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Continuity of document content

The fact that Infineon offers the following product as part of the Infineon product portfolio does not lead to any changes to this document. Future revisions will occur when appropriate, and any changes will be set out on the document history page.

Continuity of ordering part numbers

Infineon continues to support existing part numbers. Please continue to use the ordering part numbers listed in the datasheet for ordering.

Automotive TrueTouch® Multi-Touch All-Points Touchscreen Controller

Features

- **Automotive Electronics Council (AEC) Q100 qualified**
- **Multi-touch capacitive touchscreen and touchpad controller**
 - 32-bit ARM Cortex CPU
 - Register configurable
 - Noise suppression technologies for display and EMI
 - On-chip 10-V TX supply for higher signal-to-noise ratio (SNR)
 - External display synchronization
 - Water rejection and wet finger tracking
 - Large object rejection
 - Automatic baseline tracking to environmental changes
 - Low-power look-for-touch mode
 - Field upgrades via bootloader
 - Android™ driver support
 - Cypress manufacturing test kit (MTK)
 - Touchscreen sensor self-test and ID reporting
- **System performance**
 - Screen sizes up to 10.1-inch diagonal
 - 5.5-mm sensor pitch, 4:3 aspect ratio
 - Up to 65 sense pins
 - 1036 intersections, 4:3 aspect ratio (37 × 28)
 - Reports up to 10 fingers
 - Small finger support down to 5 mm
 - Large finger support up to 22 mm
 - Refresh rate up to 80 Hz; other rates configurable
 - Fast first-touch response (≤ 37.5 ms for a 10.1-inch panel)
- **Power (configuration dependent)**
 - 1.71-V to 5.5-V digital and I/O supply
 - 2.60-V to 5.5-V analog supply
 - 71-mW average power while sensing
 - 45- μ W typical deep-sleep power
- **Sensor and system design (configuration dependent)**
 - Supports a variety of touchscreen sensors and stackups
 - Manhattan and diamond patterns
 - Sensor-on-lens (SOL)
 - Plastic (PET) and glass sensor substrates
 - LCD and AMOLED displays
 - Single on cell flexible printed circuit (FPC) routing enabled by flexible TX/RX configurations
- **I²C and SPI interface options**
 - I²C slave at all standard bit rates
 - 100 kbps, 400 kbps, 1 Mbps, and 3.4 Mbps
 - SPI slave bit rates up to 8 Mbps
- **Package options**
 - 100-pin TQFP, 14 × 14 × 1.4 mm, 0.5-mm pin-pitch
- **Temperature ranges**
 - Automotive-A: -40 °C to 85 °C
 - Automotive-S: -40 °C to 105 °C

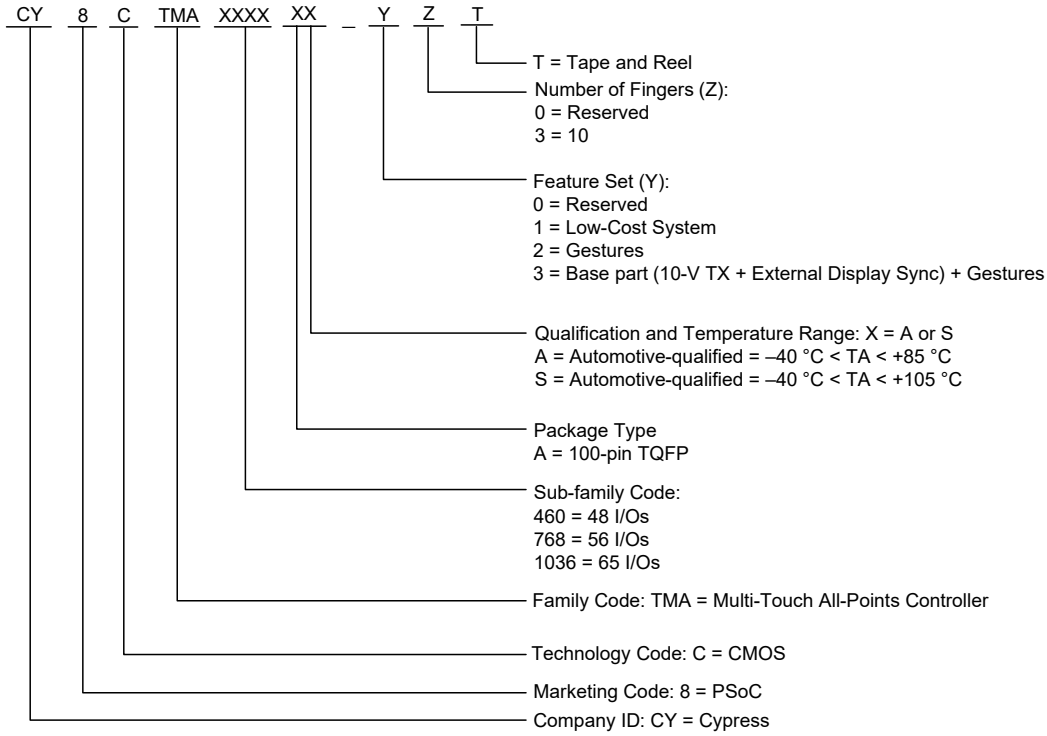
Ordering Information

Table 1 lists the CY8CTMA1036/768/460 TrueTouch touchscreen controllers. For information on other TrueTouch families, visit <http://www.cypress.com/truetouch>.

