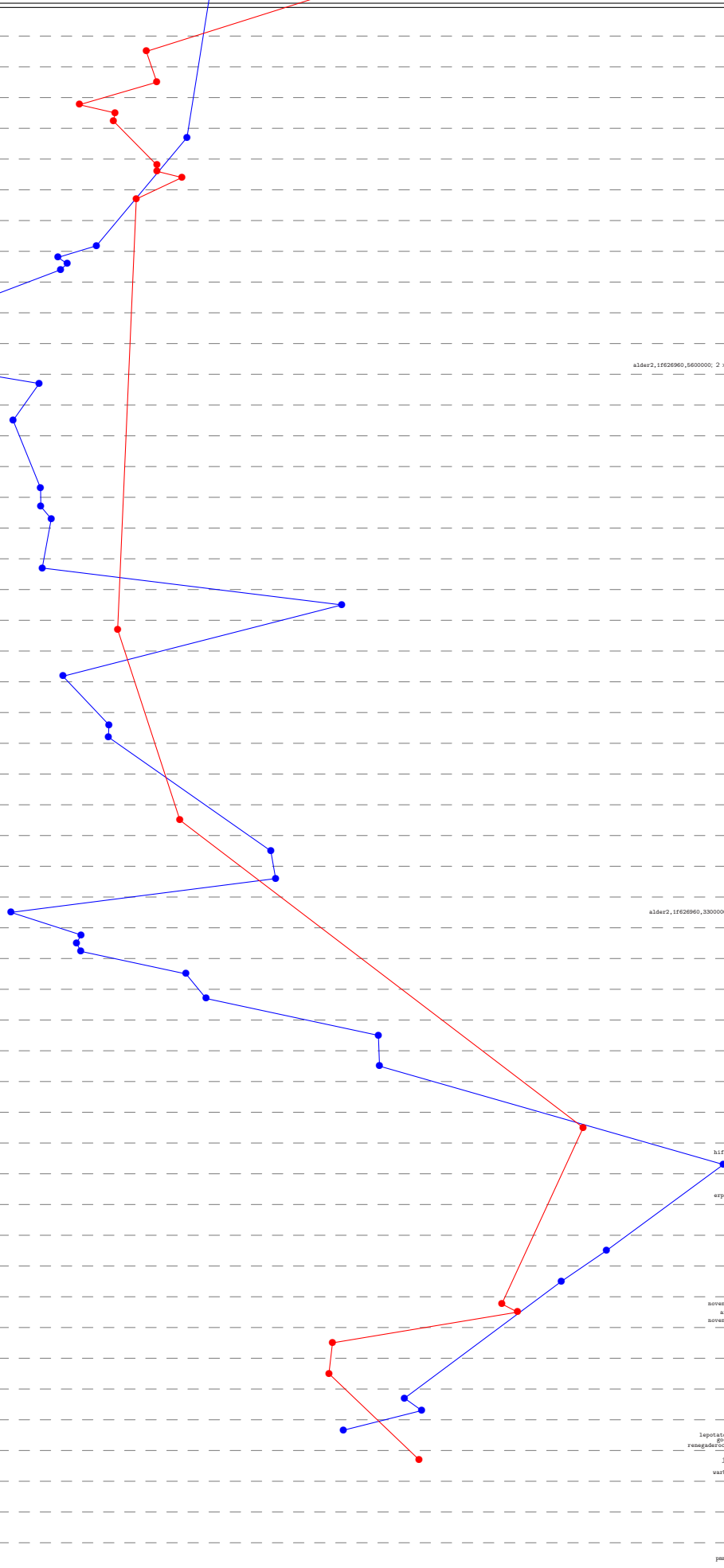


crypto_sign
ecdna1dp160
implementations
amd64 Bobcat
amd64 K8
amd64 K10 65nm
amd64 K10 45nm
amd64 K10 32nm
amd64 Bulldozer
amd64 Piledriver
amd64 Zen
amd64 Zen 2
amd64 Zen 3
amd64 Knights Landing
amd64 Golden Cove
amd64 Cascade Lake
amd64 Tiger Lake
amd64 Skylake+512x2
amd64 Ice Lake
amd64 Comet Lake
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 Oocteon II
armeabi Armada
armeabi Cortex-A7
armeabi Cortex-A8
armeabi Cortex-A9+NEON
armeabi Cortex-A15
aarch64 X-Gene
aarch64 Cortex-A53
aarch64 Cortex-A53+crypto
aarch64 Cortex-A57+crypto
aarch64 Cortex-A72
aarch64 Cortex-A72+crypto
aarch64 ThunderX2

T:opensslnew

?:openssl

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



Hardware Configuration	SuperCop Score
bobcat: 2 x 1650MHz; 2011 AMD G-T56n; amd64; Bobcat (600F10);	supercop-20230630
m4450: 2 x 1650MHz; 2011 AMD E-450; amd64; Bobcat (600F20);	supercop-20200618
nac: 2 x 2000MHz; 2006 AMD Athlon 64 X2; amd64; K8 (40f2b);	supercop-20171015
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
h3wax: 1 x 1700MHz; 2010 AMD Athlon II Neo K125; amd64; K10 45nm (100fB3);	supercop-20171218
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 (600F20);	supercop-20171218
cavli3: 4 x 4000MHz; 2012 AMD FX-8350; amd64; Bulldozer (600F20);	supercop-20171218
hydra4: 4 x 3100MHz; 2011 AMD FX-8120; amd64; Bulldozer (600F12);	supercop-20171218
shawer216: 4 x 4000MHz; 2012 AMD FX-8350; amd64; Bulldozer (600F20);	supercop-20230630
hydra9: 2 x 3800MHz; 2012 AMD A10-5800K; amd64; Piledriver (610F01);	supercop-20171218
fpriariaty: 2 x 2000MHz; 2012 AMD A10-6655M; amd64; Piledriver (610F01);	supercop-20200618
zees: 8 x 3000MHz; 2017 AMD Ryzen 7 1700; amd64; Zen (800H11);	supercop-20210865
zees: 8 x 3000MHz; 2017 AMD Ryzen 7 1700; amd64; Zen (800H11);	supercop-20210865
rubab4: 4 x 3100MHz; 2017 AMD Ryzen 3 1300; amd64; Zen (800H11);	supercop-20210865
rubab3: 4 x 3100MHz; 2017 AMD Ryzen 3 1300; amd64; Zen (800H11);	supercop-20210865
dal: 2 x 1100MHz; 2016 AMD Athlon Silver E3000; amd64; Zen (800H11);	supercop-20210865
rozo: 64 x 2250MHz; 2019 AMD EPYC 7742; amd64; Zen 2 (830F10);	supercop-20230630
