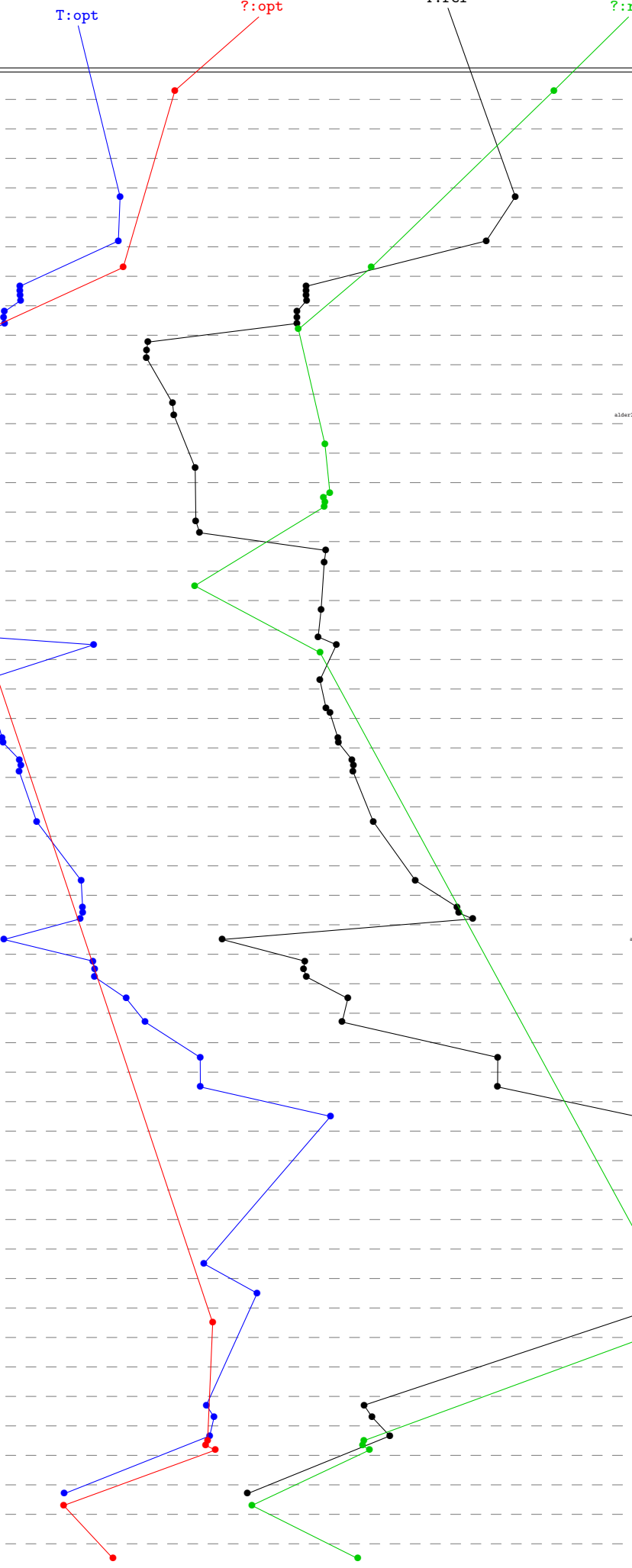


crypto\_kem  
limasp1822cca  
implementations  
amd64 Bobcat  
amd64 K8  
amd64 K10 65nm  
amd64 K10 45nm  
amd64 K10 32nm  
amd64 Bulldozer  
amd64 Piledriver  
amd64 Zen  
amd64 Zen 2  
amd64 Zen 3  
amd64 Knights Landing  
amd64 Golden Cove  
amd64 Cascade Lake  
amd64 Tiger Lake  
amd64 Skylake+512x2  
amd64 Ice Lake  
amd64 Comet Lake  
amd64 Cannon Lake  
amd64 Coffee Lake  
amd64 Kaby Lake  
amd64 Skylake  
amd64 Broadwell+AES  
amd64 Haswell+AES  
amd64 Ivy Bridge+AES  
amd64 Sandy Bridge+AES  
amd64 Sandy Bridge  
amd64 Westmere  
amd64 Core 2 45nm  
amd64 Core 2 65nm  
amd64 Gracemont  
amd64 Tremont  
amd64 Goldmont Plus  
amd64 Goldmont  
amd64 Airmont  
amd64 Silvermont  
amd64 Bonnell  
ppc32 G3  
riscv64 U54  
mips32 Octeon II  
armeabi Armada  
armeabi Cortex-A7  
armeabi Cortex-A8  
armeabi Cortex-A9+NEON  
armeabi Cortex-A15  
aarch64 X-Gen  
aarch64 Cortex-A53  
aarch64 Cortex-A53+crypto  
aarch64 Cortex-A57+crypto  
aarch64 Cortex-A72  
aarch64 Cortex-A72+crypto  
aarch64 ThunderX2



