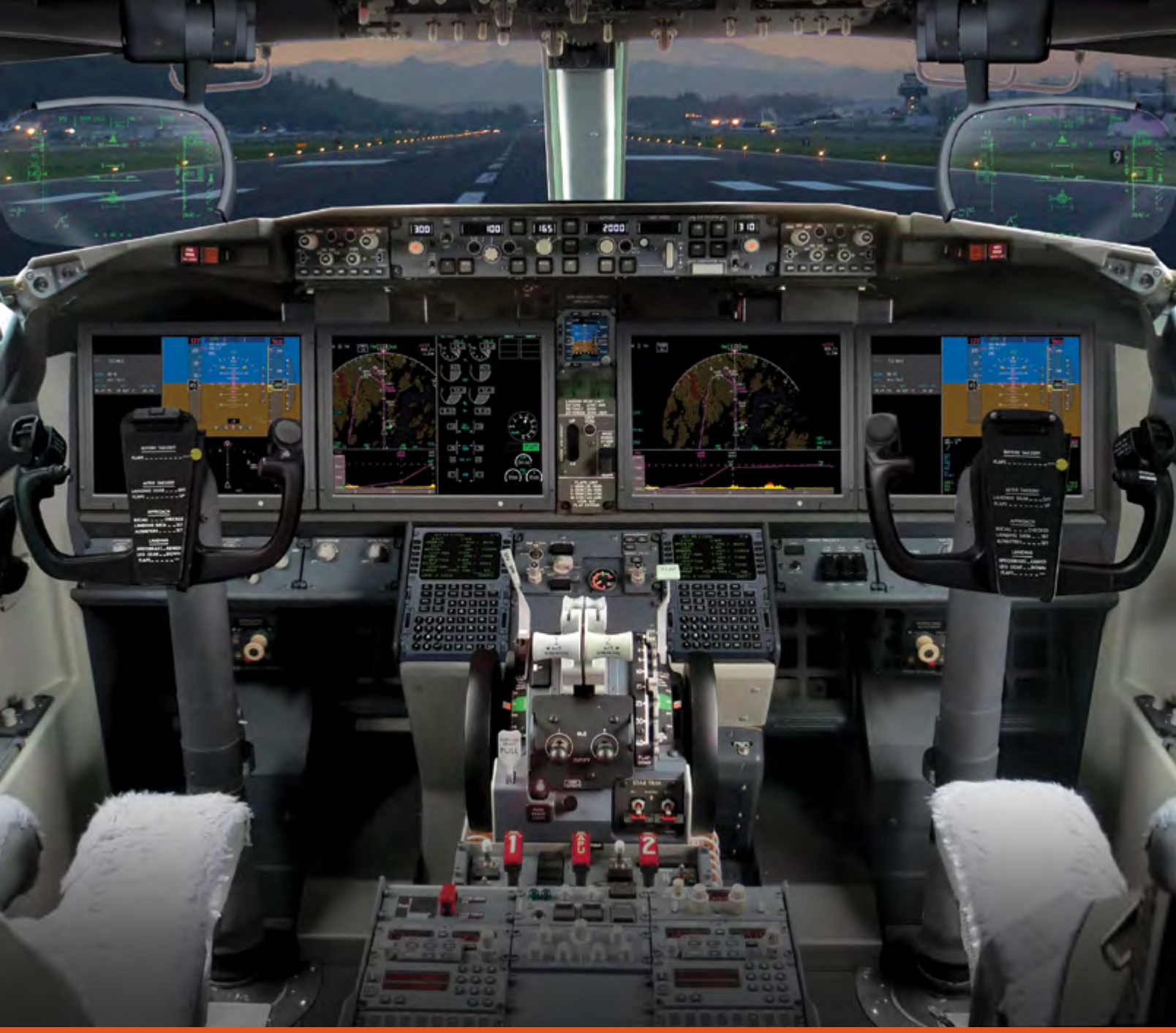
HGS™-6000 with Enhanced Flight Vision System for the Boeing 737

WHEN CONDITIONS ARE AT THEIR WORST, YOU'RE AT YOUR BEST

Real-time, eyes-forward capability that enhances safety and operations

Collins Aerospace



Twice the performance: Dual HUD available

- Provides both pilots with the same high-fidelity flight information previously only available on the left side of the flight deck
- Eases the promotion process from first officer to captain
- Avoids waiting time for Low Visibility Operations (LVO) qualifications that lead to costly delays, diversions and disruptions

BETTER VISION, GREATER PRECISION

Collins Aerospace's Head-Up Guidance System, HGS™-6000, is the latest head-up display technology available for Boeing 737 fleets.

The HGS™-6000 can decrease operational costs and maximize on-time performance with:

- Low Visibility Takeoff (LVTO)
- CAT I - III Approach Guidance
- Rollout guidance
- Autonomous flare
- Tailstrike avoidance

Head up, eyes forward

- Provides a conformal display
- Shows the flight path in all flight stages
- Enables greater awareness of the aircraft energy state

FLIGHT PATH INDICATOR

- Inertially derived
- Instantaneous indication of where the aircraft is going

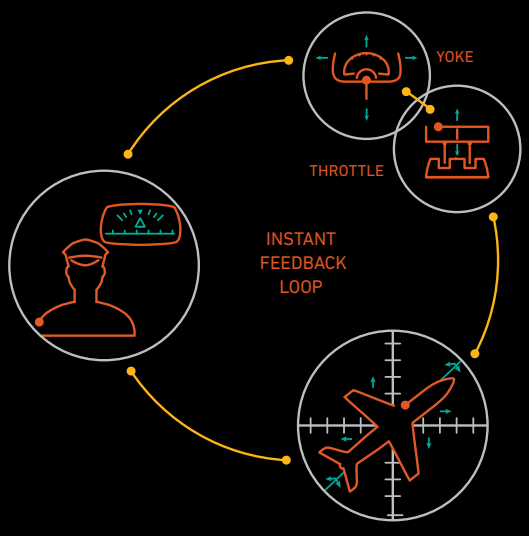
GUIDANCE CUE

- Uses landing aid (ILS, GLS) and IRS to compute and position cue

ENERGY MANAGEMENT

Seamless extension of the pilot: Pilot in the loop

- Enables eyes-forward flying, reducing reaction time
- Provides the best aircraft feedback system
- Enables approach visualization
- Improves training methods
- Increases situational awareness