rozo1r: 6 x 3600MHz; 2022 AMD Ryzen 5 4500U; amd64; Zen 2 (860H01);	supercop-20230630
lactiane: 4 x 2000MHz; 2021 AMD Ryzen 3 3300U; amd64; Zen 2 (830F11);	supercop-20230630
gew1346: 64 x 2000MHz; 2019 AMD EPYC 7702; amd64; Zen 2 (830F10);	supercop-20191017
beeline: 6 x 4625MHz; 2021 AMD Ryzen 5 5600G; amd64; Zen 3 (a50F00);	supercop-20211221
san: 16 x 3400MHz; 2020 AMD Ryzen 9 5950X; amd64; Zen 3 (a30F10);	supercop-20210213
cezanne: 6 x 3900MHz; 2021 AMD Ryzen 5 PRO 5650G; amd64; Zen 3 (a50F00);	supercop-20230630
gew1291: 68 x 1400MHz; 2016 Intel Xeon Phi 7250; amd64; Knights Landing (50671);	supercop-20180818
gew1154: 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
avx512naht: 18 x 3000MHz; 2019 Intel Core i9-10980XE; amd64; Cascade Lake (50657);	supercop-20201126
pmo4076: 20 x 2500MHz; 2019 Intel Xeon Gold 6248; amd64; Cascade Lake (50657);	supercop-20191017
panther: 4 x 2800MHz; 2020 Intel Core i7-1165G7; amd64; Tiger Lake (806c1);	supercop-20230630
sanmy1024: 10 x 2100MHz; 2017 Intel Xeon Gold 6150; amd64; Skylake-E (70654);	supercop-20170804
sanmy1024: 10 x 2100MHz; 2017 Intel Xeon Gold 6150; amd64; Skylake-E (70654);	supercop-20181123
sanmy1024: 10 x 2100MHz; 2017 Intel Xeon Gold 6150; amd64; Skylake-E (70654);	supercop-20210213
gew1248: 8 x 2400MHz; 2017 Intel Xeon Gold 6150; amd64; Skylake-E (70654);	supercop-20191017
gew1248: 8 x 2400MHz; 2017 Intel Xeon Gold 6150; amd64; Skylake-E (70654);	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
cub10: 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
r3000: 4 x 3300MHz; 2018 Intel Xeon E-2124; amd64; Coffee Lake (906a3);	supercop-20230630
bitvisie: 6 x 3200MHz; 2017 Intel Core i7-8700; amd64; Coffee Lake (906a3);	supercop-20190910
kiyamba: 4 x 3000MHz; 2017 Intel Xeon E3-1220 v6; amd64; Kaby Lake (906e9);	supercop-20230630
shasthya: 2 x 2400MHz; 2017 Intel Core i3-7102; amd64; Kaby Lake (906e9);	supercop-20211221
intalacul: 4 x 3100MHz; 2018 Intel Core i7-8809G; amd64; Kaby Lake (906e9);	supercop-20191017
saas: 2 x 3300MHz; 2015 Intel Pentium G4400; amd64; Skylake (506e3);	supercop-20171218
saaba: 4 x 3000MHz; 2015 Intel Xeon E3-1220 v5; amd64; Skylake (506e3);	supercop-20230630
