

ELECTRICAL & POWER

Our mission:
making aviation more sustainable
and the world a safer place



SAFRAN ELECTRICAL & POWER
ELECTRIC SYSTEM TREND IN AEROSPACE



A brand new range of products preparing
the future ATA 24 platform & the future of hybrid/electric propulsion
Scalable technology bricks enabling application from non propulsive to propulsive

GENeUS™

GENeUSPACK™

GENeUSGRID™

GENeUSCONNECT

ENGINEUS™

AC and DC
STARTER / GENERATOR &
GCU

ENERGY STORAGE

ELECTRICAL PROTECTION
ELECTRICAL DISTRIBUTION

HIGH POWER &
VOLTAGE
POWER CONTACT
AND WIRING

LOW & MEDIUM SPEED
MOTOR DRIVE

HIGH SPEED
MOTORS & GENERATOR

ELECTRICAL NETWORK
CONVERSION

INTEGRATED MOTOR
CONTROLLER

INTEGRATED
INVERTER/RECTIFIER

POWER MANAGEMENT

ePROPELLER

**TURBOGEN
HYBRID TURBOFAN**

KEY SUCCESS FACTORS

1. INNOVATION
2. CERTIFICATION
3. PRODUCTION SYSTEM
4. ENHANCED PROCESS ENG4.0



ELECTRIC MOTOR



ENGINEeUS™

ENGINEeUS

- Power to EMAG weight ratio : higher than 6 Kw/Kg
- Torque to EMAG weight ratio : higher than 22 N.m /Kg



ENGINEUS flights



DA eDA40 (100B1)



ECOPULSE (50A1)



AURA AERO (100B2)



DA eDA40 (100B1)

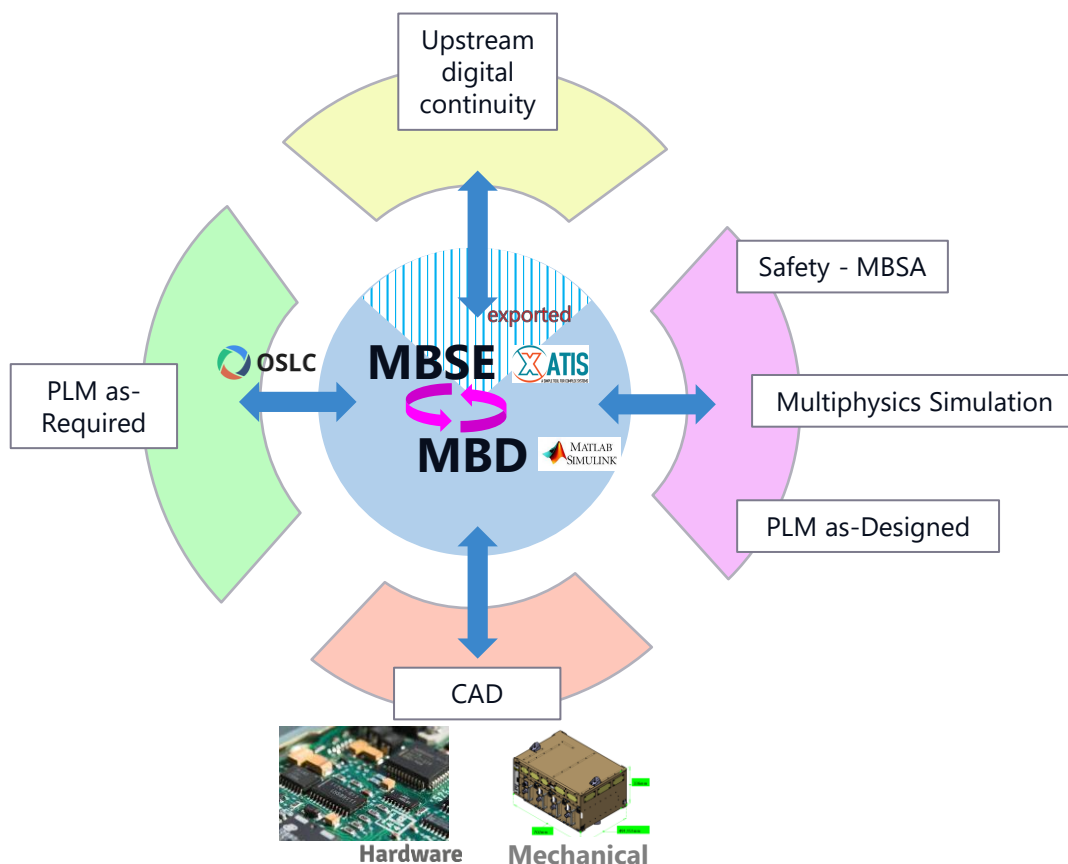


DA eDA40 (100B1)



