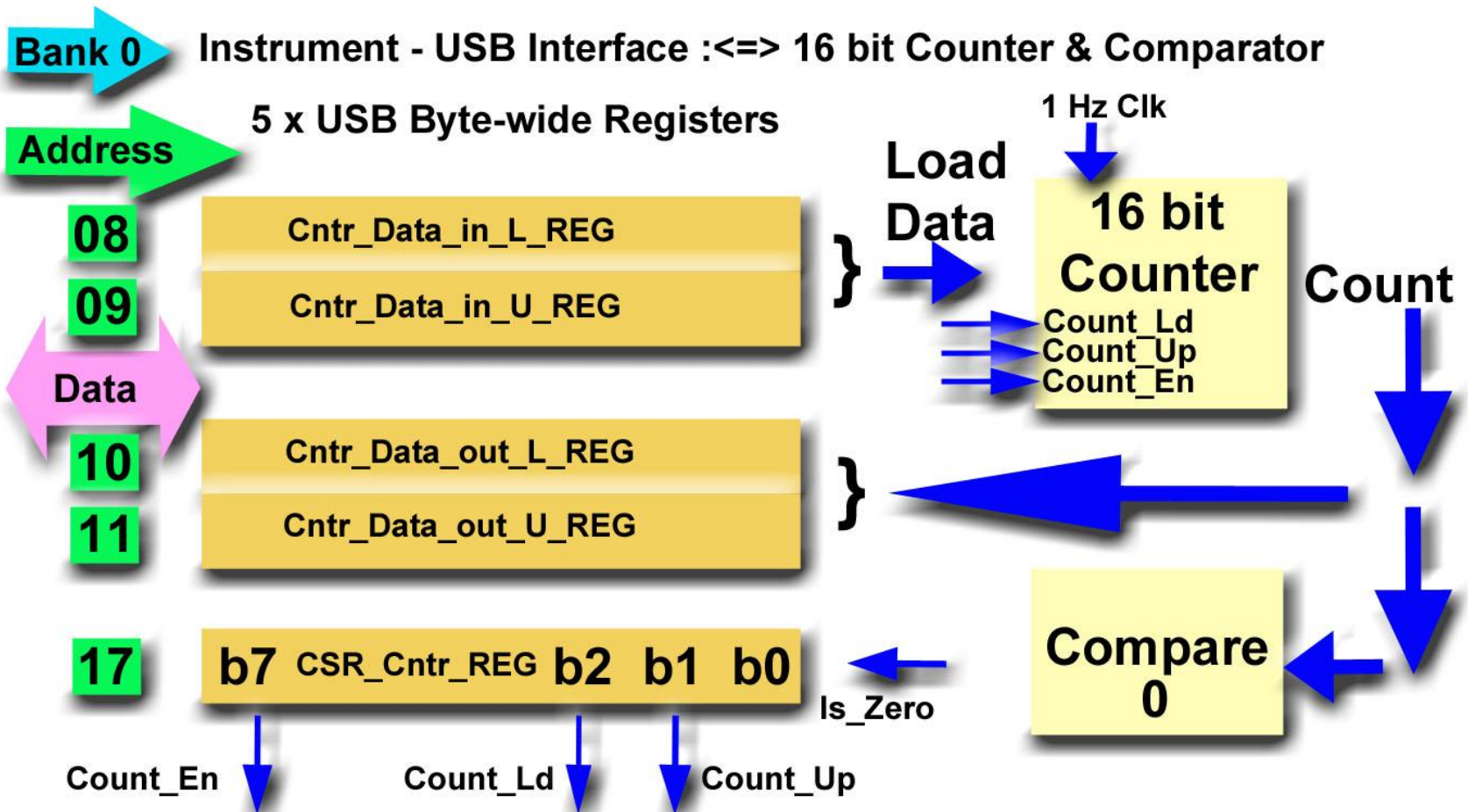
11

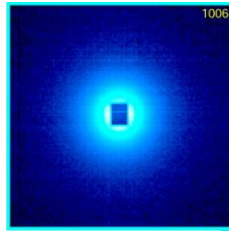
Cntr_Data_out_U_REG

17

CSR_Cntr_REG







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<http://www.lab-tools.com>



Fig. 1 – The Morph-IC-II



Morphic II FPFA modules – available from:

Future Technology Devices International Ltd. www.ftdichip.com/

Lab-Tools FPGA based Instrumentation Modules – available from:

Lab-Tools Ltd.

www.Lab-Tools.com/