CRANE

Sensing & Control

Hilary King, Vice President & General Manager

SENSING & CONTROL TODAY

CRANE

Wireless Sensing | Superior Accuracy | Rugged & Reliable | Intelligent Packaging

- Proximity Sensors & Systems
- Secondary Flight Control Monitoring
- Tire Pressure and Brake Temperature Monitoring Systems
- High Performance Pressure Sensors





37%
market share

10%
sales CAGR
2021 - 2030

HIGH ACCURACY SENSING SYSTEMS SINCE 1964

BREADTH OF CUSTOMER BASE REFLECTS MARKET POSITION

CRANE

- High accuracy
- Reputation for innovation
- Ruggedized for harsh environments
- Mission critical applications

AIRBUS

BOEING

PRATT & WHITNEY DEPENDABLE ENGINES

GE Aviation

ROLLS ROYCE

LOCKHEED MARTIN

Raytheon Technologies

EMBRAER

TEXTRON AVIATION

Gulfstream A GENERAL DYNAMICS COMPANY

CONTENT ON NEARLY EVERY MAJOR AIRCRAFT PLATFORM

WELL POSITIONED FOR LONG TERM GROWTH

CRANE



A320 Landing Gear Control & Door Sensing Systems



737 Landing Gear Pressure & Proximity

JSF Electronic Engine Control Sensing



V-22 Blade Fold Control



SUBSTANTIAL CONTENT ON ALL HIGH PRODUCTION PLATFORMS

PROXIMITY SENSORS & SYSTEMS

CRANE

- Market leader in Proximity Sensing Components & Systems
- Landing Gear, Doors, Flight Controls, & Thrust Reverser applications
- Benefits
  - High reliability and efficiency
  - Non-contact, superior accuracy
  - Flexible architectures

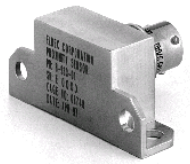


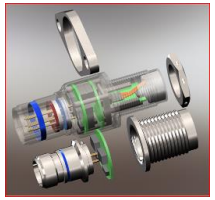
Landing Gear
Control & Indication



Engine Electronics







UNMATCHED LEGACY OF PROXIMITY SENSING APPLICATIONS

TIRE PRESSURE SENSING SYSTEMS

CRANE

- Tire Pressure and Brake Temperature Monitoring
- Handheld Reader and retrofit systems
- Benefits
  - Integrated, on board systems
  - Wireless sensing
  - Improves safety and dispatch readiness
  - Commercial and military applications



Tire Pressure Systems



IMPROVING AIRCRAFT SAFETY WITH REAL-TIME PRECISE, RELIABLE TIRE PRESSURE AND BRAKE TEMPERATURE DATA

EXPANDING OUR ADDRESSABLE MARKET WITH INNOVATION

CRANE



Next generation ruggedized proximity sensing

Rapidly Configurable 'Smart' Switch



Pressure based fuel gauging



Wireless tire pressure sensing



ALREADY GAINING TRACTION WITH EARLY ADOPTERS OF OUR NEW TECHNOLOGY

ELECTRIFICATION & INDUSTRY TRENDS

CRANE

- More electric systems will drive numerous industry changes
  - Hybrid-electric and / or all-electric aircraft
  - Greater autonomy
  - Smart sensing systems and controls
  - Size, Weight, and Power (SWaP) requirements
  - Short range, point to point travel



AT INFLECTION POINT FOR AVIATION INDUSTRY

BREAKTHROUGH INNOVATION

CRANE

- Lighter weight components / systems
- Rapidly configurable architectures
- Longer range wireless data transmission
- Benefits
  - Weight / cost improvement
  - Performance in harsh environments
  - Durability and reliability

