

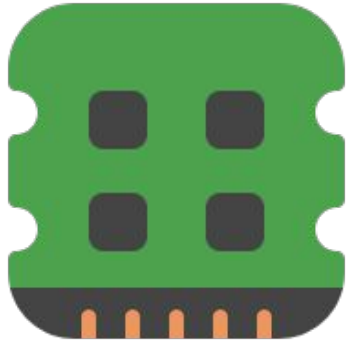


Ceph on ARM

SoftIron, Inc.



Phil Straw • Chief Executive Officer



ARM Only



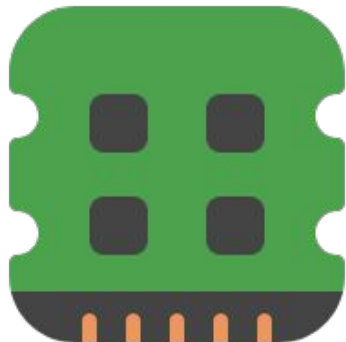
Since
2012



ARM64 & Storage



More than
an instruction
set



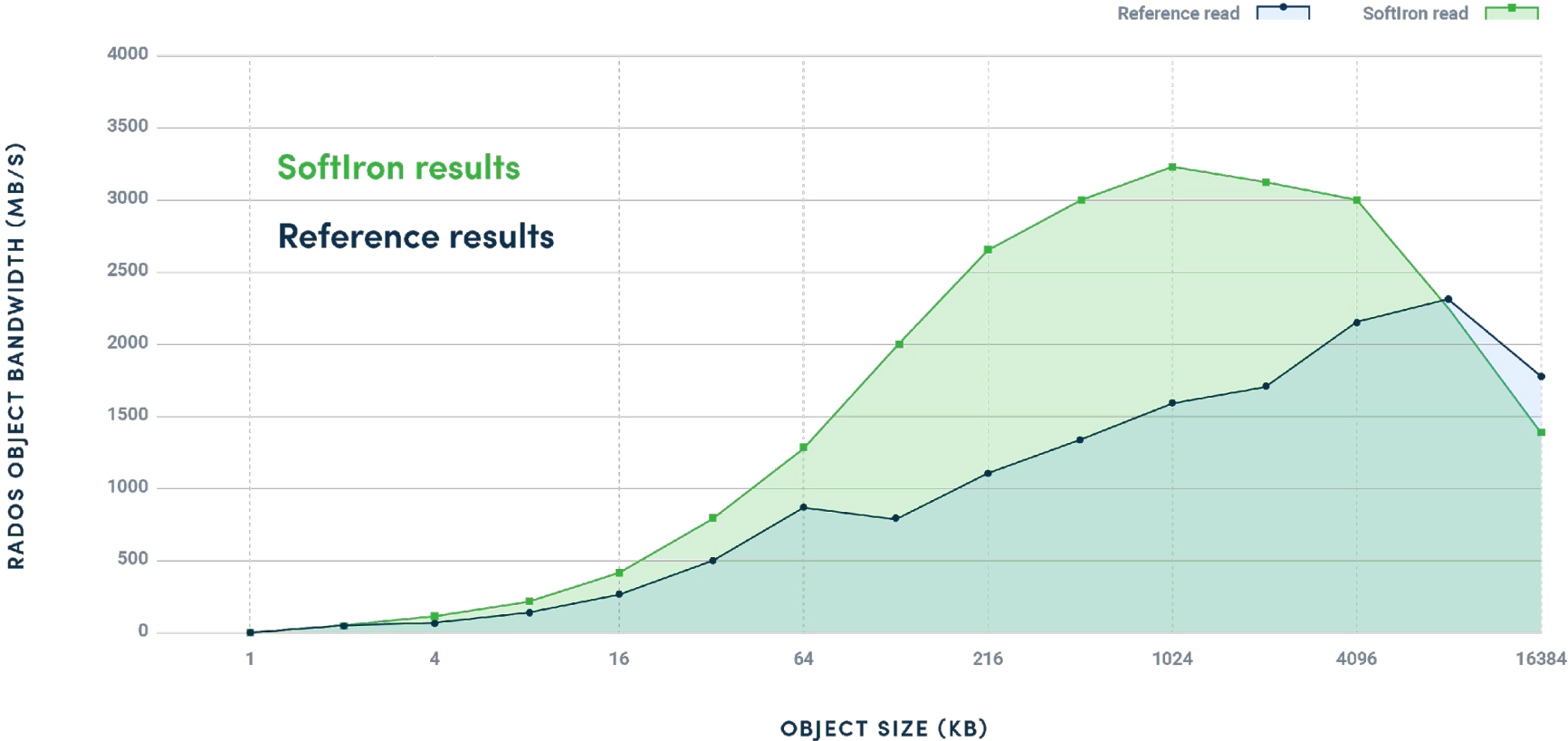
SoC Approach



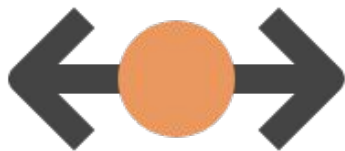
Great for
Storage



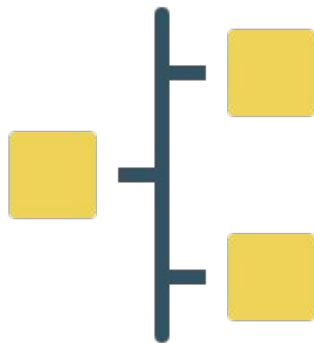
Results



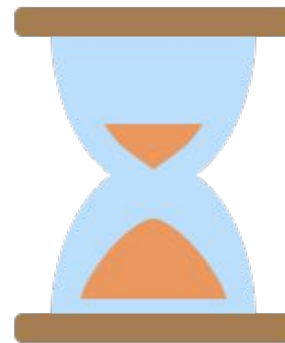