gew1164: 28 x 2400MHz; 2016 Intel Xeon E5-2650 v4; amd64; Broadwell+AES (306d1);	supercop-20180818
Banj177: 16 x 2400MHz; 2016 Intel Xeon E5-2650 v4; amd64; Broadwell+AES (306d1);	supercop-20170228
Banj177: 16 x 2400MHz; 2016 Intel Xeon E5-2650 v4; amd64; Broadwell+AES (306d1);	supercop-20170228
bolter: 18 x 1700MHz; 2015 Intel Core i7-5900A; amd64; Broadwell+AES (306d1);	supercop-20230630
bolter: 18 x 1700MHz; 2015 Intel Core i7-5900A; amd64; Broadwell+AES (306d1);	supercop-20230630
gew1165: 20 x 2200MHz; 2014 Intel Xeon E5-2650 v3; amd64; Haswell+AES (306d1);	supercop-20191017
Haswell: 4 x 2400MHz; 2013 Intel Xeon E3-1220 v2; amd64; Haswell+AES (306d1);	supercop-20230630
Haswell: 4 x 2400MHz; 2013 Intel Xeon E3-1220 v2; amd64; Haswell+AES (306d1);	supercop-20230630
Haswell: 4 x 2400MHz; 2013 Intel Xeon E3-1220 v2; amd64; Haswell+AES (306d1);	supercop-20230630
sanmy613: 12 x 2700MHz; 2013 Intel Xeon E5-2697 v2; amd64; Ivy Bridge+AES (306d4);	supercop-20180818
sanmy613: 12 x 2700MHz; 2013 Intel Xeon E5-2697 v2; amd64; Ivy Bridge+AES (306d4);	supercop-20230630
hydra6: 4 x 3500MHz; 2012 Intel Xeon E3-1275 V2; amd64; Ivy Bridge+AES (306d4);	supercop-20230630
bedera: 4 x 2500MHz; 2012 Intel Xeon E3-1265L V2; amd64; Ivy Bridge+AES (306d4);	supercop-20210226
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-20171015
voifdale: 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 (66f);	supercop-20171015
tristan: 2 x 2000MHz; 2007 Intel Core 2 Duo T7300; amd64; Core 2 65nm (66f);	supercop-20230630
augur: 4 x 2404MHz; 2007 Intel Core 2 Quad Q6600; amd64; Core 2 65nm (66f);	supercop-20230630
lalour: 4 x 2394MHz; 2007 Intel Core 2 Quad Q6600; amd64; Core 2 65nm (66f);	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
scv1M8b1: 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-Z8350; amd64; Silvermont (406a4);	supercop-20230630
bbaton: 2 x 1866MHz; 2011 Intel Atom D2500; amd64; Bonnell (306f1);	supercop-20230630
alntendovillilaung: 1 x 729MHz; 2006 IBM PowerPC Broadway; ppc32; G3 (G3);	supercop-20191221
hifiveunleashedriscv: 4 x 1400MHz; 2017 SiFive Freedom U540; riscv64; U54 (sifive,u54-mc);	supercop-20191221
