AB9 분석

README.txt

$ cd ~/AB9\_Demo

$ ./all\_run

all\_run

./darknet detector demo cfg/coco.data cfg/yolov3.cfg cfg/yolov3.weights

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |

디렉토리 구조

AB9\_Demo/

├── cfg

├── data

│   └── labels

├── dumpoutput

├── examples

├── include

├── input

├── obj

├── python

├── reference

├── results

├── scripts

└── src

13 directories

$ cd ~/AB9\_Demo

$ ls

LICENSE LICENSE.gpl LICENSE.mit Makefile all\_run darknet dumpoutput include libdarknet.a libpldaqpcie\_lib.a obj python reset\_all scripts

LICENSE.gen LICENSE.meta LICENSE.v1 README.md cfg data examples input libdarknet.so libpldaqpcie\_lib.so obj.tar.gz reference results src

매뉴얼에 있던 파일

$ find . -name "\*.onnx"

$ find . -name "\*.stchw"

./cfg/stcs32t\_f16x16.stchw

$ find . -name "\*.stccc"

$

$ ./darknet

./darknet: error while loading shared libraries: libopencv\_core.so.2.4: cannot open shared object file: No such file or directory

$ ls

LICENSE LICENSE.mit all\_run dumpoutput libdarknet.a obj reset\_all

LICENSE.gen LICENSE.v1 cfg examples libdarknet.so obj.tar.gz results

LICENSE.gpl Makefile darknet include libpldaqpcie\_lib.a python scripts

LICENSE.meta README.md data input libpldaqpcie\_lib.so reference src

$

OPENCV = 1

Makefile에 왜 cuda.o가 들어있는가?

OBJ=gemm.o utils.o cuda.o … onnx\_parser.o

GPU를 켰을 때 blas\_kernels.o가 있는 것은 이해가 되지만...

ifeq ($(GPU), 1)

LDFLAGS+= -lstdc++

OBJ+= … blas\_kernels.o ...

endif

darknet.py

from ctypes import \*

import math

import random

def sample(probs):

s = sum(probs)

probs = [a/s for a in probs]

r = random.uniform(0, 1)

for i in range(len(probs)):

r = r - probs[i]

if r <= 0:

return i

return len(probs)-1

...

if \_\_name\_\_ == "\_\_main\_\_":

#net = load\_net("cfg/densenet201.cfg", "/home/pjreddie/trained/densenet201.weights", 0)

#im = load\_image("data/wolf.jpg", 0, 0)

#meta = load\_meta("cfg/imagenet1k.data")

#r = classify(net, meta, im)

#print r[:10]

net = load\_net("cfg/tiny-yolo.cfg", "tiny-yolo.weights", 0)

meta = load\_meta("cfg/coco.data")

r = detect(net, meta, "data/dog.jpg")

print r

proverbot.py

from darknet import \*

def predict\_tactic(net, s):

prob = 0

d = c\_array(c\_float, [0.0]\*256)

tac = ''

if not len(s):

s = '\n'

for c in s[:-1]:

d[ord(c)] = 1

pred = predict(net, d)

d[ord(c)] = 0

c = s[-1]

while 1:

d[ord(c)] = 1

pred = predict(net, d)

d[ord(c)] = 0

pred = [pred[i] for i in range(256)]

ind = sample(pred)

c = chr(ind)

prob += math.log(pred[ind])

if len(tac) and tac[-1] == '.':

break

tac = tac + c

return (tac, prob)

def predict\_tactics(net, s, n):

tacs = []

for i in range(n):

reset\_rnn(net)

tacs.append(predict\_tactic(net, s))

tacs = sorted(tacs, key=lambda x: -x[1])

return tacs

net = load\_net("cfg/coq.test.cfg", "/home/pjreddie/backup/coq.backup", 0)

t = predict\_tactics(net, "+++++\n", 10)

print t

## 부록 가. lscpu 명령어 실행 결과

Architecture: x86\_64

CPU op-mode(s): 32-bit, 64-bit

Byte Order: Little Endian

CPU(s): 32

On-line CPU(s) list: 0-31

Thread(s) per core: 2

Core(s) per socket: 8

Socket(s): 2

NUMA node(s): 2

Vendor ID: GenuineIntel

CPU family: 6

Model: 85

Model name: Intel(R) Xeon(R) Silver 4110 CPU @ 2.10GHz

Stepping: 4

CPU MHz: 1023.648

CPU max MHz: 2101.0000

CPU min MHz: 800.0000

BogoMIPS: 4201.81

Virtualization: VT-x

L1d cache: 32K

L1i cache: 32K

L2 cache: 1024K

L3 cache: 11264K

NUMA node0 CPU(s): 0-7,16-23

NUMA node1 CPU(s): 8-15,24-31

Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid dca sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb cat\_l3 cdp\_l3 invpcid\_single pti intel\_ppin ssbd mba ibrs ibpb stibp tpr\_shadow vnmi flexpriority ept vpid fsgsbase tsc\_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx rdt\_a avx512f avx512dq rdseed adx smap clflushopt clwb intel\_pt avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm\_llc cqm\_occup\_llc cqm\_mbm\_total cqm\_mbm\_local dtherm ida arat pln pts pku ospke md\_clear flush\_l1d

## 부록 나. Makefile 내용

#############################################################################

#

# Original Darknet Option

#

# GPU : 0 (not use CUDA), 1 (use CUDA)

# CUDNN : 0 (not use CUDNN), 1 (use CUDNN)

# OPENCV : 0 (not use OPENCV), 1 (use OPENCV)

# OPENMP : 0 (not use OPENMP), 1 (use OPENMP)

# DEBUG : 0 (normal mode), 1 (DEBUG mode)

#

GPU = 0

CUDNN = 0

OPENCV = 1

OPENMP = 0

DEBUG = 0

#############################################################################

#

# AB9 Option

#

# AB9 : 0 (not use AB9), 1 (use AB9)

# STC\_SREVER : 1 (Xeon mode)

# STCSE\_MC : 0 (soc/fpga), 1 (simulation)

# AB9\_BIG\_ENDIAN : 0 (little endian mode), 1 (big endian mode)

# OUT\_DIFF : 0 (not check output), 1 (check output) --- simulation only

# DUMP\_OUTPUT : 0 (not dump output), 1 (dump output) --- simulation only

# DDR0\_ONLY : 0 (use DDR0/DDR1), 1 (use DDR0 only)

# AIWARE\_INTERRUPT : 0 (polling mode), 1 (interrupt mode)

# YOLO\_STC\_LAYER : 0 (not use YOLO\_STC\_LAYER), 1 (use YOLO\_STC\_LAYER)

# CMD\_MERGE : 0 (not merge commands), 1 (merge commands)

# NO\_WAIT : 0 (not modify waitNcycle), 1 (set waitNcycle to 0)

# ONLY\_HALF : 0 (float I/O), 1 (half I/O)

# NO\_PG : 0 (original SPG), 1 (no PG = always ON)

#

AB9 = 1

STC\_SERVER = 1

STCSE\_MC = 0

AB9\_BIG\_ENDIAN = 1

OUT\_DIFF = 0

DUMP\_OUTPUT = 0

DDR0\_ONLY = 0

AIWARE\_INTERRUPT = 1

YOLO\_STC\_LAYER = 1

CMD\_MERGE = 1

NO\_WAIT = 1

ONLY\_HALF = 1

NO\_PG = 0

HALF\_ALIGN = 1

LOAD\_COMPILEDNN\_BINARY = 1

STORE\_COMPILEDNN\_BINARY = 0

#############################################################################

#

# CompiledNN filename setting

#

ifeq ($(DDR0\_ONLY), 1)

YOLOV2\_COMPILEDNN="input/CompiledNN\_Yolov2\_stcs32t\_bh128\_batch1\_ddr0\_20200703.h"

else

YOLOV2\_COMPILEDNN="input/CompiledNN\_Yolov2\_stcs32t\_bh128.h"

#YOLOV2\_COMPILEDNN="input/CompiledNN\_Yolov2\_stcs32t\_bh128\_batch1\_20200707.h"

endif

ifeq ($(DDR0\_ONLY), 1)

