

# BARRA RADAR BLE

Bluetooth® Low Energy Beacon



- High-accuracy 60 GHz Bluetooth radar sensor with millimeter-level precision for level and object detection
- Seamless integration with Digital Matter Bluetooth Gateway devices
- Powered by 2 x AA user-replaceable batteries with 8+ years battery life
- Easy and secure configuration via companion mobile app (Android & iOS)
- Suitable for fluid level monitoring, cargo detection, bin fill measurement, and other industrial applications



Digital Matter BLE Ecosystem



'Deploy Once' Battery Life



Ultra-Rugged & Waterproof



Highly Configurable



Encrypted Configuration



White-Label & Integration-Ready

## Tank Fill Level Monitoring

Report exact distance to water/fill line.

## Millimetre Accuracy

Tune settings to retrieve distance variations down to the smallest increment.

## Asset Utilization

Determine whether an asset is traveling loaded or unloaded with object detection.

## Secure App Configuration

Configure settings using Digital Matter's Provisioning App. Prevents unauthorized access and simplifies setup.

## High Penetration

Detect objects behind glass, plastic and other non-ferrous materials.

## Wire-Free Installation

Multiple installation options for securing device to asset or concealing within.

## Track Longer with Industry-Leading Battery Life

Scan Intervals	2 Hours	30 Minutes	5 Minutes
Estimated Battery Life*	8 Years	8 Years	7 Years

**SUPPLY CHAIN & LOGISTICS | TRAILERS | PALLETS & CARGO | EQUIPMENT | AGRICULTURE | & MORE**

\* Battery life estimates are influenced by several factors including scan range, scan steps, BLE advertising power, BLE advertising interval, battery selection and more. Battery life calculators are available at [support.digitalmatter.com](https://support.digitalmatter.com).

\*\* Estimates are based on 2 seconds advertisement windows, 8dB advertisement power, scanning for objects starting 1m from the PCB and ending 4m from the PCB. Devices can be configured to scan larger distances with high resolution more frequently which will negatively impact battery life estimates.

This device is designed, developed, and manufactured by Digital Matter. For more information, please visit our website at [digitalmatter.com](https://digitalmatter.com).

## Connectivity

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Bluetooth® 5.3 Beacon	Silicon Labs BGM240P Low Energy Beacon for transmitting sensor data.
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## Sensors

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Radar Chipset	Acconeer A121 60GHz Pulsed Coherent Radar (PCR)
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Radar Range	Minimum - 150mm Maximum - 15000mm
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Radar Steps (Resolution)	Minimum - 2.5mm Maximum - 300mm
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Lens Type	Plano Convex
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Lens Angle of View	~15°
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Scan Interval	Minimum - 1s Maximum - 2 hours
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Number of Simultaneous Distance Measurements	2
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## Power

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User-Replaceable Batteries	2 x AA. Batteries not included. Widely available at most hardware or retail locations.
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Supported Battery Types	Lithium Battery selection is very important. <a href="#">Follow this link to learn more</a> . Please dispose of Lithium batteries in a safe and responsible manner.
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Battery Life Estimates*	2-Hour Scan Interval** – 8+ years 30-Minute Scan Interval** – 8+ years 5-Minute Scan Interval** – 7+ years
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Sleep Current

<20uA

Average current in lowest power state.

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## Mechanics / Design

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Dimensions

149 x 51 x 21 mm (5.9 x 2 x 0.8 in)

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Device Weight

117g with Energizer Ultimate Lithium batteries.

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Housing

Non-branded nylon glass housing is suitable for white labeling.

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IP/IK Rating

Ultra-rugged and waterproof IP68 and IK07-rated housing ensures the device can withstand impact, fine dust, and brief submersion.

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Installation

Compact and concealable. Multiple installation options for covertly and easily securing the device to assets with screws, bolts, cable ties, rivets, and more. Stainless steel screws provided.

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Temperature Range

Operating: -30°C to +60°C  
Recommended Storage: 10°C to 30°C, Humidity 30%.  
Store in a cool, dry place.

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Diagnostic LED

Diagnostic LED indicates operation status.

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## Smarts

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Detection Threshold

Define two distances to form the min and max detection range for measurements and objects.

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## Device Management

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Configuration App

Configurable with DM-Link provisioning tool.

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## Integration

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Third-Party Integration

Sensor data can be obtained by third-party hardware via BLE Advertising Payload.

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## Security

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Data Security

Military-grade AES-256 Encryption from device to Companion App to protect the device from being reconfigured/updated by unauthorized users.

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## Warranty

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Manufacturer's Warranty

Two-year manufacturer's warranty. [Exclusions apply.](#)

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## Certifications

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Please view our knowledge base for [regulatory and network certifications.](#)

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