Cypress Roadmap: Modules
## Cypress Module Portfolio

### Windows Trackpad Modules
- **Gen5 Windows PTP Module**
  - 5-Finger Detection/Communication
  - PS2/I²C
  - 60-Vpp² Charger Armor

- **Gen5 Windows Module**
  - NDA Required
  - Contact Sales

### Chrome Trackpad Modules
- **Gen5 Chrome Module**
  - 5-Finger Detection/Communication
  - I²C
  - 60-Vpp² Charger Armor

- **Gen6 Chrome Module**
  - 5-Finger Gesture
  - I²C

### Modules for Embedded Systems
- **Gen6 Trackpad Module**
  - 5-Finger Gesture
  - I²C
  - Max Size: 120 x 75 mm

- **Gen4 + KB + RF Module**
  - 5-Finger Gesture
  - I²C
  - Max Size: 125 x 125 mm

- **Gen4 + KB + BLE Module**
  - NDA Required
  - Contact Sales

### Mutual Capacitance

### Self Capacitance

### Software
- **Windows Driver**
  - 5-Finger Gesture
  - Windows XP/7/8/8.1 Compatible
  - User Configuration GUI

- **Chrome Driver**
  - 5-Finger Detection/Communication
  - MT-B Compliant, Linux

### Wireless Modules
- **EZ-BLE Module**
  - Bluetooth 4.1 Certified
  - FCC, CE, KC, TELEC, IC Certified
  - I²C, SPI, UART, CapSense
  - Size: 10 x 10 x 1.8 mm

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1. Microsoft Precision Touchpad
2. Noise voltage peak to peak
3. System noise detection and reduction
4. Gesture processing
5. Maximum active sensing area
6. Keyboard
7. Radio frequency (2.4-GHz wireless)
8. Bluetooth Low Energy, also known as Bluetooth Smart
9. Graphical user interface

### Cypress Module Portfolio

- **Production**
  - QQYY
- **Sampling**
  - QQYY
- **Development**
  - Concept

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001-95005
Rev. A
Owner: MINS
BUM: DSO

Module Roadmap
CYPRESS CONFIDENTIAL
Gen5 Chrome Module

**Application**
Chromebook PCs

**Features**

**Mechanical Construction**
- Maximum active sensing area of 125 mm x 70 mm
- Minimum of 1.3 mm total module thickness
- Clickpad\(^1\) and standard\(^2\) configurations
- Overlay assembly and lamination available

**Advanced Processing**
- 60-Vpp\(^3\) charger noise immunity (1-500 kHz, 9-mm finger)
- 32-bit ARM® Cortex™-M0 core for more processing power
- I\(^2\)C communication interface
- Report rates up to 150 Hz
- Five-finger detection and communication
- Low-power, look-for-touch active mode
- Google-qualified multi-touch Cypress driver
- Compatible with Google Multi-touch Protocol B (MT-B)

**Product Support**
- On-site support for customer product introduction available
- Incoming/outgoing test equipment available to customers

**Collateral**
- Datasheet: [Contact Sales](#)

**Availability**
- Production: Now

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\(^1\) Trackpad with integrated mechanical button
\(^2\) Trackpad with support for external mechanical button inputs
\(^3\) Noise voltage peak to peak
\(^4\) Interrupt
\(^5\) Advanced High-Performance Bus Lite
Gen6 Chrome Module

**Application**
Chromebook PCs

**Features**

**Mechanical Construction**
Maximum active sensing area of 120 mm x 75 mm
Minimum of 1.3 mm total module thickness
Clickpad\(^1\) and standard\(^2\) configurations
Overlay assembly and lamination available

**Advanced Processing**
35-Vpp\(^3\) charger noise immunity (1-500 kHz, 9-mm finger)
32-bit ARM® Cortex™-M0 core for more processing power
I\(^2\)C communication interface
Report rates up to 150 Hz
Five-finger detection and communication
Low-power, look-for-touch active mode
Google-qualified multi-touch Cypress driver
Compatible with Google Multi-touch Protocol B (MT-B)

**Product Support**
On-site support for customer product introduction available
Incoming/outgoing test equipment available to customers

**Collateral**
Preliminary Datasheet: [Contact Sales](#)

**Availability**
Sampling: Q2 2015
Production: Q3 2015

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1 Trackpad with integrated mechanical button
2 Trackpad with support for external mechanical button inputs
3 Noise voltage peak to peak
4 Interrupt
5 Advanced High-Performance Bus Lite
Gen5 Windows PTP\textsuperscript{1} Module

