

GPU family ¹	Meta13	Meta14	Apple2	Apple3	Apple4	Apple5	Apple6	Apple7	Apple8	Apple9	Mac2
GBGR422 BGRG422	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
Depth and stencil pixel formats ⁷	Texture capabilities for depth and stencil pixel formats by GPU family										
Depth16Unorm	Filter MSAA Resolve	Filter MSAA Resolve Sparse ¹¹	Filter MSAA	Filter MSAA Resolve	Filter MSAA Resolve	Filter MSAA Resolve	Filter MSAA Resolve	Filter MSAA Resolve Sparse ¹¹	Filter MSAA Resolve Sparse	Filter MSAA Resolve Sparse	Filter MSAA Resolve
Depth32Float ⁶	MSAA Resolve	MSAA Resolve Sparse ¹¹	MSAA	MSAA Resolve	MSAA Resolve	MSAA Resolve	MSAA Resolve	MSAA Resolve Sparse ¹¹	MSAA Resolve Sparse	Filter MSAA Resolve Sparse	Filter MSAA Resolve
Stencil8	Not available	MSAA Resolve Sparse ¹¹	MSAA	MSAA Resolve	MSAA Resolve	MSAA Resolve	MSAA Resolve	MSAA Resolve Sparse ¹¹	MSAA Resolve Sparse	MSAA Resolve Sparse	Not available
Depth24Unorm_Stencil8 ⁵	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Filter MSAA Resolve
Depth32Float_Stencil8	MSAA Resolve	MSAA Resolve	MSAA	MSAA Resolve	MSAA Resolve	MSAA Resolve	MSAA Resolve	MSAA Resolve	MSAA Resolve	Filter MSAA Resolve	Filter MSAA Resolve
X24_Stencil8	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available	MSAA
X32_Stencil8	MSAA	MSAA	MSAA	MSAA	MSAA	MSAA	MSAA	MSAA	MSAA	MSAA	MSAA
Extended range and wide color pixel formats	Texture capabilities for extended range and wide color formats by GPU family										
BGRA10_XR BGRA10_XR_sRGB BGR10_XR BGR10_XR_sRGB	Not available	All	Not available	All	All	All	All	All	All	All	Not available

1. See [MTLGPUPFamily](#) for each GPU family's enumeration constant.
2. Some GPUs support read-write textures where a kernel can both read from and write to a texture. You can check an individual GPU's support for this feature by inspecting its [MTLDevice.readWriteTextureSupport](#) property at runtime.
3. Only the GPUs in [Apple3](#) and [Apple4](#) families support [MTLSamplerAddressMode.clampToZero](#) for the PVRTC pixel formats.
4. The GPUs in [Apple6](#) through [Apple9](#) families don't support sparse textures with YUV pixel formats.
5. Some GPUs support [MTLPixelFormat.depth24Unorm_stencil8](#). You can check an individual GPU's support for this feature by inspecting its [MTLDevice.isDepth24Stencil8PixelFormatSupported](#) property at runtime.
6. Some GPUs in the [Apple7](#), and [Apple8](#) families additionally support the **Filter** and **Resolve** texture capabilities for 32-bit floating-point pixel formats in iPadOS. You can check an individual GPU's support for this feature by inspecting the [MTLDevice.supports32BitFloatFiltering](#) property at runtime.
7. Formats in this group aren't compatible with lossy texture compression through [MTLTextureDescriptor.compressionType](#).
8. Some GPU devices in the [Apple7](#) and [Apple8](#) families support filtering and sparse BC compressed textures in iPadOS. You can check an individual GPU's support for this feature by inspecting its [MTLDevice.supportsBCTextureCompression](#) property at runtime.
9. The [A8Unorm](#) pixel format is incompatible with imageblocks with explicit layout. Use either an [R8Unorm](#) texture view, or imageblocks with implicit layout.
10. You can only apply the [RG32Uint](#) format to a `ulong` texture on a GPU that supports the 64-bit atomics feature.
11. GPU devices in the [Apple7](#) family support **Sparse** depth and stencil textures only for placement sparse textures. GPU devices in [Apple8](#) through [Apple9](#) support both placement and automatic heap backing for sparse depth and stencil textures.