YOLOV3\_COMPILEDNN="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_batch1\_ddr0\_20200701.h"

else

YOLOV3\_COMPILEDNN="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_batch1\_20200707.h"

endif

ifeq ($(LOAD\_COMPILEDNN\_BINARY), 1)

ifeq ($(CMD\_MERGE), 1)

ifeq ($(NO\_WAIT), 1)

ifeq ($(ONLY\_HALF), 1)

ifeq ($(NO\_PG), 1)

YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_batch1\_no\_pg\_20200720.bin"

else

#YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_merge\_nowait.bin"

YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_nowait.bin"

endif

else

YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_batch1\_nowait\_20200717.bin"

endif

else

YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_batch1\_cmd\_merge\_20200716.bin"

endif

else

YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_batch1\_yolo\_stc\_layer\_20200716.bin"

endif

else

ifeq ($(CMD\_MERGE), 1)

ifeq ($(NO\_WAIT), 1)

ifeq ($(ONLY\_HALF), 1)

ifeq ($(NO\_PG), 1)

YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_batch1\_no\_pg\_20200720.h"

else

#YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_merge\_nowait.h"

YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_nowait.h"

endif

else

YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_batch1\_nowait\_20200717.h"

endif

else

YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_batch1\_cmd\_merge\_20200716.h"

endif

else

YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER="input/CompiledNN\_Yolov3\_stcs32t\_bh128\_batch1\_yolo\_stc\_layer\_20200716.h"

endif

endif

STCCC\_INCLUDE\_PATH = ../stccc/src

STCSE\_MC\_INCLUDE\_PATH = ../stcse\_mc/src

AIWARE\_INCLUDE\_PATH = ../aiware/include

PLDA\_DRV\_INCLUDE\_PATH = ../plda/driver/include

PLDA\_DRIVER\_PATH = ../plda/driver

PLDA\_INCLUDE\_PATH = ../plda/qpcie\_api/include

PLDA\_LIBRARY\_PATH = ../plda/qpcie\_api/bin/$(shell uname -m)

ARC0= -gencode arch=compute\_30,code=sm\_30 \

-gencode arch=compute\_35,code=sm\_35 \

-gencode arch=compute\_50,code=[sm\_50,compute\_50] \

-gencode arch=compute\_52,code=[sm\_52,compute\_52]

# -gencode arch=compute\_20,code=[sm\_20,sm\_21] \ This one is deprecated?

# This is what I use, uncomment if you know your arch and want to specify

# ARCH= -gencode arch=compute\_52,code=compute\_52

ifeq ($(STCSE\_MC), 1)

VPATH=./src:./examples:../aiware/srcForHost:../stccc/src:../aiware/src:../stcse\_mc/src/:../aiware/srcForABC/

else

VPATH=./src:./examples:../aiware/srcForHost:../stccc/src:../aiware/src

endif

SLIB=libdarknet.so

ALIB=libdarknet.a

EXEC=darknet

OBJDIR=./obj/

ifeq ($(shell cat /etc/issue.net | grep CentOS | cut -d' ' -f1), CentOS)

LINUXMACHINE = CENTOS

else

LINUXMACHINE = UBUNTU

endif

CC=gcc

CPP=g++

NVCC=nvcc

AR=ar

ARFLAGS=rcs

#OPTS=-Ofast

LDFLAGS= -lm -lpthread -lrt -mavx

COMMON= -Iinclude/ -Isrc/ -I../aiware/include/ -I../aiware/srcForHost/ -I../aiware/srcForABC/ -I../stcse\_mc/src/

CFLAGS=-Wall -Wno-unused-result -Wno-unknown-pragmas -Wfatal-errors -fPIC

CFLAGS+= -DYOLOV2\_COMPILEDNN=\"$(YOLOV2\_COMPILEDNN)\"

CFLAGS+= -DYOLOV3\_COMPILEDNN=\"$(YOLOV3\_COMPILEDNN)\"

CFLAGS+= -DYOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER=\"$(YOLOV3\_COMPILEDNN\_YOLO\_STC\_LAYER)\"

CFLAGS += -I$(STCCC\_INCLUDE\_PATH)

CFLAGS += -I$(AIWARE\_INCLUDE\_PATH)

CFLAGS += -I$(STCSE\_MC\_INCLUDE\_PATH)

CFLAGS += -I$(PLDA\_INCLUDE\_PATH)

ifeq ($(AB9), 1)

CFLAGS+= -DAB9

LDFLAGS+= -lrt

endif

ifeq ($(LOAD\_COMPILEDNN\_BINARY), 1)

CFLAGS+= -DLOAD\_COMPILEDNN\_BINARY

endif

ifeq ($(STORE\_COMPILEDNN\_BINARY), 1)

CFLAGS+= -DSTORE\_COMPILEDNN\_BINARY

endif

ifeq ($(STCSE\_MC), 1)

CFLAGS+= -DSTCSE\_MC

LDFLAGS+= -lrt

endif

ifeq ($(AB9\_BIG\_ENDIAN), 1)

CFLAGS+= -DAB9\_BIG\_ENDIAN

endif

ifeq ($(AB9\_DIFF), 1)

CFLAGS+= -DAB9\_DIFF

endif

ifeq ($(DUMP\_OUTPUT), 1)

CFLAGS += -DDUMP\_OUTPUT

endif

ifeq ($(OUT\_DIFF), 1)

CFLAGS += -DOUT\_DIFF

endif

ifeq ($(STC\_SERVER), 1)

CFLAGS+= -DSTC\_SERVER -DEXCEPT\_STCCC\_MAIN

endif

ifeq ($(DDR0\_ONLY), 1)

CFLAGS+= -DSTC\_KERNEL\_BASE=0x110000000

endif

ifeq ($(AIWARE\_INTERRUPT), 1)

CFLAGS+= -DAIWARE\_INTERRUPT

endif

ifeq ($(YOLO\_STC\_LAYER), 1)

CFLAGS+= -DYOLO\_STC\_LAYER

endif

ifeq ($(ONLY\_HALF), 1)

CFLAGS+= -DONLY\_HALF

endif

CFLAGS+= -DHALF\_ALIGN=$(HALF\_ALIGN)

ifeq ($(OPENMP), 1)

CFLAGS+= -fopenmp

endif

ifeq ($(DEBUG), 1)

OPTS=-O0 -g

endif

CFLAGS+=$(OPTS) -D$(LINUXMACHINE)

ifeq ($(OPENCV), 1)

COMMON+= -DOPENCV

CFLAGS+= -DOPENCV

LDFLAGS+= `pkg-config --libs opencv` -lstdc++

COMMON+= `pkg-config --cflags opencv`

endif

ifeq ($(GPU), 1)

COMMON+= -DGPU -I/usr/local/cuda/include/

CFLAGS+= -DGPU

LDFLAGS+= -L/usr/local/cuda/lib64 -lcuda -lcudart -lcublas -lcurand

endif

ifeq ($(CUDNN), 1)

COMMON+= -DCUDNN

CFLAGS+= -DCUDNN

LDFLAGS+= -lcudnn

endif

OBJ=gemm.o utils.o cuda.o deconvolutional\_layer.o convolutional\_layer.o list.o image.o activations.o im2col.o col2im.o blas.o crop\_layer.o dropout\_layer.o maxpool\_layer.o softmax\_layer.o data.o matrix.o network.o connected\_layer.o cost\_layer.o parser.o option\_list.o detection\_layer.o route\_layer.o upsample\_layer.o box.o normalization\_layer.o avgpool\_layer.o layer.o local\_layer.o shortcut\_layer.o logistic\_layer.o activation\_layer.o rnn\_layer.o gru\_layer.o crnn\_layer.o demo.o batchnorm\_layer.o region\_layer.o reorg\_layer.o tree.o lstm\_layer.o l2norm\_layer.o yolo\_layer.o iseg\_layer.o image\_opencv.o stccc.o stccc\_frontend.o ddralloc.o setparams.o writecmd.o agp.o dcassign.o mmp.o nccmdp.o pwrgate.o aiwareif.o aiwareHost.o forward\_network\_AB9.o onnx\_parser.o

ifeq ($(STCSE\_MC), 1)

