



600 SERIES

THE LATEST GENERATION
TURBOPROP

**NEW COCKPIT, NEW CABIN, WITH THE BEST RELIABILITY
AND ECONOMICS OF THE REGIONAL MARKET**

ATR

REINFORCING LEADERSHIP IN THE TURBOPROP MARKET



One of the key success factors of the ATR Program has been the continuous attention to market evolution, to meet the rigorous requirements of regional airlines.

The leader in the 50-70 seat turboprop market, ATR's fundamental strategy is to maintain the main strengths of its products which are unbeatable operational costs, high reliability, excellent passenger comfort and family concept, while continuing to innovate and to develop products and services to satisfy the demand of ATR operators worldwide.



■ A UNIQUE TURBOPROP FAMILY

■ ADVANCED TECHNOLOGY: GLASS COCKPIT

■ ULTIMATE CABIN COMFORT: NEW ARMONIA CABIN

■ UNRIVALLED PERFORMANCE & VERSATILITY

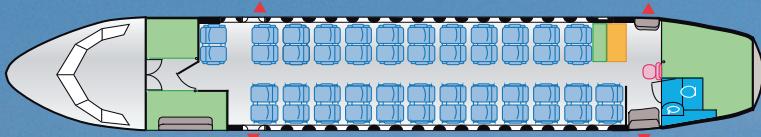
■ UNBEATABLE ECONOMICS

■ THE HIGHEST CUSTOMER SUPPORT STANDARD

■ ENVIRONMENTAL AWARENESS

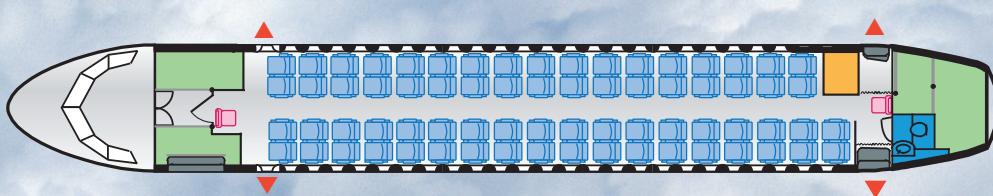
ATR 42-600/ATR 72-600

THE UNIQUE TURBOPROP FAMILY



► ATR 42

- 48-50 seats
- Only Western aircraft in this class
- Outstanding airfield performance
- Typical configuration 48 seats @ 30" pitch



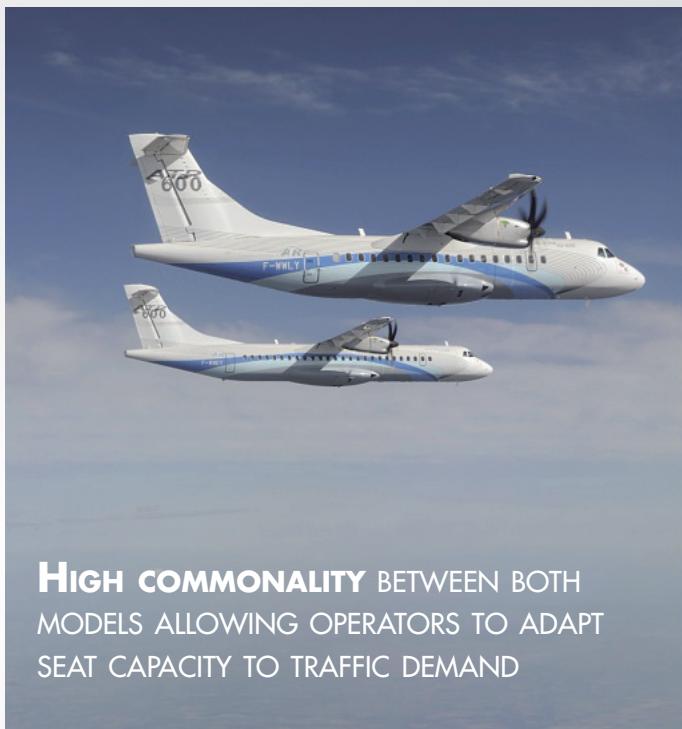
■ Attendant seat ■ Galley ■ Toilet ■ Baggage ■ Emergency exits

► ATR 72

- 68-74 seats
- Typical seating configuration 70 seats @ 30" pitch
- Lowest seat cost of all regional aircraft

ATR IS THE ONLY AIRCRAFT MANUFACTURER TO OFFER AND TO ACTIVELY SUPPORT NEW 50-SEAT AND 70-SEAT AIRCRAFT.

1 Product, 2 Sizes



HIGH COMMONALITY BETWEEN BOTH MODELS ALLOWING OPERATORS TO ADAPT SEAT CAPACITY TO TRAFFIC DEMAND

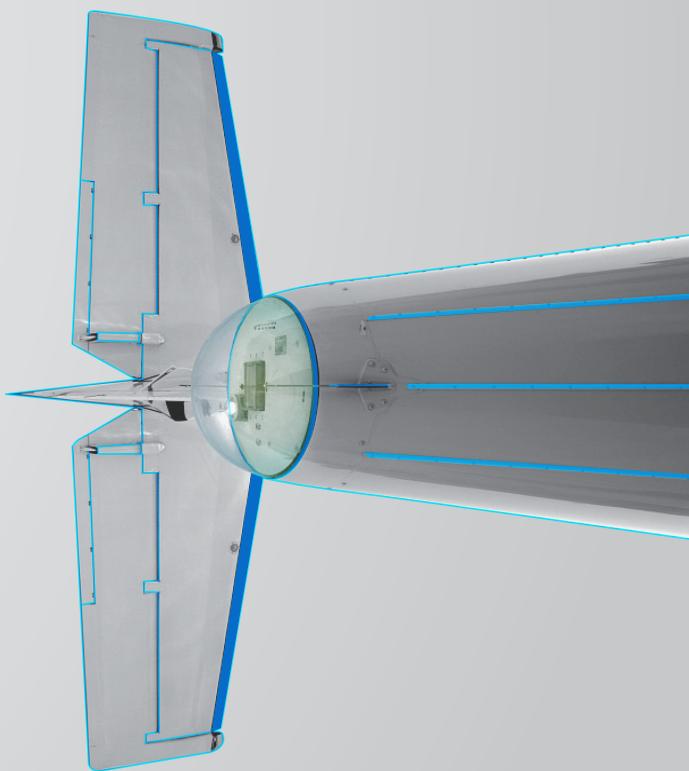
- **90% of common spares.**
- **Common Type Rating:**
few hours needed for ground difference training course.

