

Door Handle Application Reference Manual



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Overview

This manual describes the design data required for vehicle door handle application development.

Features

- Door Lock/Unlock Operation Using Touch Sensor
- Possible to Operate With Gloves
- Assuming Operation Under the Rainy Weather
- Malfunction at the time of Car Wash Hardly Occurs
- Robust Against Changes of Ambient Temperature
- 4-wire Connection. (VDD, VSS, SCL, SDA)

APPLICATION NOTE

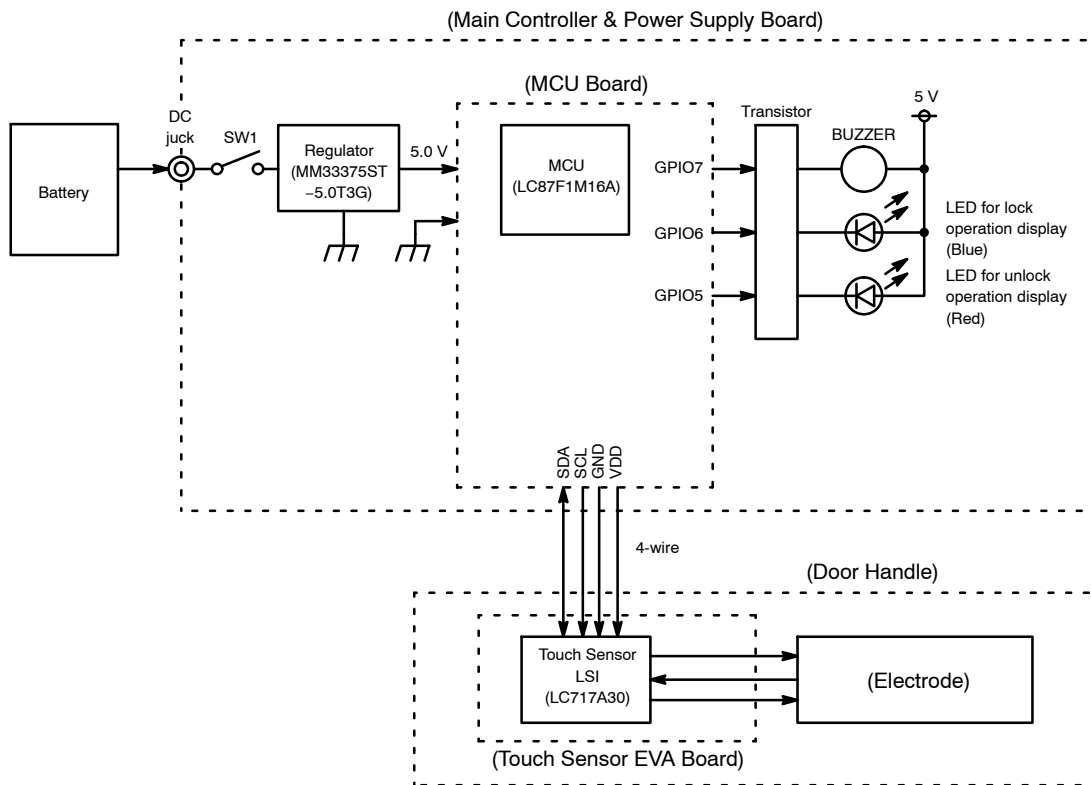


Figure 1. Door Handle's Block Diagram

AND9876/D

SCHEMATIC

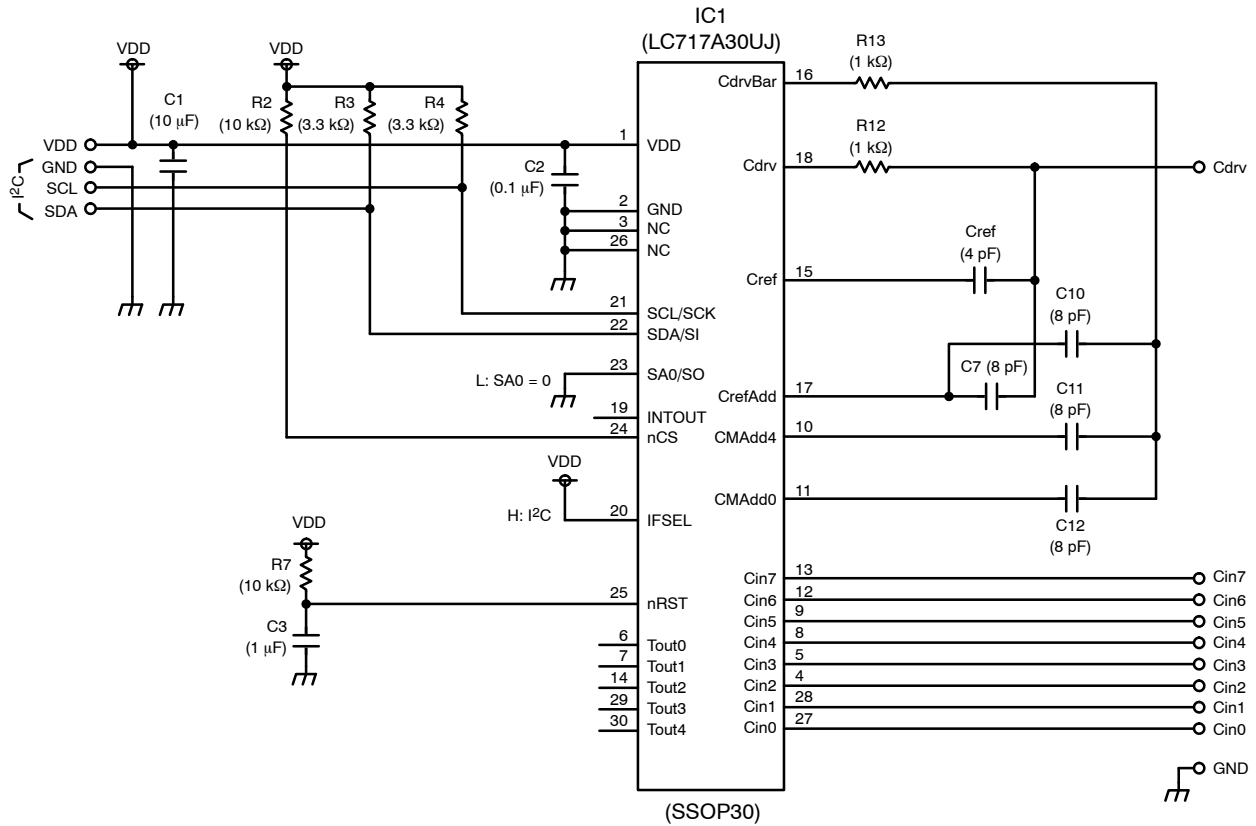


Figure 2. Schematic of the Touch Sensor EVA Board

BOM