OBJ+=stcse\_mc.o aiwareAbc.o

endif

EXECOBJA=captcha.o lsd.o super.o art.o tag.o cifar.o go.o rnn.o segmenter.o regressor.o classifier.o coco.o yolo.o detector.o nightmare.o instance-segmenter.o darknet.o

ifeq ($(GPU), 1)

LDFLAGS+= -lstdc++

OBJ+=convolutional\_kernels.o deconvolutional\_kernels.o activation\_kernels.o im2col\_kernels.o col2im\_kernels.o blas\_kernels.o crop\_layer\_kernels.o dropout\_layer\_kernels.o maxpool\_layer\_kernels.o avgpool\_layer\_kernels.o

endif

EXECOBJ = $(addprefix $(OBJDIR), $(EXECOBJA))

OBJS = $(addprefix $(OBJDIR), $(OBJ))

DEPS = $(wildcard src/\*.h) Makefile include/darknet.h

ifeq ($(shell cat /etc/issue.net | grep CentOS | cut -d' ' -f1), CentOS)

STDC11 = -std=c++0x

else

STDC11 = -std=c++11

endif

all: obj results $(SLIB) $(ALIB) $(EXEC)

#all: obj results $(SLIB) $(ALIB) $(EXEC)

$(EXEC): $(EXECOBJ) $(ALIB)

$(CPP) $(COMMON) $(CFLAGS) -D$(LINUXMACHINE) -I$(AIWARE\_INCLUDE\_PATH) -I$(PLDA\_INCLUDE\_PATH) -I$(PLDA\_DRIVER\_PATH)/include $^ -o $@ -L$(PLDA\_LIBRARY\_PATH) $(LDFLAGS) $(ALIB) libpldaqpcie\_lib.a -lrt

$(ALIB): $(OBJS)

$(AR) $(ARFLAGS) $@ $^

$(SLIB): $(OBJS)

$(CC) $(CFLAGS) -shared $^ -o $@ $(LDFLAGS)

$(OBJDIR)%.o: %.cpp $(DEPS)

$(CPP) $(COMMON) $(CFLAGS) $(STDC11) -I$(AIWARE\_INCLUDE\_PATH) -I$(PLDA\_INCLUDE\_PATH) -I$(PLDA\_DRV\_INCLUDE\_PATH) -c $< -o $@

$(OBJDIR)%.o: %.c $(DEPS)

$(CC) $(COMMON) $(CFLAGS) -I$(AIWARE\_INCLUDE\_PATH) -I$(PLDA\_INCLUDE\_PATH) -I$(PLDA\_DRV\_INCLUDE\_PATH) -c $< -o $@

$(OBJDIR)%.o: %.cu $(DEPS)

$(NVCC) $(ARCH) $(COMMON) --compiler-options "$(CFLAGS)" -c $< -o $@

obj:

mkdir -p obj

results:

mkdir -p results

.PHONY: clean

clean:

rm -rf $(OBJS) $(SLIB) $(ALIB) $(EXEC) $(EXECOBJ) $(OBJDIR)/\*

## 부록 다. Lshw 명령어 실행 결과

etri

description: Computer

product: SYS-7049GP-TRT (To be filled by O.E.M.)

vendor: Supermicro

version: 0123456789

serial: A291427X0909142

width: 64 bits

capabilities: smbios-3.2 dmi-3.2 vsyscall32

configuration: boot=normal family=To be filled by O.E.M. sku=To be filled by O.E.M. uuid=00F632A7-CA2D-EA11-8000-AC1F6BFEBF68

\*-core

description: Motherboard

product: X11DPG-QT

vendor: Supermicro

physical id: 0

version: 1.10A

serial: UM19CS010633

slot: To be filled by O.E.M.

\*-firmware

description: BIOS

vendor: American Megatrends Inc.

physical id: 1

version: 3.3

date: 02/21/2020

size: 64KiB

capacity: 15MiB

capabilities: pci upgrade shadowing cdboot bootselect socketedrom edd int13floppy1200 int13floppy720 int13floppy2880 int5printscreen int14serial int17printer acpi usb biosbootspecification uefi

\*-memory:0

description: System Memory

physical id: 26

slot: System board or motherboard

\*-bank:0

description: DIMM Synchronous 2666 MHz (0.4 ns)

product: M393A2K43CB2-CTD

vendor: Samsung

physical id: 0

serial: 443B289B

slot: P1-DIMMA1

size: 16GiB

width: 64 bits

clock: 2666MHz (0.4ns)

\*-bank:1

description: DIMM Synchronous 2666 MHz (0.4 ns)

product: M393A2K43CB2-CTD

vendor: Samsung

physical id: 1

serial: 443B28AE

slot: P1-DIMMA2

size: 16GiB

width: 64 bits

clock: 2666MHz (0.4ns)

\*-bank:2

description: DIMM [empty]

product: NO DIMM

vendor: NO DIMM

physical id: 2

serial: NO DIMM

slot: P1-DIMMB1

\*-bank:3

description: DIMM [empty]

product: NO DIMM

vendor: NO DIMM

physical id: 3

serial: NO DIMM

slot: P1-DIMMC1

\*-memory:1

description: System Memory

physical id: 2e

slot: System board or motherboard

\*-bank:0

description: DIMM Synchronous 2666 MHz (0.4 ns)

product: M393A2K43CB2-CTD

vendor: Samsung

physical id: 0

serial: 443B287F

slot: P1-DIMMD1

size: 16GiB

width: 64 bits

clock: 2666MHz (0.4ns)

\*-bank:1

description: DIMM Synchronous 2666 MHz (0.4 ns)

product: M393A2K43CB2-CTD

vendor: Samsung

physical id: 1

serial: 443B2D4D

slot: P1-DIMMD2

size: 16GiB

width: 64 bits

clock: 2666MHz (0.4ns)

\*-bank:2

description: DIMM [empty]

product: NO DIMM

vendor: NO DIMM

physical id: 2

serial: NO DIMM

slot: P1-DIMME1

\*-bank:3

description: DIMM [empty]

product: NO DIMM

vendor: NO DIMM

physical id: 3

serial: NO DIMM

slot: P1-DIMMF1

\*-memory:2

description: System Memory

physical id: 36

slot: System board or motherboard

\*-bank:0

description: DIMM Synchronous 2666 MHz (0.4 ns)

product: M393A2K43CB2-CTD

vendor: Samsung

physical id: 0

serial: 443B28B6

slot: P2-DIMMA1

size: 16GiB

width: 64 bits

clock: 2666MHz (0.4ns)

\*-bank:1

description: DIMM Synchronous 2666 MHz (0.4 ns)

product: M393A2K43CB2-CTD

vendor: Samsung

physical id: 1

serial: 443B2D3A

slot: P2-DIMMA2

size: 16GiB

width: 64 bits

clock: 2666MHz (0.4ns)

\*-bank:2

description: DIMM [empty]

product: NO DIMM

vendor: NO DIMM

physical id: 2

serial: NO DIMM

slot: P2-DIMMB1

\*-bank:3

description: DIMM [empty]

product: NO DIMM

vendor: NO DIMM

physical id: 3

serial: NO DIMM

slot: P2-DIMMC1

\*-memory:3

description: System Memory

physical id: 3e

slot: System board or motherboard

\*-bank:0

description: DIMM Synchronous 2666 MHz (0.4 ns)

product: M393A2K43CB2-CTD

vendor: Samsung

physical id: 0

serial: 443B28C2

slot: P2-DIMMD1

size: 16GiB

width: 64 bits

clock: 2666MHz (0.4ns)

\*-bank:1

description: DIMM Synchronous 2666 MHz (0.4 ns)

product: M393A2K43CB2-CTD

vendor: Samsung

physical id: 1

serial: 443B2201

slot: P2-DIMMD2

size: 16GiB

width: 64 bits

clock: 2666MHz (0.4ns)

