**CASE STUDY ON ROLLING DISPLAY**

**by**

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**Low-cost solutions for motor control and automation:**

Especially in fast growing mass markets low-cost and fast time to market solutions are key. Nevertheless customers will not compromise for smart and energy efficient designs. The mass markets for electric drives are heading towards greater adoption of more efficient brushless motors or even sensorless motors reducing BOM making magnetic field sensors obsolete. Infineon's XC800 microcontrollers and solutions are an exellent fit for these emerging requirements. We are a leading supplier for motor control in eBikes for many years.

**Microcontrollers for low-cost motor control and automation:**

XC800 product family of 8-bit microcontrollers provides a scaleable protfolio of low-cost devices for various types of motor control and industrial automation:

Portfolio from 2KB to 64KB Flash and from 16-pin to 64-pin package options, qualified upto 125°C operating temerature

Optimized peripherals and ROM-code for field oriented 3-phase motor control (FOC)

Solutions for AC/DC Power Factor Correction

MultiCAN technology supporting 2 CAN nodes with 32 message objects

Protocol stack for implementation into IO-Link Sensor/Actuator Networks

For the use in IEC 60730/Class B certified applications Today, still a lot of air conditioners - a true mass market application - are build with low-efficient motor drives and power conversion solutions. This applicaton example shows an improved solution with the use of only two 8-bit microcontrollers.

**Air Conditioner:**

**Key Features:**

* Inverter control
* Compressor restart dely
* Outdoor and indoor fan speed control
* Overcurrent protection
* Temperature control
* Power factor correction (PFC)
* Temperature arithmetic processing

**Air Conditioner Medium:**