The ATR Family concept allows airlines to match various operational needs:

- Opening/testing of new markets.
- Adapting seat capacity to traffic variations.
- Reducing costs thanks to commonality savings (lower training costs, flight crew optimisation, reduced expenditure on spare parts,...).

■ The **ATR 72** is recognized as the most **cost-effective** regional aircraft, positioning it as the industry reference to serve both low-cost/low yields environment.

■ The **ATR 42** is the only **50-seater aircraft in production** with a secured future. It is the right size and natural choice for both fragmented and niche markets.



ADVANCED TECHNOLOGY

New Avionics Suite



LEADERSHIP IS NOT JUST ABOUT MARKET SHARE. IT IS ALSO ABOUT PROVIDING THE RIGHT TECHNOLOGY FOR HIGH RELIABILITY AND LOW OPERATING COSTS.

The most advanced glass cockpit in the regional aircraft market

- ▶ A380 technology brought to regional aviation
- ▶ About 30% lower P/N count
- ▶ Reduced maintenance cost (-15%)
- ▶ Better reliability
- ▶ Pilot stress and workload reduction:
 - Automatic Check list
 - Automatic monitoring of surroundings (terrain, traffic, weather, icing)
 - Automatic failure detection and appropriate procedure pop-up
- ▶ Safety and operational improvements
 - Dual FMS
 - Airport navigation function
- ▶ New developments to meet future regulatory requirements:
 - SBAS Capability (EGNOS/WAAS) to conduct localizer performance with vertical guidance (LPV) approaches
 - ADS-B out
 - RNP 0.3 AR APCH
 - BARO VNAV for vertical guidance coupled with the autopilot.



ADVANCED TECHNOLOGY

New Avionics Suite

LATEST INTEGRATED MODULAR AVIONICS TECHNOLOGY, CERTIFIED ON THE A380 PROGRAM

FIVE 6X8" LIQUID CRYSTAL DISPLAY UNITS

Primary Flight Display (PFD):

- EFIS functions (EADI/EHSI)
- Fly / Navigate

Engine & Warning Display (EWD):

- Aircraft status
- Engine primary parameters
- Crew Alerting System
- Check-lists / Procedures management
- Manage aircraft & potential malfunctions

Multi-Function Display (MFD):

- Navigation/Communication
- Aircraft systems synoptic
- Manage route & systems
- Communicate



USE OF STATE OF THE ART TECHNOLOGY COMPLIANT WITH NEXT GENERATION CNS/ATM SYSTEMS FOR IMPROVED SAFETY AND BETTER RELIABILITY

EXAMPLE OF AVAILABLE OPTIONS:

► ACARS - Aircraft Communications Addressing & Reporting System

- Up/down-loading digital data via VHF network
- Customisable with dedicated tools
- Improved communication between aircraft, Operator's base and ATC (Air Traffic Control)



► Class 2 Electronic Flight Bag (EFB)

- Aircraft manuals
- Electronic charts
- Performance calculations
- Customer dedicated application
- Highest screen resolution in its category
- Commonality with other aircraft types (regional jet, business aviation, etc.)



► Airport Navigation Function

- Improvement of the situational awareness during ground taxiing: airport map and aircraft position on the MFD.



► Provision for personal electronic devices

- Structural and electronic provision for PED installation, such as iPad®
- 2 swiveling mounting devices located at each pilot's side
- 2 USB type power supply ports

► New Navigation and Surveillance Functions for flight path optimization and improvement of situation awareness

- RNP AR 0.3 APCH (required navigation performance with authorization required)
- LPV/APV (approach with vertical guidance)
- Baro VNAV (coupled with the auto-pilot)
- ADS-B out DO-260B

ADVANCED TECHNOLOGY

Multi Purpose Computer (MPC)

MULTI PURPOSE COMPUTER, AN INNOVATIVE SOLUTION DEVELOPED BY ATR.

ONE SINGLE COMPUTER FOR:

Performance Monitoring

- **Aircraft Performance Monitoring (APM)**, providing crew awareness of in-flight aircraft behaviour. Tool developed by ATR, unique in the aviation industry.

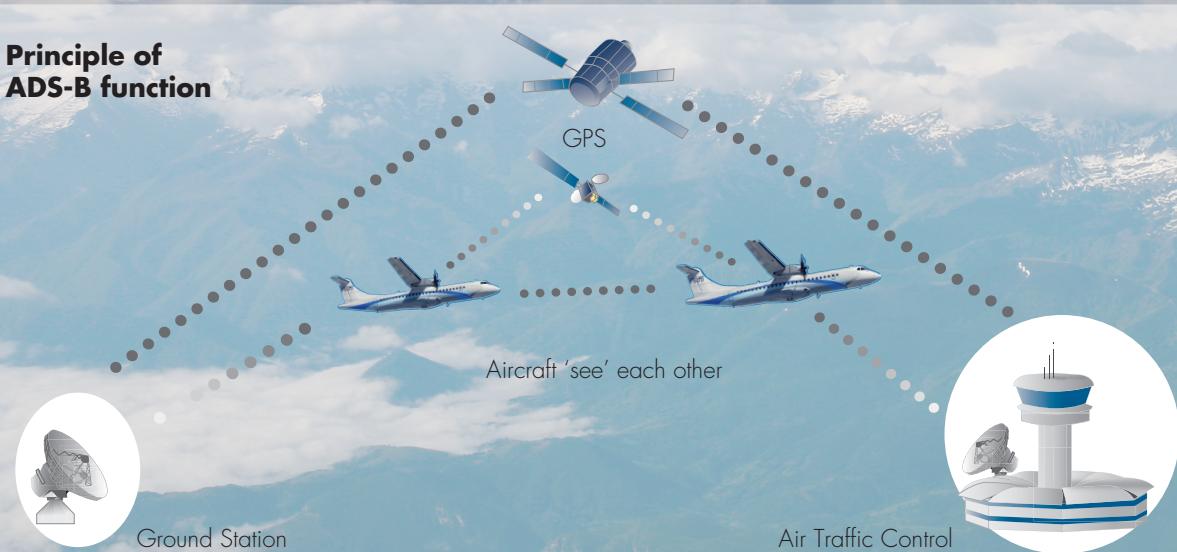
- **Enhanced Surveillance** (EHS) Mandatory in Europe since March 2007 for aircraft parameters acquisition and transfer to transponders.