\*-bank:2

description: DIMM [empty]

product: NO DIMM

vendor: NO DIMM

physical id: 2

serial: NO DIMM

slot: P2-DIMME1

\*-bank:3

description: DIMM [empty]

product: NO DIMM

vendor: NO DIMM

physical id: 3

serial: NO DIMM

slot: P2-DIMMF1

\*-cache:0

description: L1 cache

physical id: 53

slot: L1 Cache

size: 512KiB

capacity: 512KiB

capabilities: synchronous internal write-back instruction

configuration: level=1

\*-cache:1

description: L2 cache

physical id: 54

slot: L2 Cache

size: 8MiB

capacity: 8MiB

capabilities: synchronous internal varies unified

configuration: level=2

\*-cache:2

description: L3 cache

physical id: 55

slot: L3 Cache

size: 11MiB

capacity: 11MiB

capabilities: synchronous internal varies unified

configuration: level=3

\*-cpu:0

description: CPU

product: Intel(R) Xeon(R) Silver 4110 CPU @ 2.10GHz

vendor: Intel Corp.

physical id: 56

bus info: cpu@0

version: Intel(R) Xeon(R) Silver 4110 CPU @ 2.10GHz

slot: CPU1

size: 830MHz

capacity: 2101MHz

width: 64 bits

clock: 100MHz

capabilities: x86-64 fpu fpu\_exception wp vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid dca sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb cat\_l3 cdp\_l3 invpcid\_single pti intel\_ppin ssbd mba ibrs ibpb stibp tpr\_shadow vnmi flexpriority ept vpid fsgsbase tsc\_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx rdt\_a avx512f avx512dq rdseed adx smap clflushopt clwb intel\_pt avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm\_llc cqm\_occup\_llc cqm\_mbm\_total cqm\_mbm\_local dtherm ida arat pln pts pku ospke md\_clear flush\_l1d cpufreq

configuration: cores=8 enabledcores=8 threads=16

\*-cache:3

description: L1 cache

physical id: 57

slot: L1 Cache

size: 512KiB

capacity: 512KiB

capabilities: synchronous internal write-back instruction

configuration: level=1

\*-cache:4

description: L2 cache

physical id: 58

slot: L2 Cache

size: 8MiB

capacity: 8MiB

capabilities: synchronous internal varies unified

configuration: level=2

\*-cache:5

description: L3 cache

physical id: 59

slot: L3 Cache

size: 11MiB

capacity: 11MiB

capabilities: synchronous internal varies unified

configuration: level=3

\*-cpu:1

description: CPU

product: Intel(R) Xeon(R) Silver 4110 CPU @ 2.10GHz

vendor: Intel Corp.

physical id: 5a

bus info: cpu@1

version: Intel(R) Xeon(R) Silver 4110 CPU @ 2.10GHz

slot: CPU2

size: 2100MHz

capacity: 2101MHz

width: 64 bits

clock: 100MHz

capabilities: x86-64 fpu fpu\_exception wp vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid aperfmperf pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid dca sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb cat\_l3 cdp\_l3 invpcid\_single pti intel\_ppin ssbd mba ibrs ibpb stibp tpr\_shadow vnmi flexpriority ept vpid fsgsbase tsc\_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx rdt\_a avx512f avx512dq rdseed adx smap clflushopt clwb intel\_pt avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm\_llc cqm\_occup\_llc cqm\_mbm\_total cqm\_mbm\_local dtherm ida arat pln pts pku ospke md\_clear flush\_l1d cpufreq

configuration: cores=8 enabledcores=8 threads=16

\*-memory:4 UNCLAIMED

physical id: 2

\*-memory:5 UNCLAIMED

physical id: 3

\*-pci:0

description: Host bridge

product: Sky Lake-E DMI3 Registers

vendor: Intel Corporation

physical id: 100

bus info: pci@0000:00:00.0

version: 04

width: 32 bits

clock: 33MHz

\*-generic:0

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4

bus info: pci@0000:00:04.0

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:383f0-383ef irq:102 memory:383ffff30000-383ffff33fff

\*-generic:1

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.1

bus info: pci@0000:00:04.1

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:383f0-383ef irq:112 memory:383ffff2c000-383ffff2ffff

\*-generic:2

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.2

bus info: pci@0000:00:04.2

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:383f0-383ef irq:102 memory:383ffff28000-383ffff2bfff

\*-generic:3

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.3

bus info: pci@0000:00:04.3

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:383f0-383ef irq:112 memory:383ffff24000-383ffff27fff

\*-generic:4

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.4

bus info: pci@0000:00:04.4

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:383f0-383ef irq:102 memory:383ffff20000-383ffff23fff

\*-generic:5

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.5

bus info: pci@0000:00:04.5

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:383f0-383ef irq:112 memory:383ffff1c000-383ffff1ffff

\*-generic:6

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.6

bus info: pci@0000:00:04.6

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:383f0-383ef irq:102 memory:383ffff18000-383ffff1bfff

\*-generic:7

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.7

bus info: pci@0000:00:04.7

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:383f0-383ef irq:112 memory:383ffff14000-383ffff17fff

\*-generic:8 UNCLAIMED

description: System peripheral

product: Sky Lake-E MM/Vt-d Configuration Registers

vendor: Intel Corporation

physical id: 5

bus info: pci@0000:00:05.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:9 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 5.2

bus info: pci@0000:00:05.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:10 UNCLAIMED

description: PIC

product: Intel Corporation

vendor: Intel Corporation

physical id: 5.4

bus info: pci@0000:00:05.4

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress pm io\_x\_-apic bus\_master cap\_list

configuration: latency=0

resources: memory:9d31a000-9d31afff

\*-generic:11 UNCLAIMED

description: System peripheral

product: Sky Lake-E Ubox Registers

vendor: Intel Corporation

physical id: 8

bus info: pci@0000:00:08.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:12 UNCLAIMED

description: Performance counters

product: Sky Lake-E Ubox Registers

vendor: Intel Corporation

physical id: 8.1

bus info: pci@0000:00:08.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:13 UNCLAIMED

description: System peripheral

product: Sky Lake-E Ubox Registers

vendor: Intel Corporation

physical id: 8.2

bus info: pci@0000:00:08.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:14 UNCLAIMED

description: Unassigned class

product: C620 Series Chipset Family MROM 0

vendor: Intel Corporation

physical id: 11

bus info: pci@0000:00:11.0

version: 09

width: 32 bits

clock: 33MHz

capabilities: pm bus\_master cap\_list

configuration: latency=0

\*-generic:15 UNCLAIMED

description: Unassigned class

product: C620 Series Chipset Family MROM 1

vendor: Intel Corporation

physical id: 11.1

bus info: pci@0000:00:11.1

version: 09

width: 32 bits

clock: 33MHz

capabilities: pm bus\_master cap\_list

configuration: latency=0

\*-storage:0

description: SATA controller

product: C620 Series Chipset Family SSATA Controller [AHCI mode]

vendor: Intel Corporation

physical id: 11.5

bus info: pci@0000:00:11.5

version: 09

width: 32 bits

clock: 66MHz

capabilities: storage msi pm ahci\_1.0 bus\_master cap\_list

configuration: driver=ahci latency=0

resources: irq:32 memory:9d316000-9d317fff memory:9d319000-9d3190ff ioport:800(size=8) ioport:810(size=4) ioport:820(size=32) memory:9d280000-9d2fffff

