

# CH165 Smart Pet Locator

## Specification Sheet & Product Datasheet

The **CH165 Smart Pet Locator** is a high-performance circular wearable device for pets, powered by the **nRF52832 ARM Cortex M4** processor with **LTE Cat.M** communication technology for reliable wide-area connectivity.

Featuring **GPS + WiFi dual-mode positioning** with 5-10 meter accuracy, **Bluetooth 5.2**, a 500 mAh rechargeable battery with USB Type-C charging, and a built-in BOSCH accelerometer, the CH165 delivers precise location tracking and activity monitoring. Compatible with Amazon cloud or private cloud platforms, it supports Android and iOS APPs for a seamless user experience. Compact at just **26 g** and fully customizable in color — the ideal pet safety companion.



## 1. Technical Specifications

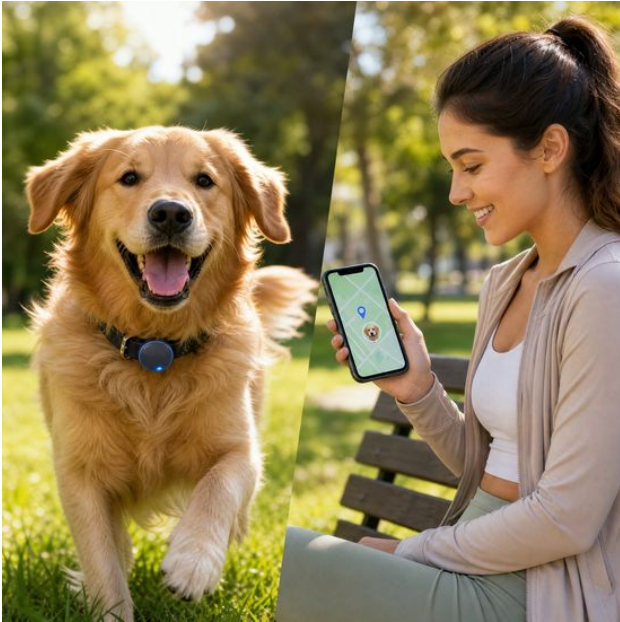
<b>Product Name</b>	CH165 Smart Pet Locator	<b>Model</b>	CH165
<b>Processor</b>	Nordic nRF52832 ARM Cortex M4 @ 64 MHz	<b>Memory</b>	64 KB RAM
<b>Flash ROM</b>	512 KB Flash ROM	<b>Accelerometer</b>	BOSCH BMA250 (Low Power)
<b>Communication</b>	LTE Cat.M (CAT-M1)	<b>SIM Card</b>	External Nano SIM (user-replaceable)
<b>Positioning Tech</b>	GPS + WiFi dual-mode	<b>Positioning Accuracy</b>	5 – 10 meters
<b>Bluetooth</b>	Bluetooth 5.2 (BLE)	<b>Output Indicators</b>	Tri-color LED + Buzzer
<b>Battery Type</b>	500 mAh / 3.7V rechargeable Li-polymer	<b>Battery Certification</b>	Supports US safety certification
<b>Charging</b>	DC 5V / 500 mA, USB Type-C port	<b>Reset</b>	Reset pin-hole
<b>Net Weight</b>	Approx. 26 g	<b>Dimensions</b>	See product image (circular design)
<b>Material</b>	Premium PC + ABS injection molding	<b>Color</b>	Fully customizable
<b>Operating Temp.</b>	-10°C to +60°C	<b>Storage Temp.</b>	-20°C to +70°C

<b>Cloud Platform</b>	Amazon AWS cloud server / Private cloud	<b>APP Support</b>	Android + iOS
<b>Certifications</b>	CE, RoHS, FCC (pending)	<b>Warranty</b>	12 months