- **Automatic Dependent Surveillance - Broadcast (ADS-B)**

parameters acquisition and transfer to transponders, to make aircraft data available to other ADS-B capable aircraft.

| Draws pilot's attention | Indicates minimum speed | |
|---|-------------------------|---|
| CRUISE SPEED LOW DEGRADED PERF | INCREASE SPEED | <ul style="list-style-type: none"> • Record all alerts in FDR • Refer to existing procedures after a 'Degraded performance' |

Principle of ADS-B function



MPC IS AN INNOVATIVE SYSTEM PROVIDING ENHANCED MONITORING OF IN-FLIGHT AIRCRAFT BEHAVIOUR

Effective Maintenance

- **Quick Access Recorder (QAR)**

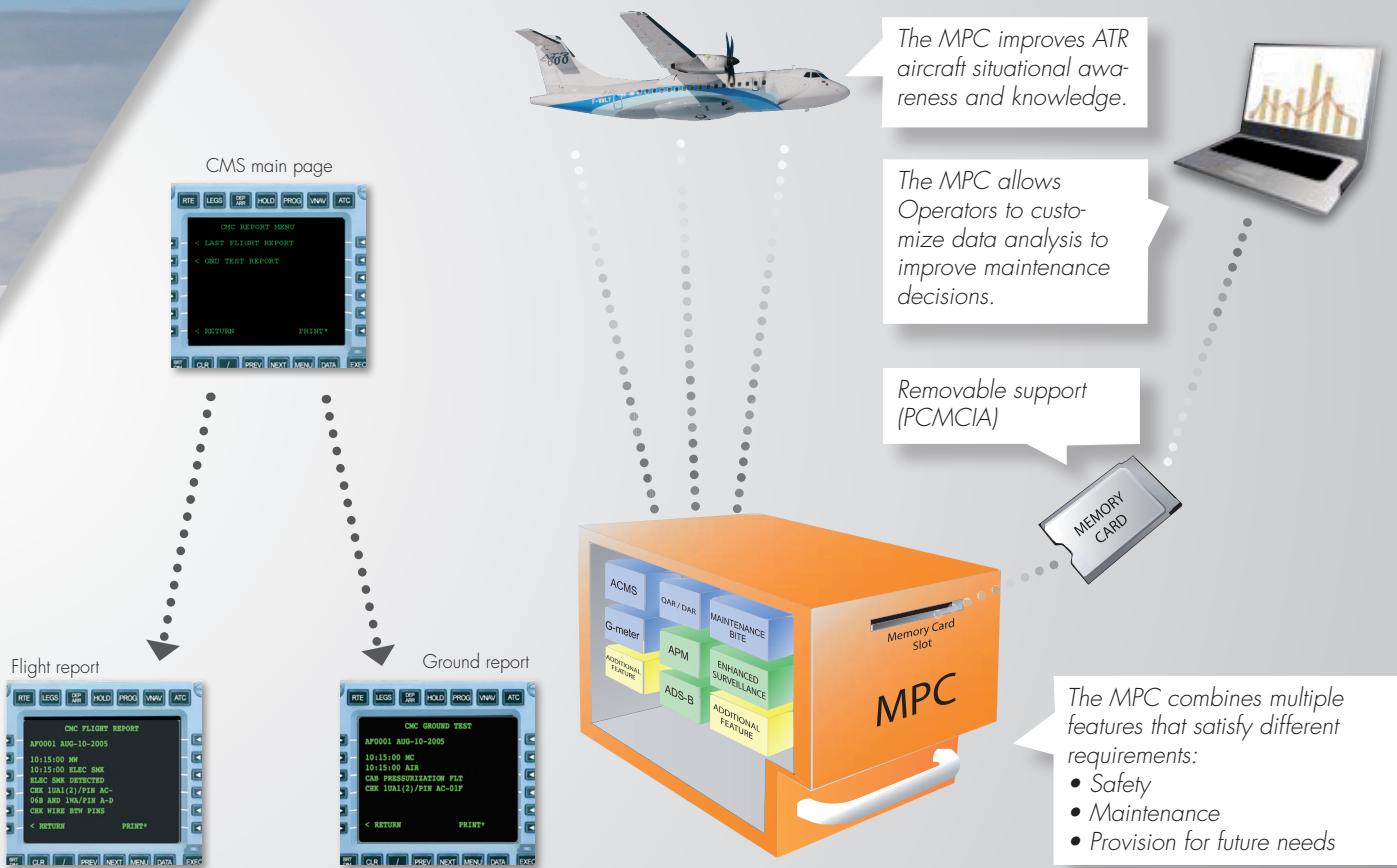
allows FDR parameters recording on a PCMCIA card.

- **G-Meter** records flight and landing vertical acceleration without FDR reading.

- **Maintenance / BITE**

monitoring allows the display of maintenance information through the MCDU.

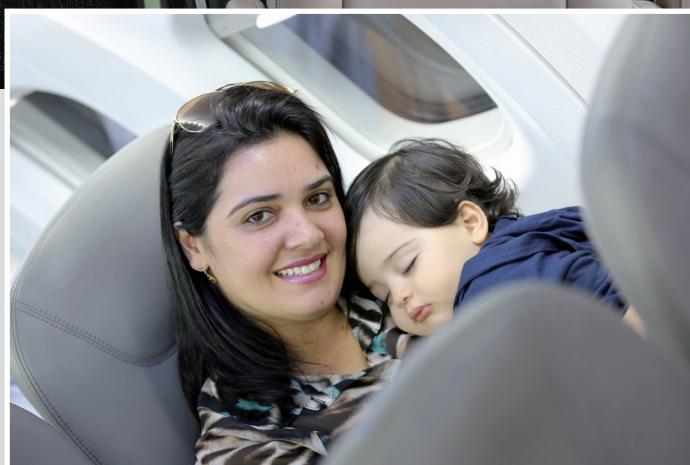
- **Aircraft Condition Monitoring System (ACMS)** allowing failure source identification, trend monitoring and on-line troubleshooting aid with automatic pilot flight report, when required, including engine reports.



