Comeau Aerospace Inc. - Advanced Projects

The Ultimate Flying Machine Design Engineering Projects

CAI-825-MC Hyper Sonic Transport - HST

In this project, we have the noble task of : SSTO – Single Stage To Orbit dynamics
- super efficient HST advanced aircraft design and engines,
- aircraft and engine noise reduction and noise cancellation,
- aero-acoustics, aero-structural and fluid dynamics applied research,
- thermal signature reduction and detection counter measures,

- advanced propulsion development, production and performance characteristics
- wide body blended fuselage – stealth design – octagon wider than height – super strong
- electro-dynamic technology and advanced propulsion

- conventional and advanced materials and manufacturing (Fortanium Advanced Materials Inc.);
- augments single stage to orbit engine research and general logistics
- co-development, investment and acquisition, enterprise and commercial opportunities

Main focus and long term vision:
- applied research and development towards reduced fuel and high thrust to weight
- advanced aero-acoustics for reduction of shockwaves and sound
- reduced operating cost and longer life cycle
- reduction of mass, thermal signature, acoustic signature and radar signature
- mission tasking, speed, range, ceiling and extended flight capabilities

CAI-825-MC Aircraft Specifications and Performance:
- Empty weight: 700,000 lbs; Payload 220,000 lbs.; Fuel load: 700,000 lbs
- Max takeoff weight: 1,620,000 lbs;
- Cargo 24' wide x 16' high (hexagonal) x 160' ; 3-4-4-3 : 560-1,120 passengers
- length: 300', wingspan: 185', height: 35' twin vertical stabilizers
- Wing area: 12,800 sq. ft.; Wing Load: ------ lb/sq.ft.
- cranked delta: 80' W x 160' L ;

- Maximum range: est 3,600 nm with 220,000 lbs; design max payload 600,000 lbs
- Max. Speed: Mach 5+ , Cruise: _____ mph
- Max Climb Rate: X/min Service Ceiling: 100,000'+
- Takeoff run at MTOW: 7,000' Landing distance: 5,500 ft ,
- Engines: 6 – Orenda -TJ-75 : 75,000 lbs thrust : 450,000 lbs thrust ; 600,000 AB
  (Orenda -TJ-75 Agility axial flow turbo-ramjet variable geometry pre-cooled intake & exhaust)
- 2 retractable taxi runway turbofan thrusters – for efficient pre-launch & after landing mobility;

CAI- 825-MC-HST-VE SSTO - sub-orbital reusable rocket engines; LOX/kerosene/jetfuel
- 10 Orenda Engines Limited-ACN-L-500 Linear Aerospike Velocity rocket engines (Orenda-Engines.ca)
- ultimate altitude and escape velocity with altitude compensating nozzles @500,000 lbs thrust

CAI-825-MC HST Hyper Sonic Transport

It is time to redefine the leading edge of hyper sonic transport.
Pre-eminent Massive Strategic Logistics
Super charged with audacity and brilliant aerospace genius
Super conscious creative imagination
The True Visionary and Revolutionary SSTO
single stage to orbit aerospace vehicle

The Ultimate Flying Machine Adventure