\*-usb

description: USB controller

product: C620 Series Chipset Family USB 3.0 xHCI Controller

vendor: Intel Corporation

physical id: 14

bus info: pci@0000:00:14.0

version: 09

width: 64 bits

clock: 33MHz

capabilities: pm msi xhci bus\_master cap\_list

configuration: driver=xhci\_hcd latency=0

resources: irq:31 memory:9d300000-9d30ffff

\*-usbhost:0

product: xHCI Host Controller

vendor: Linux 4.15.0-112-generic xhci-hcd

physical id: 0

bus info: usb@1

logical name: usb1

version: 4.15

capabilities: usb-2.00

configuration: driver=hub slots=16 speed=480Mbit/s

\*-usb:0

description: Mouse

product: USB Optical Mouse

vendor: PixArt

physical id: 5

bus info: usb@1:5

version: 1.00

capabilities: usb-1.10

configuration: driver=usbhid maxpower=100mA speed=2Mbit/s

\*-usb:1

description: USB hub

product: Hub

vendor: ATEN International Co., Ltd

physical id: 7

bus info: usb@1:7

version: 0.00

capabilities: usb-2.00

configuration: driver=hub maxpower=100mA slots=4 speed=480Mbit/s

\*-usb

description: Keyboard

vendor: ATEN International Co., Ltd

physical id: 1

bus info: usb@1:7.1

version: 1.00

capabilities: usb-1.10

configuration: driver=usbhid maxpower=160mA speed=2Mbit/s

\*-usb:2

description: Keyboard

product: HP Basic USB Keyboard - KR

vendor: CHICONY

physical id: c

bus info: usb@1:c

version: 3.00

capabilities: usb-1.10

configuration: driver=usbhid maxpower=100mA speed=2Mbit/s

\*-usbhost:1

product: xHCI Host Controller

vendor: Linux 4.15.0-112-generic xhci-hcd

physical id: 1

bus info: usb@2

logical name: usb2

version: 4.15

capabilities: usb-3.00

configuration: driver=hub slots=10 speed=5000Mbit/s

\*-usb

description: Mass storage device

product: SanDisk 3.2Gen1

vendor: USB

physical id: 1

bus info: usb@2:1

logical name: scsi14

version: 1.00

serial: 05017ff144ee1235ccbccae66c616b28205610e68e9870deb95b65a76631d4fa2972000000000000

capabilities: usb-3.20 scsi emulated scsi-host

configuration: driver=usb-storage maxpower=896mA speed=5000Mbit/s

\*-disk

description: SCSI Disk

product: SanDisk 3.2Gen1

vendor: USB

physical id: 0.0.0

bus info: scsi@14:0.0.0

logical name: /dev/sdc

version: 1.00

serial: 05017ff144ee1235ccbc

size: 114GiB (123GB)

capabilities: removable

configuration: ansiversion=6 logicalsectorsize=512 sectorsize=512

\*-medium

physical id: 0

logical name: /dev/sdc

size: 114GiB (123GB)

capabilities: partitioned partitioned:dos

configuration: signature=31aca01d

\*-volume

description: Windows FAT volume

vendor: mkfs.fat

physical id: 1

logical name: /dev/sdc1

logical name: /media/etri/ubuntu18\_04

version: FAT32

serial: 493d-5922

size: 114GiB

capacity: 114GiB

capabilities: primary fat initialized

configuration: FATs=2 filesystem=fat label=ubuntu18\_04 mount.fstype=vfat mount.options=rw,nosuid,nodev,relatime,uid=1000,gid=1000,fmask=0022,dmask=0022,codepage=437,iocharset=iso8859-1,shortname=mixed,showexec,utf8,flush,errors=remount-ro state=mounted

\*-generic:16 UNCLAIMED

description: Signal processing controller

product: C620 Series Chipset Family Thermal Subsystem

vendor: Intel Corporation

physical id: 14.2

bus info: pci@0000:00:14.2

version: 09

width: 64 bits

clock: 33MHz

capabilities: pm msi bus\_master cap\_list

configuration: latency=0

resources: iomemory:383f0-383ef memory:383ffff37000-383ffff37fff

\*-communication:0

description: Communication controller

product: C620 Series Chipset Family MEI Controller #1

vendor: Intel Corporation

physical id: 16

bus info: pci@0000:00:16.0

version: 09

width: 64 bits

clock: 33MHz

capabilities: pm msi bus\_master cap\_list

configuration: driver=mei\_me latency=0

resources: iomemory:383f0-383ef irq:114 memory:383ffff36000-383ffff36fff

\*-communication:1 UNCLAIMED

description: Communication controller

product: C620 Series Chipset Family MEI Controller #2

vendor: Intel Corporation

physical id: 16.1

bus info: pci@0000:00:16.1

version: 09

width: 64 bits

clock: 33MHz

capabilities: pm msi bus\_master cap\_list

configuration: latency=0

resources: iomemory:383f0-383ef memory:383ffff35000-383ffff35fff

\*-communication:2 UNCLAIMED

description: Communication controller

product: C620 Series Chipset Family MEI Controller #3

vendor: Intel Corporation

physical id: 16.4

bus info: pci@0000:00:16.4

version: 09

width: 64 bits

clock: 33MHz

capabilities: pm msi bus\_master cap\_list

configuration: latency=0

resources: iomemory:383f0-383ef memory:383ffff34000-383ffff34fff

\*-storage:1

description: SATA controller

product: C620 Series Chipset Family SATA Controller [AHCI mode]

vendor: Intel Corporation

physical id: 17

bus info: pci@0000:00:17.0

version: 09

width: 32 bits

clock: 66MHz

capabilities: storage msi pm ahci\_1.0 bus\_master cap\_list

configuration: driver=ahci latency=0

resources: irq:33 memory:9d314000-9d315fff memory:9d318000-9d3180ff ioport:840(size=8) ioport:850(size=4) ioport:860(size=32) memory:9d200000-9d27ffff

\*-pci:0

description: PCI bridge

product: C620 Series Chipset Family PCI Express Root Port #1

vendor: Intel Corporation

physical id: 1c

bus info: pci@0000:00:1c.0

version: f9

width: 32 bits

clock: 33MHz

capabilities: pci pciexpress msi pm normal\_decode bus\_master cap\_list

configuration: driver=pcieport

resources: irq:24 memory:90000000-904fffff ioport:9ba00000(size=5242880)

\*-network:0

description: Ethernet interface

product: Ethernet Controller 10G X550T

vendor: Intel Corporation

physical id: 0

bus info: pci@0000:01:00.0

logical name: eno1

version: 01

serial: ac:1f:6b:fe:bf:68

size: 1Gbit/s

capacity: 1Gbit/s

width: 64 bits

clock: 33MHz

capabilities: pm msi msix pciexpress bus\_master cap\_list rom ethernet physical tp 100bt-fd 1000bt-fd autonegotiation

configuration: autonegotiation=on broadcast=yes driver=ixgbe driverversion=5.1.0-k duplex=full firmware=0x800007f6 latency=0 link=yes multicast=yes port=twisted pair speed=1Gbit/s

resources: irq:17 memory:9bc00000-9bdfffff memory:9be04000-9be07fff memory:90000000-9007ffff memory:90100000-901fffff memory:90200000-902fffff

\*-network:1

description: Ethernet interface

product: Ethernet Controller 10G X550T

vendor: Intel Corporation

physical id: 0.1

bus info: pci@0000:01:00.1

logical name: eno2

version: 01

serial: ac:1f:6b:fe:bf:69

capacity: 1Gbit/s

width: 64 bits

clock: 33MHz

capabilities: pm msi msix pciexpress bus\_master cap\_list rom ethernet physical tp 100bt-fd 1000bt-fd autonegotiation

configuration: autonegotiation=on broadcast=yes driver=ixgbe driverversion=5.1.0-k firmware=0x800007f6 latency=0 link=no multicast=yes port=twisted pair

resources: irq:16 memory:9ba00000-9bbfffff memory:9be00000-9be03fff memory:90080000-900fffff memory:90300000-903fffff memory:90400000-904fffff

\*-pci:1

description: PCI bridge

product: C620 Series Chipset Family PCI Express Root Port #9

vendor: Intel Corporation

physical id: 1d

bus info: pci@0000:00:1d.0

version: f9

width: 32 bits

clock: 33MHz

capabilities: pci pciexpress msi pm normal\_decode bus\_master cap\_list

configuration: driver=pcieport

resources: irq:25

\*-pci:2

description: PCI bridge

product: C620 Series Chipset Family PCI Express Root Port #10

vendor: Intel Corporation

physical id: 1d.1

bus info: pci@0000:00:1d.1

version: f9

width: 32 bits

clock: 33MHz

capabilities: pci pciexpress msi pm normal\_decode bus\_master cap\_list

configuration: driver=pcieport

resources: irq:26 ioport:3000(size=4096) memory:9c000000-9d0fffff

\*-pci

description: PCI bridge

product: AST1150 PCI-to-PCI Bridge

vendor: ASPEED Technology, Inc.