https://bench.cr.yp.to  
20230702

bhobcat: 2 x 1650MHz; 2011 AMD G-T56N; amd64; Bobcat (600F10); supercop-20230630  
h4450: 2 x 1650MHz; 2011 AMD E-450; amd64; Bobcat (600F20); supercop-20230618

naac: 2 x 2000MHz; 2006 AMD Athlon 64 X2; amd64; K8 (40fb2); supercop-201710105

gcc16: 8 x 2194MHz; 2008 AMD Opteron 8354; amd64; K10 65nm (100F23); supercop-20171218

hydra3: 6 x 3300MHz; 2010 AMD Phenom II X6 1100T; amd64; K10 45nm (100fa0); supercop-20171218  
sonnigstar: 4 x 3200MHz; 2009 AMD Phenom II X4 955; amd64; K10 45nm (100fa2); supercop-20170904  
h3aac: 1 x 1700MHz; 2010 AMD Athlon II Neo K125; amd64; K10 45nm (100f63); supercop-201710105

hydra4: 4 x 2600MHz; 2011 AMD A8-3850; amd64; K10 32nm (300F10); supercop-20230630  
hydra5: 4 x 2900MHz; 2011 AMD A8-3850; amd64; K10 32nm (300F10); supercop-20230630

bobcat: 4 x 4000MHz; 2012 AMD FX-8350; amd64; Bulldozer (600P20); supercop-20171218  
calvin: 4 x 4000MHz; 2012 AMD FX-8350; amd64; Bulldozer (600P20); supercop-20171218  
hydra6: 4 x 3100MHz; 2011 AMD FX-8120; amd64; Bulldozer (600J12); supercop-20171218  
sawer216: 4 x 4000MHz; 2012 AMD FX-8350; amd64; Bulldozer (600P20); supercop-20230630

hydra9: 2 x 3800MHz; 2012 AMD A10-5800K; amd64; Piledriver (610F01); supercop-20171218  
hptriarty: 2 x 2000MHz; 2012 AMD A10-6650M; amd64; Piledriver (610F01); supercop-20200618

zeus: 8 x 3000MHz; 2017 AMD Ryzen 7 1700; amd64; Zen (800H11); supercop-20170865  
zeus2: 8 x 3000MHz; 2017 AMD Ryzen 7 1700; amd64; Zen (800H11); supercop-20170865  
rubab: 4 x 3100MHz; 2017 AMD Ryzen 5 1600; amd64; Zen (800H11); supercop-20211222  
rubab2: 4 x 3100MHz; 2017 AMD Ryzen 5 1600; amd64; Zen (800H11); supercop-20211222  
dali: 2 x 3800MHz; 2017 AMD Ryzen 7 1700; amd64; Zen (800H11); supercop-20211222

reno: 64 x 2250MHz; 2019 AMD EPYC 7742; amd64; Zen 2 (830F10); supercop-20230630  
reno2: 6 x 3000MHz; 2022 AMD Ryzen 5 4500U; amd64; Zen 2 (860H01); supercop-20230630  
lacune: 4 x 2600MHz; 2021 AMD Ryzen 9 5950X; amd64; Zen 3 (820F10); supercop-20230630  
gwj1346: 64 x 2000MHz; 2019 AMD EPYC 7702; amd64; Zen 2 (830F10); supercop-20191017

