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Attention Of:	Brett Hobson	Telephone No:	+1 281 890 2120
Cc:	-	Quote Number:	QUO-28185-F7V8 rev 1
Issued By:	Kim Swords	Date:	20-Jul-2016

Subject: KS-2409 : iUSBL HPT5000 Ti

Brett,

I want to begin by thanking you for your interest in Sonardyne and allowing us to quote.

The iHPT 5000 Inverted Ultra-Short Baseline (iUSBL) and Telemetry Transceiver is a new high performance platform which supports Sonardyne Wideband®2 6G® instruments and offers significant improvements in acoustic positioning and telemetry performance.

The advanced multi-element processing enables transponders to be positioned more precisely, more quickly and more robustly due to improvements in signal processing algorithms and array design. When used as part of a complete USBL system such as Marksman or Ranger 2 and tightly integrated with Sonardyne's Lodestar attitude, heading and inertial navigation sensor, class leading performance in all water depths is achieved.

New functionality, such as 'Discovery Mode' which enables user to automatically detect previously deployed transponders including their configured address and channel, makes the system easier to use. The iHPT 5000 also fully supports 6G LBL operations via Fusion LBL software.

The HPT transceiver is also a highly capable acoustic telemetry transceiver. Its multiple simultaneous channels enable robust high speed telemetry reception from Sonardyne's 6G subsea transponder modems and data loggers so reducing valuable vessel time. Manufactured in titanium, the iHPT 5000 is intended to be fitted to deep water subsea equipment such as a towfish. The array has been adapted for deep water operation from the tried and tested geometry of the HPT 5000.

Key features

- High performance USBL transceiver utilizing Wideband®2 ranging and telemetry offer improved USBL precision and robustness
- Enhanced USBL array designs for improved noisy vessel and deepwater performance
- True simultaneous tracking of multiple transponders providing high update rates
- Seamless simultaneous positioning and telemetry of data whilst tracking
- Sonardyne Wideband 1, 2 and HRP400 ranging mode compatible
- Built in health checks including array and electronics diagnostics



- Discovery mode allows users to automatically scan for transponders deployed within acoustic range
- In water ambient noise monitoring
- Integral robust High Data Rate telemetry for fast acquisition of data from subsea instruments – reduces costly vessel time
- Compatible with Marksman LUSBL, Ranger 2 USBL and Fusion 6G LBL systems

If you have any questions or require additional information, please let me know.

Regards,

Kim Schuetzner Swords
Sr. Applications Engineer
Sonardyne, Inc.



Stock Code	Type No.	Delivery	Qty	Unit Price USD	Total Price USD
620-0320 iUSBL HPT 5000 Ti housing 7km depth rated Transceiver only	8191-000-01-A1	-	1	89,655	89,655
				Subtotal	89,655
				Discount of 20.000%	17,931
				Freight	1,025.00
				Grand Total (USD)	\$72,749

TERMS AND CONDITIONS OF QUOTATION:

1. This Sonardyne Quotation and any Purchase Order that is issued for Products or Services is subject to and in accordance with:
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 - b. applicable Product Specification(s) which can be found at <http://www.sonardyne.com/products.html> collectively called "Sonardyne Sales Terms"
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The prices quoted use a current exchange rate of USD1.39/GBP. The prices may be adjusted at the discretion of Sonardyne as a result of any movement of the actual exchange rate, published by OANDA, beyond +/- USD0.03 (the daily midpoint price of the relevant trading days) between the date of this quotation and the date of a valid order placement. Alternatively the Customer may, at Purchase Order placement, agree to purchase the products and/or services in GBP.
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Should you require further information concerning this Quotation please do not hesitate to contact the undersigned.

With best regards,
Kim Swords

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