

# VIDEO TESTING

## Enhanced Programmable Video Generator & Analyzer

### Single "C" Slot Card

- Standard and Non-Standard Video
- Video Capture and Generation Capability
- Both Analog and Digital Real Time Capture
- Operates in a Windows Environment

### Adaptable to DOD and Commercial ATS

- In Production/Deployed Legacy Systems
- For ATS Presently in Development

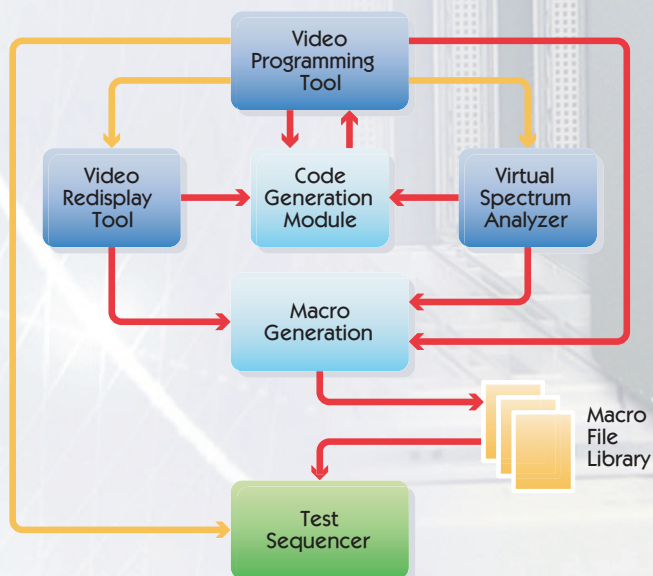
### Designed as a "Self Sufficient" Test Instrument

- Requires No Additional Hardware
- All Video test Modules on a Single Card
- Capable of Fully Independent and/or Simultaneous Operation
- Performs Mixed Mode Testing

Product Maintenance and Logistic Support In Place

### Video Integrated Development Software

- Accelerates UUT Test Program Development
- Minimizes or Eliminates Manual Programming
- Incorporates Automated and Visual Tools
- Utilizes Point and Click Programming



## For Today & The Future

This product is protected by one or more of the following patents:  
6396536, 6502045, 7180477, 7253792, 7289159, 7495674, 7768533, 7978218



# Video Testing

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## Introduction

There is a deficiency in testing capability when commercial video instrumentation is applied to military applications.

- Instrumentation does not support all video formats used by military platforms.
- Instrumentation is not capable of supporting required nonstandard variations and implementations.
- Video signal measurement methods do not support image content validation.
- Substantial programming and integration efforts are required.

There exists a requirement for video test equipment to be able to:

- Expediently generate and capture all military video formats (composite, raster, stroke video, DVI, HDMI, HD-SDI) and record the programming steps for efficient repeatable testing.
- Measure timing and amplitude parameters, as well as, validating image content of the captured video.
- View the captured video without employing extra assets / instruments
- Operate in manual (troubleshooting), embedded (TPS) or standalone (production line) configurations.

Image content validation has been conspicuously missing in test instrumentation despite its importance in identifying video UUT anomalies. Due to the complexity of executing content validation methods, even the best industry implementations rely on simple manufacturer-specified test patterns and simple measurements for self-synchronized formats such as composite video. Unfortunately, even simple image analysis can result in false positives. UUT anomalies can produce degraded signals (i.e. rise/fall times, noise, spikes, clipping, ringing, amplitude) or just a minor image defect that is not easily detected during a simple 'crosshatch image' bench test, but will be visible and flagged by a pilot looking at a complex situation display in the cockpit.

For deflection-driven formats, such as raster video and stroke video, the situation is even worse with almost no commercial support. With these formats, there are often proprietary images in multiple modes of operation and the validation of their generation becomes the operator's prerogative.

## Demonstration

The ATTI Programmable Video Generator and Analyzer (ePVGA) is the only commercially available instrument that fully supports the video requirements enumerated above. The ePVGA was designed with patented methods to capture a broad spectrum of video formats, quickly characterize the amplitude, timing and image content of any video format – without manual coding or intimate knowledge of the image content – and calculate a pass/fail result indicating the status of the UUT.



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