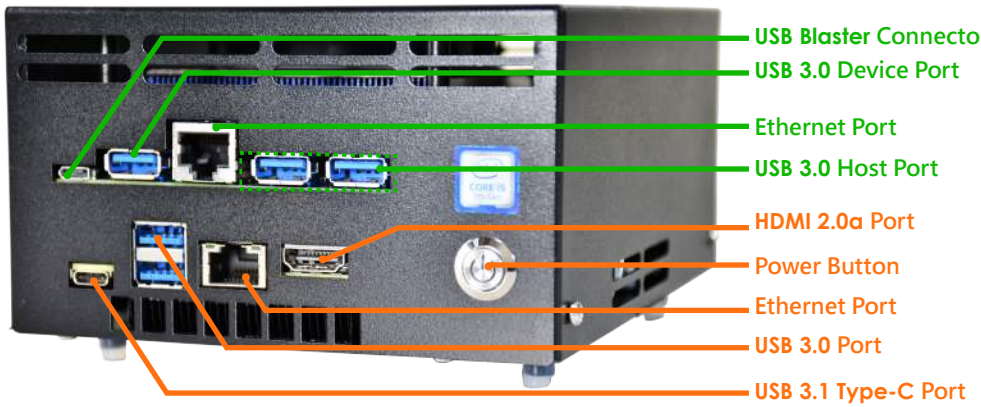
Quick Start Guide

# HERO

For more information, please visit:
http://hero.terasic.com

## Hero Connector Layout

FPGA
CPU




## Package Content

1. HERO Device
2. 12V DC Power Supply
3. AC Power Cord
4. Micro USB Cable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For any technical questions, please e-mail us at
Email: **support@terasic.com**

## Boot test

Please perform the boot test in the following order. Make sure the FPGA board power-on procedure is done before the CPU board is turn on.

1. Connect HDMI display
2. Connect a USB keyboard and mouse



3. Connect the 12V DC power supply
4. Power on the FPGA board (rear switch)
5. Turn on the power of the CPU board (front switch)
6. Set up the Linux Desktop on the display monitor
   (Username: robot  Password: intel123)

```
robot@hero: ~/data
67108864 3008.45 3131.91 2959.22 3007.50
134217728 3112.60 3221.57 3010.76 3112.25
268435456 3101.43 3101.43 3101.43 3101.43

Reading 262144 KBs with block size (in bytes) below:

Block_Size Avg     Max     Min     End-End (MB/s)
  524288 1910.08 2352.42 711.63 1820.29
 1048576 1887.27 2074.01 1378.87 1817.74
 2097152 2289.52 2460.08 1962.77 2252.79
 4194304 3057.32 3066.99 3002.66 3046.87
 8388608 3093.06 3199.87 2731.07 3080.55
16777216 3083.10 3222.30 2848.83 3078.29
33554432 3075.25 3210.56 2922.92 3073.75
67108864 3036.61 3177.22 2926.15 3035.51
134217728 3239.44 3243.17 3235.72 3239.12
268435456 3208.39 3208.39 3208.39 3208.39

Write top speed = 3221.57 MB/s
Read top speed = 3243.17 MB/s
Throughput = 3232.37 MB/s

DIAGNOSTIC_PASSED
robot@hero:~/data$
```

7. Perform FPGA OpenCL DDR4 read and write tests:

   a. Open Linux Terminal
   b. Execute "cd ~/data"
   c. Execute "source altera_rte.sh"
   d. Execute "aocl diagnose all"
   e. Observe the DDR4 test results, as shown on the left

## Design Resource Download Link

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