

Product Overview

LC717A30UR: Capacitance-Digital-Converter for Electrostatic Capacitive Touch Sensors

For complete documentation, see the data sheet.

The LC717A30UR is a high performance, low cost, and highly usable capacitance converter for electrostatic capacitive touch and proximity sensors. 8 capacitance-sensing input channels ideal for use in any end products that needs an array of switches. The LC717A30UR facilitates a short system development time through its automatic calibration function and minimal external components. The detection result (ON/OFF) for each sensor is read out by the serial interface (I2C or SPI).

Features

- Detection system: Differential capacitive detection using mutual capacitance
- Sensor input pads: Operates with small to large capacitance sensor input pads
- Input capacitance resolution: Capacitance detection down to femto-Farad level
- Measurement time 16 ms for 8 sensors
- Minimal external components
- Selectable interface : I²C or SPI
- Current consumption : 0.8 mA (VDD = 5.5 V)
- Supply voltage : 2.6 to 5.5 V
- AEC-Q100 qualified and PPAP capable

Applications

- Automotive
- Consumer
- Industrial
- Computing
- Lighting

Benefits

- Superior sensitivity performance - even not only wearing multiple layers of gloves, air gap, or thick materials but also gesture.
- Reducing cost because of being unnecessary to supplement sensitivity.
- Achieving layout freely because of receiving hardly from parasitic capacitance.
- High adaptability by internal both noise reduction and correspondence system for environment changing.
- Advantage tolerance for malfunction prevention of water.

End Products

- Smart key, Control switches, Car audio and Proximity
- Home Appliance, White goods and Induction Cooking
- Security lock
- PC Peripherals, Audio Visual equipment
- Remote control switches