A NEW COMFORT STANDARD THE **ARMONIA** CABIN

ATR and Giugiaro Design have worked closely together to create an ultra modern, appealing and comfortable cabin. The name «Armonia» is linked to beauty, harmony, balance and calm, themes apparent in the new design.

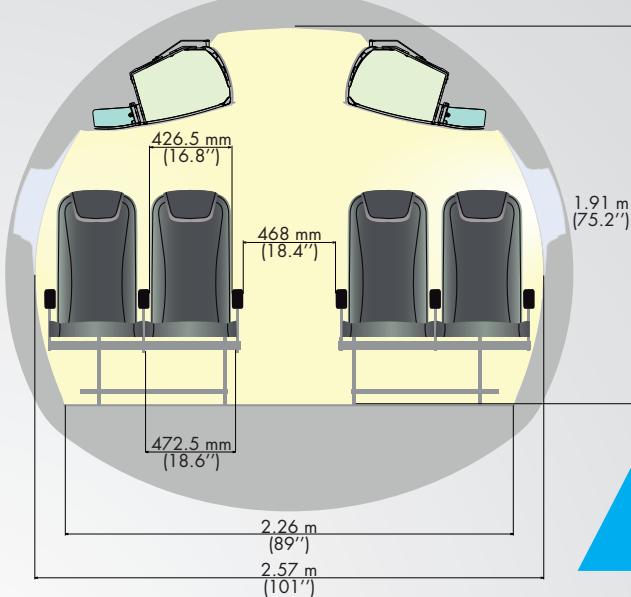
- **New light and slim seats**
- **Wider overhead bins**
- **New PSU**
- **LED cabin lighting**



OPTIMUM COMFORT FOR A MODERN REGIONAL AIRCRAFT

ARMONIA ENHANCEMENTS

The ATR -600 Series has the widest cabin in the regional aircraft market. ARMONIA's attractively and finely designed seats, ceiling, side panels and overhead bins make the cabin more spacious, airy and comfortable. ARMONIA also uses lightweight materials, reducing the total seat weight.



THE WIDEST CABIN IN THE TURBOPROP MARKET

ATR 4-abreast cross section provides large and comfortable seats, spacious aisle, head and foot clearance, and large overhead bins.

WIDEST FLOOR / WIDEST AISLE IN THE TURBOPROP MARKET • MORE LEG ROOM FOR WINDOW SEATS



NEW LIGHT & SLIM SEATS

► Weight savings

- Classic type: 160kg (353lb) on a shipset of 70 seats compared to previous series seats

WITH NEW ERGONOMIC DESIGN FOR GREATER COMFORT AND WEIGHT OPTIMIZATION.

► Improved life space

- New shape to maximize passenger space, especially at knee level.
- 30" pitch with new seats, same comfort as standard 31" pitch.

More space at knee level.



A NEW COMFORT STANDARD THE **ARMONIA** CABIN

WIDER OVERHEAD BINS



- Increased total volume by around **10%**
- **30%** more roller bags stowage with **66%** of passengers able to stow a standard bag of: 55 cm x 42 cm x 25 cm

- In a typical 70 seat configuration, about **46 IATA roller** bags can be stowed in the overhead bins
- Sliding opening door with push buttons
- New Passenger Service Units

NEW SHAPE + MORE VOLUME = GREATER EFFICIENCY

LED LIGHTING AND IN-FLIGHT ENTERTAINMENT SYSTEM



- **LED lighting system providing:**
 - Higher efficiency
 - Higher reliability
 - Lower maintenance cost
- **In-Flight Entertainment System (on option)**
 - 5" screens every two rows
 - Fold/unfold automatically
 - Unique in the turboprop industry

**BEST-IN CLASS COMFORT WITH MORE SPACE
AND BETTER CABIN ATMOSPHERE**

NEW PASSENGER SERVICE UNIT & CABIN MANAGEMENT SYSTEM



Current ATR functions

- Cabin lighting control/dimming
- Cabin signs display
- Cabin attendant /Crew calls display
- Audio control (entertainment, public address),
- Emergency lighting control
- Cargo/Toilet Smoke warning
- Elec Ground Service buses control/indication

New functions

- PSU ambient light control
- Cabin temperature
- Airline info (logo, welcoming message, flight data)
- Cabin video system management (option)



UNRIVALLED PERFORMANCE & VERSATILITY



Temperature or altitude extremes from the Equator to the Arctic Circle are part of the routine flying environment for ATR aircraft.

Operated today in all types of climates and conditions, ATR operational flexibility and versatility are recognized worldwide by regional operators.

Structural efficiency, together with an advanced

aerodynamic design and state-of-the-art Pratt & Whitney Canada PW100 Series engines, keep fuel burn to a minimum.

ATR's objective is to expand operational versatility even further by providing airlines with capability tailored to suit regional operations and boost revenue.

PROVIDING EXACTLY WHAT THE CUSTOMER NEEDS IN A FAST EVOLVING MARKET.

Example of current Performance characteristics:

- **Short runway** (less than 1,000 m/3,280 ft)
- **6° Steep slope** approach (ATR approved for operations in LCY)
- **Unpaved runways** certification (laterite, soil, gravel, grass)
- **Narrow runways** operations, down to 14 m/46 ft width
- **4.5% runway max** slope allowed
- **120 min ETOPS**

