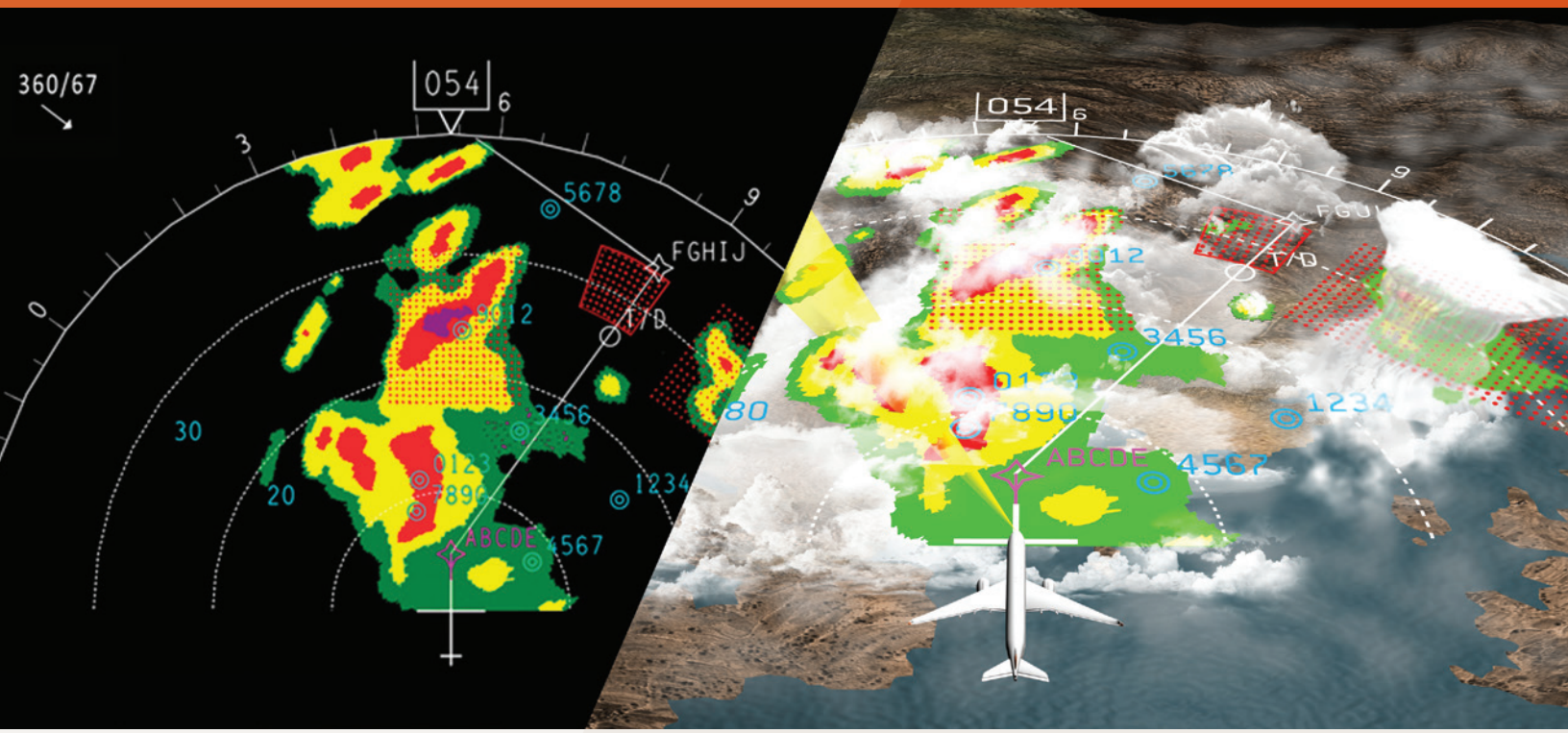
WXR-2100 MultiScan ThreatTrack™ weather radar



Superior, automatic, clutter-free weather detection and analysis out to 320 nm.

