Mobile Measurement Platform MD8710
One Device for Measurement and Medical Platform Development

Infineon`s Mobile Measurement Platform MD8710 for medical and other data acquisition and processing with USB & Bluetooth™ connectivity for convenient data exchange. This System on Chip comes with integrated peripherals for GPIO, PWM timers and several serial interfaces to meet a diversity of application`s requirements.

■ Smart combination of functional blocks supports a variety of applications
■ Single hardware with customized soft-/firmware enables several products
  – saves R&D time and cost
  – provides economy of scale for production
  – simplifies logistic efforts and flow

Precision multichannel analog frontend for medical analysis
Creation of synchronous stimuli & analysis within single device. Ideally suited for comprehensive impedance spectroscopy by the capability to link stimulus and measurement. High impedance inputs support typical medical measurement methods including photo sensors.

■ Dual high resolution Input Channels ADCs
■ Dual high resolution Output Channels DACs
■ Four auxiliary voltage/current Inputs multiplexed to ADCs
■ Programmable pre-filters & post-filters
■ Four General Purpose Operation Amplifiers

High performance standard CPU for the challenges of the future
The ARM Cortex R4 core with up to 100MHz operating frequency provides enough headroom for the most demanding real-time applications. Ample on-chip memory and peripheral functions are a perfect fit for the requirements in many applications. A wide range of tools are compatible with the medical platform architecture.

■ ARM Cortex R4 core
■ Low Power stand-by mode
■ Multilayer AMBA™ bus to all clients and I/O subsystems
■ DMA engine to unload CPU from communication between bus clients
■ Display engine supporting standard dot-matrix displays
■ Evaluation-Kit with reference medical applications available

Connectivity & Power Supply

Simple Connectivity via USB and Bluetooth™
■ Autonomous Bluetooth™ 2.1 subsystem including dedicated CPU
■ Supports USB-OTG supplement Rev. 1.3
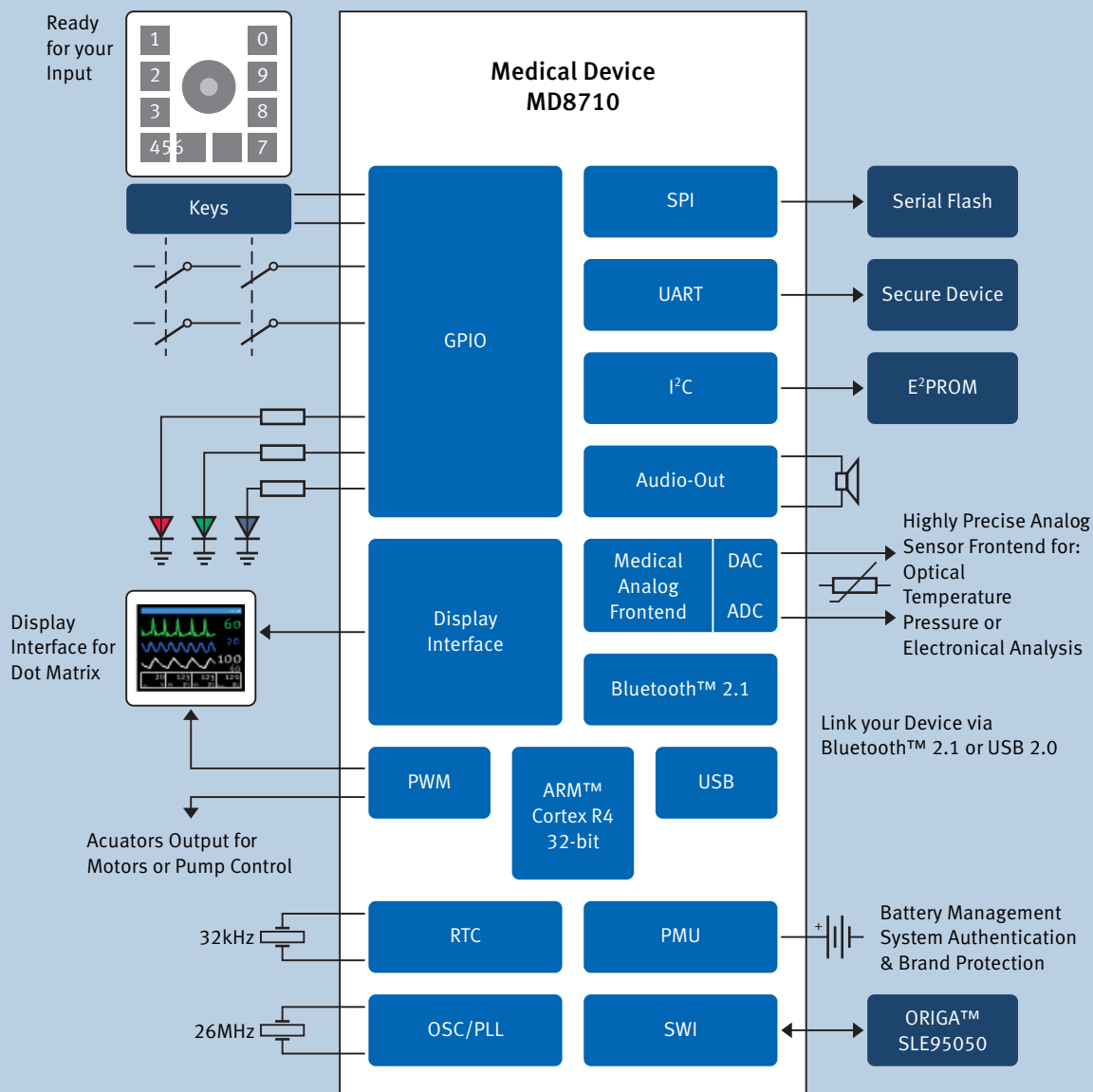■ API provides simple on chip command interface to reduce development efforts

Integrated Power Management
■ Operations from rechargeable or disposable batteries
■ Li-Ion Battery charger supporting a charging algorithms
■ DC/DC up/down converters for core and I/O power supply for high power efficiency
■ Low power sleep mode (< 30µA, RTC, wakeup)
■ Voltage monitors for all power supplies

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Ready for your Input

1 0
2 9
3 8
456 7

Keys

GPIO

Display Interface

PWM

ARM™ Cortex R4 32-bit

USB

RTC

OSC/PLL

32kHz

26MHz

Display Interface for Dot Matrix

Acuators Output for Motors or Pump Control

Medical Device MD8710

SPI

UART

I²C

Audio-Out

Medical Analog Frontend | DAC
| ADC

Bluetooth™ 2.1

PMU

SWI

Serial Flash

Secure Device

E²PROM

Highly Precise Analog Sensor Frontend for:
Optical
Temperature
Pressure or
Electronical Analysis

Link your Device via Bluetooth™ 2.1 or USB 2.0

Battery Management System Authentication & Brand Protection

ORIGA™ SLE95050

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