EFVS: Exceeding human vision

- See through weather and low visibility conditions
- Reduced minima:
  Enhanced Flight Vision System (EFVS) Approach and EFVS Landing/Rollout
- Lower the risk of runway incursions and excursions

HGS reduced operating minima (RVR)

CAT	US	EUROPE/ BRAZIL	CHINA
I	1800 ft	550 m	550 m
SA I	1400 ft DH 150 ft	450 m	450 m DH 45 m
II	1000 ft	300 m	300 m
III	600/400 ft	200 m	–
Takeoff	300 ft	75 m	200 m CAT I

EFVS expanded minima – bringing CAT I to new lows

FAA	FAA CFR	CS AWO	EXPANDED MINIMA
EFVS Approach System	91.176B	EFVS-Approach	Utilizes EFVS to 100 ft
EFVS Landing System	91.176A	EFVS-Landing	Utilizes EFVS to landing

Vertically guided approach required (ILS, GLS, LPV, RNP)

HGS and EVS: Verified value for safety and your bottom line

Fewer diversions

- Save on fuel, passenger accommodations, etc.

Improved safety

- Eliminate/reduce tailstrikes, hard landings and runway excursions
- Prevent obstacle collisions on runways

Maintenance savings

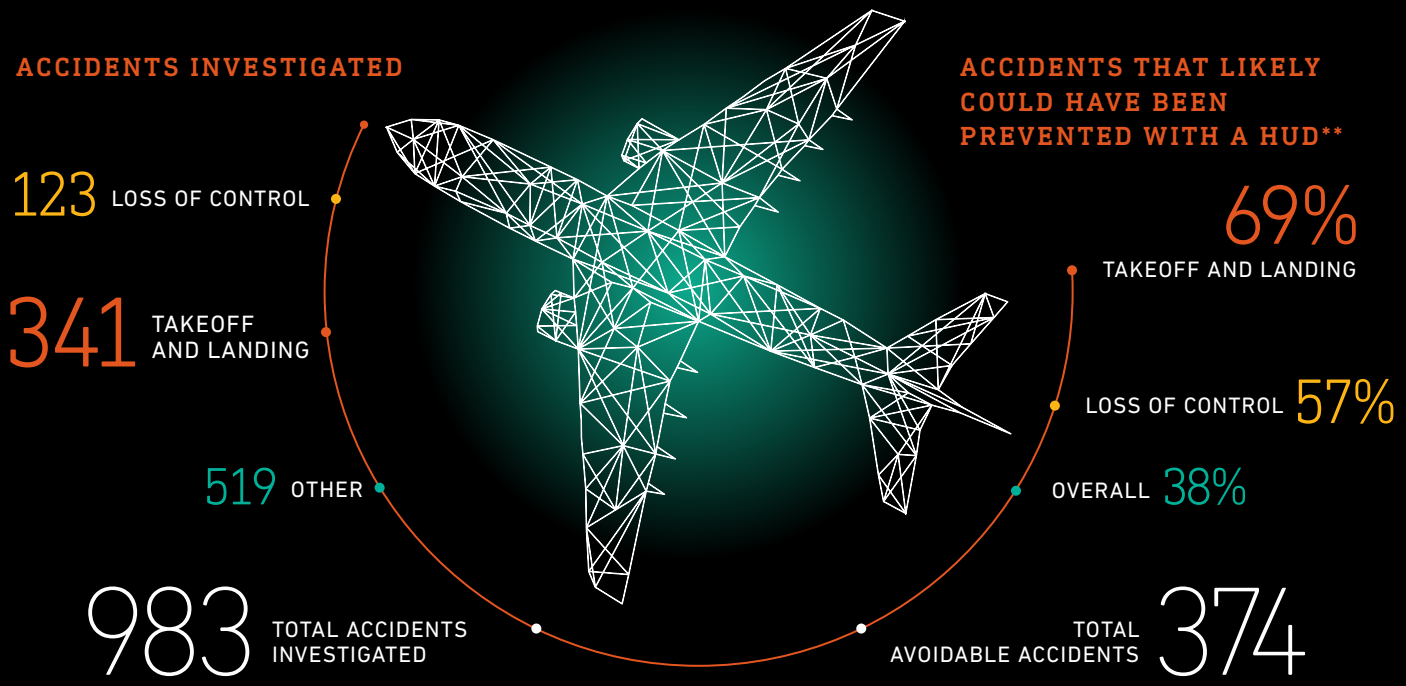
- Reduced wear and tear on wheels, tires, brakes, flaps and engines

Ready to equip

*PRODUCT	RETROFIT	LINE FIT
Left HUD	Available	Available
Right HUD	Available	Mid-2020
EVS-3600	Early 2020	Mid-2020

*Single and dual HUDs, as well as EFVS, are available for all Boeing 737NG and 737 MAX models.

Improved safety is possible



Fly and land with greater confidence

- Real-time, eyes-forward capability
- Improves safety
- Enhances operations
- Maximizes the efficiency of pilot training
- Economic benefit

**Flight Safety Foundation

To learn more, go to
collinsaerospace.com/HGS

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