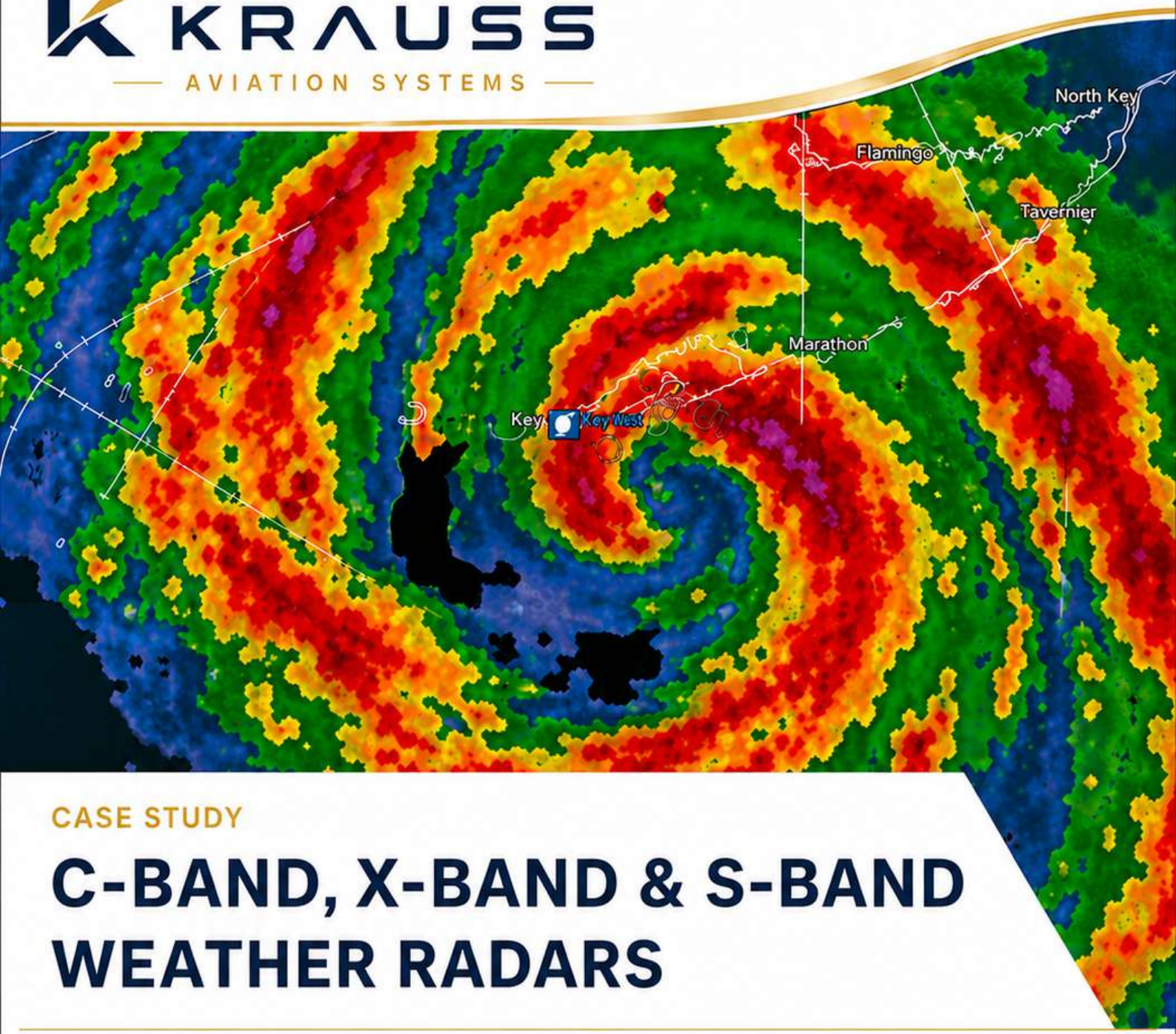
KRAUSS
AVIATION SYSTEMS



CASE STUDY

C-BAND, X-BAND & S-BAND WEATHER RADARS

Krauss Weather Radars team has more than 25 years of experience deploying, upgrading and maintaining C-Band, X-Band and S-Band Weather Radars in Europe, Africa and North America.

C-BAND RADAR

Long-range detection with excellent performance in severe weather conditions.

X-BAND RADAR

High-resolution observations for accurate tracking and warning.

S-BAND RADAR

Superior atmospheric penetration for precipitation and volumetric analysis.

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WEATHER DOPPLER RADAR

S BAND DUAL POLARIZATION
DP-S KRAUSS

Advanced radar detection and analysis with Dual Polarization technology for accurate weather monitoring and in-depth atmospheric analysis.

All-Weather and All-Day Operation

Advanced Connectivity and Easy Integration

Compatible with WINDOWS and LINUX

User-Friendly Interface and Intuitive Operation

Powerful Data Analysis for Enhanced Decision-Making

SYSTEM

Frequency	S Band (2.7 to 2.9 GHz), tuneable
Pulsed Mode	4, with selectable PW and adjustable PRF (optional: PW up to 60µs for pulse compression)
PRF	200 to 4000 Hz, selectable
Coverage	Up to 500 km
Operating Modes	Reflectivity and velocity (Doppler) with dual polarization
Processing Modes	DFT / PPP / FFT up to 8192 Bins and 25 m of spacing
Non-Ambiguous Speed in Doppler Mode	Up to ± 50 m/s from 120 km, with dual PRF in 2/3 relation
Built-in Test	Monitoring and alarms from main equipment of the system

POWER SUPPLY & ENVIRONMENTAL CONDITIONS

AC Input Supply	Voltage	380 V
	Nominal Consumption	7 kVA
Temperature	Operation under normal conditions: 0° to +50°C	
Relative Humidity	Up to 95% (external, not condensed)	

MECHANICAL CHARACTERISTICS

	DRT	SPE	RPU	Antenna
Height (mm)	1700	1930	1500	10100
Width (mm)	2200	600	1100	8540
Depth (mm)	700	700	700	3700
Weight (kg)	600	180	270	3300

RADAR SENSOR

Antenna

Type	Parabolic reflector with central feeder
Diameter of Reflector	8.5 m
Gain	45.0 dBi, typical
Beamwidth	1° @ – 3 dB
Polarization	Dual, simultaneously at vertical and horizontal, or horizontal in transmission

Transmitter

Type	Pulsed, with coaxial magnetron oscillator of high stability and solid state modulator Optional: with Klystron or Solid state amplifier
Output Power	> 750 kW, adjustable
Duty-cycle	0.0012

Receiver

Type	Digital, 16 bits, 2 inputs (High + Low) per channel (H and V)
Linear Dynamic Range	Better than 105 dB
Minimum Detectable Signal	Better than -110 dBm @ PW = 2µs
IF Frequency	30 MHz (others optional)
ADC Sampling Frequency	76.8 MHz, 16 bits resolution

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ACCURATE. RELIABLE. COMPLIANT.

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D-AW21 Automatic Weather Observing System - developed by DICOM HME
Delivered, integrated and supported in Europe, Africa and Southeast Asia by KRAUSS Aviation Systems

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