



## THIS SPEC IS OBSOLETE

Spec No: 001-91025

Spec Title: CY8CTMA140, TRUETOUCH(R) MULTI-TOUCH  
ALL-POINTS TOUCHSCREEN CONTROLLER (SUMMARY)

Sunset Owner: Rachael Sewell (SWU)

Replaced by: None

## TrueTouch® Multi-Touch All-Points Touchscreen Controller

### Features

- TrueTouch® capacitive touchscreen controller
  - Tracks up to four fingers independently
  - Screen sizes up to 4.5-inch diagonal
    - Can support up to 7-inch diagonal with stretched sensor pitch
  - Up to 32 sense pins; senses up to 252 intersections
  - Large object detection
  - Fat finger detection and tracking
  - Charger Armor™ technology, featuring adaptive frequency hopping, which provides battery charger noise immunity
  - Self-calibrating to environmental changes
  - Smart noise suppression in LCD, battery charger, common-mode, and RF environments
  - Android and Windows Phone Series 7 compliant
  - Supports unregulated dual-rail inputs
    - 1.71 V to 3.6 V digital supply voltage
    - 2.7 V to 3.6 V analog supply voltage
    - Supports single shared supply from 2.7 V to 3.6 V
- Performance
  - Best in class signal-to-noise ratio (SNR)
  - Noise-free resolution: 0.1 mm
- Accuracy: 0.5 mm
- Finger separation: 3.5 mm
- >60 Hz refresh rate with up to four fingers on the touchscreen
- Low Power state current less than 1.3 mA
- Deep Sleep state current of 1 μA
- Extended feature set
  - Integrated CapSense® button support
- Sensor and system design
  - Supports chip-on-flex and chip-on-board
  - Configurable to work with plastic film and glass touch sensors
  - Supports a variety of touchscreen sensors and stackups
- Communication interface
  - I<sup>2</sup>C slave up to 400 kHz
  - SPI slave with 2 Mbps sustained data throughput
  - Field upgrades through integrated bootloader
- Manufacturing test
  - Integrated test firmware
- Package options
  - 36-pin QFN (5 × 5 × 0.6 mm)
  - 48-pin QFN (6 × 6 × 0.6 mm)



**Document History Page**

Document Title: CY8CTMA140, TrueTouch® Multi-Touch All-Points Touchscreen Controller Document Number: 001-91025				
Rev.	ECN	Orig. of Change	Submission Date	Description of Change
**	4278978	SWU	02/12/2014	New summary datasheet.
*A	4788718	SWU	06/08/2015	Obsolete document.

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