CPU Inference Engines

Configuration	Intel® Xeon® E-2124G	Intel® Xeon® W1290P	Intel® Xeon® Silver 4216R	Intel® Xeon® Silver 4316	Intel® Xeon® Gold 5218T	Intel® Xeon® Platinum 8270
Motherboard	ASUS WS C246 PRO	ASUS WS W480-ACE	Intel® Server Board S2600STB	Intel Corporation / WilsonCity	Intel® Server Board S2600STB	Intel® Server Board S2600STB
CPU	Intel® Xeon® E-2124G CPU @ 3.40GHz	Intel® Xeon® W-1290P CPU @ 3.70GHz	Intel® Xeon® Silver 4216R CPU @ 2.20GHz	Intel® Xeon® Silver 4316 CPU @ 2.30GH	Intel® Xeon® Gold 5218T CPU @ 2.10GHz	Intel® Xeon® Platinum 8270 CPU @ 2.70GHz
Hyper Threading	OFF	ON	ON	ON	ON	ON
Turbo Setting	ON	ON	ON	ON	ON	ON
Memory	2 x 16 GB DDR4 2666MHz	4 x 16 GB DDR4 @ 2666MHz	12 x 32 GB DDR4 2666MHz	16 x 32 GB DDR4 @ 2666MHz	12 x 32 GB DDR4 2666MHz	12 x 32 GB DDR4 2933MHz
Operating System	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS
Kernel Version	5.4.0-42-generic	5.4.0-42-generic	5.3.0-24-generic	5.4.0-100-generic	5.3.0-24-generic	5.3.0-24-generic
BIOS Vendor	American Megatrends Inc.	American Megatrends Inc.	Intel Corporation	Intel Corporation	Intel Corporation	Intel Corporation
BIOS Version	1901	2301	SE5C620.86B.02.01. 0013.121520200651	WLYDCRB1.SYS.0021. P41.2109200451	SE5C620.86B.02.01. 0013.121520200651	SE5C620.86B.02.01. 0013.121520200651
BIOS Release	September 24, 2021	July 8, 2021	December 15, 2020	September 20, 2021	December 15, 2020	December 15, 2020
BIOS Settings	Select optimized default settings, save & exit	Select optimized default settings, save & exit	Select optimized default settings, change power policy to "performance", save & exit	Select optimized default settings, save & exit	Select optimized default settings, change power policy to "performance", save & exit	Select optimized default settings, change power policy to "performance", save & exit
Batch size	1	1	1	1	1	1
Precision	INT8	INT8	INT8	INT8	INT8	INT8
Number of concurrent inference requests	4	5	32	32	32	52
Rated maximum TDP/socket in Watt	71	125	125	150	105	205
CPU Prices/socket on Feb 14, 2022, USD Prices may vary	213	539	1,002	1083	1,349	7,405

Configuration	Intel® Xeon® Platinum 8380	Intel® Core™ i9-10920X	Intel® Core™ i9-10900TE	Intel® Core™ i9-12900	Intel® Core™ i7-8700T	Intel® Core™ i7-1185G7
Motherboard	Intel Corporation / WilsonCity	ASUS PRIME X299-A II	B595	Intel Corporation internal/Reference Validation Platform	GIGABYTE Z370M DS3H-CF	Intel Corporation internal/Reference Validation Platform
CPU	Intel® Xeon® Platinum 8380 CPU @ 2.30GHz	Intel® Core™ i9-10920X CPU @ 3.50GHz	Intel® Core™ i9-10900TE CPU @ 1.80GHz	12th Gen Intel® Core™ i9-12900	Intel® Core™ i7-8700T CPU @ 2.40GHz	Intel® Core™ i7-1185G7 @ 3.00GHz
Hyper Threading	ON	ON	ON	OFF	ON	ON
Turbo Setting	ON	ON	ON	●	ON	ON
Memory	16 x 16 GB DDR4 3200MHz	4 x 16 GB DDR4 2666MHz	2 x 8 GB DDR4 @ 2400 MHz	4 x 8 GB DDR4 4800MHz	4 x 16 GB DDR4 2400MHz	2 x 8 GB DDR4 3200MHz
Operating System	Ubuntu 20.04.1 LTS	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS	Microsoft Windows 10 Pro	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS
Kernel Version	5.4.0-64-generic	5.4.0-42-generic	5.4.0-42-generic	10.0.19043 N/A Build 19043	5.4.0-42-generic	5.8.0-050800-generic
BIOS Vendor	Intel Corporation	American Megatrends Inc.	American Megatrends Inc.	Intel Corporation	American Megatrends Inc.	Intel Corporation
BIOS Version	WLYDCRB1.SYS.0020. P86.2103050636	1004	Z667AR10.BIN	ADLSFWI1.R00.2303. B00.2107210432	F14c	TGLSFWI1.R00.4391. A00.2109201819
BIOS Release	March 5, 2021	March 19, 2021	July 15, 2020	July 21, 2021	March 23, 2021	September 20, 2021
BIOS Settings	Select optimized default settings, change power policy to "performance", save & exit	Default Settings	Default Settings	Default Settings	Select optimized default settings, set OS type to "other", save & exit	Default Settings
Batch size	1	1	1	1	1	1
Precision	INT8	INT8	INT8	INT8	INT8	INT8
Number of concurrent inference requests	80	24	5	4	4	4
Rated maximum TDP/socket in Watt	270	165	35	65	35	28
CPU Prices/socket on Feb 14, 2022, USD Prices may vary	8,099	700	444	519	303	426

