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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# Touch Display 4.3 Development Kit



Development Kit Options				
Tools Included	PCWHD Compiler	PCDIDE Compiler	Hardware Only*	LCD Board*
Skus	S-201	S-201	53331-1612	53224-1611
Compiler Software	PCWHD	PCDIDE		
Programmer	●	●	●	
Prototyping board	●	●	●	●
Power supply & cables	●	●	●	
Exercise book	●	●	●	

\*Hardware only and proto-boards are intended for customers already owning a CCS compiler.

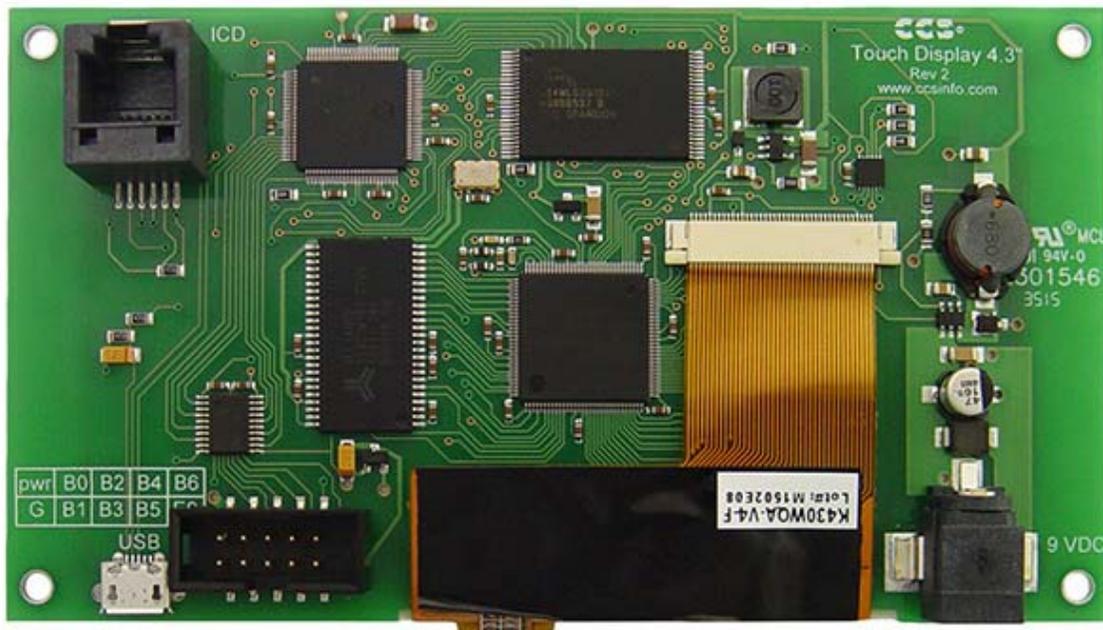
The new Touch Display 4.3 Development Kit is all that is needed to develop a GUI using the Graphics and Touch Library. Powered by a PIC24EP512GU810 it has a 4.3" 480x272 TFT display with a resistive touchscreen, a 256 megabyte flash, capable of storing hundreds of 480x272 images and custom fonts, a USB connection and 8 digital I/O pins that can be used for external inputs and outputs. No device programmer required - includes onboard programming capabilities.



Included is a software IDE to draw out a GUI and the C library for drawing graphics and handling touch.

- Draw an Image
- Draw a Object
- Handle Touch

## Touch Display 4.3 Prototyping Board (Size: 4.75" x 2.63") includes:



- PIC24EP512GU810 Microchip PIC® MCU
- 8 I/O Pins
- 4.3" 480x272 TFT Display with a Resistive Touchscreen
- 256 Megabyte Flash
- USB Connector
- Micro USB Cable

## Touch Display 4.3 Development Kit includes:

- Touch Display 4.3 Prototyping Board
- In-Circuit Debugger/Programmer
- Exercise Book
- 9V AC Adapter and Cables
- Development Tools CD with GUI Interface and CCSLoad Software



## Interface Designer

### A Simple, Fast Solution to Create GUI and Handling Touchscreen Function

CCS introduces a new Graphics and Touch Library and Interface Designer software in the CCS C Compiler. This package has every thing you need to quickly and easily develop a Graphical User Interface (GUI) using a graphics LCD and touchscreen. The package consists of a C library for drawing on an LCD and handling touch input, a software package for designing a GUI to be displayed using the C library, and a development kit to get started with the package very easily.

The C library displays bitmap images that are stored on an external memory device, for example an external flash. The library provides the functions `gfx_LoadImage()` and `gfx_EraseImage()` for easily loading and erasing images from the external memory. In addition the graphics library provides a method for loading and displaying custom fonts. The functions `gfx_LoadFont()` and `gfx_EraseFont()` are provided to easily load and remove custom fonts. The following is a list of functions in the library used to control what is displayed on the graphics LCD:

- `gfx_InitGraphics()`
- `gfx_DisplayImage()`
- `gfx_RemoveImage()`
- `gfx_RemoveAllImages()`
- `gfx_ClearScreen()`
- `gfx_RedrawScreen()`
- `gfx_FillArea()`
- `gfx_FillAreaAbsolute()`
- `gfx_DrawLineAbsolute()`
- `gfx_DrawCircleAbsolute()`
- `gfx_DisplayString()`
- `gfx_DisplayStringAbsolute()`

For the touch portion of the C library the functions `gfx_TouchTask()` and `gfx_SetTouchCallback()` are provided to use it. The `gfx_TouchTask()` function is a task function that needs to be called at least once per main loop to process touches. The `gfx_SetTouchCallback()` function is used to set the user function that is called by `gfx_TouchTask()`. In addition the `gfx_InitGraphics()` function needs to be called to set the calibration values of the touchscreen.