
LIGHT COMBAT AIRCRAFT
Tejas
KH-2013
Tejas
LIGHT | LETHAL | UNSTOPPABLE
HAL
LCA TEJAS DIVISION
Hindustan Aeronautics Limited
Bangalore Complex

Mission

"To achieve Self Reliance in Design, Development, Manufacture, Upgrade and Maintenance of Aerospace Equipment, diversifying into related areas and managing the business in a climate of growing Professional Competence to achieve world class performance standards for Global Competitiveness and growth in Exports"

Vision

"To become a Significant Global Player in Aerospace field"



LICENCE / JV / JOINT D & D PRODUCTS

Prentice, GNAT, MIG21, MIG27M
Vampire, Cheetah, Chetak,
Jaguar, SU-30 MKI,
Hawk MK 132, DO-228

OVERHAULED PRODUCTS

DC-3, Dakota, Canberra,
AN-32, Kiran,
Mirage-2000

INDIGENOUS PRODUCTS

HT-2, Marut, Pushpak, Kiran,
Basant, IJT, PTA, ALH, LCA,
LCH. LUH, HTT-40

Gamut of Capabilities

Design



Fighters



Trainers



Engines



Helicopters



Space



Weapon Integrations



Mid Life Upgrade



Aircraft Systems



MRO



Current Operations

21 Production Units in India	Over 4000 Aircraft Produced	Over 12000 Aircraft Overhauled
11 R&D Centers Over	Over 5500 Engines Produced	Over 1400 TOT Aircraft Produced

Glorious History of LCA Tejas

Tejas Technology Demonstrator (TD)
1995



Tejas Prototype Vehicle (PV)
2008



Tejas Trainer
2009



LCA Tejas MK 1
2015



LCA Tejas MK 1A
2022



MWF Tejas Mark 2
2025





LCA Tejas: Redefining Excellence in Aviation

LIGHTEST IN ITS CLASS

Engineered for unmatched agility and precision.

SUPERSONIC AT ALL ALTITUDES

Speed and performance that dominate the skies.

TAIL-LESS COMPOUND DELTA WING

A revolutionary design for superior maneuverability.

90% COMPOSITE BY AREA

Advanced materials for strength and reduced weight.

QUADRAPULEX REDUNDANT FLY BY WIRE

Cutting-edge technology for ultimate control and safety.

30% PAYLOAD CAPACITY

Carrying more firepower for every mission.

IMPECCABLE SAFETY RECORD

A proven history of accident-free flying.

TRUSTED BY THE INDIAN AIR FORCE

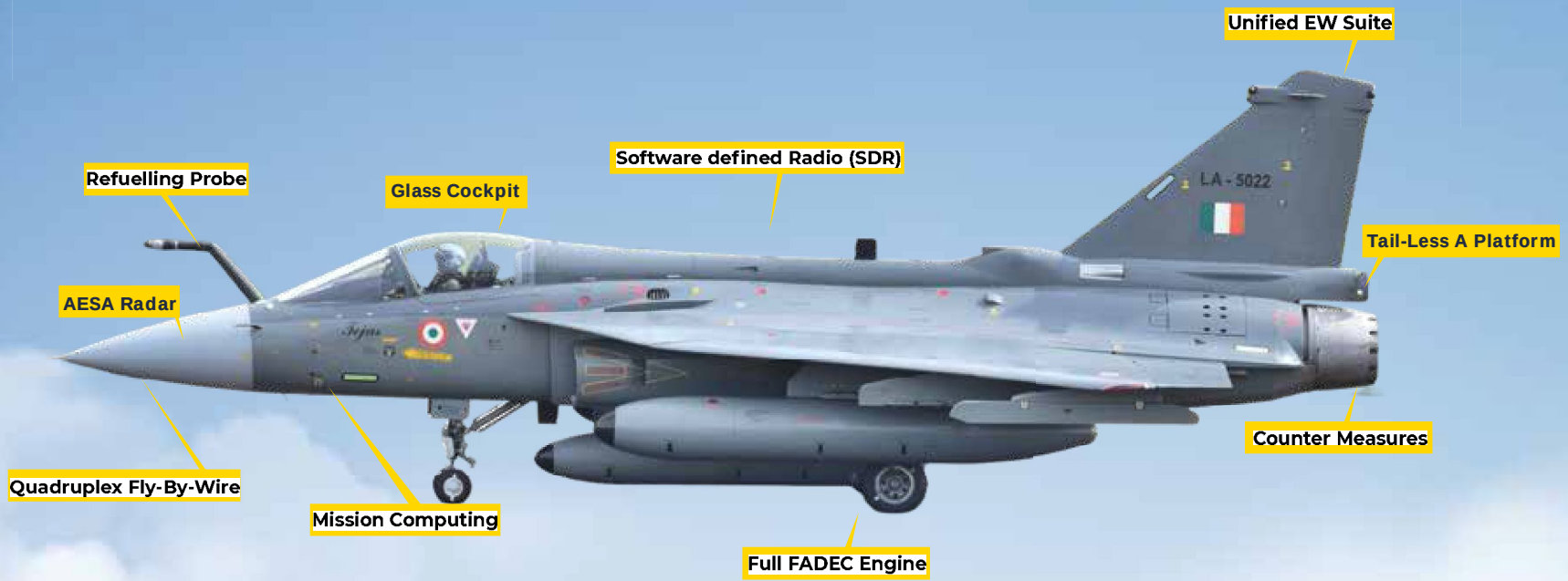
Operational and proudly serving the nation.

