



**THE DATASHEET OF
CY8CTMA340-48LQI-01**



TrueTouch[®] Multi-Touch All-Points Touchscreen Controller

Features

- TrueTouch[®] capacitive touchscreen controller
 - Tracks up to four fingers independently
 - Screen sizes up to 4.5" diagonal
 - Can support up to 7" diagonal with stretched sensor pitch
 - Up to 32 sense pins. Senses up to 252 intersections
 - Resistive stylus replacement
 - Passive stylus with 1-mm tip
 - Best in class water rejection – no false touches
 - Large object detection
 - Fat finger detection and tracking
 - Charger Armor™ technology that 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 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 μ A
- Extended feature set
 - Best in class wet-finger tracking
 - 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
 - I²C slave up to 400 kHz
 - SPI slave with 2 Mbps sustained data throughput
 - Field upgrades through integrated bootloader
- Host development kit (HDK)
 - Android and Windows Phone Series 7 drivers
 - Supports custom driver development
 - TrueTouch Host Emulator – acts as host for early prototyping
- Manufacturing test
 - Integrated test firmware
- Package options
 - 36-pin 5 × 5 × 0.6 mm QFN
 - 48-pin 6 × 6 × 0.6 mm QFN
 - 49-ball 3.2 × 3.2 × 0.55 mm CSP

Ordering Information

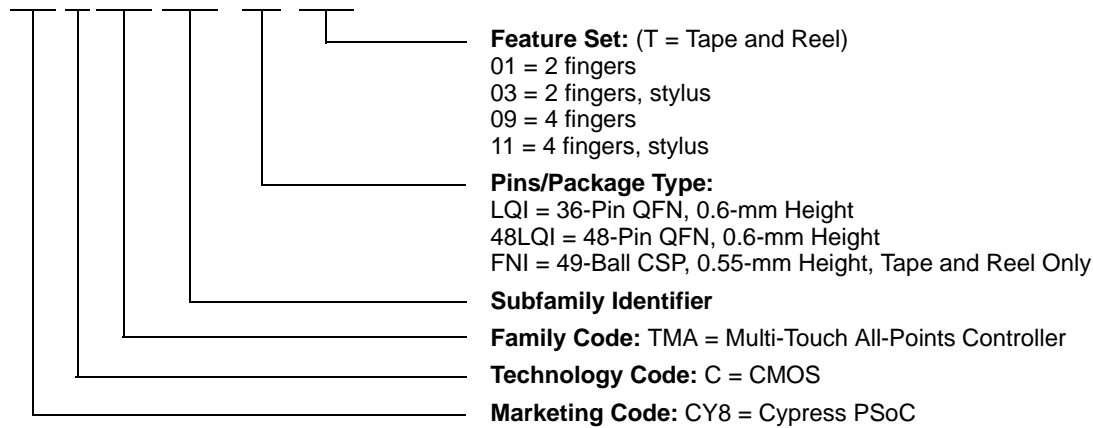
Table 1 lists the TrueTouch Standard Product Multi-Touch All-Points Touchscreen Controllers. The table contains only the parts that are currently available. If you do not see what you are looking for, contact your local sales representative. For more information, visit the Cypress website at www.cypress.com and refer to the product summary page at <http://www.cypress.com/products>.

Table 1. Device Ordering Information

Part Number	TrueTouch										Sensor			Minimum Interface Voltage	Digital Supply Voltage Operating Range	Analog Supply Voltage Operating Range	Bootloader	I ² C	SPI	Package	Unique ID
	Max Screen Size (in.) (4:3 Aspect Ratio)	Maximum Nodes	Maximum Fingers	Ghost-Free Tracking	Charger Armor	Water Rejection	On-chip Gesture Decoding	Large Object Detection	Stylus	Glass	Film										
CY8CTMA340-LQI-11(T)	3.2	132	4	✓	✓	✓	✓	✓	✓	✓	✓	1.8	1.71–3.6	2.7–3.6	✓	✓	✓	36-pin QFN	058DH		
CY8CTMA340-48LQI-11(T)	4.5	252	4	✓	✓	✓	✓	✓	✓	✓	✓	1.8	1.71–3.6	2.7–3.6	✓	✓	✓	48-pin QFN	058EH		
CY8CTMA340-LQI-09(T)	3.2	132	4	✓	✓	✓	✓	–	✓	✓	✓	1.8	1.71–3.6	2.7–3.6	✓	✓	✓	36-pin QFN	0590H		
CY8CTMA340-48LQI-09(T)	4.5	252	4	✓	✓	✓	✓	–	✓	✓	✓	1.8	1.71–3.6	2.7–3.6	✓	✓	✓	48-pin QFN	0591H		
CY8CTMA340-FNI-09T	4.5	252	4	✓	✓	✓	✓	–	✓	✓	✓	1.8	1.71–3.6	2.7–3.6	✓	✓	✓	49-pin CSP	0592H		
CY8CTMA340-48LQI-03(T)	4.5	252	2	✓	✓	✓	✓	✓	✓	✓	✓	1.8	1.71–3.6	2.7–3.6	✓	✓	✓	48-pin QFN	0597H		
CY8CTMA340-48LQI-01(T)	4.5	252	2	✓	✓	✓	✓	–	✓	✓	✓	1.8	1.71–3.6	2.7–3.6	✓	✓	✓	48-pin QFN	059AH		
CY8CTMA340-FNI-01T	4.5	252	2	✓	✓	✓	✓	–	✓	✓	✓	1.8	1.71–3.6	2.7–3.6	✓	✓	✓	49-pin CSP	059BH		