**Application**

Windows PCs

**Features**

**Mechanical Construction**
Maximum active sensing area of 125 mm x 70 mm
Minimum of 1.3 mm total module thickness
Clickpad\textsuperscript{2} and standard\textsuperscript{3} configurations
Overlay assembly and lamination available

**Advanced Processing**
60-Vpp\textsuperscript{4} charger noise immunity (1-500 kHz, 9-mm finger)
32-bit ARM Cortex-M0 core for more processing power
Dual bus interface PS2 and I\textsuperscript{2}C/PTP\textsuperscript{1}
Report rates of up to 150 Hz
Enhanced palm rejection
Five-finger detection and communication
Low-power, look-for-touch active mode
Windows driver support for XP/Vista/7/8/8.1

**Product Support**
On-site support for customer product introduction available
Incoming/outgoing test equipment available to customers

**Collateral**

Datasheet: Contact Sales

1 Microsoft Precision Touchpad
2 Trackpad with integrated mechanical button
3 Trackpad with support for external mechanical button inputs

**Availability**

Production: Now

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\textsuperscript{1} Noise voltage peak to peak
\textsuperscript{4} Interrupt
\textsuperscript{6} Advanced High-Performance Bus Lite
**Gen4 + KB\(^1\) + RF\(^2\) Module**

**Wireless Trackpad + Keyboard Solution**

### Applications
- External keyboard and trackpad
- Standalone trackpad
- Remote control and trackpad
- Tablet keyboard dock and trackpad

### Features

#### Mechanical Construction
- Maximum active sensing area of 125 mm x 125 mm
- Clickpad\(^3\) and standard\(^4\) configurations
- Overlay assembly and lamination available

#### Advanced Processing
- 32-bit ARM Cortex-M0 core for more processing power
- Five-finger detection and communication
- Software-free solution allowing fast time-to-market
- Embedded gesture detection
- Six configurable power modes
- 2.4-GHz wireless communication
- Cypress PSoC4A supporting keyboard scan
- Optional LED control

#### Product Support
- Simplification of OEM/ODM supply chains
- Incoming/outgoing test equipment available to customers

### Collateral
- Datasheet: [Contact Sales](mailto:sales@cypress.com)

### Availability
- Production: Now

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\(^1\) Keyboard  
\(^2\) Radio frequency (2.4-GHz wireless)  
\(^3\) Trackpad with integrated mechanical button  
\(^4\) Trackpad with support for external mechanical button inputs  
\(^5\) Interrupt
EZ-BLE
Bluetooth Low Energy Module using PRoC BLE

Applications
BLE\(^1\) connectivity
Medical
Industrial
PC Accessories
Toys
Smartphone Accessories

Features
Qualification and Certification
Bluetooth SIG certified QDID\(^2\)
FCC\(^3\), CE\(^4\), KC\(^5\), TELEC\(^6\) and IC\(^7\)
Small Footprint
10 mm x 10 mm X 1.8 mm, 21-pad LGA (including shield)
Bluetooth Smart connectivity with Bluetooth 4.1
2.4-GHz BLE radio and baseband
-91-dBm Rx sensitivity, +3-dBm Tx output power
Power Modes
1.3-\(\mu\)A Deep-Sleep, 150-nA Hibernate, 60-nA Stop
Highly Integrated Solution
2 crystals, chip antenna, passives, shield
Adapter board interface to CY8CKIT-042-BLE Pioneer kit
Enables testing of CapSense, buttons, GPIOs, OTA

Availability
Sampling: Mar 2015
Production: Q2 2015

Block Diagram
CYBLE-022001-00
32.768 kHz Crystal
24 MHz Crystal
Chip Antenna

Collateral
EZ-BLE Module Datasheet: Coming February
PRoC BLE Datasheet: Click here
Getting Started Application Note: February
PSoC Creator: Click here
PSoC Programmer: Click here
CySmart Windows Host Emulation Tool: Click here
CySmart iOS and Android apps: Click here

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\(^1\) Bluetooth Low Energy, also known as Bluetooth Smart
\(^2\) Bluetooth Special Interest Group Qualification Design ID
\(^3\) Federal Communications Commission
\(^4\) Conformité Européenne (Europe)
\(^5\) Korea Certification
\(^6\) Telecom Engineering Center (Japan)
\(^7\) Industry Canada
\(^8\) Serial wire debug communication protocol