Datasheet
Nano Transponder

The Wideband® Nano Transponder is specially designed for acoustic positioning of divers or small underwater vehicles. The small lightweight family of transponders allow for easy, unobtrusive attachment to a diver or vehicle.

Available in three variants: NFC, with connector (Cabled) and OEM; there is a Nano Transponder for every use case.

All variants are depth rated to 500 m and have an acoustic source level and beam shape that is designed to operate over a 995°m slant range under normal conditions. Three months battery life means they are suitable for long term deployments, marker beacons and for vehicle recovery.

A 500 m pressure sensor optimises acoustic performance at long horizontal ranges by constraining the depth measurement, making the nano perfect for Towed vehicle, AUV and Diver tracking.

The Nano Transponder family operates in the Medium Frequency (MF) band and is compatible with Sonardyne's Mini-Ranger 2 6G® Wideband USBL system.

The NFC Nano Transponder features a unique connector-less design that is recharged and programmed via the Nano Docking Station. The NFC technology allows full configuration of the Nano whilst maintaining its rugged "strap on and go" form factor.

The Cabled Nano Transponder features an industry standard Subconn connector allowing the Nano to be permanently powered and can also be used in Responder mode.

For vehicle programs and integrators, the Nano OEM when paired with an OEM transducer provides all the functionality of the housed transponders, in a form factor that can be mounted in any system.

Key Features

- Miniature size for fitting on divers and small ROVs
- Variety of form factors
- Depth rated to 500 m
- Powerful acoustic transmission level
- Medium Frequency operation
- Compatible with Sonardyne Ranger 2 USBL systems
- Configuration using the Nano Docking Station wireless communications
- Battery disconnect storage mode
- Integrated pressure sensor for depth aiding
- >300 independent acoustic addresses
- Wide dc voltage input range
- Gainless for ease of use
- Common form factor with AvTrak 6 Nano so common transponders can be used across a fleet

Specifications
Nano Transponder

Nano NFC

Nano (Cabled)

Feature		Type 8262 NFC	Type 8262 Cabled
Operating Range		995 m[1]	995 m[1]
Depth Rating		500 m	500 m
Operating Frequency		MF (19–34 kHz)	MF (19–34 kHz)
Transducer Beam Shape		Omni-directional ±130º	Omni-directional ±130º
Source Level (re 1 µPa @ 1 m)		184/175 dB	184/175 dB
Range Precision		Better than 15 mm	Better than 15 mm
Communication Interface		USB in dock	RS232, 3V3 TTL
Depth Sensor		50 bar abs +/-0.7% FS	50 bar abs +/-0.7% FS
Power Supply[2]		USB dock	12–28 V dc
Power Consumption	Wideband Listening (Battery)	n/a	5 mW
	Wideband Listening (Ext. Power)[3]	n/a	20 mW (including trickle charge)
	Battery Charging	n/a	60 mW to 2.5 W (depending on battery charge state)
	Peak (During Transmission)	n/a	<30 W SMS, <20 W Modem
Battery Life	Quiescent Listening	>90 days	>90 days
	1 Sec Ping Rate	>12 hours	>12 hours
Battery Charge Time		12 Hours[4]	12 Hours
External Connections		n/a	Subconn MCIL8M
Mechanical Construction		Polymer	Polymer
Operating Temperature[5]		-10 to 45°C	-10 to 45°C
Storage Temperature[6]		-20 to 55°C	-20 to 55°C
Dimensions (Length x Diameter)		160 x 55 mm	192 x 55 mm
Weight in Air/Water		486/149 g	584/162 g

[1] When used with Micro-Ranger 2/range limited Ranger 2 systems.
[2] Noise on the external dc supply may have an effect on the acoustic performance of the instrument.
[3] Includes top-up charging of the li-ion battery, which could be disabled, or managed intelligently for better efficiency
[4] When using ac mains charger
[5] The battery will not charge above 45°C or below 0°C.
[6] To maximise battery life, the instrument should not be stored above 30°C.

For further information, contact us at **E** sales@sonardyne.com