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Find the *Analogic DBS9900* at our website: *Click HERE*

VXI C-Size Dual Instrument Carrier

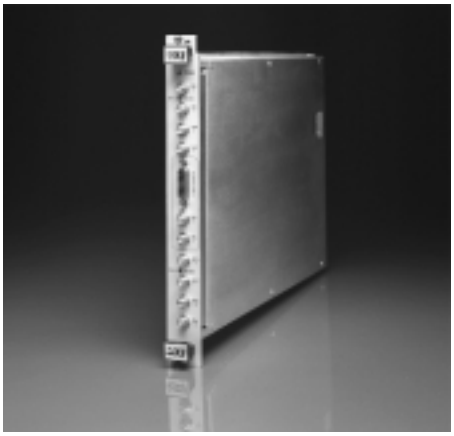
Accepts Up To Two Plug-In Function Modules

The Analogic DBS9900 is a high-performance, VXI “C” size module that accepts up to two plug-in function modules from the DBS9XX family of high speed, high precision waveform generators and digitizers. This mother/daughterboard concept allows a single VXI chassis slot to provide multiple functions, thereby maximizing VXI resources and decreasing the cost per slot. The DBS9900 continues the Analogic tradition of providing the highest possible state-of-the-art performance at the lowest price available.

Extremely versatile clocking and triggering are provided via internal circuitry, front panel connectors, and VXI TTLTRG or ECLTRG lines. Programmable trigger and clock thresholds are provided. The internal clock is programmable from 95 Hz to 100 MHz and can drive all plug-in function modules simultaneously so that clock skew and delays are reduced to an absolute minimum. This allows coherent operation of multiple plug-in modules such as an arbitrary waveform generator and a digitizer, thereby satisfying the most critical application requirements.

The VXI Plug & Play compliant software driver included with every unit supports all functions and provides automatic recognition and configuration for any plug-in module(s) installed in the DBS9900. Source code is included as well as .DLL files to allow easy porting to most popular programming environments. The driver goes beyond VXI Plug & Play requirements to ensure system integration and software development time are reduced to an absolute minimum.

The combination of DBS9900 and DBS9XX high-accuracy, high-speed, analog I/O function modules provides outstanding price/performance ratios.



Features

- Independent or Simultaneous Clocking of Multiple DBS9900 and Plug-In Modules
- Independent or Simultaneous Triggering of Multiple DBS9900 and Plug-In Modules
- Calibration Signal Port is Shared Between Installed Instruments
- Built-In Self Test

Advantages

- Low Cost Per VXI Chassis Slot
- Smaller Chassis Can Be Used, Saving Cost and Space
- Greater Versatility in Configuring Systems for Multiple Applications
- Lower Cost for Future System Configuration Changes
- Twice the Functionality in a Single VXI Chassis Slot
- Coherent Clocking of Multiple Plug-In Function Modules

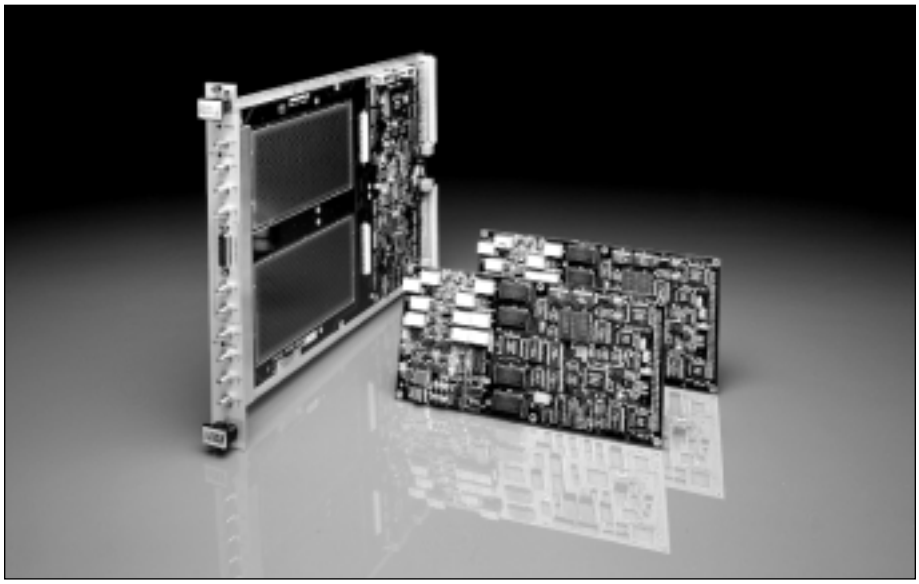


Figure 1. DBS9900 with Two DBS9XX Boards (Not Installed).

