Title: The hidden potential of Apple Silicon gaming thanks to the iPad
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The M2 and Metal 3 add another couple of essential steps to a very cautious future for Mac gaming. One of the aspects being Mesh Shaders added through the latter.

Resident Evil: Village, No Man's Sky, Grid Legends and Minecraft being released as Apple Silicon native games is a good sign. Especially Resident Evil as a DirectX12 game makes a certain statement which is often echoed. The technical hurdles can be overcome but the incentive for developers must be there.

Why would you invest time and money to port or develop a game for a proportionally small userbase of which most users do not have the required hardware to run it? It makes complete sense for this to be a prohibitive factor.

If the potential userbase were to increase dramatically the value proposition for developers could be solved. This is where the No Man's Sky for M1 iPad announcement comes in. iPadOS has [good controller support](https://developer.apple.com/games/) and [full external display support](https://www.macrumors.com/2022/06/06/apple-debuts-ipad-windows-and-full-display-support/) was added with iPadOS16. This means that an M1 iPad should be able to function as a pseudo gaming console just like that.

Apple sold [roughly](https://www.businessofapps.com/data/apple-statistics/) 71 million iPads in 2020 and 58 million in 2021. If we estimate that 35% of new iPad sales are of an M1 model (Air / Pro) that means that over 2021 alone 20.3 million M1 iPads have been sold.

The total PS5 sales since release just hit 20 million. I'm certainly not making the case that Apple Silicon M1+ systems will beat discrete graphics systems, but I believe the M1 iPads to have a key potential in bringing game developers a much needed pool of potential customers with capable uniform hardware.

I expect near-future high end iPads to adopt the M2 while perhaps the M1 will trickle down besides the cheapest model.

Model	Teraflops	Gigatexels/sec	Gigapixels/sec	Memory Bandwith
M1 - 8 core GPU	2.6TF	82	41	70GB/s
M2 - 10 core GPU	3.6TF	111	55	100GB/s
M1Pro - 16 core GPU	5.2TF	164	82	200GB/s
M1 Max - 32 core GPU	10.4TF	327	164	400GB/s

The table was added just as a quick inter-hardware comparison. These numbers are a poor representation of real world performance, although a case can be made that the blazing fast unified memory and storage architectures could lend itself well to the stringent storage and memory speed requirements of the PS5 and Xbox.