

India's First eVTOL Prototype

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Why in News?

Recently, A Chennai based startup ePlane Company unveiled India's first full-scale electric vertical take-off and landing (eVTOL) aircraft prototype - PT-01.

Key Features

- **eVTOL Concept** - Vertical take-off/landing like helicopters, forward flight like fixed-wing aircraft.
- **Structure** - Carbon-fibre composite body.
- **Design** - 6 independent lift rotors + 4 forward propellers with thrust redistribution (if one motor fails).
- **Range** - Operational range 110 km.
- **Propulsion** - Powered by batteries and multiple electric motors (no turbine engines).
- **Advanced Air Mobility (AAM)** - Combines electric propulsion, lightweight composites, advanced flight-control systems.
- **Flight Control** - Modern fly-by-wire technology enables safe unmanned testing and redundancy in case of propulsion failure.
- **Safety** - Distributed electric propulsion reduces risk of single-point failures, suited for dense urban areas.
- **Initial Trials** - Unmanned test flights first, followed by piloted trials under certification programme.
- **Commercial Operations** - Targeted by 2028.
- **Applications** - Air ambulance services (first use case), airport transfers and urban transport.
- **Benefits** - Quieter operations, lower emissions, reduced operating costs compared to helicopters.

Reference

[Economic Times | eVTOL](#)



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