## 2. Key Features

<b>LTE Cat.M Connectivity</b>	Powered by LTE Cat.M (CAT-M1) — a low-power wide-area (LPWA) cellular technology offering broader coverage, deeper building penetration, and lower power consumption than traditional 4G. Ideal for mobile IoT applications.
<b>GPS + WiFi Dual-Mode Positioning</b>	Combined GPS satellite and WiFi access-point positioning delivers 5-10 meter accuracy both outdoors and indoors. Historical trajectory auto-records and is queryable anytime.
<b>Bluetooth 5.2</b>	Latest Bluetooth 5.2 standard provides faster pairing, extended range, and improved power efficiency for seamless APP-pet interaction.
<b>External Nano SIM Card</b>	User-replaceable external Nano SIM slot — easily switch carriers or plans without device restrictions. Supports global Cat.M network bands.
<b>500 mAh High-Capacity Battery</b>	Large 500 mAh rechargeable polymer lithium battery with USB Type-C charging. US-certified for safety. Extended standby and active tracking runtime.
<b>BOSCH BMA250 Accelerometer</b>	Low-power 3-axis accelerometer from BOSCH enables precise motion detection, activity tracking, step counting, and energy expenditure monitoring.
<b>Tri-Color LED &amp; Buzzer</b>	Multi-color LED status indicator combined with a loud buzzer for ring-to-find, status alerts, and interactive play — easily locate your pet in any environment.
<b>Geofence (Virtual Safety Fence)</b>	Define custom safety zones via APP. Receive instant notification when your pet enters or exits the boundary — proactive loss prevention.
<b>Activity &amp; Health Monitoring</b>	Track daily steps, active minutes, rest duration, and calorie burn. Smart algorithms provide wellness insights and walk reminders.
<b>Historical Route Playback</b>	Complete movement history stored in the cloud. Replay your pet's daily routes and discover favorite spots and behavior patterns.
<b>Multi-User Sharing</b>	Invite family members as co-guardians. Everyone receives real-time alerts and can access the pet's location and activity data.
<b>Amazon Cloud / Private Cloud</b>	Flexible cloud deployment — use Amazon AWS global infrastructure or deploy on a private cloud for enhanced data sovereignty and security.
<b>USB Type-C Charging</b>	Industry-standard USB Type-C interface for convenient, reversible charging. Input: DC 5V / 500 mA.
<b>Compact Circular Design</b>	Sleek, lightweight circular form factor at just 26 g. Suitable for all dog sizes and cat breeds. Customizable colors to match any collar or style.

## 3. Application Scenarios



<b>Daily Home Life</b>	Monitor your pet's daily activity, sleep quality, and exercise levels from home. The BOSCH accelerometer captures precise motion data. Receive walk reminders based on rest duration and set personalized activity goals.
<b>Outdoor Walks &amp; Off-Leash Play</b>	GPS + WiFi dual-mode positioning keeps you connected to your pet in parks, trails, and open spaces. Geofence alerts notify you instantly if your pet wanders beyond the defined safe zone.
<b>Pet Lost &amp; Rapid Recovery</b>	When a pet goes missing, real-time GPS navigation guides you directly to its location. The LED + buzzer function aids visual and audio detection in darkness, dense brush, or crowded areas. Historical route data helps retrace movement paths.
<b>Travel &amp; Carrier Switching</b>	The external Nano SIM slot lets you swap to a local carrier when traveling internationally — no device lock-in. Cat.M networks provide broad global coverage across regions.
<b>Multi-Pet &amp; Multi-Owner Management</b>	Manage multiple CH165 devices from a single APP account. Share guardian access with family members, pet sitters, or daycare staff with customizable permission levels.
<b>Pet Daycare, Boarding &amp; Training</b>	Geofence monitoring ensures pets remain within facility boundaries. Activity logs provide objective data for trainers and caregivers. Cloud-based access allows remote check-ins anytime.

## 4. Application Fields

<b>Pet Ownership (Consumer)</b>	Primary application — a smart wearable for pet dogs and cats of all breeds and sizes. Enhances safety, health awareness, and owner-pet engagement through connected technology.
<b>Veterinary &amp; Telehealth</b>	Continuous activity and sleep data supports veterinary diagnostics, post-surgery recovery tracking, and remote telehealth consultations with objective behavioral data.
<b>Pet Breeding &amp; Boarding Kennels</b>	Centralized monitoring of multiple animals. Movement anomalies trigger early health alerts. Breeders can track exercise compliance and optimize care routines.
<b>Pet Training &amp; Behavior Schools</b>	Trainers leverage activity metrics to correlate training programs with behavioral outcomes. Geofence ensures secure training boundaries. Cloud logs provide progress reports.

<b>Pet Insurance &amp; Risk Assessment</b>	Objective activity logs, geofence compliance history, and location data support insurance underwriting, premium calculation, and claim verification with auditable digital records.
<b>Smart City &amp; Municipal Pet Management</b>	Cat.M connectivity enables integration into municipal IoT platforms for pet registration, lost-pet recovery networks, and urban pet population analytics.
<b>Enterprise &amp; Private Cloud Deployments</b>	Private cloud support allows enterprises, government agencies, and privacy-sensitive organizations to deploy fully self-hosted pet tracking solutions with complete data control.