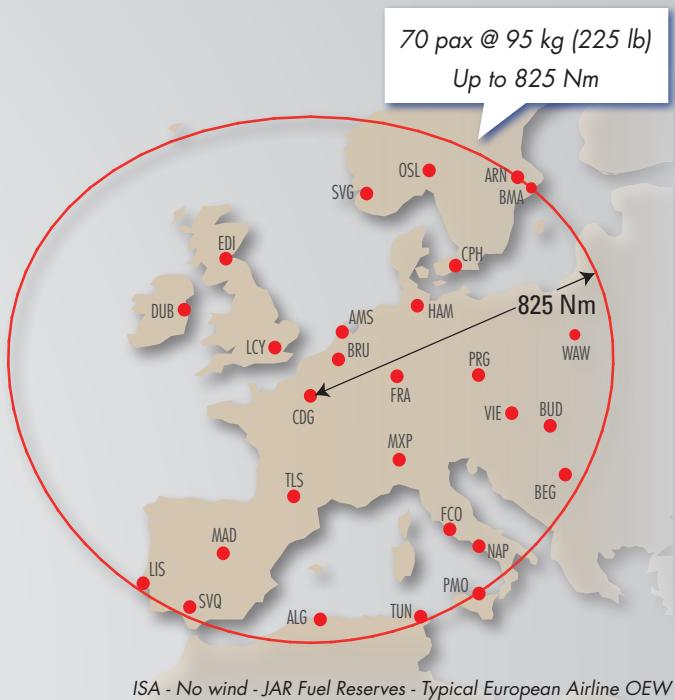
New Features

- New design weights
- Improved short runway performance
- Performance Enhancement from "hot & high" airfields

**ADAPTED FOR REGIONAL OPERATIONS
IN ALL TYPES OF ENVIRONMENT**

INCREASED ATR 72-600 OPERATIONAL WEIGHTS

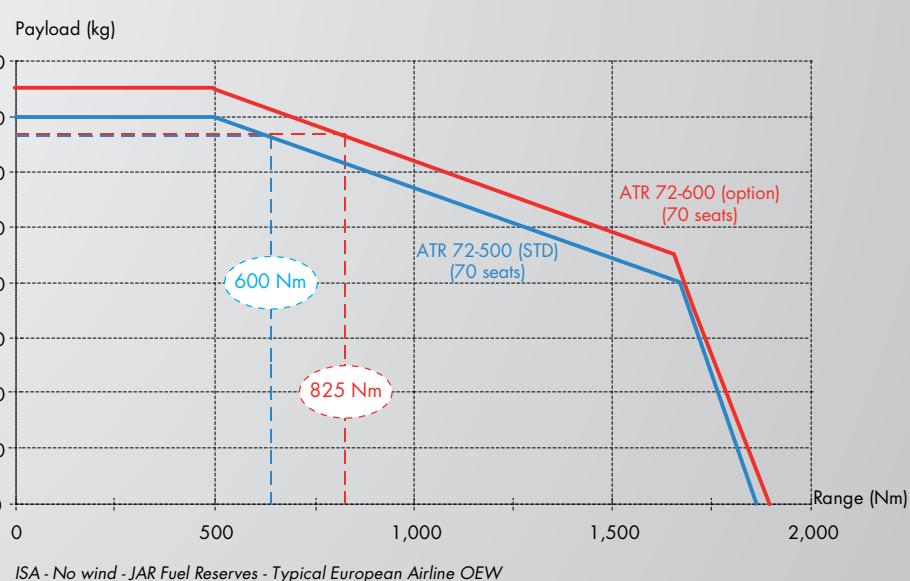
| | ATR 72-500 | ATR 72-600 | |
|--------------------|------------------------|------------------------|------------------------|
| | STANDARD | STANDARD | OPTIONAL |
| MTOW | 22,500 kg 49,604 lb | 22,800 kg 50,265 lb | 23,000 kg 50,706 lb |
| MLW | 22,350 kg 49,272 lb | 22,350 kg 49,272 lb | 22,350 kg 49,272 lb |
| MZFW | 20,500 kg 45,195 lb | 20,800 kg 45,855 lb | 21,000 kg 46,296 lb |
| MAX PAYLOAD | 7,000 kg 15,432 lb | 7,300 kg 16,093 lb | 7,500 kg 16,534 lb |



Following a strong market demand, the ATR 72-600 offers increased payload, making the aircraft even more attractive. This results in:

► **Up to 500 kg (1,100 lb)**
higher payload for the same range.

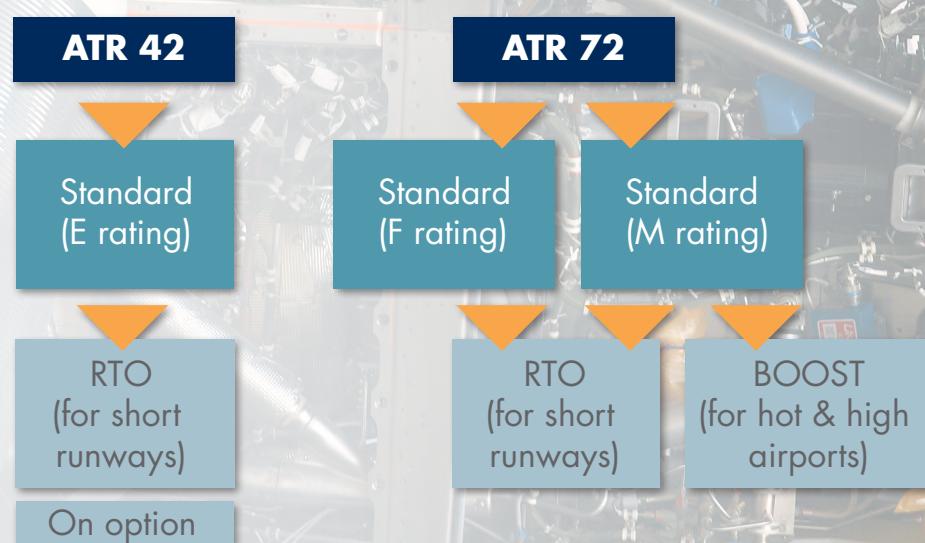
► **Up to 225 Nm (420 km)**
extended range performance at same payload.



A SINGLE MULTI-RATED ENGINE POWER

A common engine for ATR 42 & ATR 72 leading to significant maintenance savings and operational flexibility.

- A unique engine hardware PW 127 for 3 power settings: E, F and M.
- Smart Card to account for cycles relevant to each model rating.
- Higher rating on request only → better control of maintenance costs



- Engine rating selected through airframe identification system (EEC multi-configuration). Through the 'Flex Operation' concept, two levels of power are available for the ATR 72, allowing either PW127F ratings for standard operations or PW127M ratings for 'hot & high' operations.

ENHANCED PERFORMANCE ON SHORT RUNWAYS AND HOT & HIGH AIRPORTS

IMPROVED SHORT RUNWAY

TAKE-OFF PERFORMANCE (RESERVE TAKE-OFF TORQUE OPTION)

ATR has developed the **Take-off at "Reserve Take-off Torque"** option to improve take-off capabilities on very short runways or in case of near obstacles.

