

# PIC32 VGA Camera Sensor PICTail™ Plus



**Part Number: AC164150**



The PIC32 VGA Camera Sensor (VCS) PICTail™ Plus (AC164150) is a demonstration board for evaluating Microchip Technology's basic surveillance and vision solutions using 32-bit microcontrollers. It can capture & process 8-bit gray scale or color images with up to 640x480 resolution. It interfaces to the I/O expansion board (DM320002) with PIC32 starter kits (DM320004 or DM320003-2), Graphics Controller PICTail™ Plus Epson S1D13517 Board (AC164127-7) and Graphics Display Truly 5.7" 640x480 Board (AC164127-8).

- 640x480 VGA Color CMOS Sensor on our standard PICTail™ plus form factor
- Based on the Omnivision OVM7690 CameraCubeChip™
- Convenient test points for video sync and clock sync
- Jumper configurable for display out or image transport over Ethernet
- Typical Applications include Image capture, Processing and Connectivity

*Note: When using the PIC32 Ethernet Starter kit (DM320004), an external crystal needs to be attached to (Y1) on the board*

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# VGA Camera Sensor PICtail™ Plus Daughter Board Information Sheet

Thank you for purchasing a VGA Camera Sensor PICtail Plus Daughter Board. This information sheet provides some important details that will help you successfully use the board as quickly as possible.

Additional information can be accessed at: <http://www.microchip.com>

## Basic Requirements

The VGA Camera Sensor PICtail Plus Daughter Board was designed to work with a PICtail™ Plus connector. This connector can be found on many boards including the Explorer 16 Development Board (DM240001) and the Starter Kit I/O Expansion Board (DM320002).

The VGA Camera Sensor PICtail Plus Daughter Board uses an OmniVision Technologies CameraCubeChip™ to receive digital video images. These images are then controlled by the microcontroller via I/O ports. Depending on the desired use, there are eight DATAx jumpers on the daughter board that can be used to switch between I/O lines. There is another jumper (J10) that can be used to switch between using an external clock source or the microcontroller as a clock source for the OmniVision Technologies CameraCubeChip™.

## Getting Started

To get started with the VGA Camera Sensor PICtail Plus Daughter Board, follow these steps:

1. Ensure that MPLAB® IDE is installed.
2. Download a project file for the daughter board from the Microchip web site.
3. Power the daughter board.
4. Connect a debugger/programmer.
5. Using MPLAB IDE, open the project that was previously downloaded.
6. Select a debugger/programmer in MPLAB IDE.
7. Click **Build**. This builds the downloaded project.
8. Click **Program all memories**.
9. Click **Run**.

Your VGA Camera Sensor PICtail Plus Daughter Board should now be up and running. To begin viewing the camera sensor image, either online or on an LCD, follow the guide that accompanies the chosen demonstration.

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