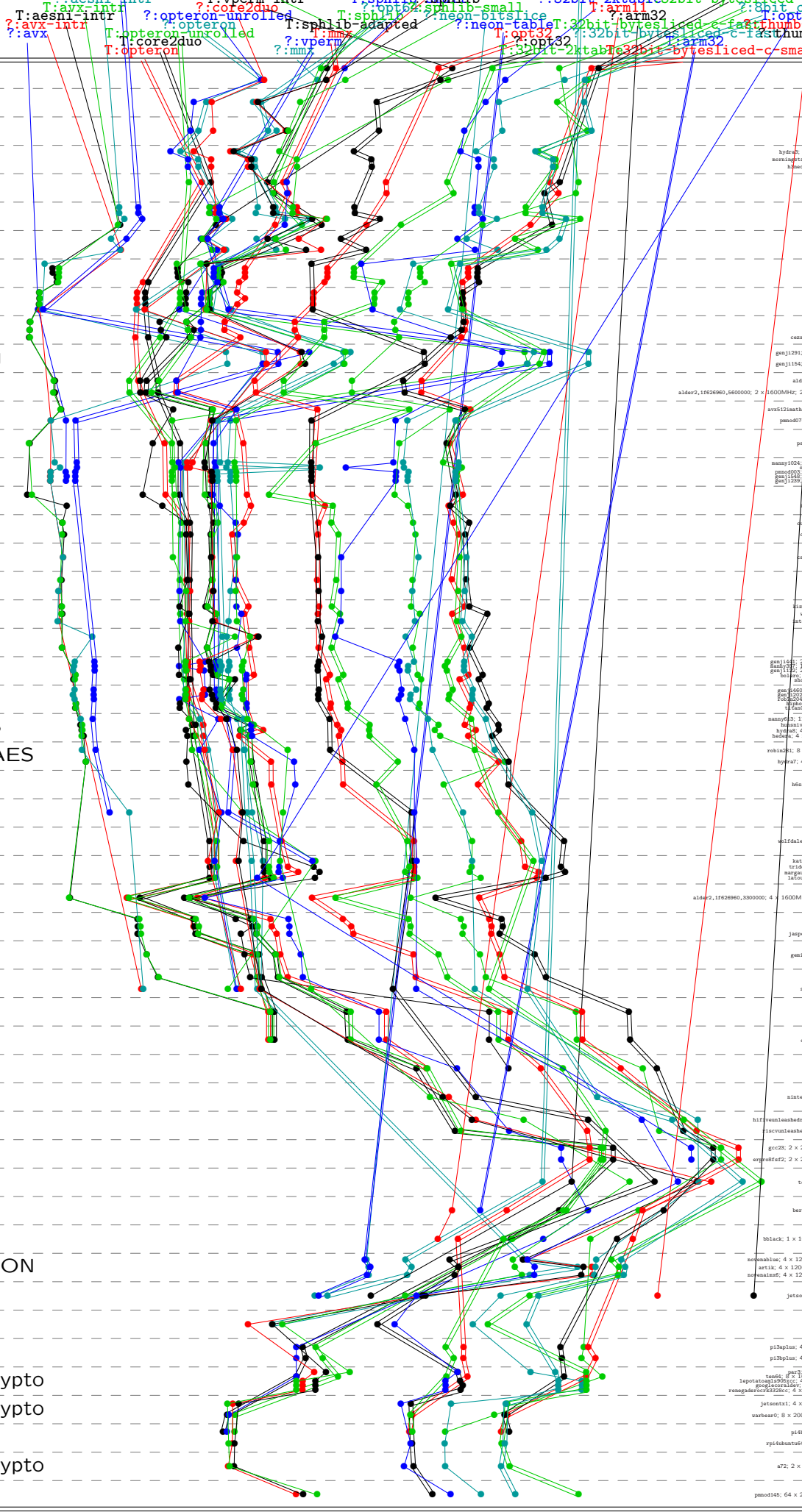


crypto_hash
groestl256
implementations
amd64 Bobcat
amd64 K8
amd64 K10 65nm
amd64 K10 45nm
amd64 K10 32nm
amd64 Bulldozer
amd64 Piledriver
amd64 Zen
amd64 Zen 2
amd64 Zen 3
amd64 Knights Landing
amd64 Golden Cove
amd64 Cascade Lake
amd64 Tiger Lake
amd64 Skylake+512x2
amd64 Ice Lake
amd64 Comet Lake
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
mipso32 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



