Ventilator Respirator

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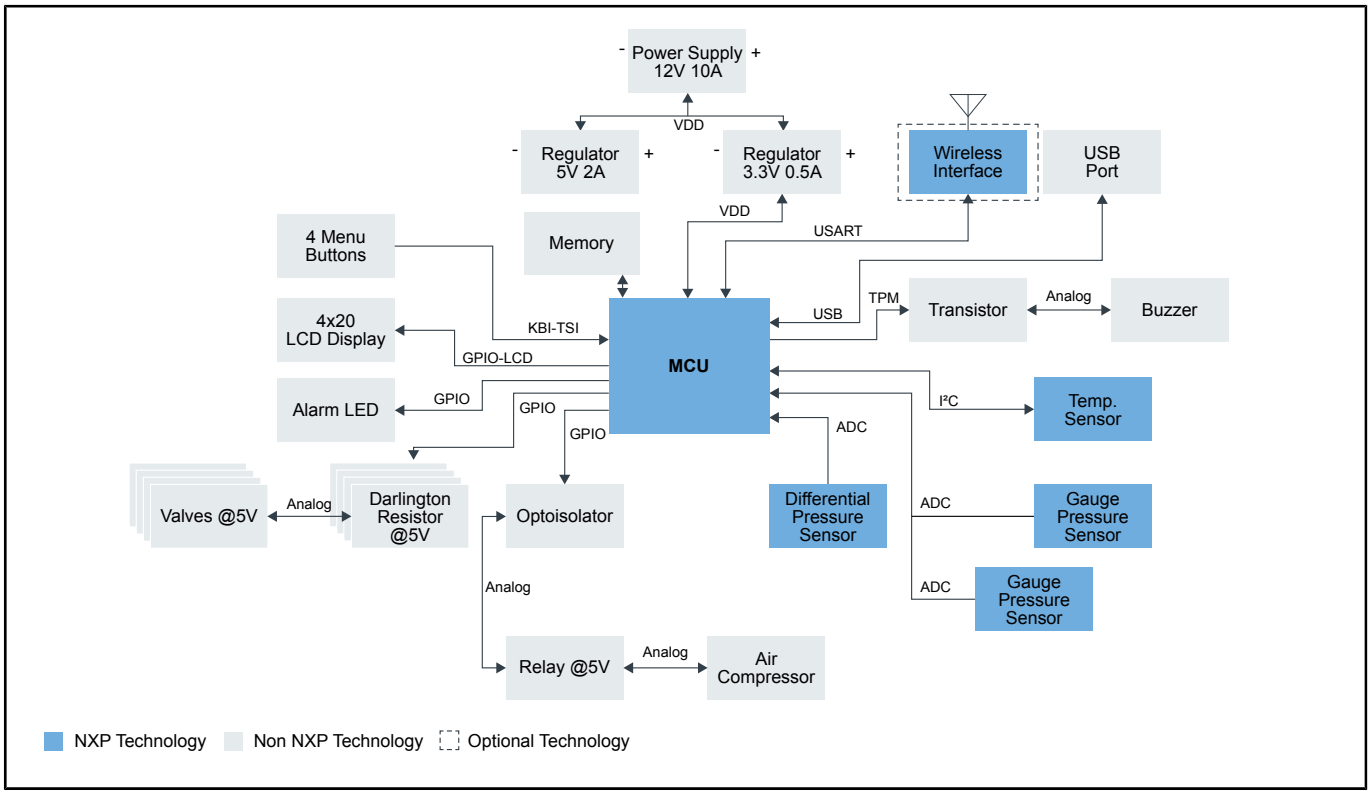
A ventilator is a machine designed to mechanically move air in and out of the lungs to assist or control pulmonary ventilation. This apparatus is principally used in intensive therapy to help improve the patient's breathing by regulating the flow of gas in the lungs. This system requires a set of sensors for pressure, volume and flow. The information from the sensors modulates the operations in the MCU and decides how the ventilator pump responds.

