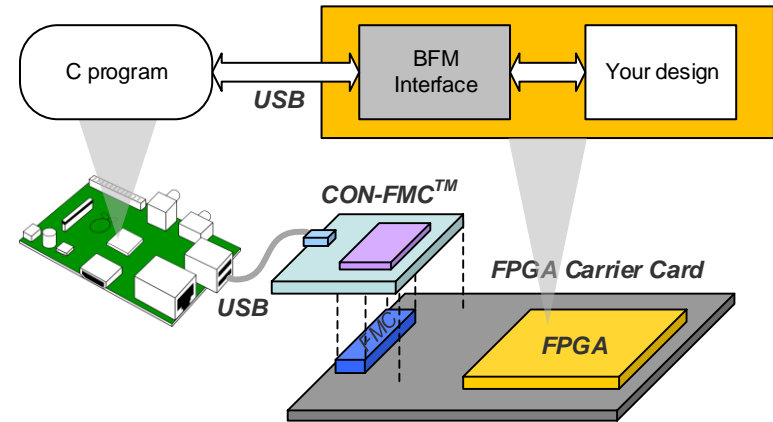
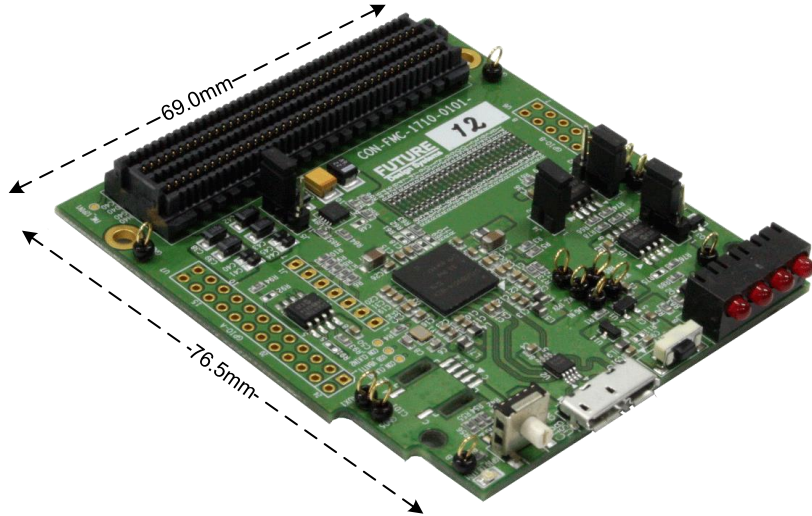


Talking to FPGA through USB

Connecting Linux/Windows/Android to the FPGA through USB



CON-FMC™

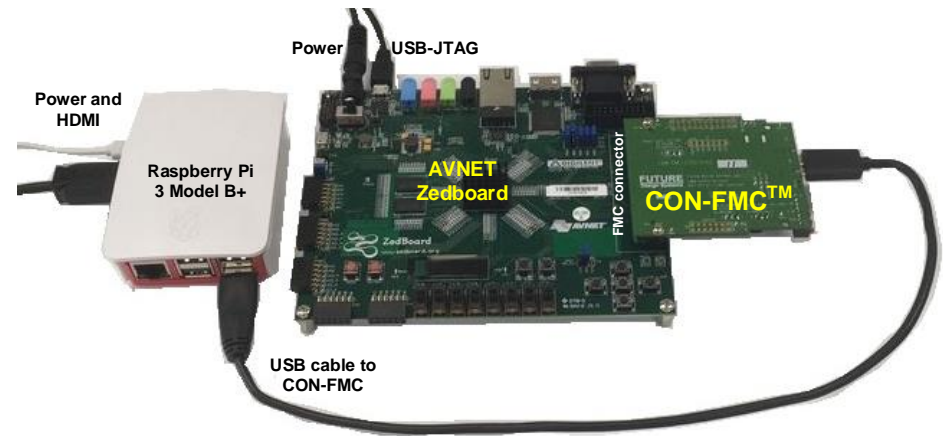
- USB 3.0/2.0
- FMC VITA 57.1 compliant including LPC, HPC, and HPC+
- Linux, Windows, Android
- Raspberry Pi, Odroid, Samsung ARTIK, and so on
- 10~250MByte/sec bandwidth depending on the host system

http://www.future-ds.com/en/products.html#CON_FMC

CON-FMC™ C API

User-Level program without device driver installation.

