

Athena to Athena II Migration Guide

The Athena II single board computer product family is upward compatible from the original Athena family. Moreover, there are a number of important changes to Athena II which make it a superior single board computer for most applications. These changes are as follows:

| Feature | Original Athena | New Athena II |
|-----------------|-------------------------------|---|
| Processor | Via Eden at 400MHz or 660MHz | Via Mark CoreFusion CPU at 500MHz or 800MHz |
| Chipset | Via VT8606 + Via 82C686B | Via Mark (VT8606 integrated) + 82C686B |
| CPU Cooling | 400MHz fan-less 660MHz fan | 500MHz fan-less 800MHz fan-less |
| Memory | 128MB (all models) | 256MB (all models) |
| A/D Calibration | Manual / potentiometers | Autocalibration |
| Sample FIFO | 48 samples | 2048 samples |
| RoHS | No | Yes |

The Athena II footprint and mounting holes are unchanged from the original. The 800MHz version with tall heat sink violates the PC/104 height envelope and is intended to be the top board in the PC/104 stack. The 800MHz version with low profile heatsink preserves the height envelope but has an operating temperature range of -40°C to +70°C.

No cabling or jumper changes are required to switch from Athena to Athena II. The connectors are of the same types and have identical pinouts. Some connector locations have shifted slightly, but remain in the same general area. The Pandora Panel Board (PNL-EAP-01) will mate with the Athena II as with the original Athena.

In order to use all of the features of the Athena II, the Universal Driver software needs to be upgraded to version 5.92.2. In using the Universal Driver version 5.92.2, the board type being passed into the dscBoardInit must be changed to ATHENA_II.

Known Issue with Athena II

The data acquisition feature GAIN_8 does not work in unipolar mode. In other words, since mode 4 is an invalid mode (combination of gain and polarity), mode 7 (the 8th mode) has a range of 0 - 2.5V.



Product Number Transition

| Users of original Athena Product Number . . . | Should Order New Athena II Product Number: |
|--|--|
| ATH400-128 Athena 400MHz, 128MB RAM, DAQ | ATHM500-256A Athena II 500MHz, 256MB RAM, DAQ |
| ATH400-128N Athena 400MHz, 128MB RAM, no DAQ | ATHM500-256N Athena II 500MHz, 256MB RAM, no DAQ |
| ATH660-128 Athena 600MHz, 128MB RAM, DAQ | ATHM800-256A Athena II 800MHz, 256MB RAM, DAQ <i>Or</i> ATHM800-256ALP Athena II 800MHz, 256MB RAM, DAQ, low profile heatsink |
| ATH660-128N Athena 600MHz, 128MB RAM, no DAQ | ATHM800-256N Athena II 800MHz, 256MB RAM, no DAQ <i>Or</i> ATHM800 -256NLP Athena II 800MHz, 256MB RAM, no DAQ, low profile heatsink |

More Information

Detailed information about Athena II, including a data sheet, user manual and ordering information, may be found at www.diamondsystems.com/products/athenaii