With this option, the ATR 72-600 can operate profitably from very short runways in different weather conditions, greatly improving TOW and payload.

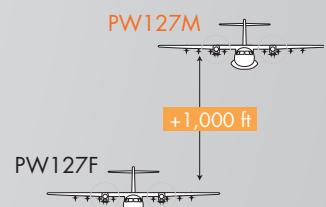
| ATR 72-500 (standard) | ATR 72-600 with Reserve Take-off torque Option |
|--|---|
| 950 m - dry runway, sea level - 30 °C conditions | Ref. +640 kg - 1,415 lb |
| 1,000 m - wet runway - sea level - ISA conditions | Ref. +480 kg - 1,065 lb |
| 1,200 m - 1,000 ft elevation - atmospheric icing conditions - 0 °C | Ref. +600 kg - 1,320 lb |

PERFORMANCE ENHANCEMENT FROM "HOT AND HIGH" AIRFIELDS (BOOST OPTION)

Within the scope of providing even better performance and additional payload for the most demanding networks (hot and high airports, mountainous environment), ATR and P&WC have jointly worked **to provide on request 4.5% higher thermodynamic power at take-off and max continuous ratings.**

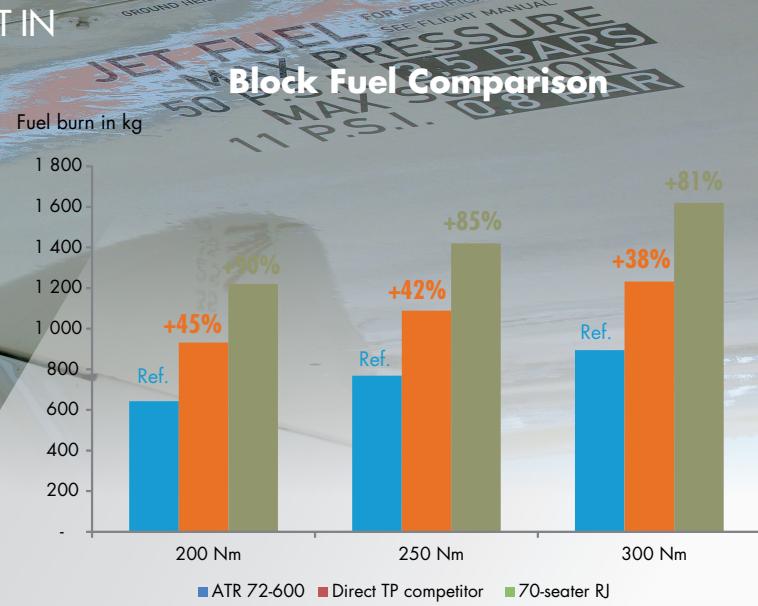
This results in:

- ▶ Increase of climb gradient in hot and high conditions leading to take-off weight improvement of around 500 Kg (1,100 lb). Example: + 500 kg from Bogota airport (8,360ft and ISA+20°C)
- ▶ + 1,000 ft higher one engine out net ceiling.



UNBEATABLE ECONOMICS

ATRs, THE MOST FUEL EFFICIENT AIRCRAFT IN THE REGIONAL MARKET



Thanks to lighter structure, optimized speed and well suited engine for short sectors, the ATR 72-600 is by far more fuel efficient than any other 70-seater aircraft.

In addition to the lower fuel bill, the fuel efficiency of ATR makes the aircraft the "green" turboprop of tomorrow and the most environment friendly aircraft of its category.

ATR IS THE NATURAL HEDGE AGAINST HIGH FUEL PRICES

250Nm stage length
10 min. taxi time



ATR 72-600



Direct TP Competitor

FUEL ECONOMY PER TRIP: 320 KG → 42%

Competitor extra fuel bill per aircraft dramatically increases with fuel price.

| Fuel Price | Direct TP competitor Extra US\$/trip | Direct TP competitor Extra US\$/year |
|------------------|--------------------------------------|--------------------------------------|
| 3\$/Gal | 323 | 646,198 |
| 3,5\$/Gal | 377 | 753,898 |
| 4\$/Gal | 431 | 861,597 |

