

EPH8611 provides superior touchscreen performance using combined Mutual- and Self- capacitive measurements.

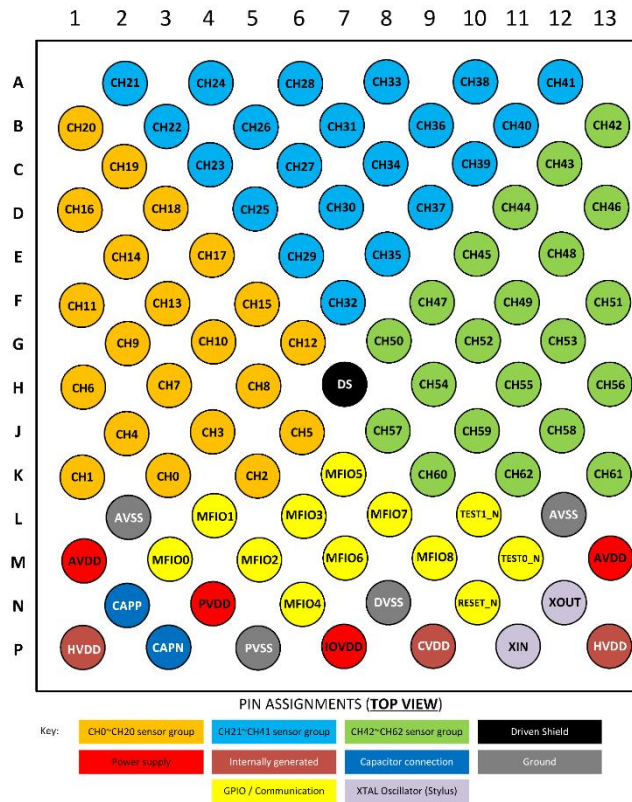
63 Channels are available providing up to 882 touchscreen nodes. Channels can be configured as either Receive (Rx) or Transmit (Tx) within 3 groups of 21 channels to allow for numerous screen edge channel routings for both double- and single- connected sensor. It also allows and support for various screen sizes and aspect ratios.

EPH8611 provides I<sup>2</sup>C, I<sup>3</sup>C and SPI Peripheral mode interface for flexible or rigid laminated, touch-on-lens or on-cell stack-ups, supporting up to 700pf screen load per line and touch report rates up to 480Hz (subject to features and configuration settings)

## Features

- Support 4 different touch application types:
  - Analogue data acquisition only (Analogue Front-end (AFE))
  - Analogue data acquisition with Active Stylus
  - Full touch application
  - Full touch with Active Stylus
- Number of Transmit (Tx) and Receive (Rx) channels
  - Tx: 12 to 21
  - Rx: 28 to 42
- Support 100pf~700pf per channel screen load
- Wide range of display sizes supported
  - For example, 9.16-inch diagonal with 5.0mm pitch for 21:9 aspect ratio, or 7.32 inch at 4.0mm pitch
- Touch performance
  - Mutual-capacitance and Self-capacitance sensing methods are supported for touch detection
  - Sensor Test Mode provides detection of Opens/Shorts
  - Programmable Active/Idle scan rates for Power saving modes
  - Touch report rates up to 480Hz
  - Programmable sampling frequency and filtering/averaging for noise avoidance
- Screen/Panel/Cover Glass type support
  - Support Flexible, Foldable or Rigid panels
  - Support fully laminated sensors, touch-on-lens stack-ups and on-cell designs
  - Work with PET or glass, including curved profiles
  - Support metal mesh or ITO touchscreens
  - Support glass from 0.5 to 2.5mm, dependent on the screen size, touch size, stack-up
  - Support plastic from 0.25 to 1.2mm, dependent on the screen size and touch size

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- Support Notched and Rounded sensor designs
  - End user features
    - Up to 10 tracked touches
    - Low power gesture wake-up
    - Moisture touches
    - Glove touches
    - Large touch detection and suppression
    - USI or HPP Stylus
  - Support product data store area
    - User-defined data can be stored to memory to support system production and test
  - Power Saving
    - Pipelined analogue sensing detection and digital filtering to optimize system power efficiency
    - Low power Idle/Armed mode
  - Communication Interfaces
    - I<sup>2</sup>C: Standard/Fast mode 400kHz, Fast-plus mode 1MHz
    - I<sup>3</sup>C: SDR / HDR-DDR
    - SPI: SCK frequency of up to 30MHz allowing raw data transfer for Analogue data acquisition (Host-based touch processing)
  - IO Host Interface 1.8V and 1.2V supported
  - Power Supply
    - Analogue (AVDD) 3.3V nominal
    - Digital I/O (IOVDD) 1.8V nominal
  - Packaging
    - 91-ball BGA 5.0 × 5.4 × 0.45 (nominal) mm, ~0.50mm pitch. RoHS/Green
  - Operating temperature
    - -40°C to +85°C



Part Number	Bulk Packaging	Note
EPH8611-BGn2	Trays or Tape and Reel	<p>Parts are supplied with bootloader only pre-loaded. (Contact ESWIN for required system touch application type )</p> <p>Product-specific application .enc file is supplied separately.</p> <p>This application and configuration will be loaded to the part during the system production test process.</p>

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