beeline: 6 x 4062MHz; 2021 AMD Ryzen 5 5600G; amd64; Zen 3 (a50F00); supercop-20211222  
sash: 16 x 3400MHz; 2020 AMD Ryzen 9 5950X; amd64; Zen 3 (820F10); supercop-20230630  
cezanne: 6 x 3900MHz; 2021 AMD Ryzen 5 PRO 5650G; amd64; Zen 3 (a50F00); supercop-20230630

gwj1291: 68 x 1400MHz; 2016 Intel Xeon Phi 7250; amd64; Knights Landing (50671); supercop-20180818  
gwj1154: 64 x 1300MHz; 2016 Intel Xeon Phi 7210; amd64; Knights Landing (50671); supercop-20170228

alder: 4 x 3300MHz; 2022 Intel Core i3-12100; amd64; Golden Cove (90673-00); supercop-20230630  
alder2.1f62690.5600000: 2 x 1600MHz; 2022 Intel Core i3-1215U performance cores; amd64; Golden Cove (906A4-40); supercop-20230630

avx512aath: 18 x 3000MHz; 2019 Intel Core i9-10980XE; amd64; Cascade Lake (50657); supercop-20210126  
jms0476: 20 x 2500MHz; 2019 Intel Xeon Gold 6248; amd64; Cascade Lake (50657); supercop-20191017

panthar: 4 x 2800MHz; 2020 Intel Core i7-1165G7; amd64; Tiger Lake (806c1); supercop-20230630

nanpy1024: 18 x 2700MHz; 2017 Intel Xeon Gold 6150; amd64; Skylake+512x2 (90654); supercop-20170814  
nanpy0512: 8 x 2500MHz; 2017 Intel Core i7-8750; amd64; Skylake+512x2 (90654); supercop-20171121  
nanpy0256: 4 x 2400MHz; 2017 Intel Core i7-8750; amd64; Skylake+512x2 (90654); supercop-20171121  
gwj1346: 64 x 2400MHz; 2017 Intel Xeon Gold 6150; amd64; Skylake+512x2 (90654); supercop-20191017  
gwj1346: 64 x 2400MHz; 2017 Intel Xeon Gold 6150; amd64; Skylake+512x2 (90654); supercop-20191017

icelake2: 4 x 1000MHz; 2019 Intel Core i3-1035G1; amd64; Ice Lake (706e5); supercop-20221005  
icelake: 4 x 1100MHz; 2020 Intel Core i5-1030NG7; amd64; Ice Lake (706e5); supercop-20200626

cus10: 2 x 2100MHz; 2019 Intel Core i3-10110U; amd64; Comet Lake (806ec); supercop-20230630  
cosat: 2 x 2100MHz; 2019 Intel Core i3-10110U; amd64; Comet Lake (806ec); supercop-20230630

cannon: 2 x 2200MHz; 2018 Intel Core i3-8121U; amd64; Cannon Lake (90663); supercop-20190910

r3400: 4 x 3300MHz; 2018 Intel Xeon E-2124; amd64; Coffee Lake (906ea); supercop-20230630  
n3190: 6 x 3200MHz; 2017 Intel Core i7-8700; amd64; Coffee Lake (906ea); supercop-20190910

kabya: 4 x 3000MHz; 2017 Intel Xeon E3-1220 v6; amd64; Kaby Lake (906e9); supercop-20230630  
skosharsa: 2 x 2400MHz; 2017 Intel Core i3-7100; amd64; Kaby Lake (906e9); supercop-20211222  
istalaue18: 4 x 3100MHz; 2018 Intel Core i7-8809G; amd64; Kaby Lake (906e9); supercop-20191017

sand: 2 x 3300MHz; 2015 Intel Pentium G4400; amd64; Skylake (506e3); supercop-20171218  
saba: 4 x 3000MHz; 2015 Intel Xeon E3-1220 v5; amd64; Skylake (506e3); supercop-20230630

em1144: 28 x 2400MHz; 2016 Intel Xeon E5-2680 v4; amd64; Broadwell+AES (406f1); supercop-20180818  
Broadwell: 18 x 2400MHz; 2016 Intel Xeon E5-2680 v4; amd64; Broadwell+AES (406f1); supercop-20170228  
Broadwell: 18 x 2400MHz; 2016 Intel Xeon E5-2680 v4; amd64; Broadwell+AES (406f1); supercop-20170228  
Broadwell: 18 x 2400MHz; 2016 Intel Xeon E5-2680 v4; amd64; Broadwell+AES (406f1); supercop-20170228  
Broadwell: 18 x 2400MHz; 2016 Intel Xeon E5-2680 v4; amd64; Broadwell+AES (406f1); supercop-20170228

