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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.

SUMMARY

CY8CTMA1036/768/460

PSoC™ Automotive Multitouch All-Points Touchscreen Controller

Features

- **Automotive Electronics Council (AEC) Q100 qualified**
- **Multitouch 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-µW 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
- **I^2C and SPI interface options**
  - I^2C 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

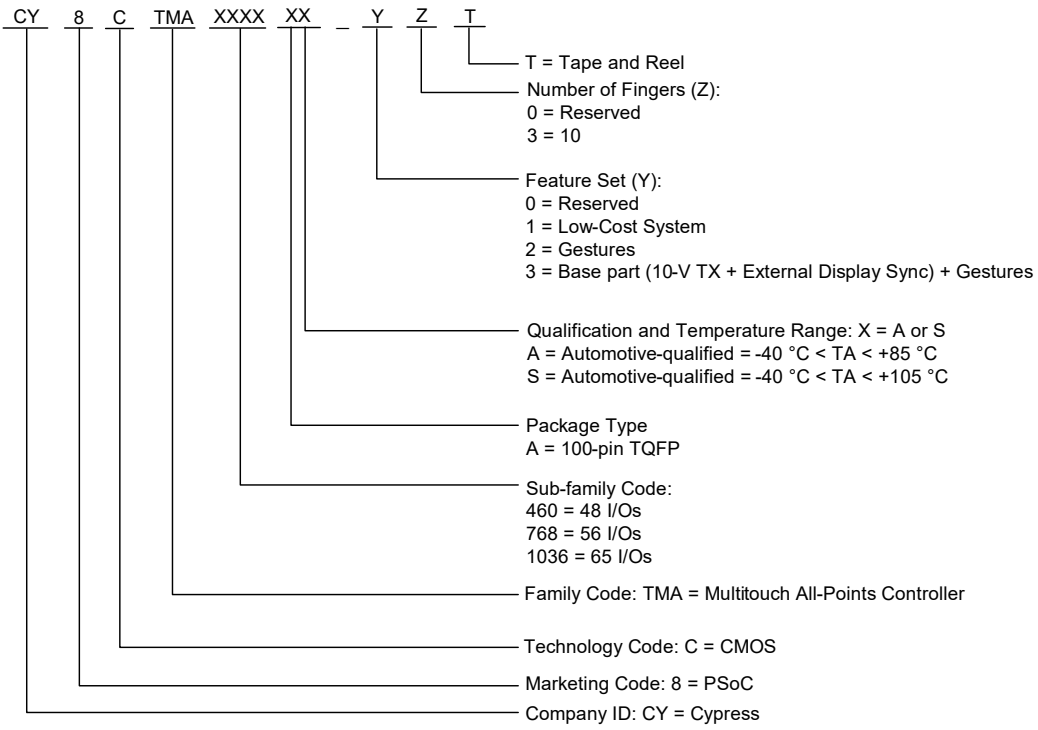
Ordering Information

Table 1 lists the CY8CTMA1036/768/460 PSoC™ Automotive Multitouch touchscreen controllers.

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
	CY8CTMA1036AA-13	65	10	✔	✔	✔	✔	–	–	–	100 TQFP	14 × 14 ×1.4 mm	0x01772390
Base	CY8CTMA460AS-33	48	10	✔	✔	✔	✔	✔	✔	✔	100 TQFP	14 × 14 ×1.4 mm	0x01882390
	CY8CTMA768AS-33	56	10	✔	✔	✔	✔	✔	✔	✔	100 TQFP	14 × 14 ×1.4 mm	0x017E2390
	CY8CTMA1036AS-33	65	10	✔	✔	✔	✔	✔	✔	✔	100 TQFP	14 × 14 ×1.4 mm	0x01802390

Ordering Code Definitions



Document History Page

Document Title: CY8CTMA1036/768/460, PSoC™ Automotive Multitouch All-Points Touchscreen Controller Document Number: 001-94115			
Revision	**ECN**	**Submission Date**	**Description of Change**
**	4495966	09/09/2014	New summary datasheet.
*A	5718187	04/28/2017	Updated Cypress Logo and Copyright.
*B	5861817	08/30/2017	Updated Ordering Code Definitions. Updated Sales page and Copyright information.
*C	7761532	05/16/2022	Updated to the PSoC™ Automotive Multitouch branding guidelines. Removed the following Obsolete/EOL Prune part numbers from Ordering Information: CY8CTMA460AS-13, CY8CTMA768AA-13, CY8CTMA768AS-13, CY8CTMA1036AS-13, CY8CTMA460AA-23, CY8CTMA460AS-23, CY8CTMA768AA-23, CY8CTMA768AS-23, CY8CTMA1036AA-23, CY8CTMA1036AS-23, CY8CTMA460AA-33, CY8CTMA768AA-33, CY8CTMA1036AA-33, CY8CTMA1036AA-00, and CY8CTMA1036AS-00.

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