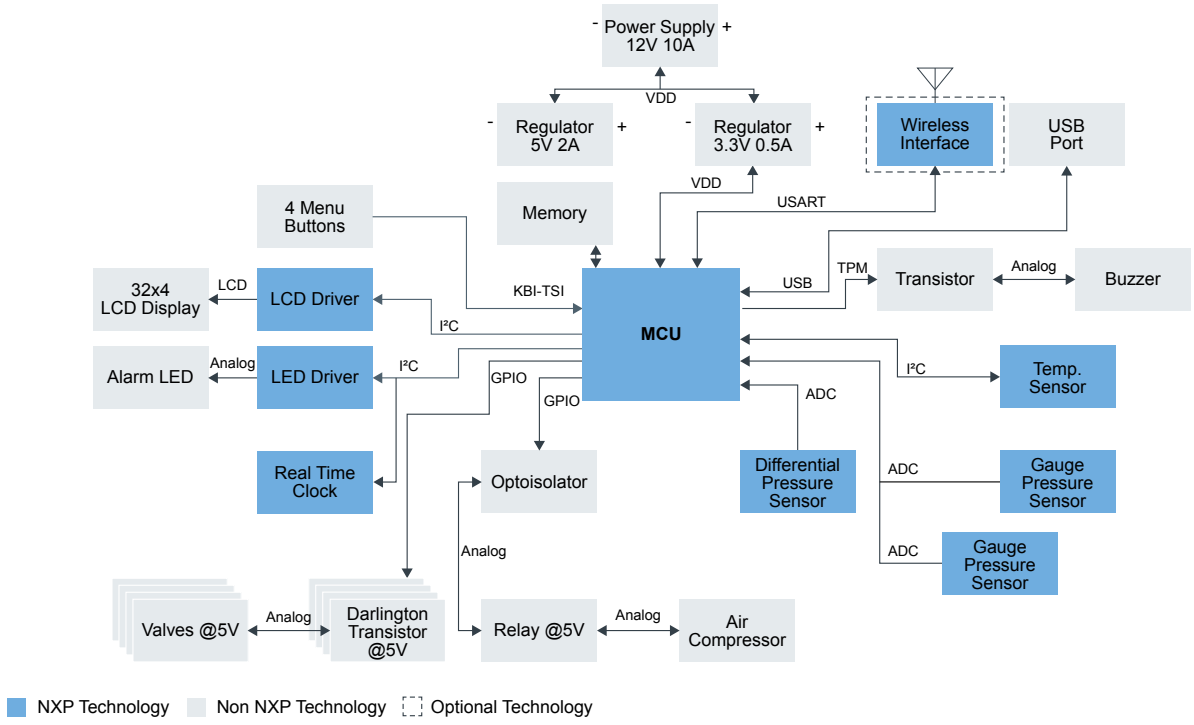
NXP offers a broad portfolio of sensors and MCUs, such as Kinetis and i.MX RT crossover MCU families, capable of delivering precision for medical equipment.

Ventilator Respirators Block Diagram



Recommended Products for Ventilator Respirators	
MCU	• MCF51MM: Flexis 32-bit ColdFire® V1 MCUs • KV3x: Kinetis® KV3x-100–120 MHz, Advanced 3ph FOC / Sensorless Motor Control MCUs based on Arm® Cortex®-M4 • i.MX RT1020 Crossover MCU with Arm® Cortex®-M7 Core
Temperature Sensor	• SA56004X: SMBus-Compatible, 8-Pin, Remote/Local Digital Temperature Sensor
Gauge Pressure Sensor	• MPXx5050: -50 to 50kPa, Differential and Gauge Pressure Sensor
Differential Pressure Sensor	• MPXV7025DP: -25 to 25kPa, Differential and Gauge Pressure Sensor
Wireless Interface	• QN908x: Ultra-Low-Power Bluetooth Low Energy System on Chip Solution

Ventilator Respirator with K64 Block Diagram



Recommended Products for Ventilator Respirator with K64	
MCU	• K64_120: Kinetis® K64-120 MHz, 256 KB SRAM Microcontrollers (MCUs) Based on Arm® Cortex®-M4 Core
Temperature Sensor	• SA56004X: SMBus-Compatible, 8-Pin, Remote/Local Digital Temperature Sensor

Gauge Pressure Sensor	• MPXx5050: -50 to 50kPa, Differential and Gauge Pressure Sensor
Differential Pressure Sensor	• MPXV7025DP: -25 to 25kPa, Differential and Gauge Pressure Sensor
RTC	• PCF85063A: Tiny Real-Time Clock/Calendar with Alarm Function and I²C-Bus
LCD Driver	• PCF85162T: 32 × 4 Universal LCD Driver for Low Multiplex Rates
LED Driver	• PCA9955BTW: 16-Channel Fm+ I²C-Bus 57 MA/20 V Constant-Current LED Driver
Wireless Interface	• QN908x: Ultra-Low-Power Bluetooth Low Energy System on Chip Solution

View our complete solution for Ventilator Respirator.

Note: The information on this document is subject to change without notice.