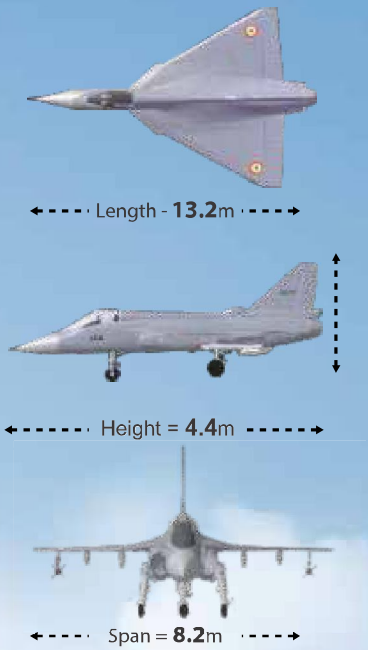


POWER MEETS PRECISION

LCA MK1A Features & System

Max Speed | 1.6 Mach	**Glimits | +8 g/-3.5 g**	**Max Take-off Weight | 13500 kg**
Service Ceiling | 50,000 feet	**Empty Mass | 6950 kg**	**Static Thrust | 8600 kg**





AESA Radar

Low Probability of intercept (LPI), Practically jam proof AESA radar provides extended A-A track ranges for launching BVRAAMS

Long Range BVRAAM

Long range BVR missiles with shaped Trajectory and expanded end game manoeuvring with bi-directional missile data link.

AESA Based SPJ

AESA based jamming system with higher Effective Radiated Power

DIGITAL Wide-band RWR

Multi-channel Digital Receives with Instantaneous Tracking and Identification of emitters in the entire Frequency Band

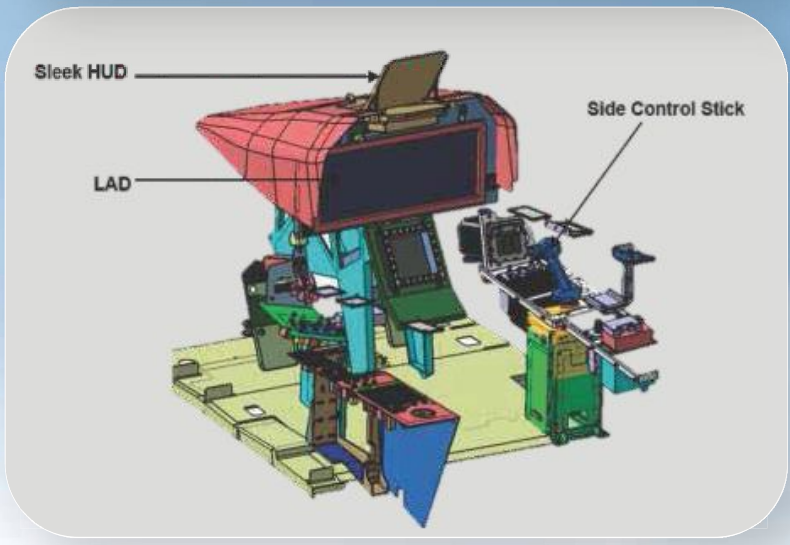
LCA Tejas: Further Developments

Tejas MK II



Specification

Length	14.65 m
Wing Span	8.5 m
Height	4.87 m
‘g’ Limits	+9.0g / -3.2g
Max Take-off Mass	17500 kg
Powerplant	Single GE-F414-INSC