SoC not a chipset even in mentality



I/O Channels



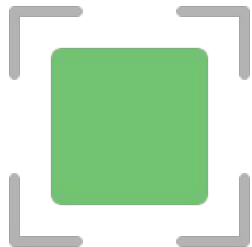
DMA



Wait States



Not all SoCs are Equal



ARM64



Chef's Choice



A57?



Software tuning



“Porting to ARM”



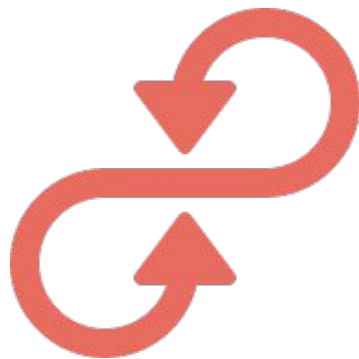
Entire Stack
Important



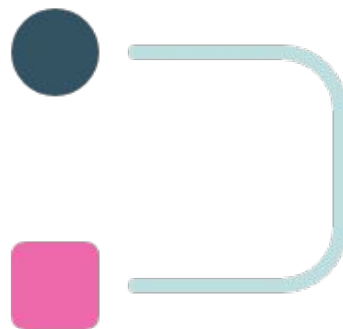
Direct connect DMA ethernet/media storage



Velocity of
Bytes



Not
Processing!