## 5. Wearing Methods & Compatibility

The CH165 Smart Pet Locator features a **circular, compact design** weighing just **26 grams**. It attaches universally to all standard dog collars, cat collars, and harnesses. The lightweight, low-profile form factor ensures comfort for pets of all sizes — from small cats to large-breed dogs.



**Collar Attachment** — The circular device clips securely onto any standard pet collar (width up to 25 mm). Simple snap-on mechanism — no tools needed. Compatible with flat collars, rolled collars, martingale collars, and cat breakaway collars.

**Harness Mounting** — Attach to chest harnesses, back-clip harnesses, or vest harnesses. The 26 g weight is virtually unnoticeable — does not affect gait, posture, or natural movement.

**Quick-Release Mechanism** — Tool-free removal for charging or maintenance. Secure latch system prevents accidental detachment during running, jumping, or rough play.

**Customizable Colors & Branding** — Fully customizable shell colors enable brand differentiation for B2B/OEM clients. Match corporate identity, campaign themes, or fashion accessories seamlessly.

## 6. Size & Breed Compatibility

<b>Small / Cat</b>	1 – 8 kg	Chihuahua, Pomeranian, Toy Poodle, Yorkshire Terrier, Domestic Cat, Siamese	✓ Perfect — ultra-light 26 g design
<b>Medium</b>	8 – 25 kg	Shiba Inu, Corgi, Beagle, French Bulldog, Border Collie, Cocker Spaniel	✓ Ideal — balanced weight and durability

<b>Large</b>	25 – 45 kg	Golden Retriever, Labrador, German Shepherd, Husky, Samoyed, Boxer	✓ Recommended — rugged enclosure
<b>Extra Large</b>	45+ kg	Alaskan Malamute, Great Dane, Tibetan Mastiff, Rottweiler, Saint Bernard	✓ Compatible — durable PC+ABS build

## 7. Product Highlights at a Glance

●	<b>LTE Cat.M</b>	Low-power wide-area cellular connectivity
●	<b>GPS + WiFi</b>	Dual-mode positioning, 5-10 m accuracy
●	<b>BT 5.2</b>	Bluetooth 5.2 — fast, efficient, extended range
●	<b>Nano SIM</b>	User-replaceable external SIM — carrier freedom
●	<b>500 mAh Battery</b>	High-capacity rechargeable Li-polymer, USB-C
●	<b>BOSCH Sensor</b>	BMA250 3-axis accelerometer — precise motion
●	<b>Tri-LED + Buzzer</b>	Visual + audible alerts and find-me function
●	<b>Geofence</b>	Custom virtual perimeter with instant APP alerts
●	<b>AWS / Private Cloud</b>	Flexible cloud deployment options
●	<b>26 g Circular Design</b>	Ultra-light, sleek, customizable colors

## 8. How to Use

**1 CHARGE**  
Connect the device to a USB power source. LED will light up while charging.

**2 ATTACH COLLAR**  
Securely attach the device to your pet's collar using the built-in clip.

**3 CONNECT APP**  
Turn on Bluetooth and pair the device with the pet tracking app.

**4 TRACK & MONITOR**  
View your pet's real-time location, activity, and health insights in the app.

**LED INDICATOR**

- Charging: Blinking Yellow
- Fully Charged: Solid Green
- Low Battery: Blinking Red

**Dimensions:** 48mm x 16.5mm

**Secure Clip-On Design**  
Lightweight & Comfortable

**Bluetooth**  
Make sure Bluetooth is enabled on your smartphone.

**Stay connected, stay informed, and keep your pet safe.**

**Long Battery Life**  
Up to 7 Days

**Water Resistant**  
IP67 Rated

**Lightweight Design**  
Only 25g

**Smart Alerts & Notifications**

### Step 1 — Insert SIM

Insert a Nano SIM card into the external SIM slot. Ensure the Cat.M network is active in your region.

### Step 2 — Charge

Connect the USB Type-C cable (DC 5V / 500 mA). The tri-color LED indicates charging status.

### Step 3 — Install APP

Download the mobile APP from the App Store (iOS) or Google Play (Android). Create an account and follow the setup wizard.

### Step 4 — Bind Device

Scan the device QR code or enter the device ID manually. The APP pairs via Bluetooth 5.2 and activates the device on the cloud.

### Step 5 — Attach & Go

Clip the device onto your pet's collar or harness. Set up geofence zones, activity goals, and guardian sharing as desired.

## Suzhou Shengxin Electronic Technology Co., Ltd

### Contact Us

### Professional Smart Pet Wearable Solutions

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