em1165: 20 x 2000MHz; 2014 Intel Xeon E5-2680 v3; amd64; Haswell+AES (306e1); supercop-20190918  
Haswell: 12 x 2000MHz; 2012 Intel Xeon E3-1275 V2; amd64; Haswell+AES (306e1); supercop-20190918  
Haswell: 4 x 2100MHz; 2013 Intel Xeon E3-1275 V2; amd64; Haswell+AES (306e1); supercop-20190918  
Haswell: 4 x 2100MHz; 2013 Intel Xeon E3-1275 V2; amd64; Haswell+AES (306e1); supercop-20190918  
Haswell: 4 x 2100MHz; 2013 Intel Xeon E3-1275 V2; amd64; Haswell+AES (306e1); supercop-20190918

nanpy613: 12 x 2700MHz; 2013 Intel Xeon E5-2697 v2; amd64; Ivy Bridge+AES (306e4); supercop-20180818  
hansivvy: 2 x 1800MHz; 2012 Intel Core i5-3427U; amd64; Ivy Bridge+AES (306e4); supercop-20230630  
hydra8: 4 x 3500MHz; 2012 Intel Xeon E3-1275 V2; amd64; Ivy Bridge+AES (306e4); supercop-20230630  
bedera: 4 x 2500MHz; 2012 Intel Xeon E3-1265L V2; amd64; Ivy Bridge+AES (306e4); supercop-20210326

robia281: 8 x 2600MHz; 2012 Intel Xeon E5-4650L; amd64; Sandy Bridge+AES (206d7); supercop-20170228  
hydra7: 4 x 3100MHz; 2011 Intel Xeon E3-1225; amd64; Sandy Bridge+AES (206d7); supercop-20230630

h6sandy: 2 x 2100MHz; 2011 Intel Core i3-2310M; amd64; Sandy Bridge (206a7); supercop-20221122

glyse: 2 x 3200MHz; 2010 Intel Core i5-650; amd64; Westmere (20652); supercop-201710105

voirdale: 2 x 3060MHz; 2009 Intel Core 2 Duo E7600; amd64; Core 2 45nm (1067a); supercop-20230630

katana: 2 x 2137MHz; 2006 Intel Core 2 Duo E6400; amd64; Core 2 65nm (6f6); supercop-201710105  
trslant: 2 x 2000MHz; 2007 Intel Core 2 Duo T7300; amd64; Core 2 65nm (6f6); supercop-20230630  
nargard: 4 x 2404MHz; 2007 Intel Core 2 Quad Q6600; amd64; Core 2 65nm (6f6); supercop-20230630  
latour: 4 x 2394MHz; 2007 Intel Core 2 Quad Q6600; amd64; Core 2 65nm (6f6); supercop-20201130

alder2.1f62690.3300000: 4 x 1600MHz; 2022 Intel Core i3-1215U efficiency cores; amd64; Gracemont (906A4-20); supercop-20230630

jasper2: 2 x 1100MHz; 2021 Intel Celeron N4500; amd64; Tremont (906c0); supercop-20230630  
jasper3: 4 x 2000MHz; 2021 Intel Celeron N5105; amd64; Tremont (906c0); supercop-20230630  
jasper: 4 x 1100MHz; 2021 Intel Pentium Silver N6000; amd64; Tremont (906c0); supercop-20230630

gemini: 2 x 1100MHz; 2019 Intel Celeron N4020; amd64; Goldmont Plus (706a8); supercop-20230630

wooden: 4 x 1500MHz; 2016 Intel Celeron J3455; amd64; Goldmont (506c9); supercop-20230630  
scv1m8n1: 16 x 2100MHz; 2017 Intel Atom C3955; amd64; Goldmont (506f1); supercop-20191017

mccmc: 4 x 1600MHz; 2015 Intel Pentium N3700; amd64; Airmont (406c3); supercop-20230630