bobcat: 2 x 1650MHz; 2011 AMD G-T56n; amd64; Bobcat (500F10); supercop-20230630
b44650: 2 x 1650MHz; 2011 AMD E-450; amd64; Bobcat (500F20); supercop-20206168

naia: 2 x 2000MHz; 2006 AMD Athlon 64 X2; amd64; K8 (40Fb2); supercop-201710105

gccl16: 8 x 2194MHz; 2008 AMD Opteron 8354; amd64; K10 65nm (100F23); supercop-20171218

hydra: 6 x 3300MHz; 2010 AMD Phenom II X6 1100T; amd64; K10 45nm (100F40); supercop-20171218
sonnagar: 4 x 3200MHz; 2009 AMD Phenom II X4 955; amd64; K10 45nm (100F42); supercop-20170904
h4560: 1 x 1700MHz; 2010 AMD Athlon II Neo K125; amd64; K10 45nm (100F63); supercop-20171218

hydra: 4 x 2600MHz; 2011 AMD A6-3650; amd64; K10 32nm (300F10); supercop-20230630
hydra: 4 x 2900MHz; 2011 AMD A8-3850; amd64; K10 32nm (300F10); supercop-20230630

bobcat: 4 x 4000MHz; 2012 AMD FX-8350; amd64; Bulldozer (500F20); supercop-20171218
calista: 4 x 4000MHz; 2012 AMD FX-8350; amd64; Bulldozer (500F20); supercop-20171218
hydra: 4 x 3100MHz; 2011 AMD FX-8120; amd64; Bulldozer (500F12); supercop-20171218
h4560: 4 x 4000MHz; 2012 AMD FX-8350; amd64; Bulldozer (500F20); supercop-20230630

hydra: 2 x 3800MHz; 2012 AMD A10-5800K; amd64; Piledriver (610F01); supercop-20171218
liberty: 2 x 2000MHz; 2012 AMD A10-6650M; amd64; Piledriver (610F01); supercop-202001618

zen: 8 x 3000MHz; 2017 AMD Ryzen 7 1700; amd64; Zen (800F11); supercop-201710105
zen: 8 x 3000MHz; 2017 AMD Ryzen 7 1700; amd64; Zen (800F11); supercop-201710105
zen: 4 x 3000MHz; 2017 AMD Ryzen 5 1600; amd64; Zen (800F11); supercop-201710105
zen: 4 x 3000MHz; 2017 AMD Ryzen 5 1600; amd64; Zen (800F11); supercop-201710105
zen: 4 x 3000MHz; 2017 AMD Ryzen 5 1600; amd64; Zen (800F11); supercop-201710105
zen: 4 x 3000MHz; 2017 AMD Ryzen 5 1600; amd64; Zen (800F11); supercop-201710105

zen: 64 x 2250MHz; 2019 AMD EPYC 7742; amd64; Zen 2 (830F10); supercop-20230630
zen: 6 x 3000MHz; 2022 AMD Ryzen 5 4500U; amd64; Zen 2 (860F01); supercop-20230630
lisa: 4 x 2600MHz; 2021 AMD Ryzen 3 3300U; amd64; Zen 2 (860F01); supercop-20230630
zen: 64 x 2000MHz; 2019 AMD EPYC 7702; amd64; Zen 2 (830F10); supercop-20191017