Configuration	Intel® Core™ i3-8100	Intel® Core™ i5-8500	Intel® Core™ i5-10500TE	Intel Atom® x5-E3940	Intel Atom® x6425RE	Intel® Celeron® 6305E
Motherboard	GIGABYTE Z390 UD	ASUS PRIME Z370-A	GIGABYTE Z490 AORUS PRO AX	Intel Corporation internal/Reference Validation Platform	Intel Corporation internal/Reference Validation Platform	Intel Corporation internal/Reference Validation Platform
CPU	Intel® Core™ i3-8100 CPU @ 3.60GHz	Intel® Core™ i5-8500 CPU @ 3.00GHz	Intel® Core™ i5-10500TE CPU @ 2.30GHz	Intel Atom® Processor E3940 @ 1.60GHz	Intel Atom® x6425RE Processor @ 1.90GHz	Intel® Celeron® 6305E @ 1.80GHz
Hyper Threading	OFF	OFF	ON	OFF	OFF	OFF
Turbo Setting	OFF	ON	ON	ON	ON	ON
Memory	4 x 8 GB DDR4 2400MHz	2 x 16 GB DDR4 2666MHz	2 x 16 GB DDR4 @ 2666MHz	1 x 8 GB DDR3 1600MHz	2 x 4GB DDR4 3200MHz	2 x 8 GB DDR4 3200MHz
Operating System	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS
Kernel Version	5.3.0-24-generic	5.4.0-42-generic	5.4.0-42-generic	5.4.0-42-generic	5.13.0-27-generic	5.13.0-1008-intel
BIOS Vendor	American Megatrends Inc.	American Megatrends Inc.	American Megatrends Inc.	American Megatrends Inc.	Intel Corporation	Intel Corporation
BIOS Version	F8	3004	F21	5.12	EHLSFWI1.R00.3273.A01.2106300759	TGLIFUI1.R00.4064.A02.2102260133
BIOS Release	May 24, 2019	July 12, 2021	November 23, 2021	September 6, 2017	June 30, 2021	February 26, 2021
BIOS Settings	Select optimized default settings, set OS type to "other", save & exit	Select optimized default settings, save & exit	Select optimized default settings, set OS type to "other", save & exit	Default settings	Default settings	Default settings
Batch size	1	1	1	1	1	1
Precision	INT8	INT8	INT8	INT8	INT8	INT8
Number of concurrent inference requests	4	3	4	4	4	4
Rated maximum TDP/socket in Watt	65	65	35	9.5	12	15
CPU Prices/socket on Feb 14, 2022, USD Prices may vary	117	192	195	34	59	107

Accelerator Inference Engines

Configuration	Intel® Neural Compute Stick 2	Intel® Vision Accelerator Design with Intel® Movidius™ VPUs (Mustang-V100-MX8)
VPU	1 X Intel® Movidius™ Myriad™ X MA2485	8 X Intel® Movidius™ Myriad™ X MA2485
Connection	USB 2.0/3.0	PCIe X4
Batch size	1	1
Precision	FP16	FP16
Number of concurrent inference requests	4	32
Rated maximum TDP/socket in Watt	2.5	30
CPU Price/socket on Feb 14, 2022, USD Prices may vary	69	492
Host Computer	Intel® Core™ i7	Intel® Core™ i5
Motherboard	ASUS Z370-A II	Uzelinfo / US-E1300
CPU	Intel® Core™ i7-8700 CPU @ 3.20GHz	Intel® Core™ i5-6600 CPU @ 3.30GHz
Hyper Threading	ON	OFF
Turbo Setting	ON	ON
Memory	4 x 16 GB DDR4 2666MHz	2 x 16 GB DDR4 2400MHz
Operating System	Ubuntu 20.04.3 LTS	Ubuntu 20.04.3 LTS
Kernel Version	5.0.0-23-generic	5.0.0-23-generic
BIOS Vendor	American Megatrends Inc.	American Megatrends Inc.
BIOS Version	411	5.12
BIOS Release	September 21, 2018	September 21, 2018