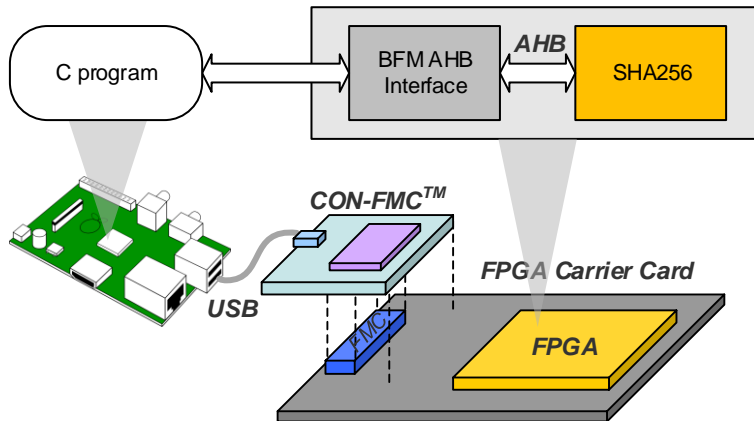
```
void BfmRead (unsigned int addr, unsigned int *data,  
             unsigned int size, unsigned int length);  
void BfmWrite(unsigned int addr, unsigned int *data,  
             unsigned int size, unsigned int length);
```



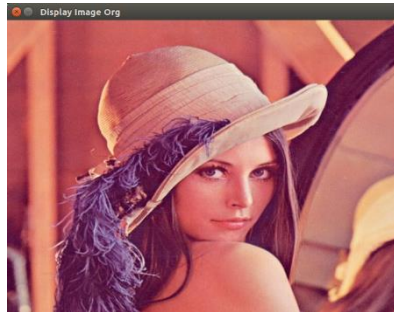
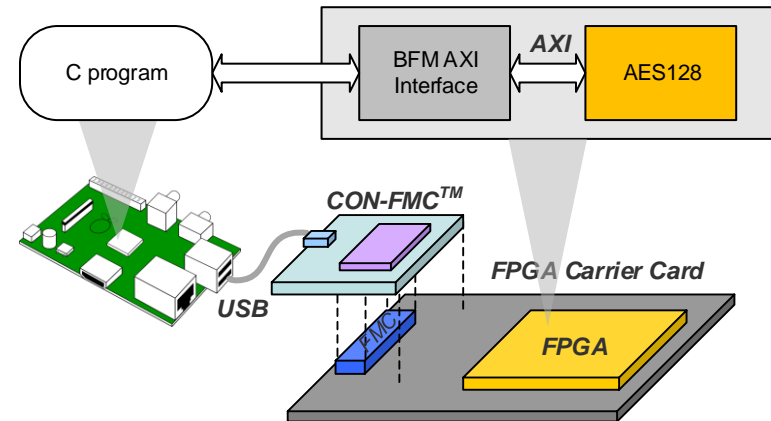
A typical setup of CON-FMC™ with Raspberry Pi along with ZedBoard.

Application Examples: CON-FMC™ with Raspberry Pi

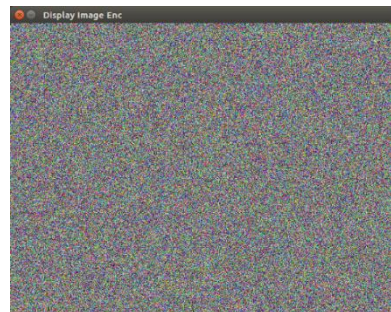
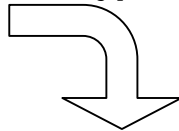
Example: Serial SHA256 with AMBA AHB



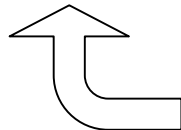
Example: Pipelined AES128 with AMBA AXI



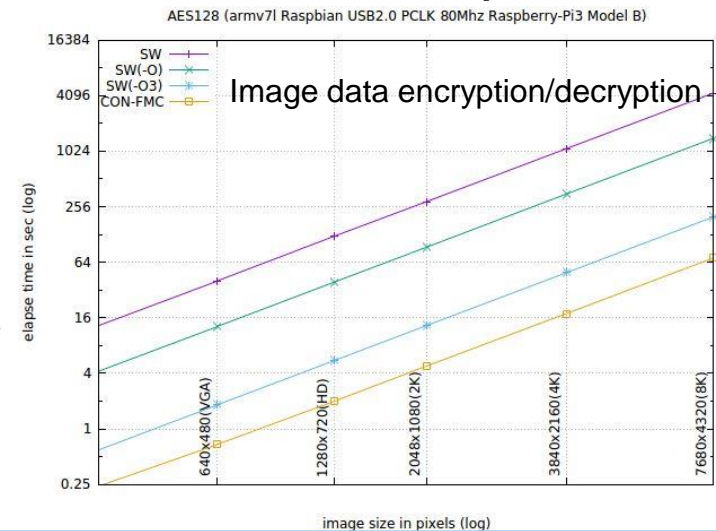
Encryption on FPGA



Decryption on FPGA



Performance benefit for AES128 with Raspbian case



Processing 8k image with CON-FMC is faster than that of software solution by 60x TIMES.