The miniMediCO₂™ OEM module is part of the Microstream™ capnography family of OEM module technology. Microstream™ capnography solutions are engineered to offer accuracy and flexibility for virtually all patient populations in virtually all environments.

**Accurate measurement technology**
- CO₂-specific infrared (IR)-based technology
- Designed to be unaffected by the presence of other inhaled gases
- IPI provides an inclusive assessment of respiratory status in a single number
- Technology with Smart Capnography™ alarm management algorithms designed for nonintubated applications
- Clear, crisp waveforms and accurate respiratory rates
- Designed for fast power-up and accuracy at first reading
- Low sampling flow rate of 50 ml/min, recommended for neonates because of low tidal volumes
- Automatically adjusts for changes in ambient temperature and barometric pressure

**Features**
- Measures etCO₂, FiCO₂, respiration rate
- Provides CO₂ waveform and etCO₂ values
- RS232 communication
- Power and communication via one cable
- Integrated Pulmonary Index™ (IPI) algorithm
- Smart Breath Detection™ (SBD) algorithm
- Smart Alarm for Respiratory Analysis™ (SARA) algorithm
Smart capnography measurement technology

- IPI incorporates four real-time respiratory measurements — end-tidal CO₂ (etCO₂), respiratory rate, pulse oximetry, and pulse rate — into a single number that represents an integrated respiratory status. IPI is displayed on a scale from 1 to 10, with 10 indicating a normal respiratory rate.

- SBD is a proprietary filter and pattern recognition algorithm engineered to screen out low-amplitude "nonbreath" etCO₂ excursions like snoring, talking, or crying, to offer a more reliable respiratory rate.

- SARA combines with the SBD algorithm to manage breath-to-breath variability and help reduce the number of nuisance alarms.

Versatile design for fast, simple setup and use

- Offers the option to switch between patient types without re-zeroing or re-calibration*

- Rugged and cost effective — no expensive external sensor or cable to damage

- Designed for use in and out of hospital

Compatible with a broad sampling line portfolio

- A wide array of sampling lines to meet clinical needs — longer-term monitoring; high-humidity environments; adult, pediatric, and neonate patient types, both intubated and nonintubated, with or without supplemental oxygen delivery

*Requires annual calibration.

Specifications

MEASURING PARAMETERS
CO₂ waveform, etCO₂, FICO₂, respiration rate, IPI

ACCURACY
CO₂ Partial Pressure (at sea level) | Accuracy
--- | ---
0-38 mmHg | ± 2 mmHg
39-99 mmHg | ± (5% of reading + 0.08 x [reading - 39 mmHg])
100-150 mmHg | ± (5% of reading + 0.08 x [reading - 39 mmHg])

PERFORMANCE
CO₂ range | 0-150 mmHg, 0-20 vol%, 0-20 kPa
Flow rate | 50 ml/min (+ 15 ml/min, - 7.5 ml/min) flow measured by volume
Initialization time | Full time to accuracy (power on to first reading) is typically 30 seconds for both reading and waveform (max 180 seconds); at full accuracy when value appears
Respiration rate | 0-150 breaths/min
Mode | Adult, pediatric, neonate

PHYSICAL CHARACTERISTICS

Power requirements | 5VDC only, or 5VDC and 5-15VDC. 1.5W (typical in operation), 0.9W in standby mode
Weight | 160 g (5.64 oz)
Dimensions | 30 mm H x 65 mm W x 76.5 mm L (1.18 in H x 2.56 in W x 3 in L)
Communication interface | RS-232 full duplex

ENVIRONMENTAL

Temperature
Operating | 0° to 65° C (32° to 122° F) measured at the module
Storage | -20° to 70° C (-4° to 158° F)

Operating and Storage Pressure, and Altitude
Pressure | 430-795 mmHg
Altitude | -380 m to 4572 m (-1,250 ft to 15,000 ft)
Relative Humidity | 10% to 95% (non-condensing)

STANDARDS

The following standards are met by the module, as long as the monitor in which it is installed also meets the standards:
- RoHS Directive 2011/65/EU (applicable to some configurations only)
- EN 60601-1-2/2001, emission class B
- ISO 21647

SHOCK AND VIBRATION

The following standards are met:
- Shock | IEC 68-2-27
- Vibration | MIL-STD-810F Method 514.5, Helicopter-category 14

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