

nexa3D®

CASE STUDY

Motorola Solutions Prototypes Produced Within Minutes - How Motorola Solutions is Speeding Things Up with the NXE400



BACKGROUND

Motorola Solutions is a global leader in mission-critical communications and analytics. Their technology platforms in mission-critical communications, command center software and video security & analytics, bolstered by managed & support services, make cities safer and help businesses stay productive and secure. Motorola Solutions utilizes 3D printers for the design and development of highly sophisticated communications devices for professional and mission-critical markets in the commercial, government and industrial segments. Their AM capabilities are an essential part of their product development process and allow for the design flexibility they need for a wide range of parts.



Customer

Motorola Solutions

Industry

Communications Equipment

Product

3D Printer NXE 400

Advantages

- Highest Speed in the Industry
- Smooth Surface Finish
- Large Build Volume
- Optimized Production Processes

Learn More

www.motorolasolutions.com



We have been working with the Nexa3D team for almost a year now, and they have taken a lot of feedback and implemented lots of very positive changes to the machine and software in a really short period of time. The machine and software get better with every update. The speed and quality of parts still blows my mind every time I run it. I am extremely pleased with the NXE 400, and it is a great addition to our in-house capabilities.

– Peter Edwards
Lead AM Technology Manager
Motorola Solutions



CHALLENGE

Motorola Solutions has incorporated a wide variety of printers into their product development process to create prototypes/pilot builds and fixtures for internal evaluation and use. Their equipment ranges from desktop FDM printers to industrial-sized SLA printers. Being able to design, prototype and test parts in-house have given them a significant advantage in time and cost savings. When it came to their larger, complex designs, such as a housing enclosure, they were running into several issues. First, they found that their build time was increasing due to the limited amount they could yield in one build. Secondly, some of their larger designs couldn't fit their current build platforms. Lastly, their FDM machines produced stair-stepped surfaces that required additional steps to remove layer lines. Motorola Solutions decided to set out to find an industrial-sized printer that could deliver the speed, quality, and cost they needed.

SOLUTION

Finding a printer that could increase productivity without sacrificing quality was critical. Motorola Solutions identified several industrial-sized SLA printers to test against their size requirements, materials, and design. At the end of their evaluation, none were able to match the speed, durability, accuracy, and build area of the NXE 400. The cost was also a major driver. Some of the pricing models they were presented with, such as subscription-based equipment,

meant they would spend more in the long run. The cost of ownership for the NXE 400 was straightforward and was going to ultimately help them remain profitable and reduce costs.

Since integrating the NXE 400 into their process, the team has found that they were able to print 5 to 10 times the speed of their traditional SLA machines. Production at these speeds helps Motorola Solutions significantly shorten their product development time. At the same time, the NXE 400 produces fast isotropic parts, with little to no build lines. This eliminates the additional steps needed to create a smooth finish. By achieving a high level of feature detail with every print, prototyping development has been far less costly. The combination of speed and quality has also reduced labor time, allowing teams to focus on other productive tasks. Motorola Solutions plans to continue implementing the NXE 400 into other workflow processes and they look forward to the latest software updates that will help them continually improve.