zen: 6 x 4062MHz; 2021 AMD Ryzen 5 5600G; amd64; Zen 3 (a50F00); supercop-20211212
zen: 16 x 3400MHz; 2020 AMD Ryzen 9 5900X; amd64; Zen 3 (a50F10); supercop-20211212
zen: 6 x 3900MHz; 2021 AMD Ryzen 5 PRO 5650G; amd64; Zen 3 (a50F00); supercop-20230630
zen: 6 x 3900MHz; 2021 AMD Ryzen 5 PRO 5650G; amd64; Zen 3 (a50F00); supercop-20230630

gaj1291: 6 x 1400MHz; 2016 Intel Xeon Phi 7250; amd64; Knights Landing (506F71); supercop-20180818
gaj1514: 6 x 1300MHz; 2016 Intel Xeon Phi 7210; amd64; Knights Landing (506F71); supercop-20170228

alder: 4 x 3300MHz; 2022 Intel Core i3-12100; amd64; Golden Cove (906F3-00); supercop-20230630
alder: 2x2 Intel Core i3-1215U performance cores; amd64; Golden Cove (906A4-40); supercop-20230630

avx121ath: 8 x 3000MHz; 2019 Intel Core i9-10980XE; amd64; Cascade Lake (506F7); supercop-20210126
penn070: 20 x 2000MHz; 2019 Intel Xeon Gold 6248; amd64; Cascade Lake (506F7); supercop-20191017

patshar: 4 x 2800MHz; 2020 Intel Core i7-1165G7; amd64; Tiger Lake (806C1); supercop-20230630

sanj1004: 16 x 2100MHz; 2017 Intel Xeon Core i5-10200; amd64; Skylake+512x2 (806A1); supercop-20191017
sanj1004: 16 x 2100MHz; 2017 Intel Xeon Core i5-10200; amd64; Skylake+512x2 (806A1); supercop-20191017
sanj1004: 16 x 2100MHz; 2017 Intel Xeon Core i5-10200; amd64; Skylake+512x2 (806A1); supercop-20191017
sanj1004: 16 x 2100MHz; 2017 Intel Xeon Core i5-10200; amd64; Skylake+512x2 (806A1); supercop-20191017
sanj1004: 16 x 2100MHz; 2017 Intel Xeon Core i5-10200; amd64; Skylake+512x2 (806A1); supercop-20191017
sanj1004: 16 x 2100MHz; 2017 Intel Xeon Core i5-10200; amd64; Skylake+512x2 (806A1); supercop-20191017

icelake: 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

alder: 2 x 2100MHz; 2019 Intel Core i3-10110U; amd64; Comet Lake (806C); supercop-20230630
cove: 2 x 2100MHz; 2019 Intel Core i3-10110U; amd64; Comet Lake (806C); supercop-20230630

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

coffee: 4 x 3300MHz; 2018 Intel Xeon E-2124; amd64; Coffee Lake (906A); supercop-20230630
lisa: 6 x 3200MHz; 2017 Intel Core i7-8080; amd64; Coffee Lake (906A); supercop-20190910

isabla: 4 x 3000MHz; 2017 Intel Xeon E3-1220 v6; amd64; Kaby Lake (906E9); supercop-20230630
westhara: 2 x 2400MHz; 2017 Intel Core i3-7102; amd64; Kaby Lake (906E9); supercop-20211212
atalaaci: 4 x 3100MHz; 2018 Intel Core i7-8080G; amd64; Kaby Lake (906E9); supercop-20191017

skylake: 2 x 3300MHz; 2015 Intel Pentium G4400; amd64; Skylake (506C3); supercop-20171218
skylake: 4 x 3000MHz; 2015 Intel Xeon E3-1220 v5; amd64; Skylake (506C3); supercop-20230630

