

# Mainstream CO<sub>2</sub> Sensor QuRe<sup>®</sup>

OEM solution



Mainstream CO<sub>2</sub>  
monitoring



QuRe® Sensor is intended to measure FiCO<sub>2</sub> and EtCO<sub>2</sub> concentration in the mainstream breathing. Designed to use with medical devices for intensive care, ventilation, respiratory support and patient monitoring. The sensor is applicable for all intubated patients from adults to neonates.



### QuRe® Sensor Benefits

- The most accurate capnogram.
- Compact and lightweight.
- Long-life time reusable airway adapters, up to 100 sterilization cycles.
- Suitable for high-frequency ventilation, up to 200 BPM.
- No user calibration required.
- “Everything on board”: the measurement channel and analysis CPU are inside the sensor. This saves space in your own medical devices.
- Easy integration to any monitoring or ventilation system, full technical support by the Manufacturer.
- Private labeling solutions (PLM) available.
- Fastest response time.

### OEM Delivery Kit

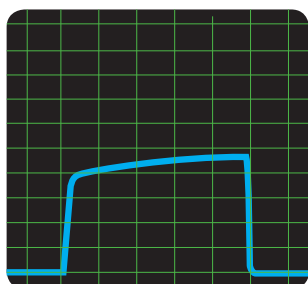
Mainstream CO <sub>2</sub> Sensor	TESM.506001	1 pcs.
Reusable airway adapter adult / pediatric	TESM.706020	1 pcs.
pediatric / neonate	TESM.706021	
Evaluation kit includes: RS-232-USB converter, USB cable, CD with development software and data protocol description, integration manual	On request	1 pcs.

The highest precision of capnogram waveform for true clinical diagnostics.

QuRe® data rate is 100 Hz and instant accurate response of the sensor to the changing CO<sub>2</sub> concentration.

The sensor contains an innovative ultrafast semiconductor emitter with a high modulation frequency of the signal.

Due to the precise capnography waveform, the clinicians can analyze each breathing cycle, detect respiratory disorders and provide optimal ventilation mode to a patient.

Mainstream CO<sub>2</sub> Sensor

## Technical Specification

Sensor type	CO <sub>2</sub> mainstream sensor
Operation principle	Non-dispersive infrared (NDIR)
Initialization time	20 s at an ambient temperature of 25°C Full specification within 2 min
Response time	~10 ms
CO <sub>2</sub> measurement range	0–20% (0–150 mmHg)
CO <sub>2</sub> accuracy	0.2 vol. %
CO <sub>2</sub> resolution	0.1 vol. %
Respiration rate range	0–200 breath per minute (BPM)
Respiration rate accuracy	±1 breath
Apnea detection range	10–60 s, default 20 s
Calibration	No user calibration required
Airway adapters	Reusable adult / pediatric. Reusable pediatric / neonate Material: airway adapter — polycarbonate, optical windows — sapphire glass Dead space: <5 ml (adult / pediatric), <1 ml (pediatric / neonate) Sterilization: ethylene oxide / autoclaving up to 100 times
Dimensions & Weight	Sensor: 38x35x23 mm. Weight: 28 g. Cable length: 3 m
Power	Voltage: 5.0 V±5%. Power consumption: 1.3 W, not more then 3 W at the warm-up
Environment / Protection	Water and splash resistance: IP44 (sensor) Operation: 10–35°C, RH 10–90%, 390–900 mmHg Storage: 5–40°C, RH < 80% at 25°C Transportation: (–50)°C–50°C
Integration	Interface: RS-232. Connector: Lemo Redel / ODU Data output: FiCO <sub>2</sub> , EtCO <sub>2</sub> , respiration rate. Gas and pressure compensation: available, supplied by host

We continuously improve the technological principles and implement new profitable solutions based on market demands



In biomedical signal processing, gas monitoring and respiratory support since 1989

Bajova str. 33  
Ekaterinburg, 620133  
Russian Federation

Quality management system certified as meeting the requirements of EN ISO 13485

January  
2024

