

# 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.

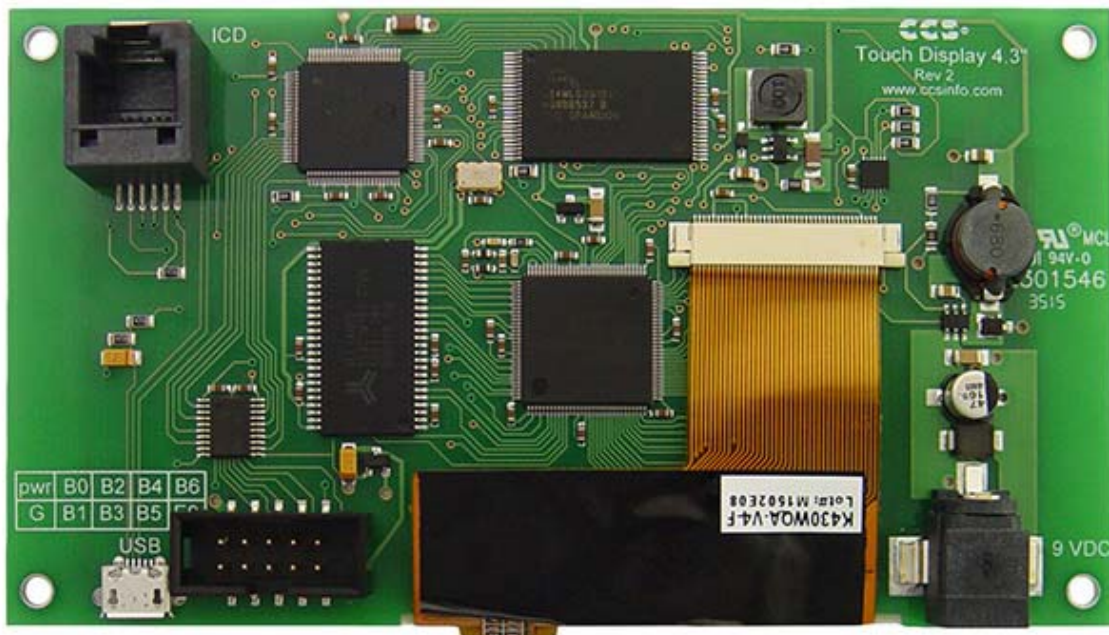
The new Touch Display 4.3 Development Kit is all that is needed to develop a GUI using the Graphics and Touch Library. Powered by a PIC24EP512GU810 it has a 4.3" 480x272 TFT display with a resistive touchscreen, a 256 megabyte flash, capable of storing hundreds of 480x272 images and custom fonts, a USB 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.