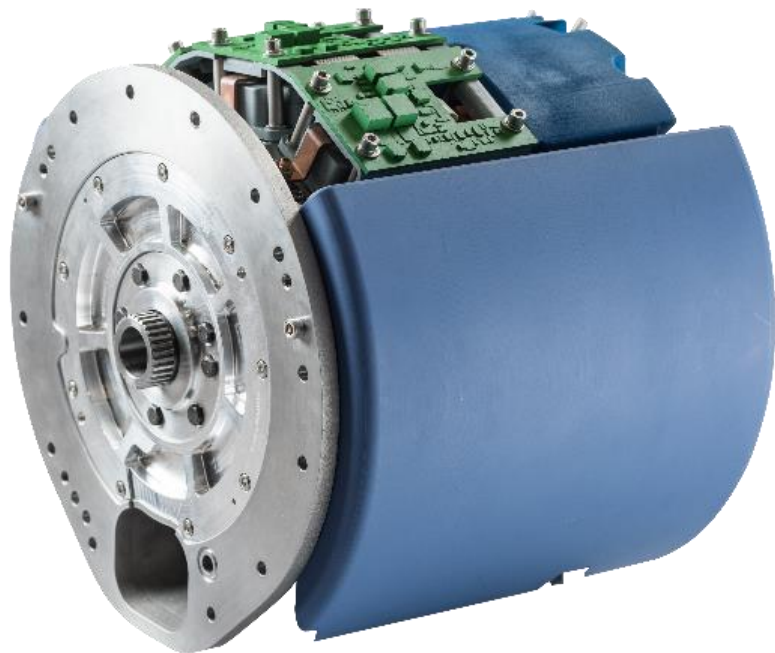
AURA AERO (100B2)

Digital Continuity



MBSE / MBD at the center of next design standard
Deliver the competitiveness levers

GENeUS 300



FLAGSHIP OF THE GENeUS FAMILY

Permanent magnet synchronous machine with integrated power electronics

BIDIRECTIONAL OPERATION

Operates as either a motor or generator depending on demand

300 KW CONTINUOUS POWER

Designed for demanding high-voltage applications (550–800 VDC). Powers critical loads (landing gear, etaxi, de-icing, etc.) and electric propulsion systems.

HIGH EFFICIENCY & COMPACT DESIGN

+10 KW/KG power density, reducing volume by up to 3X versus current generation

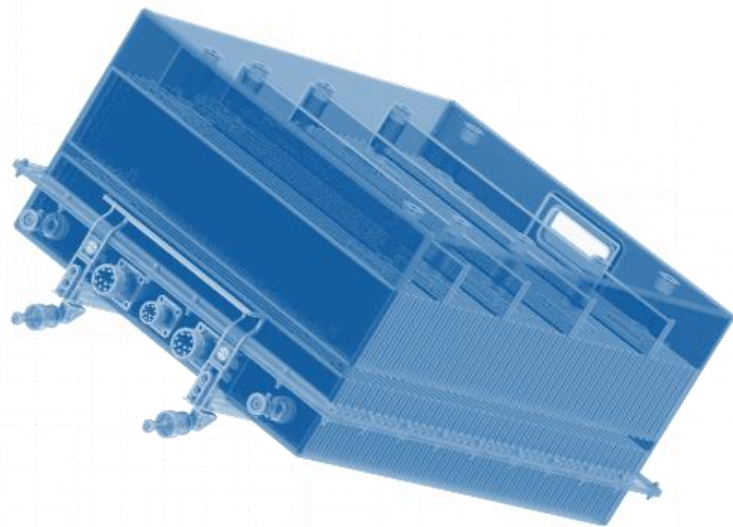
POWER MANAGEMENT
& DISTRIBUTION



GENeUSGRID

GENeUSGRID

SAFRAN X SAFT HIGH POWER BATTERIES



SCALABILITY AND POWER

Configurable packs up to 800 VDC for optimal integration and performance, tailored to each platform's energy and power needs.

MODULAR DESIGN

Adjustable-length modules with liquid cooling and composite casings, engineered to meet demanding aerospace safety standards.

INNOVATIVE CELL TECHNOLOGY

CONCLUSION

- ✓ **Up to circa 800 HVDC is becoming a credible option for Electrical propulsion system**
- ✓ **It allows synergies with automotive EV power train technologies**
- ✓ **High density, high frequency electrical machine with SIC inverter technology are proven solutions for Aerospace**