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DBS9900

Specifications [1]

ANALOG I/O		
Parameter	*Conditions*	*Value*
Number of Channels	Single ended or differential dependent on modules installed	2 – One for each plug-in module via front panel SMA connectors
Impedance		Dependent on modules installed
Overvoltage Protection		Dependent on modules installed

INTERNAL SAMPLE CLOCK		
Parameter	*Conditions*	*Value*
Frequency Range	Useable range dependent on modules installed	95 Hz to 100 MHz
Frequency Setting Resolution	Worst case is 50 kHz at 100 MS/s	<500 PPM of set frequency
Frequency Accuracy		±5 PPM of frequency setting
Settling Time		2 ms to 750 PPM of set value
Phase Jitter	1 µs measurement window	30 ps RMS max., Time Base set to 10 MHz

EXTERNAL SAMPLE CLOCK		
Parameter	*Conditions*	*Value*
Number of Inputs	Front-panel-mounted SMA connectors programmable to control either or both plug-in modules	2
Frequency Range		0 Hz to 100 MHz (1.56V/ µs min.)
Amplitude		500 mV pp to 10V pp
Hysteresis		±40 mV typ.
Threshold Setting Range	Programmable	+10V, –9.92V
Threshold Setting Resolution		78 mV
Impedance		4 kΩ ±5%
Threshold Accuracy		±5% FSR –110 mV
Waveform	May be dependent on module installed	5 ns min. pulse width
Overvoltage Protection		±20V max.

EXTERNAL REFERENCE FOR PLL		
Parameter	*Conditions*	*Value*
Inputs	Front-panel-mounted SMA connector shared with channel B external clock input	1
Frequency Range		10 MHz ±1%
Amplitude		1V pp to 10V pp
Hysteresis		±40 mV typ.
Threshold Setting Range	Programmable	+10V, –9.92V
Threshold Setting Resolution		78 mV
Threshold Accuracy		±5% FSR –110 mV
Impedance		4 kΩ ±5%
Overvoltage Protection		±20V max.

1. All specifications are subject to change without notice.

EXTERNAL TRIGGER		
Parameter	*Conditions*	*Value*
Number of Inputs		One for each plug-in module via 2 front-panel-mounted SMA connectors
VXI Backplane Triggers		TTLTRG/ECLTRG lines
EdgeTrigger Modes	Programmable	Start on rising edge or start on falling edge
Gated Trigger Modes	Programmable	Run when high and stop when low. Or run when low and stop when high.
Amplitude		500 mV pp to 10V pp
Hysteresis		±40 mV typ.
Threshold Setting	Programmable	+10V, –9.92
Threshold Setting Resolution		78 mV
Threshold Accuracy		±5% FSR –110 mV
Impedance		4 kΩ ±5%
Trigger to External Clock Setup time		5 ns min.
Trigger to Internal Clock Uncertainty		<1 clock period
Overvoltage Protection		±20V max.
Min. Pulse Width		19 ns

POWER (per Module)				
Supply Voltage	***Amps, Max.***			
	DBS9900	**DBS901/HV**	**DBS901LM**	**DBS902/HV**
+24 VDC	0.05	0.18	0.18	0.00
–24 VDC	0.00	0.18	0.18	0.00
+12 VDC	0.05	0.25	0.25	0.50
–12 VDC	0.05	0.25	0.25	0.10
+5 VDC	0.70	2.00	2.80	2.30
–5.2 VDC	1.00	0.30	0.30	0.20
–2 VDC	1.00	0.20	0.20	0.10
Total Watts	**13.1W**	**27.0W**	**31.0W**	**20.0W**

RELIABILITY		
Parameter	*Conditions*	*Value*
MTBF	Determined by the Generic Parts Count method of MIL-HDBK-217F for a ground benign environment at a temperature of +25°C	>100,000 Hrs

ENVIRONMENTAL & MECHANICAL		
Parameter	*Conditions*	*Value*
Operating Temperature	For rated specifications	+10°C to +40°C
Non-Operating Temperature	Non-condensing	–20°C to +70°C
Cooling Air Flow	For 15°C rise at 0.5 mm H_2O back pressure typ.	4 litre/sec.
Operating Humidity	IEC 68-2-3 Test (Ca)	90% RH @ +40°C
Non-Operating Vibration	IEC 68-2-6 Test (Fc)	<2G
Non-Operating Bump	IEC 68-2-29 Test (Eb)	10G
Non-Operating Altitude	IEC 68-2-13 Test M	2 Hrs. @ 12,192M
Weight		3.5 lbs., (1.57 kg)

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