Features

- Flushed Podded GUN
- Close Coupled Canard
- 11 Hard Points
- New Cockpit with Large Area Display (LAD)
- Side Control Stick
- High Thrust Engine
- Advanced Sensors (IRST, MAWS)
- On Board Oxygen Generating System
- In-built Pilot Ladder
- Wing tip Missiles

CATS (Combat Air Teaming System)

Elements

01

CATS-MAX LCA based Mothership of team

02

CATS-WARRIOR Autonomous Unmanned Wingman for executing deepstrike missions of team

03

CATS-ALFA CATS-MAX controlled Weaponized Drones on 200 km standoff Distance

04

CATS-HUNTER CATS-MAX Launched Unmanned Wingman With 250 Kg Warhead Capacity





Elements

01

CATS-OMCA Optionally Manned Combat Aircraft for decoy and Terminal missions

02

CATS-INFINITY Solar Powered High-Altitude Pseudo Satellite with endurance upto 3 months

03

HALE-UAV 5 Tonne class UAV with capabilities of 45000 ft altitude and 24 hours endurance

Production Facilities

CNC Machines

Various 5-Axis CNC machines to cater the need of machining parts up to 6mtr bed length with very high accuracy like CNC Profiler, Vertical Mill center, Robotic Wing Skin drilling machine etc.



Robatic Wing Drilling Machine



5. Axis CNC Profiler



CNC Precision Machining Centre



CNC Vertical Milling Centre



CNC Jig Boring Machine



CNC Vertical Milling Centre

Structural Assembly

Laser tracker calibrated assembly jigs with necessary interchangeability of parts for ease of maintenance



Pylon Assembly



Centre Fuselage Assembly Jig



Front Fuselage Assembly Jig



Coupling Jig



Wing Assembly Jig



Drop Tank Assembly

Looms

Extremely sophisticated looming for LCA is fabricated and integrated using 2D and 3D models



Loom Board



Laser Cable Marking Machine

Equipping & Final Assembly

Environmentally controlled Equipping and Final Assembly hangar for system integration checks



Quality

CMM, Laser tracker calibrated jig, profile projectors, hardness tester, PI checks, NDT equipments to ensure quality at every stage



CMM



Laser Tracker Calibration





Pre Installation Check Facility for LRUS

LCA Tejas Plant - II















- Spread in 35 acres with 34893 sq. mtr build up area
- Dedicated export facility for LCA Tejas
- State of the art manufacturing facilities with specialized features like automated Heat Treatment, Process Shop
- Assembly Line of trainer variant of LCA Tejas

Plant 2 Facilities



Aluminium Cutting



Lining Facility



Block Furnace



Metal Cutting Machine



Fluid Cell Forming Machine



Hydraulic Shearing Machines



Metal Flanging Machine



Metal Flanging Machine



Material Rack



Work Shop

LCA Tejas Eco System

FIN
TASL, Bengaluru

Wing
L&T, Coimbatore

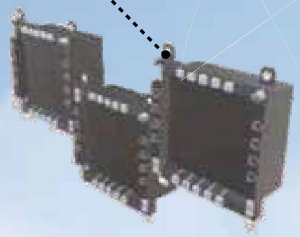
Center Fuselage
VEM Technologies, Hyderabad

