



SUMMARY

CYAT8268X
(54, 46, 39, 31 RX Channels)

Automotive TrueTouch[®] Multi-Touch All-Points In-Cell Touchscreen Controller

Features

- In-cell touchscreen controller
- Multi-touch capacitive touchscreen controller
 - 32-bit ARM[®] Cortex[™] CPU
 - Register-configurable
 - Noise-suppression technologies for display and EMI
 - AutoArmor[™] improves both electromagnetic emissions and immunity
 - Water rejection and wet-finger tracking using DualSense[™]
 - Multi-touch glove with automatic mode switching
 - Ten fingers with thin glove (≤ 1 mm thick)
 - Two fingers with thick glove (≤ 5 mm thick)
 - Fingernail tracking
 - Large object rejection
 - Automatic baseline tracking to environmental changes
 - Field upgrades via bootloader
 - Cypress Manufacturing Test Kit (MTK)
 - Touchscreen sensor self-test
- System performance (configuration dependent)
 - Screen sizes up to 15-inch diagonal
 - 6.0 mm electrode pitch; 16:10 aspect ratio
 - Up to 54 RX channels, 1836 intersections
 - Reports up to ten fingers
 - Small finger support down to 5 mm
 - Refresh rate up to 250 Hz; other rates configurable
- Power (configuration-dependent)
 - 1.71 to 1.95 V and 3.0 to 5.5 V logic and digital I/Os supply
 - 3.0 to 5.5 V analog supply
 - 30 mW average power
 - 30 μ W typical deep-sleep power
- Sensor and system design (configuration-dependent)
 - Supports In-Cell sensors
 - TX/VCOM share the same layer
 - RX ITO layer on/above the color filter
- Communication interface
 - I²C slave at 100 and 400 kbps
- Package
 - 100-pin TQFP 14 × 14 × 1.4 mm (0.5-mm pitch)
- Ambient temperature range
 - Automotive-A: -40 °C to 85 °C
 - Automotive-S: -40 °C to 105 °C

Ordering Information

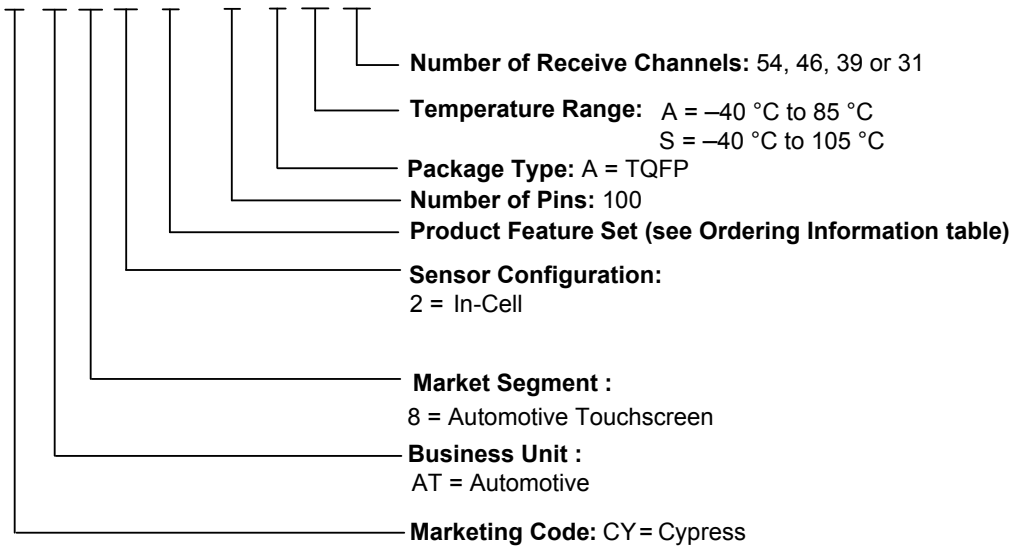
Table 1 lists the CYAT8268X TrueTouch touchscreen controllers.

Table 1. Ordering Information [1]

MPN	Number of Receive Channels	Number of Fingers	Water Rejection	Gesture	Thick Overlay/Thick Glove Support
CYAT82687-100AA31	31	10	✓	✓	✓
CYAT82687-100AS31	31	10	✓	✓	✓
CYAT82687-100AA39	39	10	✓	✓	✓
CYAT82687-100AS39	39	10	✓	✓	✓
CYAT82687-100AA46	46	10	✓	✓	✓
CYAT82687-100AS46	46	10	✓	✓	✓
CYAT82687-100AA54	54	10	✓	✓	✓
CYAT82687-100AS54	54	10	✓	✓	✓

Ordering Code Definitions

CY AT X X XXX-XXX X X XX



Note

1. All devices have the following base features: Water Rejection, DisplayArmor™, AutoArmor™, DualSense™, CapSense buttons, Large Object Detection and Rejection, and Grip Suppression.



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Document History Page

Document Title: CYAT8268X (54, 46, 39, 31 RX Channels), Automotive TrueTouch® Multi-Touch All-Points In-Cell Touchscreen Controller (Summary) Document Number: 002-18479				
Revision	ECN	Orig. of Change	Submission Date	Description of Change
**	5600383	ANEE	01/24/2017	New summary datasheet.

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