

EPH8621 provides superior touchscreen performance using combined Mutual- and Self- capacitive measurements.

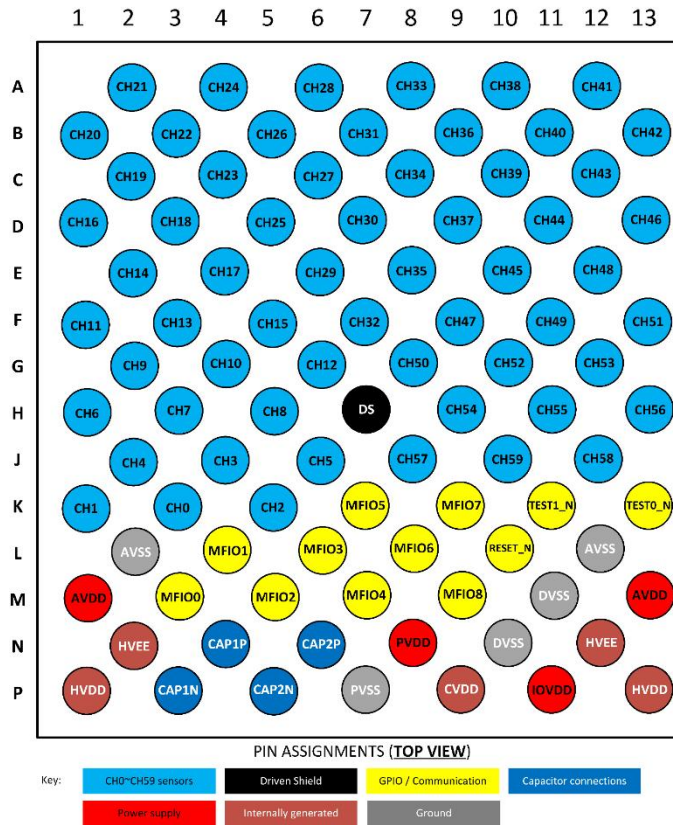
60 Channels are available providing up to 800 touchscreen nodes. Channels can be configured as either Receive (Rx) or Transmit (Tx) to allow for numerous screen edge channel routings for both double- and single- connected sensor. It also allows and support for various screen sizes and aspect ratios.

EPH8621 provides I²C, I³C 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 of 480Hz (subject to features and configuration settings).

Features

- Support 2 different touch application types:
 - Analogue data acquisition only (Analogue Front-end (AFE))
 - Full touch application
- Number of Transmit (Tx) and Receive (Rx) channels
 - Tx: 10 to 20
 - Rx: 24 to 40 (up to maximum of 42 with a maximum of 18Tx channels)
- Support 100pf~700pf per channel screen load
- Wide range of display sizes supported
 - Wide range of display sizes supported from ~4" to ~9" diagonal dependent on channel pitch size and aspect ratio
- 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 1.2 mm, dependent on the screen size and touch size
 - Support Notched and Rounded sensor designs
- End user features
 - Up to 10 tracked touches

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- Moisture touches
 - Glove touches
 - Passive Stylus ~2mm diameter
 - Large touch detection and suppression
 - 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
 - I²C: Standard/Fast mode 400KHz, Fast-plus mode 1MHz
 - I³C: SDR / HDR-DDR
 - SPI: SCK frequency of up to 30MHz
 - I/O 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
EPH8621-BG10	Trays or Tape and Reel	<p>Parts are supplied with bootloader only pre-loaded.</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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