DIRECT TP COMPETITOR ANNUAL EXTRA FUEL COST > US\$ 750,000 PER AIRCRAFT

Based on a yearly utilisation of 2,000 flights per year

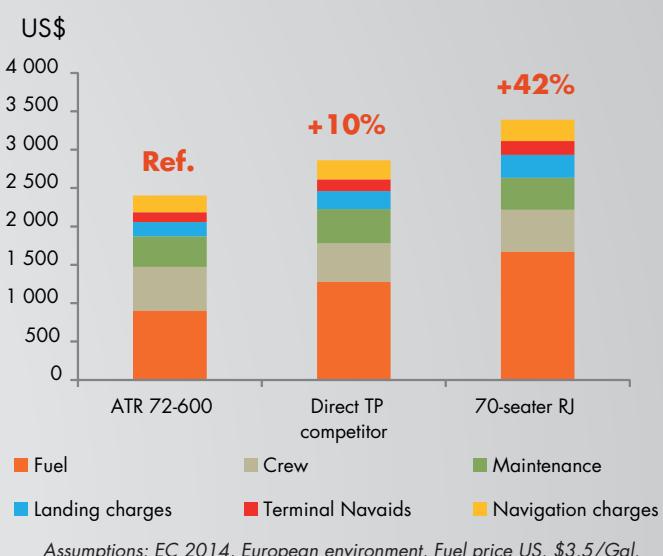
ATR 72-600: THE LOWEST SEAT-MILE COST IN ITS CATEGORY

ATR, THE LOW COST REFERENCE FOR THE REGIONAL MARKET

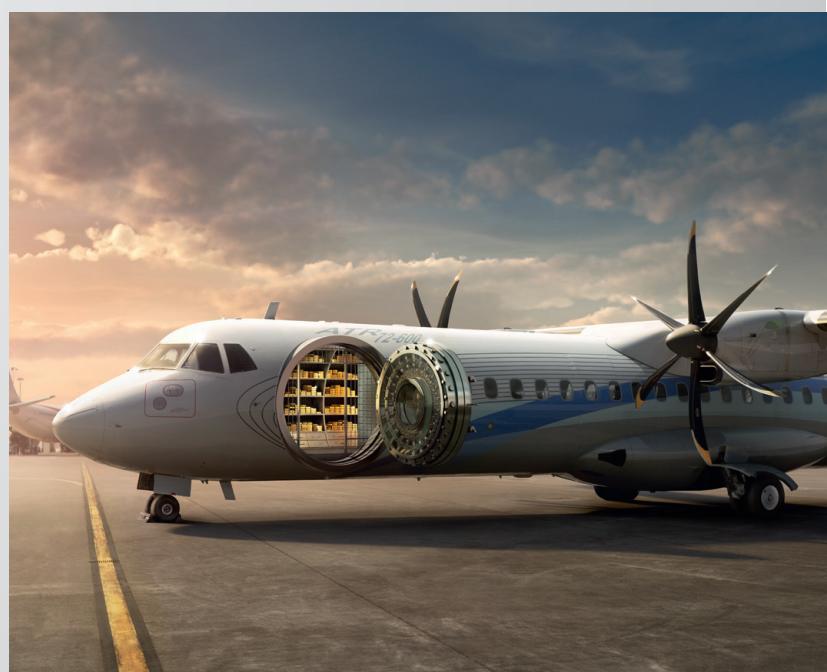
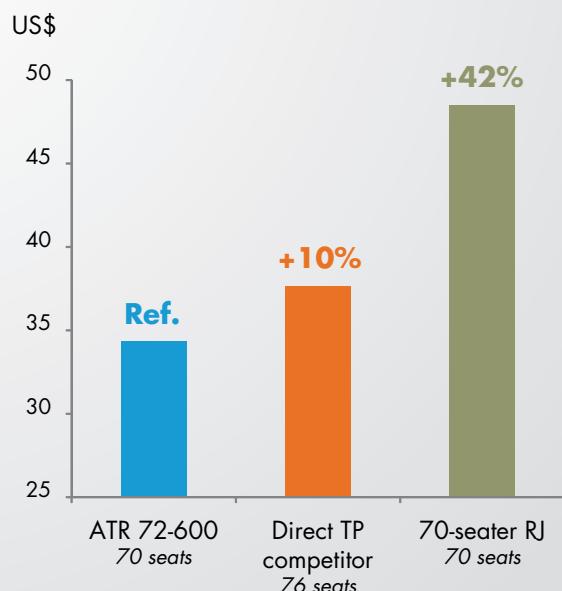
ATR, and especially the ATR 72-600 features exceptionally low operating costs when compared to similar sized turboprops and jet competitors on typical regional sectors. Thanks to its structural efficiency and low design weights, the ATR 72-600 benefits from:

- ▶ **Lower fuel bill**
- ▶ **Lower engine and airframe maintenance costs**
- ▶ **Significantly lower airport and navigation charges** (weight related charges).

Cash Operating cost per trip on 250 Nm



Cash Operating cost per seat on 250 Nm



STRONG CUSTOMER SUPPORT WITH CERTIFIED EXPERTISE



► CUSTOMER FRONT DESKS

Each of the main support functions is accessible through its own dedicated front desk: Technical, Spares, Training and Flight operations, Services and Warranty. The channeling of standard queries via such specific front desks means that a prompt yet truly specialised assistance is provided.



► AOG SERVICES

A worldwide ATR team is on call, 24H/7D to organise spares deliveries and to provide technical assistance under emergency conditions to return your aircraft to service.

► ON-SITE ASSISTANCE

ATR Customer Support Representatives located at the customer's base assist ATR operators integrate ATR aircraft into their fleet in a seamless manner. They also provide front-line technical assistance during operations.

► TECHNICAL SUPPORT

A specific ATR team is in place on a 24H/7D basis, providing solutions on any technical issues.

The group is also ready and able to perform on-site assistance missions.

► TECHNICAL SERVICES

Subjects such as aircraft damage assessment, engineering studies, working party, fuel tank/video inspection and maintenance cost analysis are handled, with specific benefits that only an experienced and successful aircraft manufacturer like ATR can offer.

► TECHNICAL PUBLICATION

Aircraft publications are regularly updated for flight operations, maintenance and retrofit purposes; available in multiple formats (hard copy, CD/DVD-Rom and online).



**PROVIDING CONTINUOUS SUPPORT AND SERVICES TO OUR CUSTOMERS
FOR SAFE AND PROFITABLE OPERATIONS.**



► TRAINING AND FLIGHT OPERATIONS

Worldwide training is available through the ATR network of dedicated centres, named RTCs (Reference Training Centres). Each Operator benefits from

the highest level of training whenever and wherever it operates its ATR aircraft.

► RETROFIT ENGINEERING

ATR offers updates and retrofit solutions for highest aircraft specifications and residual values. Airworthy and validated solutions from the aircraft manufacturer's design and technical offices, by user requests or innovation initiatives.

► SERVICES

- The ATR Global Maintenance Agreement: A GMA is a comprehensive package combining parts availability and on/off aircraft maintenance for Operators who seek minimum stock investment. It also helps to better predict and therefore better plan maintenance expenditure.
- Consulting services: Specific modules have been developed in order to help Operators reach optimum efficiency and work with the best and most up-to-date practices and procedures available in all domains (engineering & maintenance, flight-ops., training, etc.).

► ATRactive PORTAL



ATRactive is a complete web suite solution. Secured thanks to certificate or login/password it is a unique access to all ATR products and services (24H/7D service availability).

ATR worldwide Customer Support organization



ATR -600, THE "GREENEST" AIRCRAFT OF THE MARKET



► July 2008: ATR is certified ISO 14001 for the activities and sites.

► June 2011: ATR is certified ISO 14001 for the aircraft life cycle.