cherry: 4 x 1440MHz; 2016 Intel Atom i5-28350; amd64; Silvermont (406c4); supercop-20230630

hbaton: 2 x 1866MHz; 2011 Intel Atom D2500; amd64; Bonnell (30661); supercop-20230630

alntendosilluziang: 1 x 720MHz; 2006 IBM PowerPC Broadway; ppc32; G3 (G3); supercop-20191221

hifiveunleashedriscv: 4 x 1400MHz; 2017 SiFive Freedom U540; riscv64; U54 (sifive,u54-mc); supercop-20191221  
riscvunleashed000: 4 x 1000MHz; 2017 SiFive Freedom U540; riscv64; U54 (sifive,u54-mc); supercop-20210326

gcc23: 2 x 2000MHz; 2011 Cavium Octeon II CN6120; mips32; Octeon II (cmnips64v2); supercop-20230630  
exproffatz2: 2 x 2000MHz; 2011 Cavium Octeon II CN6120; mips32; Octeon II (cmnips64v2); supercop-20220213

tesla: 1 x 1200MHz; 2010 Marvel Armada 310; armeabi; Armada (562f311); supercop-20170718

berry2: 4 x 900MHz; 2016 Broadcom BCM2836; armeabi; Cortex-A7 (410f075); supercop-20230630

black: 1 x 1000MHz; 2012 TI Sitara XAM3359AZCZ100; armeabi; Cortex-A8 (413fc082); supercop-20230630

novena14x: 4 x 1200MHz; 2011 Freescale i.MX6 Quad; armeabi; Cortex-A9+NEON (412f09a); supercop-20200702  
artix: 4 x 1200MHz; 2012 Samsung Exynos 44127; armeabi; Cortex-A9+NEON (413f090); supercop-20191221  
novena14x: 4 x 1200MHz; 2011 Freescale i.MX6 Quad; armeabi; Cortex-A9+NEON (412f09a); supercop-20191221

jetsonrti: 4 x 2065MHz; 2014 NVIDIA Tegra K1; armeabi; Cortex-A15 (413fc0f3); supercop-20170728

gcc16: 8 x 1600MHz; 2014 APM 88320B-X1; aarch64; X-Gen (500F000); supercop-20171218

pi3apla: 4 x 1400MHz; 2018 Broadcom BCM2837B0; aarch64; Cortex-A53 (410f034); supercop-20230630  
pi3apla: 4 x 1400MHz; 2018 Broadcom BCM2837B0; aarch64; Cortex-A53 (410f034); supercop-20221122

leus: 4 x 1500MHz; 2015 ARMv8-A Cortex-A53; aarch64; Cortex-A53+crypto (410f034); supercop-20170718  
leus: 4 x 1500MHz; 2015 ARMv8-A Cortex-A53; aarch64; Cortex-A53+crypto (410f034); supercop-20170718  
leus: 4 x 1500MHz; 2015 ARMv8-A Cortex-A53; aarch64; Cortex-A53+crypto (410f034); supercop-20170718  
leus: 4 x 1500MHz; 2015 ARMv8-A Cortex-A53; aarch64; Cortex-A53+crypto (410f034); supercop-20170718  
leus: 4 x 1500MHz; 2015 ARMv8-A Cortex-A53; aarch64; Cortex-A53+crypto (410f034); supercop-20170718

jetsonrti: 4 x 1734MHz; 2015 NVIDIA Tegra X1; aarch64; Cortex-A57+crypto (418f071); supercop-20191017  
warbear: 8 x 2000MHz; 2016 AMD Opteron A1100; aarch64; Cortex-A57+crypto (411f072); supercop-20200626

pi4b: 4 x 1500MHz; 2019 Broadcom BCM2711; aarch64; Cortex-A72 (410f083); supercop-20221122  
rpi4bunleashed: 4 x 1500MHz; 2019 Broadcom BCM2711; aarch64; Cortex-A72 (410f083); supercop-20191221

a72: 2 x 2100MHz; 2015 Mediatek MT8173; aarch64; Cortex-A72+crypto (418f080); supercop-20170904

pm04145: 64 x 2500MHz; 2018 Cavium ThunderX2 CN980; aarch64; ThunderX2 (431fa1f1); supercop-20191017

Time 8388608 33554432 134217728