Nexa3D Solutions vs. Carbon M2 and M3

When it comes to industrial resin 3D printers that produce fast and repeatable results, the XiP Pro, NXE 400Pro and M2 / M3 / Max are some of the most commonly used printers. Here is a simple comparison between the three systems to help you determine which one is better for your particular application.

Nexa3D® XiP Pro

XiP Pro is an open platform offering the highest daily throughput in its class at the lowest operational costs making it ideal for industrial users looking to scale additive production without complicated leasing.

Nexa3D® NXE 400Pro

For labs, workshops, and production facilities, NXE 400Pro offers a large build volume, great accuracy, and fast printing thanks to Nexa3D's proprietary LSPc® tech.

Carbon® M2 / M3 / M3 Max

The M2 & M3/Max are three of the most popular Carbon DLP printers. The build volume and throughput are significantly lower than XiP Pro & NXE 400Pro. Available on lease-basis only.

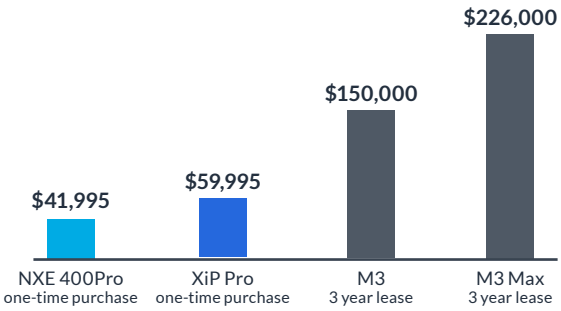
Compare Specs

	Nexa3D XiP Pro	Nexa3D NXE 400Pro	Carbon3D M2 and M3 / Max
Technology	LSPc	LSPc	CLIP
Light Engine	LED/LCD (7K, 405nm) 46 µm with 23 µm sub-pixel resolution	LED/LCD (4K, 405nm) 76.5µm	DLP (4K, 385nm) 75 µm
Throughput	★★★★★	★★★★	★★★
Build Volume	292 x 163 x 410 mm (19.5 L)	275 x 155 x 400 mm (17 L)	M2/M3: 189 x 118 x 326 mm (7.2 L) M3 Max: 307 x 163 x 326 mm (16.3 L)
Materials	Open with unlimited 3rd party resin options and 25+ verified engineering and dental resins*	Open with unlimited 3rd party resin options and 33 verified engineering and dental resins	Closed with 28 resins (14 dental, 14 engineering)†
Material Vat Life	1-2 years	1-2 years	24 hours†
Post-Print Material Bake Time	Not required^	Not required^	8-12 hours†
Preferred Geometries	Latticed or Solid	Latticed or Solid	Latticed
Software	NexaX Pro	NexaX Pro	Design Engine
Price	$59,995	$41,995	M3: $150,000 (3-year lease only) M3 Max: $225,000 (3-year lease only)

*New resins and validation settings are expected to be added monthly to incorporate Nexa3D's full resin portfolio.
†10 of 14 resins are two part resins that require manual mixing and have limited pot life.
^xPEEK is the unique NXE 400Pro resin that requires a post-print bake of ~3 hours.

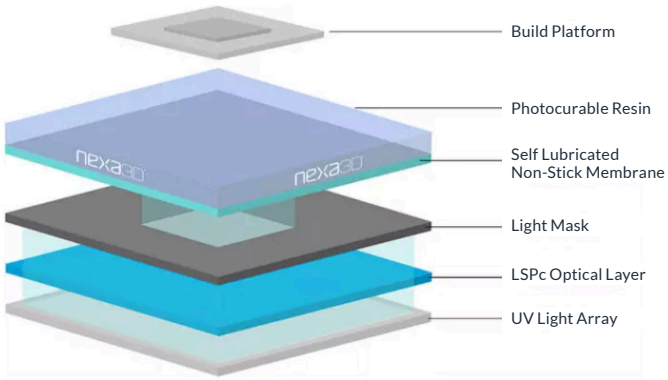
Cost Comparison

Carbon M2, M3 and M3 Max are available exclusively on a 3-year lease basis which results in a minimum of $150,000 over that term (or $225,000 for the Max). By comparison, the XiP Pro industrial 3D printer is available for one-time purchase at $59,995, making it 60% less expensive than the smaller M2/M3 and 74% less than the similarly sized (albeit smaller build volume) M3 Max over the life of the hardware.



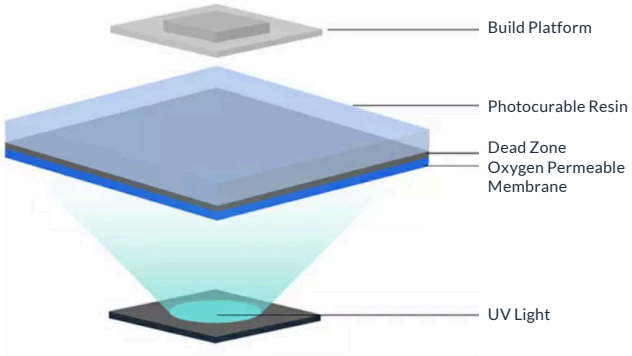
3D Printing Technologies

Nexa3D LSPc Technology



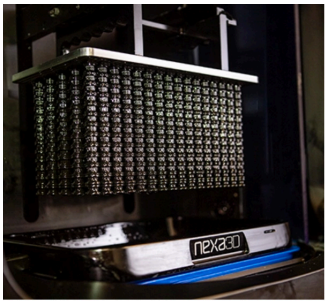
Lubricant Sublayer Photo-curing utilizes a proprietary membrane that reduces peel forces enabling high-speed 3D printing for parts small and large, solid and latticed. An industrial LED light engine further enables high resolution and high precision 3D printing.

Carbon3D CLIP Technology



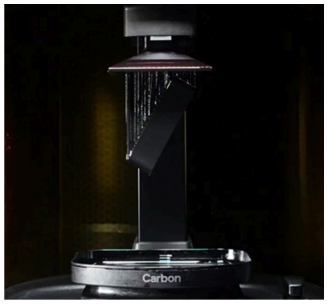
CLIP is a form of DLP 3D printing that utilizes on oxygen permeable membrane to create a 'dead zone' that prevents resin from attaching to the window. This enables high speed 3D printing but also is mostly limited to latticed parts due to the limits of oxygen permeability. The single projector chip can also cause warping at the edges due to the severe angle.

Materials Overview



Nexa 3D

The XiP Pro and NXE 400Pro resins are available in a variety of high detail modeling and high performance engineering materials. They are single part photopolymers meaning they can sit in the vat for 1-2 years, and upon print completion only require basic washing and curing.
All of Nexa3D's printers are open platform, so if you can't find the solution with our 30+ resins, you can choose your own.



Carbon3D

The M2 and M3 series resins are available in high detail modeling and high performance engineering materials. They are mostly 2-part photopolymers meaning they will quickly expire once in the vat if unused after 24 hours. In addition to basic washing and curing, the 2-part resins also require an 8-12 hour baking cycle. The M2 and M3 series do not have an open material platform.