physical id: 0

bus info: pci@0000:03:00.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pci msi pm pciexpress normal\_decode bus\_master cap\_list

resources: ioport:3000(size=4096) memory:9c000000-9d0fffff

\*-display

description: VGA compatible controller

product: ASPEED Graphics Family

vendor: ASPEED Technology, Inc.

physical id: 0

bus info: pci@0000:04:00.0

version: 41

width: 32 bits

clock: 33MHz

capabilities: pm msi vga\_controller cap\_list rom

configuration: driver=ast latency=0

resources: irq:16 memory:9c000000-9cffffff memory:9d000000-9d01ffff ioport:3000(size=128) memory:c0000-dffff

\*-isa

description: ISA bridge

product: C621 Series Chipset LPC/eSPI Controller

vendor: Intel Corporation

physical id: 1f

bus info: pci@0000:00:1f.0

version: 09

width: 32 bits

clock: 33MHz

capabilities: isa bus\_master

configuration: latency=0

\*-memory UNCLAIMED

description: Memory controller

product: C620 Series Chipset Family Power Management Controller

vendor: Intel Corporation

physical id: 1f.2

bus info: pci@0000:00:1f.2

version: 09

width: 32 bits

clock: 33MHz (30.3ns)

capabilities: bus\_master

configuration: latency=0

resources: memory:9d310000-9d313fff

\*-multimedia

description: Audio device

product: Intel Corporation

vendor: Intel Corporation

physical id: 1f.3

bus info: pci@0000:00:1f.3

version: 09

width: 64 bits

clock: 33MHz

capabilities: pm msi pciexpress bus\_master cap\_list

configuration: driver=snd\_hda\_intel latency=0

resources: iomemory:383f0-383ef iomemory:383f0-383ef irq:127 memory:383ffff10000-383ffff13fff memory:383ffff00000-383ffff0ffff

\*-serial:0 UNCLAIMED

description: SMBus

product: C620 Series Chipset Family SMBus

vendor: Intel Corporation

physical id: 1f.4

bus info: pci@0000:00:1f.4

version: 09

width: 64 bits

clock: 33MHz

configuration: latency=0

resources: iomemory:38000-37fff memory:380000000000-3800000000ff ioport:780(size=32)

\*-serial:1 UNCLAIMED

description: Serial bus controller

product: C620 Series Chipset Family SPI Controller

vendor: Intel Corporation

physical id: 1f.5

bus info: pci@0000:00:1f.5

version: 09

width: 32 bits

clock: 33MHz

configuration: latency=0

resources: memory:fe010000-fe010fff

\*-generic:0 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 6

bus info: pci@0000:17:05.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:1 UNCLAIMED

description: System peripheral

product: Sky Lake-E RAS Configuration Registers

vendor: Intel Corporation

physical id: 7

bus info: pci@0000:17:05.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:2 UNCLAIMED

description: PIC

product: Intel Corporation

vendor: Intel Corporation

physical id: 9

bus info: pci@0000:17:05.4

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress pm io\_x\_-apic bus\_master cap\_list

configuration: latency=0

resources: memory:aaf00000-aaf00fff

\*-generic:3 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: a

bus info: pci@0000:17:08.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:4 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: b

bus info: pci@0000:17:08.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:5 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: c

bus info: pci@0000:17:08.2

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:6 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: d

bus info: pci@0000:17:08.3

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:7 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: e

bus info: pci@0000:17:08.4

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:8 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: f

bus info: pci@0000:17:08.5

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:9 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 10

bus info: pci@0000:17:08.6

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:10 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 11

bus info: pci@0000:17:08.7

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:11 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 12

bus info: pci@0000:17:09.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:12 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 13

bus info: pci@0000:17:09.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:13 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 14

bus info: pci@0000:17:0e.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:14 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 15

bus info: pci@0000:17:0e.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:15 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 16

bus info: pci@0000:17:0e.2

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:16 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 17

bus info: pci@0000:17:0e.3

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:17 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 18

bus info: pci@0000:17:0e.4

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:18 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 19

bus info: pci@0000:17:0e.5

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:19 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 1a

bus info: pci@0000:17:0e.6

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:20 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 1b

bus info: pci@0000:17:0e.7

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:21 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 1c

bus info: pci@0000:17:0f.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:22 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 1d

bus info: pci@0000:17:0f.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:23 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 1e

bus info: pci@0000:17:1d.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:24 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 1f

bus info: pci@0000:17:1d.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:25 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 20

bus info: pci@0000:17:1d.2

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:26 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 21

bus info: pci@0000:17:1d.3

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:27 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 22

bus info: pci@0000:17:1e.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:28 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 23

bus info: pci@0000:17:1e.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:29 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 24

bus info: pci@0000:17:1e.2

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:30 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 25

bus info: pci@0000:17:1e.3

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:31 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 27

bus info: pci@0000:17:1e.4

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:32 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 28

bus info: pci@0000:17:1e.5

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:33 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 29

bus info: pci@0000:17:1e.6

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-pci:1

description: PCI bridge

product: Sky Lake-E PCI Express Root Port A

vendor: Intel Corporation

physical id: 101

bus info: pci@0000:3a:00.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pci msi pciexpress pm normal\_decode bus\_master cap\_list

configuration: driver=pcieport

resources: irq:28 ioport:38bff0000000(size=135266304)

\*-communication

description: Communication controller

product: PLDA

vendor: PLDA

physical id: 0

bus info: pci@0000:3b:00.0

version: 02

width: 64 bits

clock: 33MHz

capabilities: pciexpress msi pm bus\_master cap\_list

configuration: driver=plda latency=0

resources: iomemory:38bf0-38bef iomemory:38bf0-38bef irq:100 memory:38bff8000000-38bff8003fff memory:38bff0000000-38bff7ffffff

\*-generic:34 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 2a

bus info: pci@0000:3a:05.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:35 UNCLAIMED

description: System peripheral

product: Sky Lake-E RAS Configuration Registers

vendor: Intel Corporation

physical id: 2b

bus info: pci@0000:3a:05.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:36 UNCLAIMED

description: PIC

product: Intel Corporation

vendor: Intel Corporation

physical id: 2c

bus info: pci@0000:3a:05.4

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress pm io\_x\_-apic bus\_master cap\_list

configuration: latency=0

resources: memory:b8700000-b8700fff

\*-generic:37

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 2d

bus info: pci@0000:3a:08.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:38

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 2f

bus info: pci@0000:3a:09.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:39 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 30

bus info: pci@0000:3a:0a.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:40 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 31

bus info: pci@0000:3a:0a.1

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:41

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 32

bus info: pci@0000:3a:0a.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:42 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 33

bus info: pci@0000:3a:0a.3

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:43 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 34

bus info: pci@0000:3a:0a.4

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:44 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 35

bus info: pci@0000:3a:0a.5

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:45

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 37

bus info: pci@0000:3a:0a.6

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:46 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 38

bus info: pci@0000:3a:0a.7

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:47 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 39

bus info: pci@0000:3a:0b.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:48 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 3a

bus info: pci@0000:3a:0b.1

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:49

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 3b

bus info: pci@0000:3a:0b.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:50 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 3c

bus info: pci@0000:3a:0b.3

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:51 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 3d

bus info: pci@0000:3a:0c.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:52 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 3f

bus info: pci@0000:3a:0c.1

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:53

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 40

bus info: pci@0000:3a:0c.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:54 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 41

bus info: pci@0000:3a:0c.3

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:55 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 42

bus info: pci@0000:3a:0c.4

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:56 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 43

bus info: pci@0000:3a:0c.5

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:57

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 44

bus info: pci@0000:3a:0c.6

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:58 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 45

bus info: pci@0000:3a:0c.7

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:59 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 46

bus info: pci@0000:3a:0d.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:60 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 47

