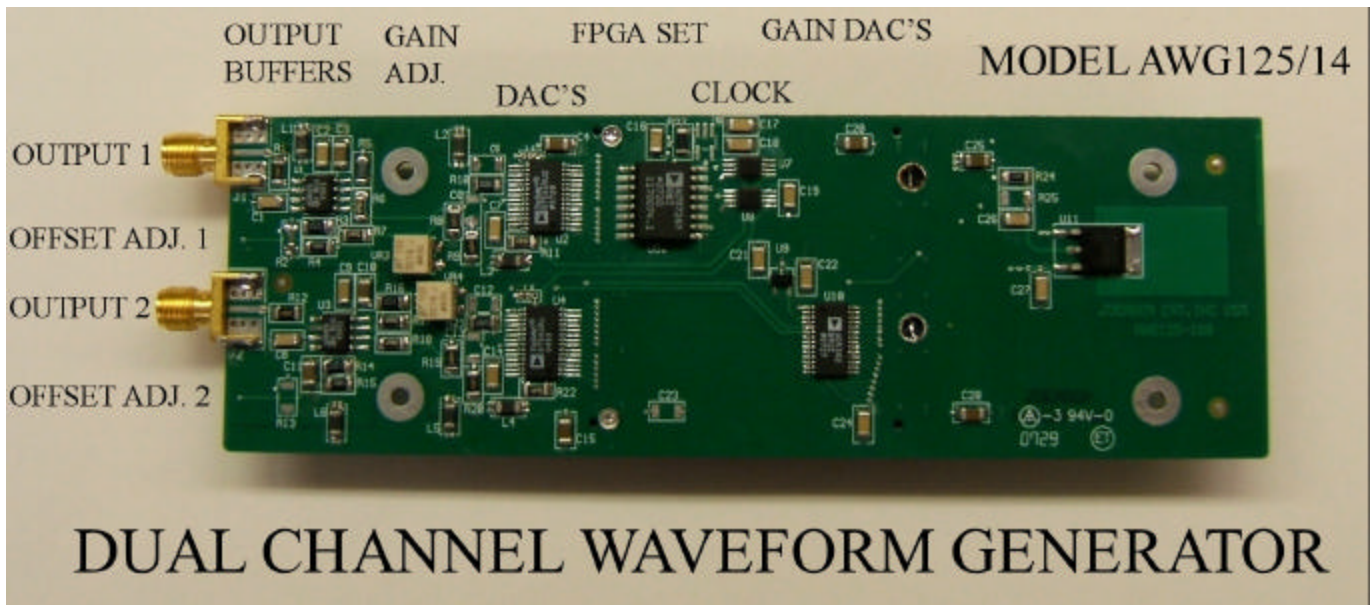


## MODEL AWG125/14

### TWO INDEPENDENT, 125Mhz, 14 BIT, ARBITRARY WAVEFORM GENERATORS “VME” DAUGHTER BOARD



#### **FEATURES:**

- Two independent DAC's
- Operating speed settable from DC to 125Mhz
- 14 bit resolution
- Output amplitude is programmable
- 5 pV-s glitch output, excellent for waveform generation
- 512kword SRAM memory per channel
- Programmable:
  - Start Address
  - Memory Size
  - Clock Speed per Channel
  - Output Amplitude per Channel
  - Operating Mode; Single, Repeat

## **DESCRIPTION:**

The **JOERGER ENTERPRISES, INC.** Model AWG125/14 is an arbitrary waveform generator daughter card to be used with a VME-M motherboard. It provides two 125Mhz, 14 bit DAC's. The single width 6U, VME module is available with 2 channels, using one daughter card or 8 channels using 4 daughter cards. Each channel has the ability to generate an analog output signal with a speed of up to 125Mhz and a resolution of 14 bits. This DAC has been chosen because it has a typical glitch impulse of only 5 pV-s, a critical factor in generating clean wave shapes. The clock range is from DC to a maximum of 125Mhz. The motherboard has a 100Mhz crystal clock source. To operate at 125Mhz the clock would be provided externally having a duty cycle of 50%. Each DAC is clocked independently. The clock source can be either the "timed system clock" or a programmed clock using this timed clock as its source. This insures that all the DAC's can be run synchronously. Each DAC has a SRAM memory of 512kwords. These can be loaded and reread for verification. Addressing, clock selection, operating mode, start address and active memory size are settable. The output is +/- 1 volt maximum with a zero offset control pot on the front panel. The output impedance is 50 ohms offering better signal driving capability. In addition to setting the output level in the high-speed DAC each channel's output can be adjusted with 12 bit DAC's providing amplitude adjustment during operation. The reference for the DAC's is a high stability voltage source providing a gain drift of 5ppm/°C typical.

## **SPECIFICATIONS:**

• OUTPUT	+/- 1 Volt into 50 ohms
• OUTPUT IMPEDANCE	50 Ohms
• OUTPUT AMPLITUDE/CHANNEL	12 Bit DAC selects output level
• ZERO OUTPUT OFFSET	Front panel adjustable
• OUTPUT GLITCH IMPULSE	5pV-S (typ.)
• MAXIMUM INTERNAL CLOCK RATE	100Mhz (max) programmable selected
• MAXIMUM EXTERNAL CLOCK RATE	125Mhz, 50% duty cycle, programmable selectable
• RESOLUTION	14 Bits
• GAIN DRIFT	5 ppm/°C (typ)
• MEMORY CAPACITY/CHANNEL	512kwords of SRAM, re-readable
• OPERATING MODES	Single or repeat modes
• ACTIVE MEMORY SIZE	Programmable
• DAUGHTER CARD IDENTITY	Readable

**POWER REQUIREMENTS:** + 3.3V, + 5V, - 12V

**SIZE:** Single daughter card for use with a VME-M motherboard

**CONNECTOR:** SMA

work/datasheets/awg125-14.doc  
0807



166 LAUREL ROAD • EAST NORTHPORT, NY 11731, USA  
1-631-757-6200 • FAX 1-631-757-6201 • Email: joerger@joergerinc.com • web: www.joergerinc.com