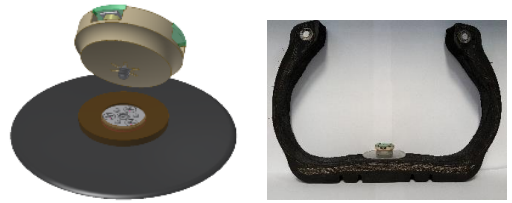


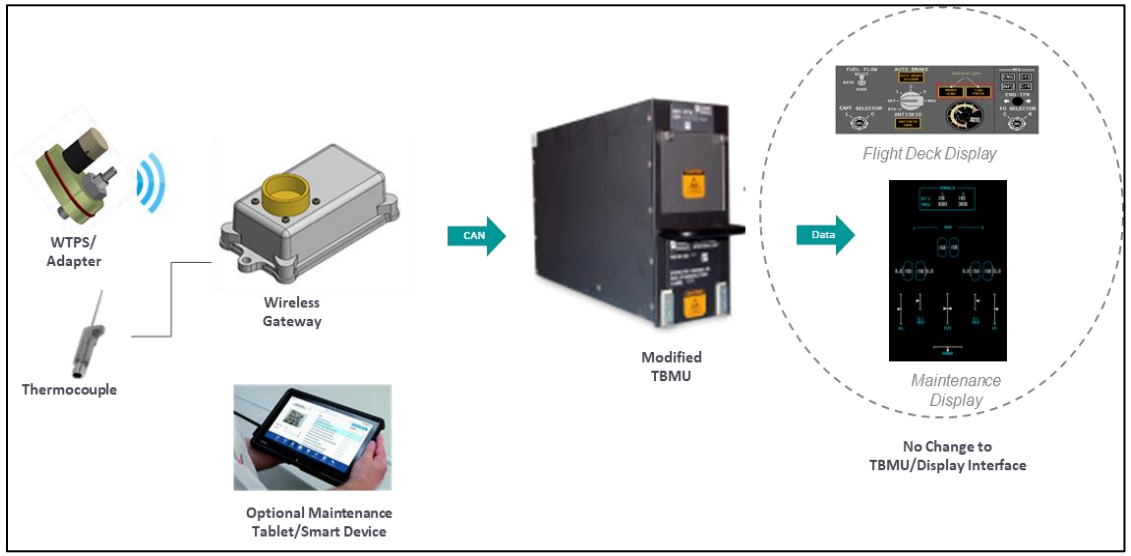
Wireless Gateway



Wheel Mounted Sensor

Tire Mounted Sensor



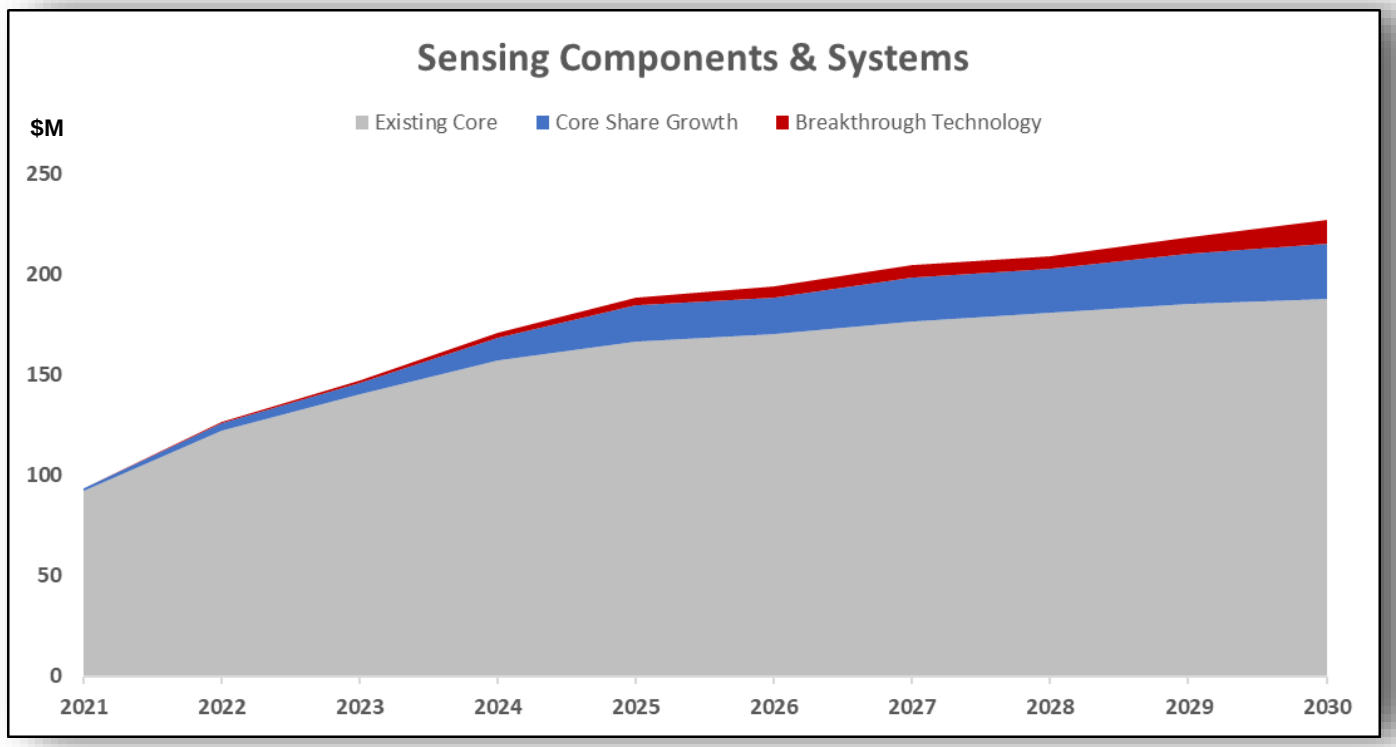


ALREADY DELIVERING NEW SOLUTIONS FOR NEXT GENERATION SYSTEMS

SIGNIFICANT SENSING GROWTH POTENTIAL

CRANE

- Advanced applications positioned for growth
- New applications supporting carbon neutral goals
- Proliferation of non-traditional aircraft
- 9%-11% CAGR (2021-2030)



ADDRESSING AND INFLUENCING NEW MARKET TRENDS

CRANE®

AEROSPACE & ELECTRONICS

INNOVATIVE | TRUSTED | COLLABORATIVE



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