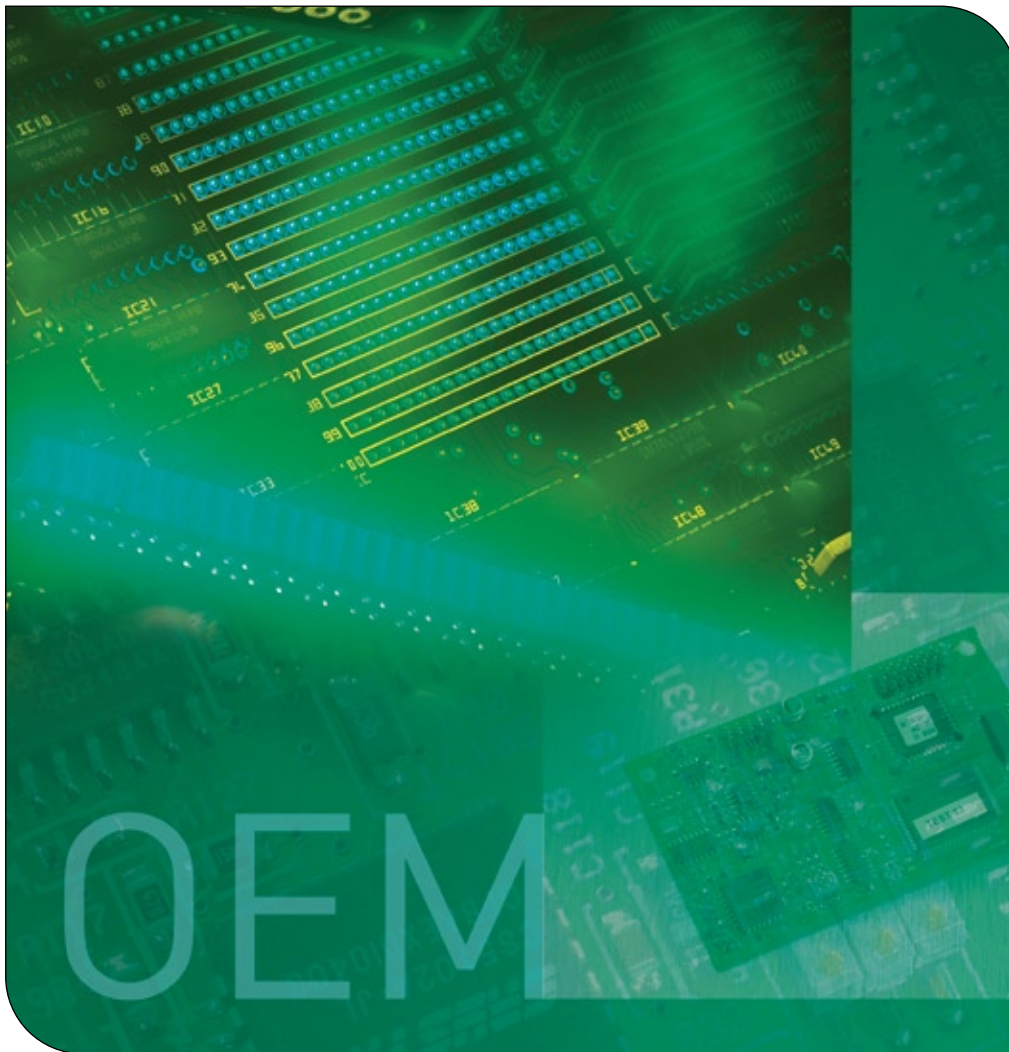


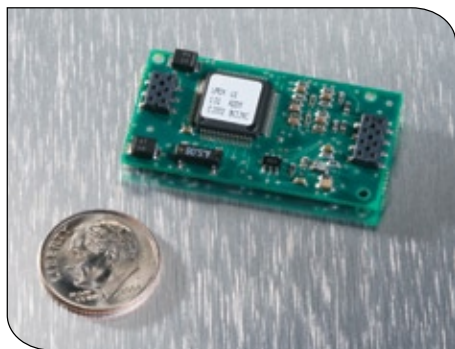
OEM Technology



Smiths Medical PM Inc. provides OEM pulse oximetry and capnography technologies in a variety of component formats under the BCI® brand. With experience in integrating technology with OEM suppliers around the world, BCI® OEM Technology has proven to be reliable and cost-effective. Easy-to-integrate external solutions and complete OEM board level options are available.