Table 1. BILL OF MATERIALS OF THE TOUCH SENSOR EVA BOARD

Designator	Qty.	Description	Part Number	Value	Manufacturer
IC1	1	Capacitive touch sensors LSI	LC717A30UJ	8 ch, SSOP30	ON Semiconductor
R12, R13	2	Resistor	MCR03EZPJ102	1.0 kΩ ±5%, 0.1 W	ROHM
R3, R4	2	Resistor	MCR03EZPJ332	3.3 kΩ ±5%, 0.1 W	ROHM
R2, R7	2	Resistor	RK73B1JTTD103J	10.0 kΩ ±5%, 0.1 W	KOA
Cref	1	Multilayer ceramic capacitor	GRM1885C1H4R0CA01D	4 pF ±0.25 pF, 50 V	Murata
C7, C10–C12	4	Multilayer ceramic capacitor	GRM1885C1H8R0DA01D	8 pF ±0.5 pF, 50 V	Murata
C2	1	Multilayer ceramic capacitor	GRM188B11E104KA01D	0.1 μF ±10%, 25 V	Murata
C3	1	Multilayer ceramic capacitor	GRM188B31E105KA75D	1.0 μF ±10%, 25 V	Murata
C1	1	Multilayer ceramic capacitor	GRM21BB31C106KE15L	10.0 μF ±10%, 16 V	Murata