Ordering Code Definitions

CY8 C TMA 340 - xxx xx(T)



Document History Page

Document Title: CY8CTMA340, TrueTouch® Multi-Touch All-Points Touchscreen Controller Document Number: 001-91023				
Rev.	ECN	Orig. of Change	Submission Date	Description of Change
**	4278978	SWU	02/12/2014	New summary datasheet.

Sales, Solutions, and Legal Information

Worldwide Sales and Design Support

Cypress maintains a worldwide network of offices, solution centers, manufacturer’s representatives, and distributors. To find the office closest to you, visit us at [Cypress Locations](#).

Products

- Automotive cypress.com/go/automotive
- Clocks & Buffers cypress.com/go/clocks
- Interface cypress.com/go/interface
- Lighting & Power Control cypress.com/go/powerpsoc
cypress.com/go/plc
- Memory cypress.com/go/memory
- PSoC cypress.com/go/psoc
- Touch Sensing cypress.com/go/touch
- USB Controllers cypress.com/go/USB
- Wireless/RF cypress.com/go/wireless

PSoC® Solutions

- psoc.cypress.com/solutions
- [PSoC 1](#) | [PSoC 3](#) | [PSoC 4](#) | [PSoC 5LP](#)

Cypress Developer Community

- [Community](#) | [Forums](#) | [Blogs](#) | [Video](#) | [Training](#)

Technical Support

- cypress.com/go/support

© Cypress Semiconductor Corporation, 2014. The information contained herein is subject to change without notice. Cypress Semiconductor Corporation assumes no responsibility for the use of any circuitry other than circuitry embodied in a Cypress product. Nor does it convey or imply any license under patent or other rights. Cypress products are not warranted nor intended to be used for medical, life support, life saving, critical control or safety applications, unless pursuant to an express written agreement with Cypress. Furthermore, Cypress does not authorize its products for use as critical components in life-support systems where a malfunction or failure may reasonably be expected to result in significant injury to the user. The inclusion of Cypress products in life-support systems application implies that the manufacturer assumes all risk of such use and in doing so indemnifies Cypress against all charges.

Any Source Code (software and/or firmware) is owned by Cypress Semiconductor Corporation (Cypress) and is protected by and subject to worldwide patent protection (United States and foreign), United States copyright laws and international treaty provisions. Cypress hereby grants to licensee a personal, non-exclusive, non-transferable license to copy, use, modify, create derivative works of, and compile the Cypress Source Code and derivative works for the sole purpose of creating custom software and or firmware in support of licensee product to be used only in conjunction with a Cypress integrated circuit as specified in the applicable agreement. Any reproduction, modification, translation, compilation, or representation of this Source Code except as specified above is prohibited without the express written permission of Cypress.

Disclaimer: CYPRESS MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH REGARD TO THIS MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Cypress reserves the right to make changes without further notice to the materials described herein. Cypress does not assume any liability arising out of the application or use of any product or circuit described herein. Cypress does not authorize its products for use as critical components in life-support systems where a malfunction or failure may reasonably be expected to result in significant injury to the user. The inclusion of Cypress’ product in a life-support systems application implies that the manufacturer assumes all risk of such use and in doing so indemnifies Cypress against all charges.

Use may be limited by and subject to the applicable Cypress software license agreement.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View CY8CTMA340-48LQI-01 on WIN SOURCE](#)

 [Infineon Technologies](#) Information

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management