Rockwell Collins' MultiScan ThreatTrack™ weather radar offers an innovative approach to detecting and analyzing weather phenomena and displaying adverse weather threats, enabling safer, smoother and more efficient flights. Global flight tests of the system have validated the performance of the threat detection concept and ensure that the radar makes optimum adjustments to maximize the "probability of detecting" thunderstorms during all phases of flight.

Crews will benefit from additional innovative technologies that go beyond today's most advanced radar systems by adding predictive weather analysis and new threat detection features.

MULTISCAN THREATTRACK FEATURES

Patented track-while-scan technology prioritizes weather threats out to 320 nm by performing dedicated horizontal and vertical scans on developed or fast-growing convective cells that pose an actual threat.

Core threat assessment examines thunderstorm cells and increases the displayed colors to better represent the actual thunderstorm threat.

Associated threat assessment infers lightning, hail and convective threat potential within and external to a thunderstorm core.

Predictive OverFlight™ protection tracks thunderstorm cells ahead and below the aircraft, measures growth rate, predicts bow-wave turbulence and indicates potential threats in the aircraft's flight path.

Two-level enhanced turbulence detection detects severe and ride-quality turbulence up to 40 nm ahead of the aircraft.

Predictive wind shear detection with wind shear event data recording and retrieval.

Geographic weather correlation uses a database of geographic and seasonal weather variations that enhance MultiScan ThreatTrack's algorithms to provide accurate worldwide hazard information.

Advanced ground clutter suppression eliminates ground clutter on the weather display at all ranges, allowing pilots to concentrate exclusively on true weather threats.

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MULTISCAN THREATTRACK FEATURES (CONT.)

- Track-while-scan thunderstorm assessment out to 320 nm
- Core threat assessment increases display colors based on potential threat
- Associated threat assessment with inferred hail and lightning threats outside of the cell
- Predictive OverFlight protection tracks and alerts on rapidly building cells in the flight path
- Two-level enhanced turbulence detection – certified turbulence plus ride-quality turbulence displays

ADDITIONAL FEATURES

- Fully automatic operation
- Advanced ground clutter suppression at all ranges
- Enhanced geographic and seasonal weather correlation for maximum worldwide performance
- Optimized weather detection from 0 to 320 nm and all altitudes
- OverFlight protection (prevents inadvertent thunderstorm top penetration)
- SmartScan™ real-time weather during turns
- TrueZero™ antenna compensation
- Variable, temperature-based gain
- Predictive wind shear detection with wind shear event data recording and retrieval
- Redesigned RF section for improved performance and enhanced reliability
- Demonstrated, industry-leading pedestal reliability
- Simultaneous display updates in all range/mode combinations
- Split function control on some platforms
- Optional manual mode can be used by crews at any time

AVAILABLE MODES

- MultiScan ThreatTrack automatic operation
- Ground map
- Weather
- Weather plus turbulence
- Wind shear detection (takeoff and landing flight phases)
- Turbulence detection
- Manual operations – independent; mode, gain, tilt, range for each pilot
- Manual gain available in all modes

OVERALL SYSTEM SPECIFICATIONS

General	ARINC 708, 708A, 429, 453, 600
TSO	C63c
Interfaces	TCAS, ACARS, EFIS, CMC/CFDS, radio altimeter, EGPWS, DADC, IRS or ADIRU
Environmental	RTCA DO-160E
Software	RTCA DO-178B Level C
Performance index (avoidance)	
X-Band	236 dB (580 nm range)
Receiver-transmitter	
Size	Per ARINC 708A
Weight	23.1 lbs max
Input power	115 V ac ± 10%, 400 ± 20 Hz single phase
Power dissipated	120 watts or less
Transmitter	
PRF	180 (up to 3,000) pp/s
Pulse widths	1 to 25 microseconds
Frequency (direct digital synthesis)	9.33 GHz
Peak power	150 watts nom
Receiver	
Noise figure	3.8 dB
Bandwidth	32 MHz
Minimum discernible signal	TBD
Antenna	
First side lobe	-31 dB
Stabilization type	Full stabilization – all modes
Type	Flat plate
Beam width	10 degrees
Gain	34.5 dB nom

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

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Rockwell Collins delivers smart communication and aviation electronic solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

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