

Host CPU
Intel Xeon
E5-2686



reset();
step(k);

Simulation
Main

MIDAS
Simulation
Libraries

MIDAS CPU-FPGA
Transport Drivers

AWS F1 Runtime

PCI-E Drivers

CPU DRAM
122 GiB DDR4

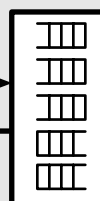
PCI-E Controller

Host FPGA Xilinx XCVU9P

Simulation Control Bus
(AXI4-lite 32b)

SW Model
Endpoints

Rocket Chip



FASED
Instance

Default I/O
Model

Simulation
Master

Memory
Initialization

FPGA Memory Bus
(AXI4 64b)

Width Adapter & CDC
DRAM Controllers

FPGA DRAM
16 GiB DDR4 x 4 Channels

PCI-E Controller
AXI4 Bridge & CDC

MIDAS Clock Domain (125 - 190 MHz)

Shell Clock Domain (250 MHz)