



HUMATICS

KinetIQ™ 100

1D CM-SCALE
Microlocation System



Superior ranging capabilities for industrial environments

FEATURES & BENEFITS

2 CENTIMETER PRECISION

Reliably measure distance between units with high precision

UP TO 500 METER RANGE

Industry-leading operating range

ROBUST PERFORMANCE

Operates in any weather or lighting condition

RUGGED DESIGN

IP67-certified to work in harsh industrial conditions

EASE OF PROVISIONING

User-friendly configuration software and API

Measuring distances beyond one meter wirelessly in complex industrial environments is a major challenge. Vision systems are expensive and sensitive to lighting conditions and dust. Existing radio-frequency (RF) systems lack precision and are difficult to deploy.

The KinetIQ 100 by Humatics is the world's most accurate ranging radio, providing centimeter-scale precision distance measurement over operating ranges that extend hundreds of meters. Its ruggedized design is suitable for extreme environments.

Industrial customers use the KinetIQ 100 to measure such critical items as:

- the linear movement of gantry bridges and hoists
- the safe operating distance between rail vehicles
- the extension of crane arms and hydraulic cylinders
- the height of industrial lifts and forks on lift trucks
- the deflection (bend) of items under environmental stress

The KinetIQ 100 is cost-effective, easy-to-use, and being deployed worldwide to solve applications not addressed previously. It is also available as various development kits - see the KinetIQ 100 Development Kits and Lab.

KinetIQ 100 PRODUCT OVERVIEW

The KinetIQ 100 uses two-way time-of-flight ranging technique to provide cm-scale distance measurements. The ranging software logs waveform scan data and provides bias adjustment with a patented range quality metric to inform the user of blocked or compromised measurements.



SYSTEM SPECIFICATIONS

Size and Weight	Size	20 cm x 8 cm x 5 cm
	Weight	450 g
Performance	Precision	+/- 2 cm
	Ranging Measurement Rate	14 - 125 Hz
	Ranging Maximum Distance	240 - 500 m at FCC power
	Operating Band	Ultra-wideband (UWB) 3.1 to 4.8 GHz
	Center Frequency	4.3 GHz
	Average Transmit Power	-41.3 dBm / MHz (50 microwatts)
	Average Power Consumption	2 Watts
Power and Charging	Power Supply	5 to 48 VDC
	Battery	Optional
Control and Communication	User Interface Options	Ethernet (UDP, Ethernet/IP)
Environmental Requirements	Ambient Temperature	-40 C to +75 C
	Storage Temperature	-40 C to +85 C
	Permissible Relative Humidity	10% to 95%
	Operating & Survival (Random Vibration)	8 g
	Mechanical Shock (Survival)	75 g
	Warranty	1 year parts and labor
	Extended Warranty	1 year increments
Regulatory	International Protection Rating	IP67
Regulatory	Regulatory	Region 1, US FCC Part 15 (certified); Region 2 (EU)
	RoHS Compliant	Yes

Humatics leverages the quality systems of each of our manufacturing partners to deliver quality product in accordance with our Quality Strategy. Raw material is procured, manufactured and tested by external manufacturing partners that have ISO 9001 certified quality systems.



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