bus info: pci@0000:3a:0d.1

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:61

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 48

bus info: pci@0000:3a:0d.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:62 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 49

bus info: pci@0000:3a:0d.3

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:63 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 4a

bus info: pci@0000:5d:05.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:64 UNCLAIMED

description: System peripheral

product: Sky Lake-E RAS Configuration Registers

vendor: Intel Corporation

physical id: 4b

bus info: pci@0000:5d:05.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:65 UNCLAIMED

description: PIC

product: Intel Corporation

vendor: Intel Corporation

physical id: 4c

bus info: pci@0000:5d:05.4

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress pm io\_x\_-apic bus\_master cap\_list

configuration: latency=0

resources: memory:c5f00000-c5f00fff

\*-generic:66

description: Performance counters

product: Intel Corporation

vendor: Intel Corporation

physical id: 4d

bus info: pci@0000:5d:0e.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:67 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 4e

bus info: pci@0000:5d:0e.1

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:68

description: Performance counters

product: Intel Corporation

vendor: Intel Corporation

physical id: 4f

bus info: pci@0000:5d:0f.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:69 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 50

bus info: pci@0000:5d:0f.1

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:70 UNCLAIMED

description: Performance counters

product: Sky Lake-E M3KTI Registers

vendor: Intel Corporation

physical id: 51

bus info: pci@0000:5d:12.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:71

description: Performance counters

product: Sky Lake-E M3KTI Registers

vendor: Intel Corporation

physical id: 52

bus info: pci@0000:5d:12.1

version: 04

width: 32 bits

clock: 33MHz

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:72

description: System peripheral

product: Sky Lake-E M3KTI Registers

vendor: Intel Corporation

physical id: 5b

bus info: pci@0000:5d:12.2

version: 04

width: 32 bits

clock: 33MHz

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:73 UNCLAIMED

description: System peripheral

product: Sky Lake-E M2PCI Registers

vendor: Intel Corporation

physical id: 5c

bus info: pci@0000:5d:15.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:74 UNCLAIMED

description: System peripheral

product: Sky Lake-E M2PCI Registers

vendor: Intel Corporation

physical id: 5d

bus info: pci@0000:5d:16.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:75 UNCLAIMED

description: System peripheral

product: Sky Lake-E M2PCI Registers

vendor: Intel Corporation

physical id: 5e

bus info: pci@0000:5d:16.4

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:76

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4

bus info: pci@0000:80:04.0

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:393f0-393ef irq:121 memory:393ffff1c000-393ffff1ffff

\*-generic:77

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.1

bus info: pci@0000:80:04.1

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:393f0-393ef irq:123 memory:393ffff18000-393ffff1bfff

\*-generic:78

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.2

bus info: pci@0000:80:04.2

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:393f0-393ef irq:121 memory:393ffff14000-393ffff17fff

\*-generic:79

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.3

bus info: pci@0000:80:04.3

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:393f0-393ef irq:123 memory:393ffff10000-393ffff13fff

\*-generic:80

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.4

bus info: pci@0000:80:04.4

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:393f0-393ef irq:121 memory:393ffff0c000-393ffff0ffff

\*-generic:81

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.5

bus info: pci@0000:80:04.5

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:393f0-393ef irq:123 memory:393ffff08000-393ffff0bfff

\*-generic:82

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.6

bus info: pci@0000:80:04.6

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:393f0-393ef irq:121 memory:393ffff04000-393ffff07fff

\*-generic:83

description: System peripheral

product: Sky Lake-E CBDMA Registers

vendor: Intel Corporation

physical id: 4.7

bus info: pci@0000:80:04.7

version: 04

width: 64 bits

clock: 33MHz

capabilities: msix pciexpress pm bus\_master cap\_list

configuration: driver=ioatdma latency=0

resources: iomemory:393f0-393ef irq:123 memory:393ffff00000-393ffff03fff

\*-generic:84 UNCLAIMED

description: System peripheral

product: Sky Lake-E MM/Vt-d Configuration Registers

vendor: Intel Corporation

physical id: 5f

bus info: pci@0000:80:05.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:85 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 60

bus info: pci@0000:80:05.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:86 UNCLAIMED

description: PIC

product: Intel Corporation

vendor: Intel Corporation

physical id: 61

bus info: pci@0000:80:05.4

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress pm io\_x\_-apic bus\_master cap\_list

configuration: latency=0

resources: memory:d3700000-d3700fff

\*-generic:87 UNCLAIMED

description: System peripheral

product: Sky Lake-E Ubox Registers

vendor: Intel Corporation

physical id: 62

bus info: pci@0000:80:08.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:88 UNCLAIMED

description: Performance counters

product: Sky Lake-E Ubox Registers

vendor: Intel Corporation

physical id: 63

bus info: pci@0000:80:08.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:89 UNCLAIMED

description: System peripheral

product: Sky Lake-E Ubox Registers

vendor: Intel Corporation

physical id: 64

bus info: pci@0000:80:08.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-pci:2

description: PCI bridge

product: Sky Lake-E PCI Express Root Port A

vendor: Intel Corporation

physical id: 0

bus info: pci@0000:85:00.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pci msi pciexpress pm normal\_decode bus\_master cap\_list

configuration: driver=pcieport

resources: irq:30 ioport:397ff0000000(size=135266304)

\*-communication

description: Communication controller

product: PLDA

vendor: PLDA

physical id: 0

bus info: pci@0000:86:00.0

version: 02

width: 64 bits

clock: 33MHz

capabilities: pciexpress msi pm bus\_master cap\_list

configuration: driver=plda latency=0

resources: iomemory:397f0-397ef iomemory:397f0-397ef irq:101 memory:397ff8000000-397ff8003fff memory:397ff0000000-397ff7ffffff

\*-generic:90 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 65

bus info: pci@0000:85:05.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:91 UNCLAIMED

description: System peripheral

product: Sky Lake-E RAS Configuration Registers

vendor: Intel Corporation

physical id: 66

bus info: pci@0000:85:05.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:92 UNCLAIMED

description: PIC

product: Intel Corporation

vendor: Intel Corporation

physical id: 67

bus info: pci@0000:85:05.4

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress pm io\_x\_-apic bus\_master cap\_list

configuration: latency=0

resources: memory:e0f00000-e0f00fff

\*-generic:93 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 68

bus info: pci@0000:85:08.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:94 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 8.1

bus info: pci@0000:85:08.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:95 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 8.2

bus info: pci@0000:85:08.2

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:96 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 69

bus info: pci@0000:85:08.3

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:97 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 6a

bus info: pci@0000:85:08.4

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:98 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 6b

bus info: pci@0000:85:08.5

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:99 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 6c

bus info: pci@0000:85:08.6

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:100 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 6d

bus info: pci@0000:85:08.7

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:101 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 6e

bus info: pci@0000:85:09.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:102 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 6f

bus info: pci@0000:85:09.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:103 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 70

bus info: pci@0000:85:0e.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:104 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 71

bus info: pci@0000:85:0e.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:105 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 72

bus info: pci@0000:85:0e.2

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:106 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 73

bus info: pci@0000:85:0e.3

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:107 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 74

bus info: pci@0000:85:0e.4

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:108 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 75

bus info: pci@0000:85:0e.5

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:109 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 76

bus info: pci@0000:85:0e.6

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:110 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 77

bus info: pci@0000:85:0e.7

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:111 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 78

bus info: pci@0000:85:0f.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:112 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 79

bus info: pci@0000:85:0f.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:113 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 7a

bus info: pci@0000:85:1d.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:114 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 7b

bus info: pci@0000:85:1d.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:115 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 7c

bus info: pci@0000:85:1d.2

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:116 UNCLAIMED

description: System peripheral

product: Sky Lake-E CHA Registers

vendor: Intel Corporation

physical id: 7d

bus info: pci@0000:85:1d.3

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:117 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 7e

bus info: pci@0000:85:1e.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:118 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 7f

bus info: pci@0000:85:1e.1

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:119 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 80

bus info: pci@0000:85:1e.2

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:120 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 81

bus info: pci@0000:85:1e.3

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:121 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 82

bus info: pci@0000:85:1e.4

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:122 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 83

bus info: pci@0000:85:1e.5

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:123 UNCLAIMED

description: System peripheral

product: Sky Lake-E PCU Registers

vendor: Intel Corporation

physical id: 84

bus info: pci@0000:85:1e.6

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:124 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 85

bus info: pci@0000:ae:05.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:125 UNCLAIMED

description: System peripheral

product: Sky Lake-E RAS Configuration Registers

vendor: Intel Corporation

physical id: 86

bus info: pci@0000:ae:05.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:126 UNCLAIMED

description: PIC

product: Intel Corporation

vendor: Intel Corporation

physical id: 87

bus info: pci@0000:ae:05.4

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress pm io\_x\_-apic bus\_master cap\_list

configuration: latency=0

resources: memory:ee700000-ee700fff

\*-generic:127

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 8

bus info: pci@0000:ae:08.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:128