scrvunleashed000: 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 (cnnip64v2);	supercop-20230630
expoffart2: 2 x 2000MHz; 2011 Cavium Octeon II CN6120; mips32; Octeon II (cnnip64v2);	supercop-20220213
teside: 1 x 1200MHz; 2010 Marvell Armada 310; armeabi; Armada (562f311);	supercop-20170718
berry2: 4 x 900MHz; 2016 Broadcom BCM2836; armeabi; Cortex-A7 (410fc075);	supercop-20230630
nblack: 1 x 1000MHz; 2012 TI Sitara XAM3359AZC2100; armeabi; Cortex-A8 (413fc082);	supercop-20230630
noevenblue: 4 x 1200MHz; 2011 Freescale i.MX6 Quad; armeabi; Cortex-A9+NEON (412fc09a);	supercop-20200702
artix: 4 x 1200MHz; 2012 Samsung Exynos 44127; armeabi; Cortex-A9+NEON (413fc090);	supercop-20191221
noevenblue: 4 x 1200MHz; 2011 Freescale i.MX6 Quad; armeabi; Cortex-A9+NEON (412fc09a);	supercop-20191221
jetsontati: 4 x 2065MHz; 2014 NVIDIA Tegra K1; armeabi; Cortex-A15 (413fc0f3);	supercop-20170728
gcc16: 8 x 1600MHz; 2014 APM 88320B-X1; aarch64; X-Gene (500f000);	supercop-20171218
pi3plus: 4 x 1400MHz; 2018 Broadcom BCM2837B0; aarch64; Cortex-A53 (410fc034);	supercop-20230630
pi3plus: 4 x 1400MHz; 2018 Broadcom BCM2837B0; aarch64; Cortex-A53 (410fc034);	supercop-20221122
leeds: 4 x 1600MHz; 2015 ARMv8-A Cortex-A53; aarch64; Cortex-A53+crypto (410fc034);	supercop-20171015
teptastantrid: 4 x 1500MHz; 2018 ARMv8-A Cortex-A53; aarch64; Cortex-A53+crypto (410fc034);	supercop-20191221
gogiacraslav: 4 x 1500MHz; 2018 NXP i.MX 8M; aarch64; Cortex-A53+crypto (410fc034);	supercop-20191221
rmsagedeck3266c: 4 x 1812MHz; 2017 Rockchip RK3266; aarch64; Cortex-A53+crypto (410fc034);	supercop-20191221
jetsontati: 4 x 1734MHz; 2015 NVIDIA Tegra X1; aarch64; Cortex-A57+crypto (418fd071);	supercop-20191017
warbear: 8 x 2000MHz; 2016 AMD Opteron A1100; aarch64; Cortex-A57+crypto (411f6072);	supercop-20200626
pi4b: 4 x 1500MHz; 2019 Broadcom BCM2711; aarch64; Cortex-A72 (410fc083);	supercop-20221122
rpi4bunleashed: 4 x 1500MHz; 2019 Broadcom BCM2711; aarch64; Cortex-A72 (410fc083);	supercop-20191221
a72: 2 x 2100MHz; 2015 Mediatek MT8173; aarch64; Cortex-A72+crypto (418fd080);	supercop-20190904
pmo4145: 64 x 2500MHz; 2018 Cavium ThunderX2 CN9980; aarch64; ThunderX2 (431fa0f1);	supercop-20191017