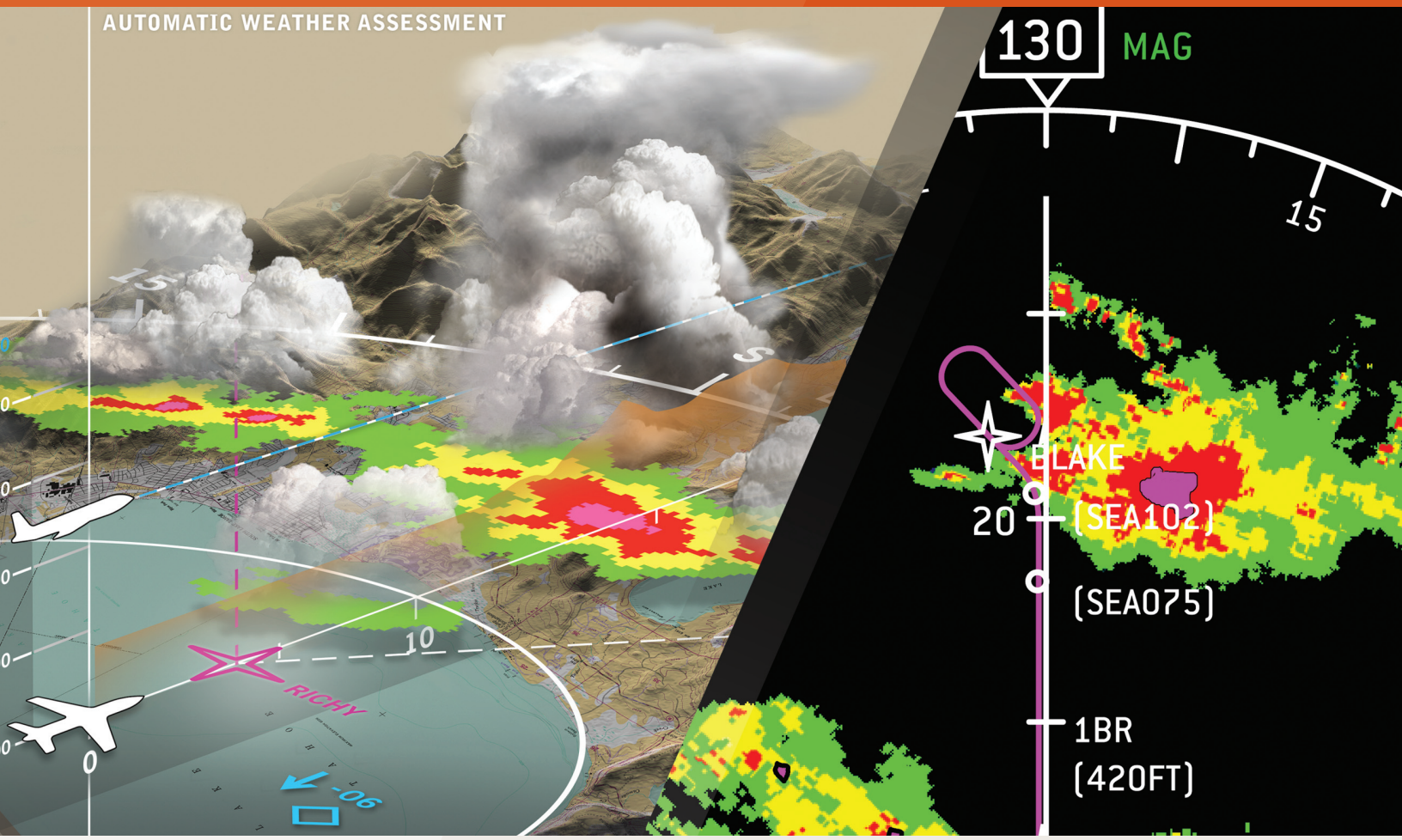
RTA-4100 MultiScan™ Weather Radar



Automatic, clutter-free weather detection and analysis from the nose of your aircraft to 300 nm.

The Rockwell Collins RTA-4100 MultiScan™ Weather Radar delivers comprehensive weather analysis and threat detection capability to pilots. The system provides a 300 nm "clutter-free" weather display and enhanced effectiveness as a threat detector. Capabilities such as MultiScan automatic operation, Geographic Weather Correlation, OverFlight™ protection and turbulence detection accurately depict weather and weather related hazard events at any location around the globe. Turbulence detection provides your flight crew with turbulence detection and alerting capability out to 40 nautical miles.

Our MultiScan Weather Radar system automatically gives pilots a complete picture of weather while eliminating the requirement to manually adjust the radar. The system automatically scans ahead of the aircraft and combines the returns through advanced digital processing and analysis algorithms to display not just precipitation rates but the actual weather threats. The result – a more accurate depiction of weather and turbulence hazards while significantly reducing flight deck workload and training for pilots.

The RTA-4100 MultiScan radar is designed to support integration of new sources of data as they become available.

Rockwell Collins

Building trust every day

KEY FEATURES

- Automatic operation
- Clutter-free, real-time weather detection from the aircraft nose to 300 nm
- Variable temperature based gain
- OverFlight protection
- Geographic Weather Correlation (patented)
- Certified turbulence detection
- Enhanced ground clutter suppression
- TrueZero™ automatic antenna misalignment compensation
- Path Attenuation Compensation (PAC) and PAC alert
- SmartScan™ rapid update technology
- Exceptional transmitter/receiver system performance
- Active gain in all modes
- Full split function operation
- High reliability

AVAILABLE MODES

- MultiScan automatic operation
- Time-shared operation - independent; mode, gain, tilt, range for each pilot
- Ground map
- Weather
- Weather plus turbulence
- Turbulence detection
- Test
- Manual operation

OVERALL SYSTEM SPECIFICATIONS

General	ARINC 429, 453
TSO	C63c
Interfaces	EFIS, AHRS/IRS, CAS
Environmental	RTCA/DO-160E
Software	RTCA DO-178B Level C

System Parameters	12" antenna	14" antenna	18" antenna
Antenna Gain (dB)	27.5	28.9	30.5
Beam Width (deg)	8.0	7.5	5.7
Performance Index	224.6	227.4	230.6
Avoidance Range (nm)	369	410	461
Weight (lbs)	15.1	15.4	17

Receiver-Transmitter-Antenna

Size	Per Installation Manual
Input power	28 V dc ±20%
Power dissipated	70 watts or less

Transmitter

PRF	120 to 1,800 pps
Pulse widths	3.4 to 55 microseconds
Frequency (direct digital synthesis)	9.45 - 9.49 GHz
Peak power	50 watts nominal

Receiver

Noise figure	3.8 dB
Bandwidth	32 MHz
Minimum discernible signal	-126 dBm

Antenna

First side lobe	-30 dB
Stabilization type	Full stabilization – all modes
Type	Flat plate

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Building trust every day.

Rockwell Collins delivers smart communication and aviation electronics 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.

For more information contact:

Rockwell Collins
400 Collins Road NE
Cedar Rapids, Iowa 52498
319.295.4085
email: csmarketing@rockwellcollins.com
www.rockwellcollins.com

Rockwell Collins
Building trust every day