For more information, visit www.smiths-medical.com/bci-oem.

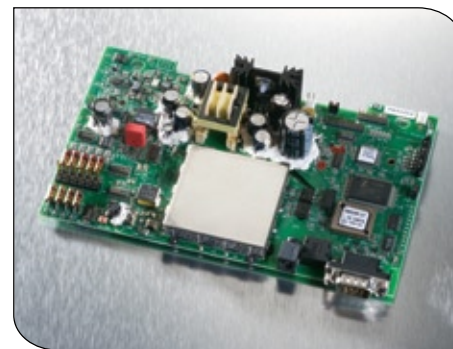
Pulse Oximetry Componentry



**Micro Power Oximeter Board
31392B1**



**BCI® Digital Micro Power
Oximeter Board
WW3711**



**Digital Oximeter/ECG/
Respiration Module
71272A2**

Specifications/Technical Data

	Micro Power Oximeter Board 31392B1	BCI® Digital Micro Power Oximeter Board WW3711	Digital Oximeter/ECG/Respiration 71272A2
SpO₂			
Range	0-99%	0-99% with Extended Micro Power Mode 0-100% with Digital Micro Power Mode	0-100%
Accuracy	Adult: +/-2% at 70-99% SpO ₂ , < 70% undefined Neonate: +/-3% at 70-99% SpO ₂ , < 70% undefined	Standard Accuracy: Adult/Peds: ± 2 Arms @70-100% SpO ₂ , less than 70% undefined Neonate: ± 3 Arms @ 70-100% SpO ₂ less than 70% undefined Motion Accuracy: Adult/Peds: ± 3 Arms @70-100% SpO ₂ , less than 70% undefined Low Perfusion Accuracy: Adult/Peds: ± 3 Arms @70-100% SpO ₂ , less than 70% undefined Neonate: ± 3 Arms @ 70-100% SpO ₂ less than 70% undefined	+/-2% at 70-100% +/-3% at 50-69%
Pulse Rate			
Range	30-254 BPM	30-254 BPM in Extended Micro Power Mode 20-300 BPM in Digital Micro Power Mode	30-254 BPM
Accuracy	Greater of +/-2 BPM or +/-2%	Standard: Arms = ± 1; Motion: Undefined Low Perfusion: Arms = ± 1.5	Greater of +/-2 BPM or +/-2%
Signal Strength	0-8	0-8	0-8
Bargraph	0-15	0-14	0-15
Plethysmogram	0-100 auto-gained or highest resolution	0-100 auto-gained or fixed gain	8 bit
Flags	Pulse beep, no finger in sensor, sensor unplugged, searching for pulse, searching too long, lost pulse	Pulse beep, no finger in sensor, sensor unplugged, searching for pulse, searching too long, lost pulse	Sensor, searching for pulse, searching too long, small pulse, artifact, pulse beep cue
Dimensions	0.80" W (20 mm) 1.53" D (39 mm) 0.22" H (5.6 mm)	0.80" W (20 mm) 1.53" D (39 mm) 0.24" H (6.1 mm)	7.00" W (17.8 cm) 4.50" D (11.4 cm) 1.25" H (3.20 cm)
Power Requirements	6.6mA at 3.3 VDC electrically isolated (22mW typical)	14mA at 3.3V electrically isolated (46mW typical)	Input voltage: +12 VCD, 2 Watts
Serial Communications	CMOS 3.3 levels Protocol consists of 5-byte packets sent at 60Hz, using speed of 4800 Baud	3.3V CMOS voltage levels	Serial communication logic levels 0-5 V
	Data provided to host includes % SpO ₂ , pulse rate, signal strength, bargraph, plethysmogram waveform, and status bits		
Optional Data from Host System	Plethysmogram sync	SpO ₂ Averaging, Pulse Rate Averaging, Plethysmogram sync, mode settings	SpO ₂ Averaging, Pulse Rate Averaging, Plethysmogram sync

OxiLink™ and OxiLink™ II OEM Oximeters

Minimal power draw, a compact size, and patient isolation features simplify your engineering requirements while reliably satisfying your needs for quality oximetry.