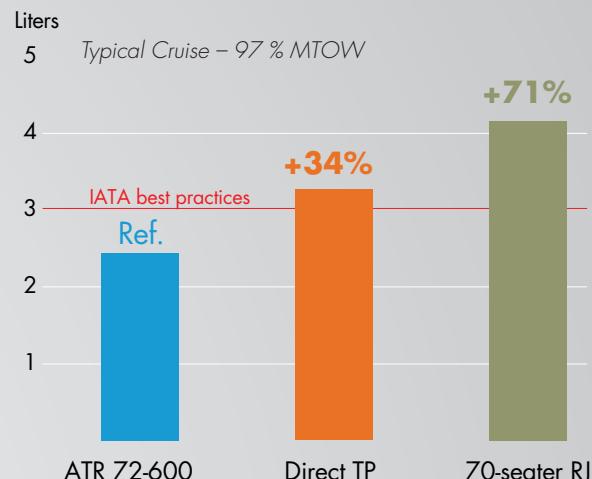
ATR 1ST REGIONAL AIRCRAFT MANUFACTURER TO BE CERTIFIED "ENVIRONMENT" FOR THE AIRCRAFT LIFE CYCLE



THE LOWEST FUEL CONSUMPTION OF THE MARKET

THE ATR72 IS THE ONLY AIRCRAFT WITH A FUEL CONSUMPTION **LOWER THAN 3 LITERS PER PAX PER 100 KM** AND ALREADY COMPLIANT WITH IATA BEST PRACTICES.

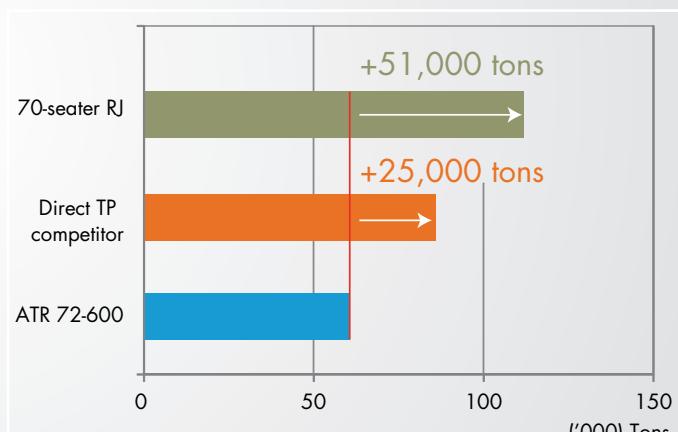
Liters of Fuel / Pax / 100 Km



LOW CO2 EMISSIONS

- Global Warming Prevention
- CO2 trading cost benefits

CO2 emissions for a fleet of 10 aircraft



25,000 tons = CO2 absorbed by **25 million trees** in one year

51,000 tons = CO2 absorbed by **51 million trees** in one year

ATR INVOLVEMENT IN EUROPEAN R&D PROJECTS

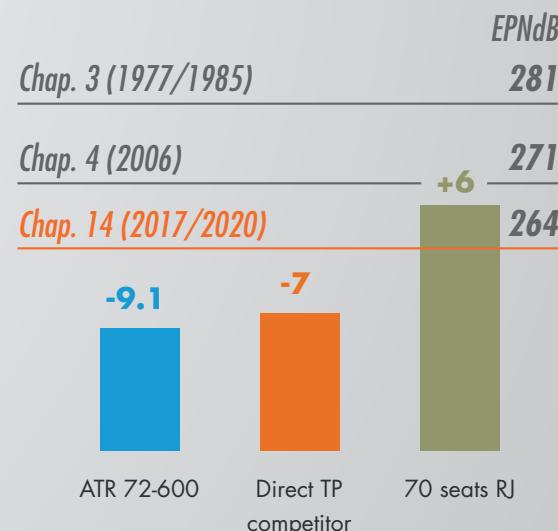
- ATR and its Partners are strongly involved in European Research and Project Development, with the aim to conceive and validate specific technologies for a future generation "green" regional aircraft.



- ATR is participating in the European CLEANSKY Project by providing the green regional aircraft platform.

LOW NOISE LEVEL

- Modern regional turboprop ATR aircraft meet both external noise and gaseous emission level regulatory requirement with ample margins.
- Regional turboprops operate at relatively low altitude, leaving the ozone layer unaffected and barely contributing to pollution of the upper atmosphere.



Noise levels and ICAO's requirements - EPNdB

ATR 72-600

CHAPTER 3 CUMULATIVE MARGINS: 26.1 EPNdB

CHAPTER 4 CUMULATIVE MARGINS: 16.1 EPNdB

CHAPTER 14 CUMULATIVE MARGINS: 9 EPNdB

GLOSSARY



ADS-B: Automatic Dependent Surveillance - Broadcast

APM: Aircraft Performance Monitoring

APV: Approach with Vertical guidance

ASI: Air Speed Indicator

ATC: Air Traffic Control

CDTI: Cockpit Display of Traffic Information

CNS/ATM: Communication Navigation Surveillance/
Air Traffic Management

EGPWS: Enhanced Ground Proximity Warning
System (or TAWS, ICAO designation)

EFB: Electronic Flight Bag

EHSI: Electronic Horizontal Situation Indicator

LPV: Localizer Performance with Vertical guidance

MCDU: Multipurpose Control Display Unit

MPC: MultiPurpose Computer

MTBF: Mean Time Between Failure

QAR: Quick Access Recorder

RMI: Radio Magnetic Indicator

RNP: Required Navigation Performance

TAWS: Terrain Awareness and Warning System

TCAS: Traffic Collision Avoidance System
(or ACAS, ICAO designation)

V-NAV: Vertical Navigation

VSI/TRA: Vertical Speed Indicator/Traffic Resolution
Advisory

WAAS: Wide Area Augmentation System

WXR: Weather Radar

ATR -600 CHARACTERISTICS

► COST EFFECTIVENESS

- The specialised tool for short haul sectors.
- ATR aircraft are the most fuel efficient and most environment friendly aircraft in the regional market.
- ATR 72 is the lowest seat-mile cost aircraft in the 70 seat segment (money maker), providing significantly lower direct operating costs than its competitors.

► OPERATIONAL FLEXIBILITY

- ATR-600 Series is the only aircraft family in the 50/70-seater market with high product commonality allowing Operators to match demand & capacity.
- Unrivalled performance at challenging airports with short, narrow or unpaved runways which jet aircraft cannot access.

► A MODERN TURBOPROP AIRCRAFT WITH:

- A new avionics suite with state-of-the-art technology compliant with future CNS/ATM systems.
- A new cabin for jet-like passenger comfort.
- A new engine for better performance with higher payload.

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PROPELLING THE NEXT CONNECTION