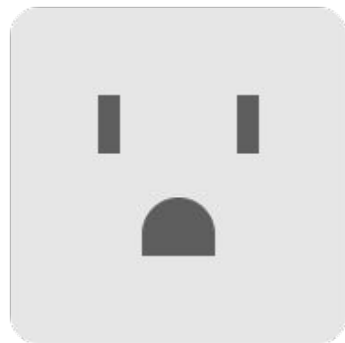
Silicon Path
Optimization



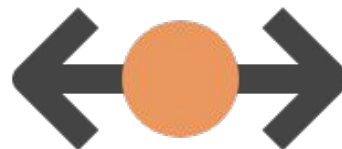
X86 versus ARM64



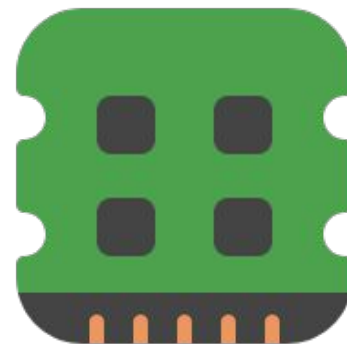
Heat



Power



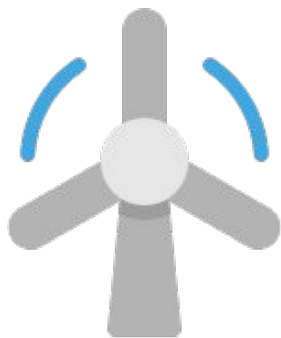
I/O



Compute



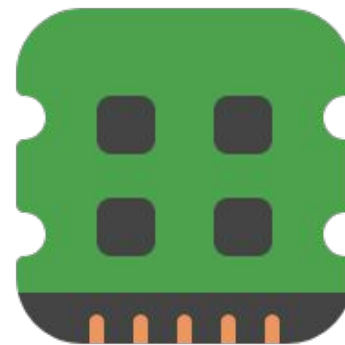
Power, density, cooling MTBF



Airflow First



MTBF Uplift



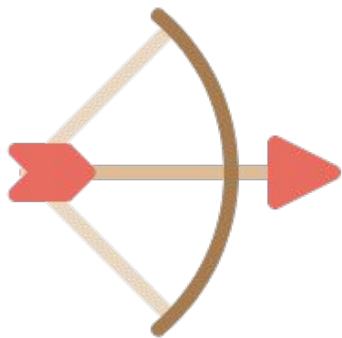
ARM Only



**Power overflow to more and more parts, cooling,
more power, heat makes use more power in silicon...**



Power = Waste



Waste = Crime



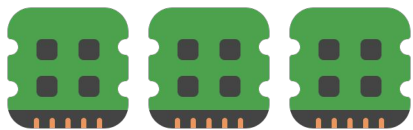
Lack of
Imagination



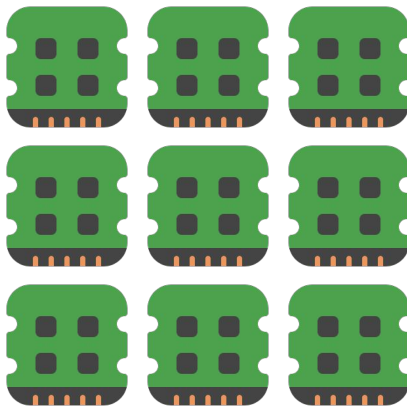
Looking to the future (just a little)



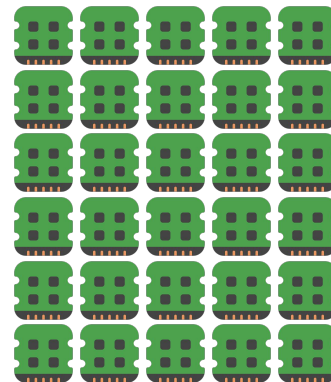
Multiprocessor



Ceph Loves
Horizontal



Ceph Scales
Beautifully



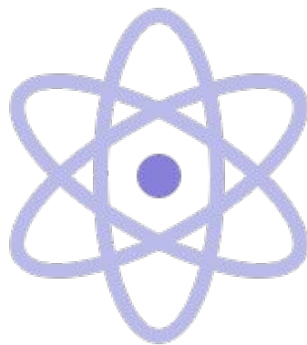
Unprecedented
Speed & Density



Hardware acceleration



Erasure Code



Physics



Wire speed

Accepherator™





We are hiring! Rockstars welcome

Thank you. Questions?



#CephonARM



Phil Straw • Chief Executive Officer