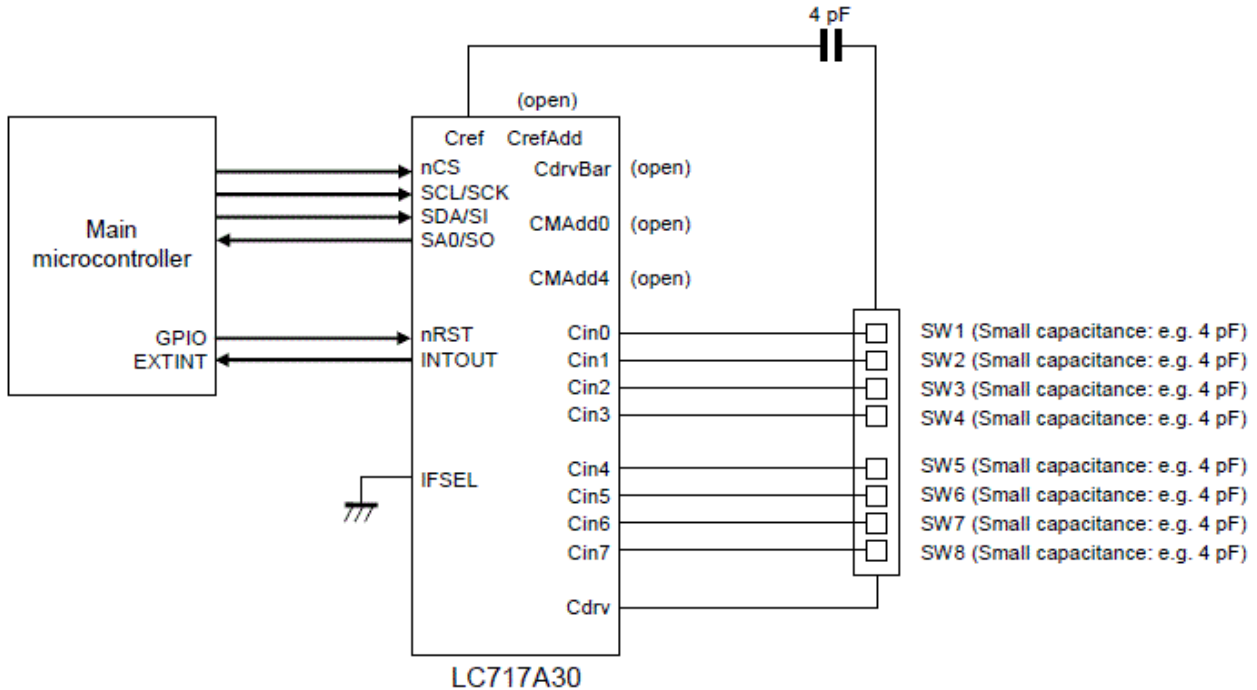
Part Electrical Specifications

Product	Compliance	Status	Number of Sensing Inputs	Number of Sensing Outputs	Interface Control	Proximity Sensing	V _{DD} Min (V)	V _{DD} Max (V)	I _{DD} Typ (μA)	Package Type
LC717A30UR-NH	AEC Qualified PPAP Capable Pb-free Halide free	Active	8	0	SPI I2C	Yes	2.6	5.5	800	VCT-28

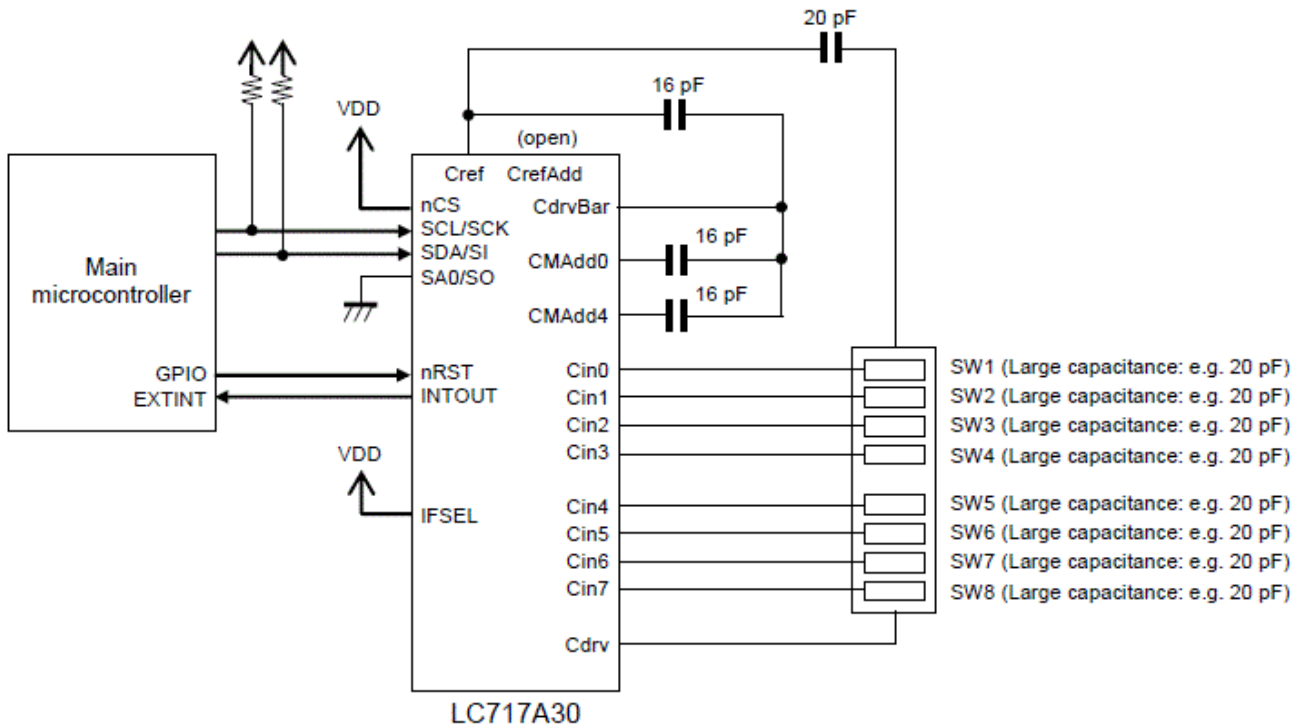
Application Diagram

Application Schematic

- 8 small capacitance sensor switches and 4-wire SPI interface.



- 8 large capacitance sensor switches and I²C interface.



For more information please contact your local sales support at www.onsemi.com.

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