FLOW CHART

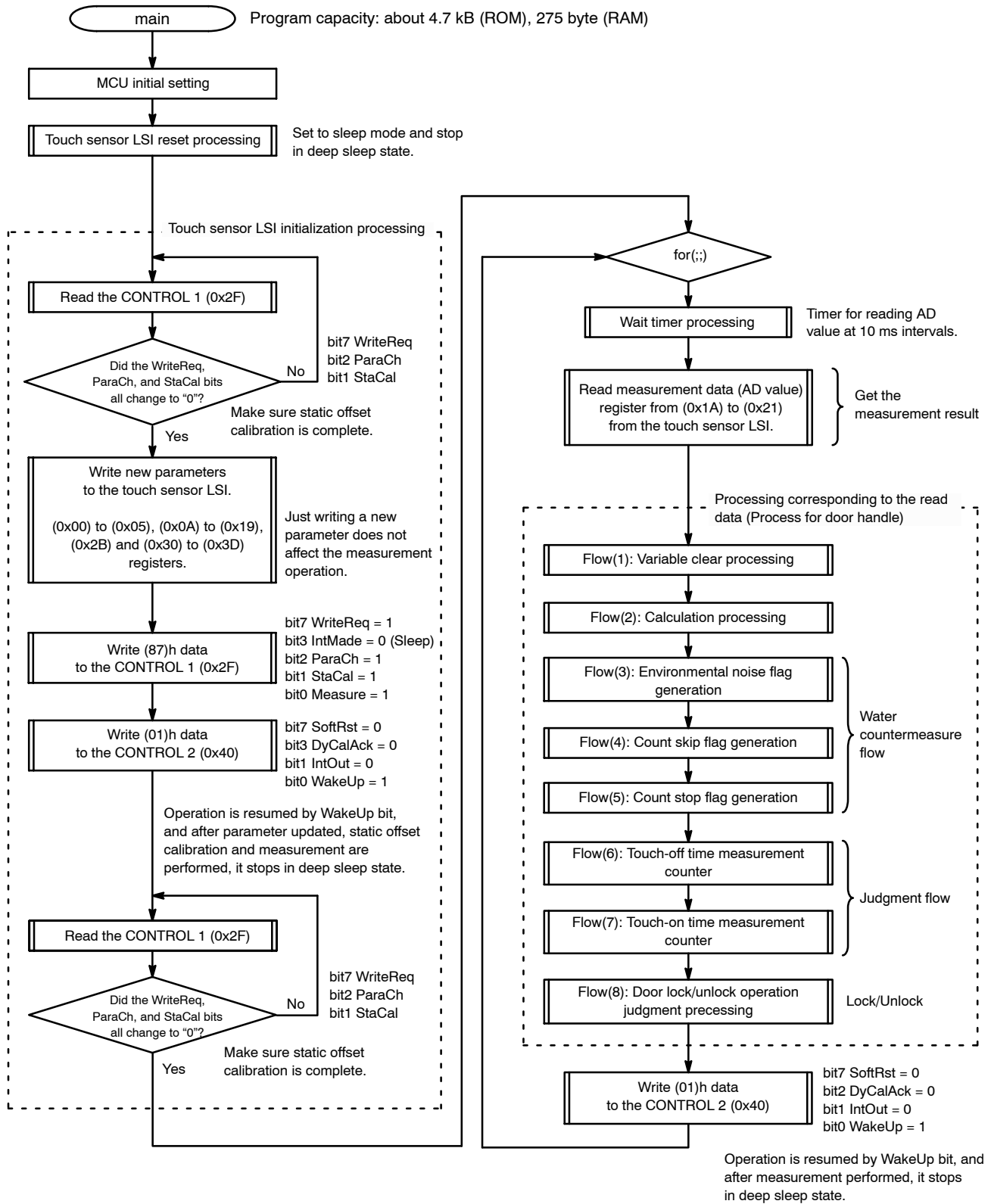



Figure 3. Door Handle's Flow Chart

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