



**ADVANCED
MANUFACTURING
DESIGN
CENTRE**

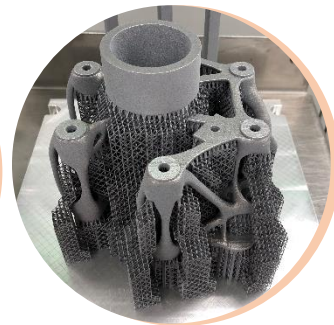
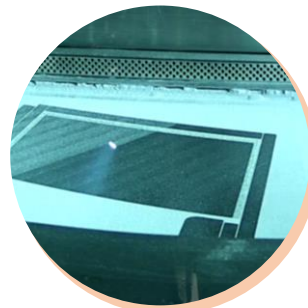
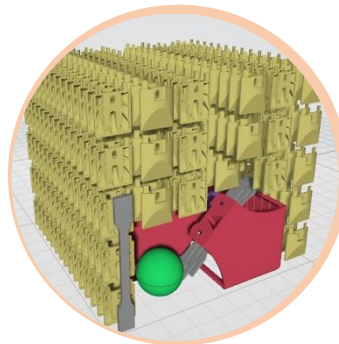
WHY ADDITIVE?

Driven by the continuous pursuit of better and more efficient parts, the aviation industry was among the first to look towards AM as one of the key drivers of improvement and innovation.

AM delivers a wide range of benefits that makes it a perfect match for aerospace applications:

- Fabrication of AM parts can be done close to the point of needs thanks to its digital nature.
- Enables topologically-optimised designs to achieve high-strength-to-weight ratios, translating to lower fuel consumption and longer part life cycle.
- On-demand high-mix, low volume manufacturing, well-suited for low-to-medium quantity production
- Little-to-no tooling investment cost
- Consolidation of assemblies into singular parts, therefore simplifying inventory managements
- Shorter lead time for production and delivery, minimising aircraft's ground time.

ST Engineering is well-poised to be your gateway to AM-empowered solutions that add value to your operations



OUR MISSION

ST Engineering's AMDC is a one-stop solution provider for AM. We create robust turnkey AM solutions through our integrated workflow, driving a concept from R&D to a finished, certified commercial product seamlessly and sustainably.

STRENGTHENING ST ENGINEERING'S MRO BUSINESS

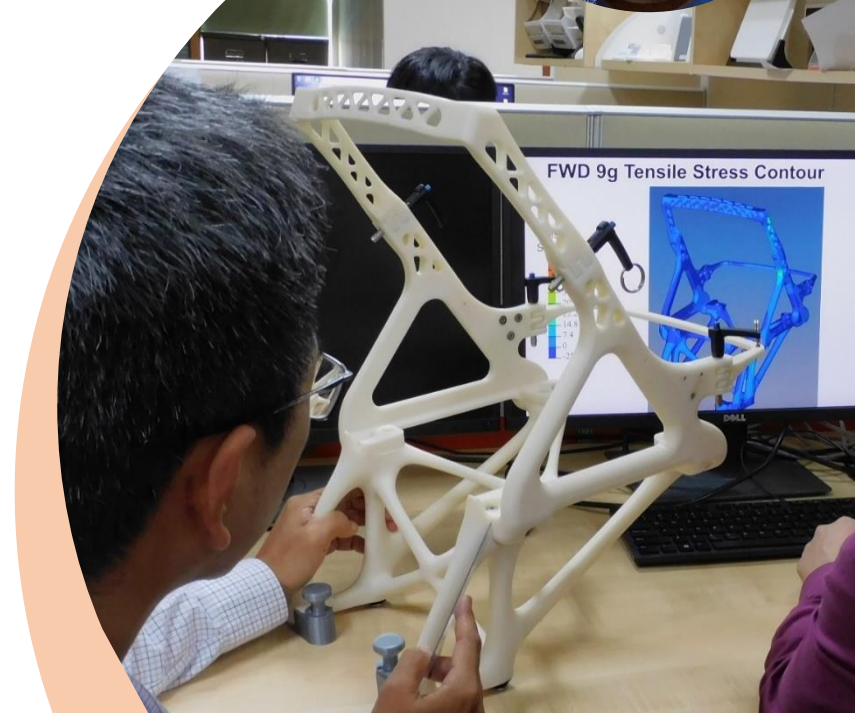
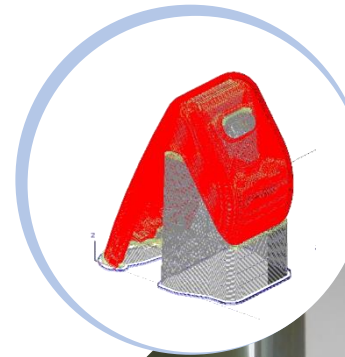
As part of the largest commercial airframe MRO provider in the world, AMDC harnesses the use of AM to further enhance ST Engineering's maintenance operation:

- Enable faster part turnaround time
- Improve part reliability
- Provide obsolete parts and solutions economically
- MOQ advantage vs traditional methods
- Operate seamlessly between spare part supply and replacement through our services network.

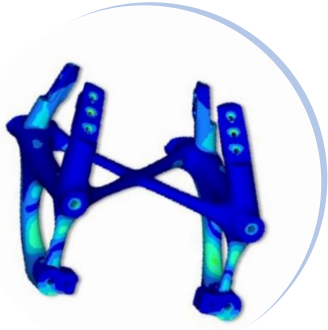
BECOMING THE PREFERRED PART SOLUTION PROVIDER

Thanks to the unique strength of AM, we have the freedom to offer more effective, tailored and economical solutions that are out of reach for traditional manufacturing. We offer bespoke designs and solutions to our customers with proven track records.