brodwell: 8 x 2400MHz; 2016 Intel Xeon E3-2650 v4; amd64; Broadwell+AES (406F1); supercop-20180818
brodwell: 8 x 2400MHz; 2016 Intel Xeon E3-2650 v4; amd64; Broadwell+AES (406F1); supercop-20170228
brodwell: 8 x 2400MHz; 2016 Intel Xeon E3-2650 v4; amd64; Broadwell+AES (406F1); supercop-20170228
brodwell: 8 x 2400MHz; 2016 Intel Xeon E3-2650 v4; amd64; Broadwell+AES (406F1); supercop-20170228
brodwell: 8 x 2400MHz; 2016 Intel Xeon E3-2650 v4; amd64; Broadwell+AES (406F1); supercop-20170228
brodwell: 8 x 2400MHz; 2016 Intel Xeon E3-2650 v4; amd64; Broadwell+AES (406F1); supercop-20170228

haswell: 20 x 2000MHz; 2014 Intel Xeon E5-2650 v3; amd64; Haswell+AES (306F1); supercop-20191017
haswell: 20 x 2000MHz; 2014 Intel Xeon E5-2650 v3; amd64; Haswell+AES (306F1); supercop-20191017
haswell: 20 x 2000MHz; 2014 Intel Xeon E5-2650 v3; amd64; Haswell+AES (306F1); supercop-20191017
haswell: 20 x 2000MHz; 2014 Intel Xeon E5-2650 v3; amd64; Haswell+AES (306F1); supercop-20191017
haswell: 20 x 2000MHz; 2014 Intel Xeon E5-2650 v3; amd64; Haswell+AES (306F1); supercop-20191017
haswell: 20 x 2000MHz; 2014 Intel Xeon E5-2650 v3; amd64; Haswell+AES (306F1); supercop-20191017

ivy: 13 x 2700MHz; 2013 Intel Xeon E5-2697 v2; amd64; Ivy Bridge+AES (306A4); supercop-20180818
ivy: 4 x 3000MHz; 2012 Intel Core i5-3470; amd64; Ivy Bridge+AES (306A9); supercop-20230630
ivy: 4 x 3000MHz; 2012 Intel Core i5-3470 V2; amd64; Ivy Bridge+AES (306A9); supercop-20230630
ivy: 4 x 2500MHz; 2012 Intel Core i3-1265L V2; amd64; Ivy Bridge+AES (306A9); supercop-20210326
ivy: 4 x 2500MHz; 2012 Intel Core i3-1265L V2; amd64; Ivy Bridge+AES (306A9); supercop-20210326

sandy: 8 x 2600MHz; 2012 Intel Xeon E5-4650L; amd64; Sandy Bridge+AES (206F7); supercop-20170228
sandy: 4 x 3100MHz; 2011 Intel Xeon E3-1225; amd64; Sandy Bridge+AES (206A7); supercop-20230630

west: 2 x 2100MHz; 2011 Intel Core i3-2310M; amd64; Sandy Bridge (206A7); supercop-20211212

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

core2: 2 x 3060MHz; 2009 Intel Core 2 Duo E7600; amd64; Core 2 45nm (1067A); supercop-20230630

gracemont: 2 x 2137MHz; 2006 Intel Core 2 Duo E6400; amd64; Core 2 65nm (616); supercop-201710105
gracemont: 2 x 2000MHz; 2007 Intel Core 2 Duo T7300; amd64; Core 2 65nm (616); supercop-20230630
gracemont: 4 x 2304MHz; 2007 Intel Core 2 Quad Q6600; amd64; Core 2 65nm (616); supercop-20230630
gracemont: 4 x 2394MHz; 2007 Intel Core 2 Quad Q6600; amd64; Core 2 65nm (616); supercop-20201130

alder: 2x2 Intel Core i3-1215U efficiency cores; amd64; Gracemont (906A4-20); supercop-20230630

jasper: 2 x 1100MHz; 2021 Intel Celeron N4500; amd64; Tremont (906C0); supercop-20230630
jasper: 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

goldmont: 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
av1m63b1: 16 x 2100MHz; 2017 Intel Atom C3955; amd64; Goldmont (506F1); supercop-20191017

airmont: 4 x 1600MHz; 2015 Intel Pentium N3700; amd64; Airmont (406C3); supercop-20230630

silvermont: 4 x 1440MHz; 2016 Intel Atom i5-28350; amd64; Silvermont (406C4); supercop-20230630

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

powerpc: 1 x 729MHz; 2006 IBM PowerPC Broadway; ppc32; G3 (G3); supercop-20191221

siwifi: 4 x 1400MHz; 2017 SiWiFi Freedom U540; riscv64; U54 (siwifi-u54-mc); supercop-20210121
siwifi: 4 x 1400MHz; 2017 SiWiFi Freedom U540; riscv64; U54 (siwifi-u54-mc); supercop-20210121
siwifi: 4 x 1400MHz; 2017 SiWiFi Freedom U540; riscv64; U54 (siwifi-u54-mc); supercop-20210121
siwifi: 4 x 1400MHz; 2017 SiWiFi Freedom U540; riscv64; U54 (siwifi-u54-mc); supercop-20210121
siwifi: 4 x 1400MHz; 2017 SiWiFi Freedom U540; riscv64; U54 (siwifi-u54-mc); supercop-20210121
siwifi: 4 x 1400MHz; 2017 SiWiFi Freedom U540; riscv64; U54 (siwifi-u54-mc); supercop-20210121

octeon: 2 x 2000MHz; 2011 Cavium Octeon II CN6120; mipso32; Octeon II (cmnips64v2); supercop-20230630
octeon: 2 x 2000MHz; 2011 Cavium Octeon II CN6120; mipso32; Octeon II (cmnips64v2); supercop-20220213

armada: 1 x 1200MHz; 2010 Marvell Armada 310; armeabi; Armada (562F1311); supercop-20170718

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

black: 1 x 1000MHz; 2012 TI Sitara XAM3359AZC12100; armeabi; Cortex-A8 (413fc082); supercop-20230630

neon: 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 (413fc09A); supercop-20191221
neon: 4 x 1200MHz; 2011 Freescale i.MX6 Quad; armeabi; Cortex-A9+NEON (412fc09A); supercop-20191221

tegra: 4 x 2065MHz; 2014 NVIDIA Tegra K1; armeabi; Cortex-A15 (413fc0F3); supercop-20170728

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

pi3aplus: 4 x 1400MHz; 2018 Broadcom BCM2837B0; aarch64; Cortex-A53 (410f034); supercop-20230630
pi3aplus: 4 x 1400MHz; 2018 Broadcom BCM2837B0; aarch64; Cortex-A53 (410f034); supercop-20211212

tegra: 4 x 1600MHz; 2015 ARM Cortex-A53; aarch64; Cortex-A53+crypto (410f034); supercop-20171017
tegra: 4 x 1600MHz; 2015 ARM Cortex-A53; aarch64; Cortex-A53+crypto (410f034); supercop-20171017
tegra: 4 x 1600MHz; 2015 ARM Cortex-A53; aarch64; Cortex-A53+crypto (410f034); supercop-20171017
tegra: 4 x 1600MHz; 2015 ARM Cortex-A53; aarch64; Cortex-A53+crypto (410f034); supercop-20171017
tegra: 4 x 1600MHz; 2015 ARM Cortex-A53; aarch64; Cortex-A53+crypto (410f034); supercop-20171017
tegra: 4 x 1600MHz; 2015 ARM Cortex-A53; aarch64; Cortex-A53+crypto (410f034); supercop-20171017

tegra: 8 x 1734MHz; 2015 NVIDIA Tegra X1; aarch64; Cortex-A57+crypto (418f071); supercop-20191017

varbar: 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-20211212
pi4b: 4 x 1500MHz; 2019 Broadcom BCM2711; aarch64; Cortex-A72 (410f083); supercop-20191221

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

thunder: 64 x 2500MHz; 2018 Cavium ThunderX2 CN980; aarch64; ThunderX2 (431f0f1); supercop-20191017