OxiLink™ OEM Oximeter

- Choice of sensors for greater flexibility
- 2 connector options: serial output or USB
- Low power draw (25mW)
- 1.5kv patient isolation

OxiLink™ II OEM Oximeter

- Available with or without display
- 3 connector options: serial output, phono jack, or USB
- Low power draw (40 mW)
- 1.5kv patient isolation



Specifications/Technical Data

	OxiLink™ OEM Oximeters	OxiLink™ II OEM Oximeters
SpO₂		
Range	0-99% (1% increments)	
Accuracy	Adult: +/-2% at 70-99% SpO ₂ , < 70% undefined Neonate: +/-2% at 70-99% SpO ₂ , < 70% undefined	Adult: +/-2% at 70-99% SpO ₂ , < 70% undefined
Averaging	8 pulse beat average and instantaneous	
Pulse Rate		
Range	30-254 BPM (1 BPM increments)	
Accuracy	+/-2 BPM or +/-2% (whichever is greater)	
Averaging	8 second average	
Signal Strength	0-8 indicates logarithmic strength of patient's pulse from 30-254 BPM	
Bargraph	0-15 segments	0-8 segments
Flags	Pulse beep, no finger in sensor, sensor unplugged, searching for pulse, searching too long	Pulse beep, no finger in sensor
Dimensions	3.25" W (8.3 cm) 1.08" D (2.7 cm) 0.57" H (1.5 cm)	1.70" W (4.3 cm) 1.50" D (3.8 cm) 2.25" H (5.7 cm)
Communication/Power Options	RS232, USB, CM0S level communication through low profile connector (OxiLink™ II OEM Oximeter available with no display for low power operation.)	

1410 Sidestream Capnograph Board

Proven Sidestream Capnography Technology in an OEM Component

The 1410 Sidestream Capnograph Board offers a sophisticated sidestream capnograph in an easy to integrate, compact system.

- Sidestream capnography accommodates both intubated and non-intubated patients
- Compact board system with 3 different options for customized applications
- Four digital outputs: CO₂, ETCO₂, inspired CO₂ and respiration rate
- Digital outputs accessed via RS232 serial communications
- Capable of driving 2 different pneumatic systems
- Available in a base system with reduced pneumatics
- Occlusion detected by internal pressure transducer
- Accurate ETCO₂ and crisp waveform outputs with simple calibration methods
- Patented advanced pneumatics available with Water Trap and Water Detection System, ideal for mid- to long-term monitoring application
- Wide variety of gas sampling and patient attachment accessories available



**1410 System with
Advanced Pneumatics**

Specifications/Technical Data

1410 Sidestream Capnograph Board	
CO₂	
Range	0-10%
Accuracy	+/-2 mmHg or +/-4% of reading, whichever is greater
Respiration Rate	
Range	0-120 BPM
Accuracy	+/-1 BPM
Sample Rate	150 ml/min +/-20 (user selectable via restrictor)
Dimensions	3.9" L (9.9 cm) 3.2" W (8.1 cm) 1.0" H (2.5 cm)
Weight	0.5 lbs. (227 grams)
Power	6-15 volts, 3 Watts
Communications	TTL levels, 19.2K Baud
Serial Port Description	Protocol: 19.2K Baud, 1 Start Bit, 8 Data Bits, 1 Stop Bit, no Parity Bit

Reference Technical Documentation for full and current specifications. Information subject to change without notice.

For more information, please call Smiths Medical PM, Inc., at 262-542-3100 or 800-558-2345.

Smiths Medical PM, Inc.

BCI® OEM Technology

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Smiths Medical – a part of Smiths Group plc

The products described are covered by one or more of the following U.S. Patent Nos. 5,558,096; 5,615,091; other patents pending.

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