Our aviation-standard qualified production systems and supplier network ensure a timely and complete integrated solution to our customers.



OUR CAPABILITIES



END-TO-END SOLUTION PROVIDER

- We possess extensive knowledge of both technical and economical aspects for AM.
- Our certification network includes major aviation authorities: FAA, EASA, CAAS.
- Our work is supported by a complete software suite, from engineering design, topological optimisation, FEA simulations to printing strategy, printing design and print file control
- Our solutions are underpinned with a wide range of AM machines and materials certified for aviation.



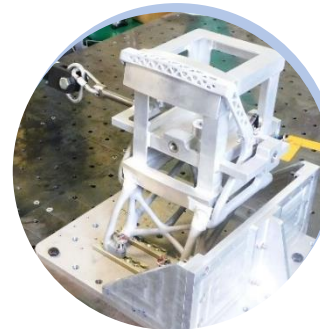
CONSTANTLY STAYING AHEAD

- We constantly drive new AM materials, systems and technologies to meet the diverse needs of our customer through cutting-edge and comprehensive R&D effort.
- We have extensive partnership with strategic like-minded research and educational institutions, local SMEs, airline partners and international brands.



PROPRIETARY AM SPECIFICATIONS

- Our in-house developed specifications for AM part production have demonstrated robustness and reliability while being fully capable of serial production.
- All our qualified AM processes have established design values and can produce certifiable functional parts.
- Our AM specifications are recognized by major international aviation authorities: FAA, CAAS, EASA.



ASSURANCE OF QUALITY

- Our seamless design and production interfacing procedures as well as supply chain are accepted by various aviation authorities.
- All produced parts undergo quality assurance procedures and holistic traceability.

OUR AM SYSTEMS

FORTUS 900MC | ULTEM

- PEI/PC blend
- Fully aerospace compliant
- Scratch and chemical resistant
- Superior stability to environment influence



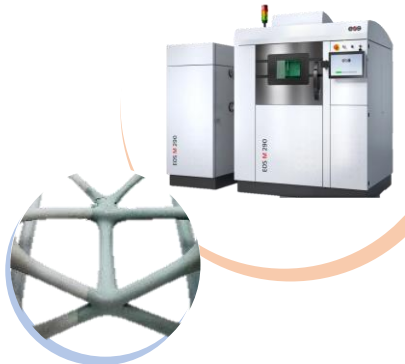
EOS P396 | PA2241FR

- Nylon-12 based
- Flammability compliant
- High level of design freedom



EOS M290 | AISi10Mg

- Aluminium alloy
- High strength-to-weight ratio



AON-M2 | MULTI-MATERIALS

- Open-ecosystem FLM printer
- Greater variety of aerospace-compliant materials
- Affordable and versatile alternatives



SLM 280 2.0 | IN625

- High productivity Dual laser system
- High-performance nickel-based alloy
- Extreme temperature resistant.



OUR OFFERINGS

CABIN INTERIOR

Cabin interiors directly impact the passenger's flight experience and are often damaged as a result of heavy exposure to human activity. Our cabin interior parts are specially designed to be more durable both in function and aesthetics.



PTF COMPONENTS

Passenger-to-Freighter (PTF) conversion programmes provide a new lease of life for ageing aircraft. Our proprietary AM parts are attractive alternatives that help improve and accelerate the conversion and maintenance process.



CUSTOM SOLUTIONS

Are you introducing new capabilities or branding in your operations? We are well-equipped to provide you with a bespoke solution that will effectively and efficiently support your new or emerging needs.



FREIGHTER

Freighter aircrafts demand efficient, safe, and low-maintenance solutions. With AM's unique capabilities, we can provide durable, on demand and tailored solutions to ensure minimum operation disruptions to your freighters. For older aircraft, AM presents an affordable solution for obsolete parts that is always available.

BRACKETS AND FITTINGS

In daily operations, small improvements to the working environment can streamline workflow and processes. Whether airborne or on ground, these operational improvements can be done by introducing a variety of AM fittings, fixtures, jigs and tools.



FEATURED PARTS



SEAT ARM CAP

Replace P/N: 861267-445B

Category: Cabin Interior

AM Seat Arm Cap, manufactured with ULTEM 9085, offers better durability and longer lifespan than traditionally manufactured arm cap.



KICK STRIP END CAP

Replace P/N: 432W7101-6X

Category: Cabin Interior

AM Kick Strip End Cap is designed to better withstand impact than traditional end cap. Multiple colour options available. Manufactured with Laser Sintered PA2241FR.



GPU RECEPTACLE

Replace P/N: 284A4807-9

Category: Bracket and Fittings

AM GPU Receptacle offers better durability and drastically shorter lead time compared to traditional part. Manufactured with ULTEM 9085

AEROMEDICAL EQUIPMENT MOUNT

Category: Custom Solutions

ST Engineering can offer customised light-weight equipment mounts for various aeromedical equipment, manufactured by Metal Sintering Aluminium. Mounts are designed to be mounted on standardised seat tracks and compatible to A330 aircraft. Custom solutions available.



ATTENDANT SIGNAGE HOUSING

Replace P/N: F252R4155-002-00 & F252R4156-000-00

Category: PTF Components

Signage Housing manufactured with PA2241 combines a multi-part assembly into one single part.



EXIT SIGNAGE SHROUD

Replace P/N: 0201000-001

Category: Freighter Interior

By leveraging AM, ST Engineering can provide affordable, low lead time replacement for obsolete, out-of-production parts.



Can't find what you need?

Check out our latest online part catalogue & contact us here:

