SUCCESS STORY | **LIFESTYLE**

FARSOON CUSTOMIZED 3D PRINTED PHONE CASES IN SERIES PRODUCTION

The customized 3D printed phone case designs (image courtesy Xuberance)

Project Overview

CHALLENGES

Complicated design with intricate structure
Design to Manufacture Time
Quality standard for functional parts
Customized designs

SOLUTION

Farsoon plastic LPBF system 403P with FS3300PA material

KEY BENEFITS

Detailed yet strong designs
High definition details
Excellent performance
Ease of post processing

FARSOON TECHNOLOGIES

Intricate 3D Printed Phone Cases - Through Additive Manufacturing.

Customer Profile

Xuberance is a world-renowned 3D printing design company dedicated to providing 3D design and research services worldwide, focusing on 3D data services, 3D product customization and 3D printing related research, development and user training. Founded in 2008 by Steven Ma, Xuberance is the first professional 3D printing design company in China, covering a wide range of fields including art, fashion, jewelry, interior, architecture, and industrial product design. For more information, please visit: http://www.xuberance.com/

May 6th, 2019, Fuzhou, China — ZTE Corporation launched its latest AXON 10 PRO at their annual launch event and together with the phone release they revealed a series of tantalizing 3D printed phone cases.These intricate 3D printed phone cases were designed by the Shanghai based design office Xuberance then fabricated by CAMC, a service bureau located in Chongqing specialized in additive manufacturing production. Each phone cases features unique intricated structure that designed for additive manufacturing. Upon the introduction at the event, these 3D printed phone cases received increasing attention and inquiry throughout the market, which will look forward to be available at second half of 2019.

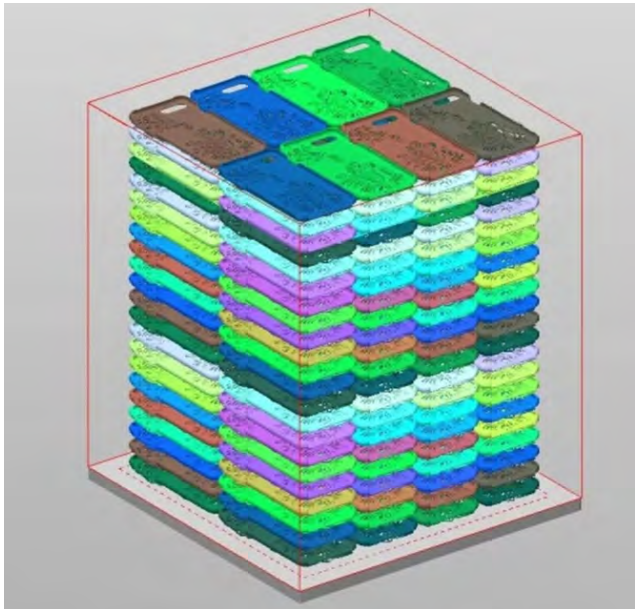
Designed for AM

The intricate cases are designed with a patented free moving interwoven component system that takes advantage of additive capabilities. The minimum distance between each interwoven component can be as small as 0.3mm, which is extremely difficult to produce using traditional manufacturing methods. Instead, the production of these design was made possible by the polymer powder bed fusion technology of Farsoon Technologies. Farsoon's powder bed fusion (PBF) systems utilize high powered lasers along with advanced thermal and optical controls to additively fabricate detailed yet strong parts without the need of supports or tooling. By designing for additive from the start Xuberance is able to use their new found design and production freedom to give rise to new and unique solutions.

The customized 3D printed phone protectors (image courtesy Xuberance)

Ready for Series Production

When it comes to designing for additive manufacturing it is not only the design itself which should be taken into consideration, but also how the production process takes place. The phone cases are designed to be printed with all movable interwoven components on a flat surface to minimize the occupied space, and thus achieve a higher build density within the build volume. With the Farsoon's 403P polymer PBF system's large build cylinder size of 400x400x450mm (15.7 x15.7 x17.7 in), up to 200 customized phone cases can be packaged in a single build. With scanning speeds of up to 15.2m/s along with a highly efficieny roller system and convenient powder cartridge system, Farsoon's 403P series offers high throughput achieving production times of only 8 minutes per case.



The packaging of phone cases in the Farsoon's 403P Series build chamber. (image courtesy Xuberance)

The customized 3D printed phone cases with Patented Dyeing process (image courtesy Xuberance)

Material is also a key consideration when it comes to designing for additive production. The Xuberance cases were produced using Farsoon's FS3300PA, a PA1212 nylon copolymer whose unique blend of elongation strength, color stability, and good surface finish allows the final product to weigh in at just 20 grams, with high definition details and excellent performance.

Ease for Post Processing

An aspect of additive manufacturing often not considered is post processing. While the design and production of the parts are key for additive manufacturing, post process is as important if not more so when it comes to producing a finished consumer product. CAMC and Xuberance along with the help of Farsoon engineers joined forces to develop a patented dyeing technique especially suitable for these phone cases. With know-how in material R&D, parts production, application development, and machine operation, Farsoon was able to offer the most suitable finished parts for post processing. The final process realizes high color saturation, durability, and a minimization of color deviation for a finished product that closely matches the designers' vision.

Customized phone case designs (image courtesy Xuberance)

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About CAMC

Chongqing Additive Manufacturing Center (CAMC) is a service supplier of additive manufacturing production. It is located in Gangcheng Industrial Park in Jiangbei District, Chongqing. CAMC currently operates multiple Farsoon plastic and metal systems, including 402P Series, 252P series, FS271M and FS121M. For more information, please visit: http://www.camc3d.com/

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