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 88

bus info: pci@0000:ae:09.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:129 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 89

bus info: pci@0000:ae:0a.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:130 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 8a

bus info: pci@0000:ae:0a.1

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:131

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 8b

bus info: pci@0000:ae:0a.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:132 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 8c

bus info: pci@0000:ae:0a.3

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:133 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 8d

bus info: pci@0000:ae:0a.4

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:134 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 8e

bus info: pci@0000:ae:0a.5

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:135

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 8f

bus info: pci@0000:ae:0a.6

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:136 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 90

bus info: pci@0000:ae:0a.7

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:137 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 91

bus info: pci@0000:ae:0b.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:138 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 92

bus info: pci@0000:ae:0b.1

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:139

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 93

bus info: pci@0000:ae:0b.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:140 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 94

bus info: pci@0000:ae:0b.3

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:141 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 95

bus info: pci@0000:ae:0c.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:142 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 96

bus info: pci@0000:ae:0c.1

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:143

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 97

bus info: pci@0000:ae:0c.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:144 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 98

bus info: pci@0000:ae:0c.3

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:145 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 99

bus info: pci@0000:ae:0c.4

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:146 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 9a

bus info: pci@0000:ae:0c.5

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:147

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 9b

bus info: pci@0000:ae:0c.6

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:148 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 9c

bus info: pci@0000:ae:0c.7

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:149 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 9d

bus info: pci@0000:ae:0d.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:150 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 9e

bus info: pci@0000:ae:0d.1

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:151

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 9f

bus info: pci@0000:ae:0d.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:152 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: a0

bus info: pci@0000:ae:0d.3

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:153 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: 5

bus info: pci@0000:d7:05.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:154 UNCLAIMED

description: System peripheral

product: Sky Lake-E RAS Configuration Registers

vendor: Intel Corporation

physical id: 5.2

bus info: pci@0000:d7:05.2

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:155 UNCLAIMED

description: PIC

product: Intel Corporation

vendor: Intel Corporation

physical id: 5.4

bus info: pci@0000:d7:05.4

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress pm io\_x\_-apic bus\_master cap\_list

configuration: latency=0

resources: memory:fbf00000-fbf00fff

\*-generic:156

description: Performance counters

product: Intel Corporation

vendor: Intel Corporation

physical id: a1

bus info: pci@0000:d7:0e.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:157 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: a2

bus info: pci@0000:d7:0e.1

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:158

description: Performance counters

product: Intel Corporation

vendor: Intel Corporation

physical id: a3

bus info: pci@0000:d7:0f.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:159 UNCLAIMED

description: System peripheral

product: Intel Corporation

vendor: Intel Corporation

physical id: a4

bus info: pci@0000:d7:0f.1

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:160 UNCLAIMED

description: Performance counters

product: Sky Lake-E M3KTI Registers

vendor: Intel Corporation

physical id: a5

bus info: pci@0000:d7:12.0

version: 04

width: 32 bits

clock: 33MHz

capabilities: pciexpress cap\_list

configuration: latency=0

\*-generic:161

description: Performance counters

product: Sky Lake-E M3KTI Registers

vendor: Intel Corporation

physical id: a6

bus info: pci@0000:d7:12.1

version: 04

width: 32 bits

clock: 33MHz

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:162

description: System peripheral

product: Sky Lake-E M3KTI Registers

vendor: Intel Corporation

physical id: a7

bus info: pci@0000:d7:12.2

version: 04

width: 32 bits

clock: 33MHz

configuration: driver=skx\_uncore latency=0

resources: irq:0

\*-generic:163 UNCLAIMED

description: System peripheral

product: Sky Lake-E M2PCI Registers

vendor: Intel Corporation

physical id: a8

bus info: pci@0000:d7:15.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:164 UNCLAIMED

description: System peripheral

product: Sky Lake-E M2PCI Registers

vendor: Intel Corporation

physical id: a9

bus info: pci@0000:d7:16.0

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-generic:165 UNCLAIMED

description: System peripheral

product: Sky Lake-E M2PCI Registers

vendor: Intel Corporation

physical id: aa

bus info: pci@0000:d7:16.4

version: 04

width: 32 bits

clock: 33MHz

configuration: latency=0

\*-scsi:0

physical id: ab

logical name: scsi6

capabilities: emulated

\*-disk

description: ATA Disk

product: Samsung SSD 860

physical id: 0.0.0

bus info: scsi@6:0.0.0

logical name: /dev/sda

version: 2B6Q

serial: S5G8NS0N701048N

size: 953GiB (1024GB)

capabilities: partitioned partitioned:dos

configuration: ansiversion=5 logicalsectorsize=512 sectorsize=512 signature=fea186cb

\*-volume:0

description: Linux swap volume

physical id: 1

bus info: scsi@6:0.0.0,1

logical name: /dev/sda1

version: 1

serial: f8b992e9-328c-4313-b91b-5d6cd36783fd

size: 244GiB

capacity: 244GiB

capabilities: primary bootable nofs swap initialized

configuration: filesystem=swap pagesize=4096

\*-volume:1

description: Extended partition

physical id: 2

bus info: scsi@6:0.0.0,2

logical name: /dev/sda2

size: 709GiB

capacity: 709GiB

capabilities: primary extended partitioned partitioned:extended

\*-logicalvolume

description: Linux filesystem partition

physical id: 5

logical name: /dev/sda5

logical name: /

capacity: 709GiB

configuration: mount.fstype=ext4 mount.options=rw,relatime,errors=remount-ro,data=ordered state=mounted

\*-scsi:1

physical id: ac

logical name: scsi7

capabilities: emulated

\*-disk

description: ATA Disk

product: Samsung SSD 860

physical id: 0.0.0

bus info: scsi@7:0.0.0

logical name: /dev/sdb

version: 2B6Q

serial: S5G8NA0N303182R

size: 953GiB (1024GB)

capabilities: partitioned partitioned:dos

configuration: ansiversion=5 logicalsectorsize=512 sectorsize=512 signature=2db5a8b7

\*-volume

description: EXT4 volume

vendor: Linux

physical id: 1

bus info: scsi@7:0.0.0,1

logical name: /dev/sdb1

logical name: /home

version: 1.0

serial: a58c390b-5311-4e58-9201-4fa224799c19

size: 953GiB

capacity: 953GiB

capabilities: primary journaled extended\_attributes large\_files huge\_files dir\_nlink recover extents ext4 ext2 initialized

configuration: created=2020-12-01 22:52:39 filesystem=ext4 lastmountpoint=/home modified=2021-01-19 10:39:14 mount.fstype=ext4 mount.options=rw,relatime,data=ordered mounted=2021-01-19 10:39:14 state=mounted

\*-power:0 UNCLAIMED

description: PWS-2K20A-1R

product: PWS-2K20A-1R

vendor: SUPERMICRO

physical id: 1

version: 1.1

serial: P2K20CK11XB0064

capacity: 2200mWh

\*-power:1 UNCLAIMED

description: PWS-2K20A-1R

product: PWS-2K20A-1R

vendor: SUPERMICRO

physical id: 2

version: 1.1

serial: P2K20CK11XB0063

capacity: 2200mWh