Rudder
TASL, Bengaluru



Rear Fuselage
Alpha Tocol, Bengaluru

Switches & Displays



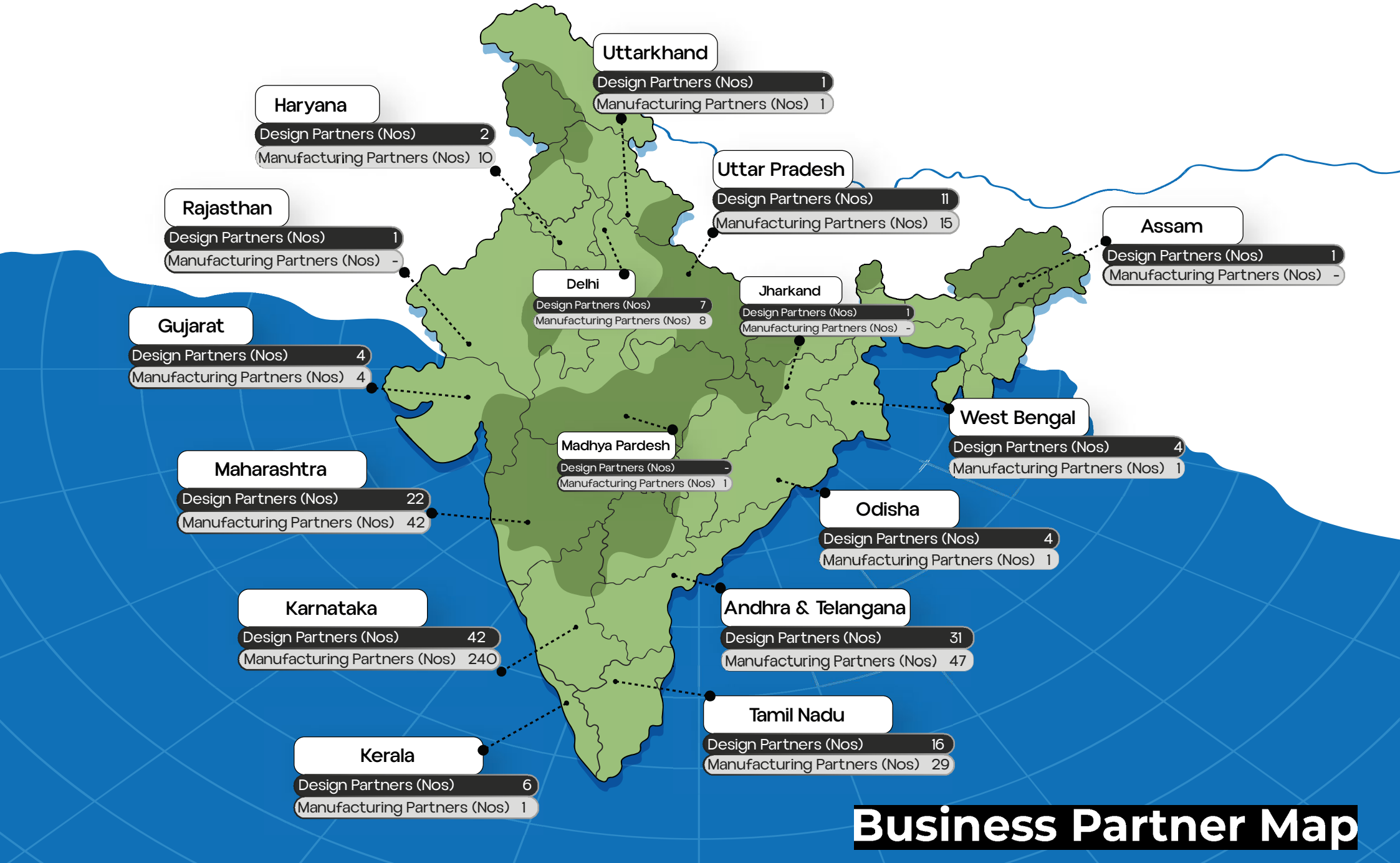


Ground
Equipement

Front Fuselage
DTL, Bengaluru

Private Sector Participation

LCA Tejas Eco System



Business Partner Map

Testimonials



Air Chief Marshal RKS Bhadauria (Chief of Air Staff (AF)



Gen. David L. Goldfein (Chief of Staff, USAF)



Tejasvi Surya (Member of Parliament)



PV Sindhu (Renowned Indian Badminton Player)



Army Gen. Andra Lanata (Chief of Staff, French Air Force)



Rajnath Singh (Defence Minister, India)



Air Chief Marshal Arup Raha (Chief of Air Staff, IAF)



Air Chief Marshal BS Dhanoa (Chief of Air Staff, IAF)



Air Chief Marshal Masihuzzaman Serniabat (Chief of Air Staff, Bangladesh Air Force)



Ng Eng Hen (Defence Minister, Singapore)



Argentine Air Force



Royal Malaysian Air Force Technical Evaluation Team



Gen. Bipin Rawat (Chief of Defence Staff, India)



PM Modi (Prime Minister of India)

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