Table 1. Device Ordering Information

| Family | Marketing Part Number | Number of Sense Pins | Number of fingers | Capsense Buttons | Water Rejection | Object Detect and Reject | Glove Support | Gestures | 10-V TX | External Display Sync | Package | Package Size | Silicon ID |
|----------|-----------------------|----------------------|-------------------|------------------|-----------------|--------------------------|---------------|----------|---------|-----------------------|----------|------------------|------------|
| Low cost | CY8CTMA460AA-13 | 48 | 10 | ✓ | ✓ | ✓ | ✓ | - | - | - | 100 TQFP | 14 × 14 × 1.4 mm | 0x01832390 |
| | CY8CTMA460AS-13 | 48 | 10 | ✓ | ✓ | ✓ | ✓ | - | - | - | 100 TQFP | 14 × 14 × 1.4 mm | 0x01842390 |
| | CY8CTMA768AA-13 | 56 | 10 | ✓ | ✓ | ✓ | ✓ | - | - | - | 100 TQFP | 14 × 14 × 1.4 mm | 0x01752390 |
| | CY8CTMA768AS-13 | 56 | 10 | ✓ | ✓ | ✓ | ✓ | - | - | - | 100 TQFP | 14 × 14 × 1.4 mm | 0x01762390 |
| | CY8CTMA1036AA-13 | 65 | 10 | ✓ | ✓ | ✓ | ✓ | - | - | - | 100 TQFP | 14 × 14 × 1.4 mm | 0x01772390 |
| | CY8CTMA1036AS-13 | 65 | 10 | ✓ | ✓ | ✓ | ✓ | - | - | - | 100 TQFP | 14 × 14 × 1.4 mm | 0x01782390 |
| Gestures | CY8CTMA460AA-23 | 48 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | 100 TQFP | 14 × 14 × 1.4 mm | 0x01852390 |
| | CY8CTMA460AS-23 | 48 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | 100 TQFP | 14 × 14 × 1.4 mm | 0x01862390 |
| | CY8CTMA768AA-23 | 56 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | 100 TQFP | 14 × 14 × 1.4 mm | 0x01792390 |
| | CY8CTMA768AS-23 | 56 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | 100 TQFP | 14 × 14 × 1.4 mm | 0x017A2390 |
| | CY8CTMA1036AA-23 | 65 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | 100 TQFP | 14 × 14 × 1.4 mm | 0x017B2390 |
| | CY8CTMA1036AS-23 | 65 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | - | - | 100 TQFP | 14 × 14 × 1.4 mm | 0x017C2390 |
| Base | CY8CTMA460AA-33 | 48 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 100 TQFP | 14 × 14 × 1.4 mm | 0x01872390 |
| | CY8CTMA460AS-33 | 48 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 100 TQFP | 14 × 14 × 1.4 mm | 0x01882390 |
| | CY8CTMA768AA-33 | 56 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 100 TQFP | 14 × 14 × 1.4 mm | 0x017D2390 |
| | CY8CTMA768AS-33 | 56 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 100 TQFP | 14 × 14 × 1.4 mm | 0x017E2390 |
| | CY8CTMA1036AA-33 | 65 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 100 TQFP | 14 × 14 × 1.4 mm | 0x017F2390 |
| | CY8CTMA1036AS-33 | 65 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 100 TQFP | 14 × 14 × 1.4 mm | 0x01802390 |
| Custom | CY8CTMA1036AA-00 | 65 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 100 TQFP | 14 × 14 × 1.4 mm | 0x01812390 |
| | CY8CTMA1036AS-00 | 65 | 10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 100 TQFP | 14 × 14 × 1.4 mm | 0x01822390 |

Ordering Code Definitions



Document History Page

| Document Title: CY8CTMA1036/768/460 Automotive TrueTouch® Multi-Touch All-Points Touchscreen Controller Document Number: 001-94115 | | | | |
|---|---------|-----------------|-----------------|--|
| Revision | ECN | Orig. of Change | Submission Date | Description of Change |
| ** | 4495966 | KAUL | 09/09/2014 | New summary datasheet. |
| *A | 5718187 | AESATMP7 | 04/28/2017 | Updated Cypress Logo and Copyright. |
| *B | 5861817 | ANEE | 08/30/2017 | Updated Ordering Code Definitions . Updated Sales page and Copyright information. |

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