

# Datasheet

## Mini-Ranger 2



**Mini-Ranger 2 is our mid-level USBL system that's also able to support data harvesting, using USVs, from seabed-deployed instruments or communicating with underwater assets such as AUVs.**

With a 995 m operating range, extendable to 4,000 m, Mini-Ranger 2 can track up to 10 underwater targets simultaneously, including divers, towed instruments, ROVs and AUVs.

Opt for the Marine Robotics software pack and it will communicate with subsea robotic platforms; sharing position and allowing you to exchange data.

Expected system accuracy is 0.2–1.3% of slant range depending on system configuration. If you need higher precision or looking for a USBL that you can use as a dynamic positioning reference, then take a look at our top performing USBL, Ranger 2 Standard, or Ranger 2 Survey.

Mini-Ranger 2 is a compact, easily installed system, so it's the ideal choice for temporary installation on small survey vessels, as well as uncrewed surface vessels (USVs). It's built around the same market-leading 6G hardware and Wideband 2 digital acoustic technology you'll find in our entire family of USBL systems – even the software is the same.

### HPT 3000

At the heart of the system is HPT 3000, a highly capable surface-deployed USBL transceiver which is optimised for; performance in shallow water, high elevation and long lay back operating scenarios, as well data telemetry.

It's typically deployed over the side of a vessel on a simple pole arrangement or under the hull of a USV. If the system is going to be permanently deployed, a tough-hull deployment setup is possible.

HPT 3000 is connected to the system's 1U-high Ethernet Serial Hub (ESH) and your PC running the Ranger 2 software application. Fit a transponder to each target you want

to track and you're ready to go. Mini-Ranger 2 is simple to configure and easy to use, even with no experience of acoustic tracking technology.

As standard HPT 3000 enables data harvesting from seafloor instruments using a crewed or uncrewed vessel.

### Transponder options

A wide range of Sonardyne 6G transponders can be used with Mini-Ranger 2, allowing you to select the most appropriate model for each task. If you're tracking divers, man-portable AUVs and micro-class ROVs, Nano is a popular choice. When tracking larger targets such as; a towfish, a crane wire lowering a structure, or an observation-class ROV, WSM 6+ will meet your requirements.

And if you're looking for a combined tracking and acoustic release transponder, RT 6 is now available. It allows you to deploy, track and recover seafloor equipment, all using the same instrument.

See the Sonardyne website for more information on [Mini-Ranger 2](#).

# Specifications

## Mini-Ranger 2



| Feature            | Specification  |
|--------------------|--|
| <b>Design</b>      | Powerful features for commercial users   |
|                    | Easy to transport, hardware comes in one shipping box  |
|                    | Configurable for manned or uncrewed vessel operations  |
|                    | Quick to mobilise, configure and uninstall   |
|                    | Shares common platform with other Sonardyne USBLs  |
| <b>Performance</b> | 0.2% positioning repeatability using external MRU  |
|                    | 1.3% positioning repeatability using internal MRU  |
|                    | Up to 10 targets tracked, simultaneously   |
|                    | 995 m tracking range; extendable to 4,000 m  |
|                    | Up to 3 Hz position update rate  |
| <b>Acoustics</b>   | MF frequency (20–34 kHz)   |
|                    | Supports Sonardyne Messaging Service for data exchange   |
|                    | Sonardyne Wideband 2 digital acoustic for reliable performance in both shallow and deep environments |
|                    | Transceiver optimised for high elevation tracking  |
| <b>Ownership</b>   | What's in the box: HPT 3000, ESH, deck cables, software, manual                                      |
|                    | Warranty: 1 year return to Sonardyne service centre  |
|                    | ITAR Controlled: No  |
|                    | UK Export License: Not required for 995 m version. Required for extended range (4,000 m) version     |
|                    |  |