

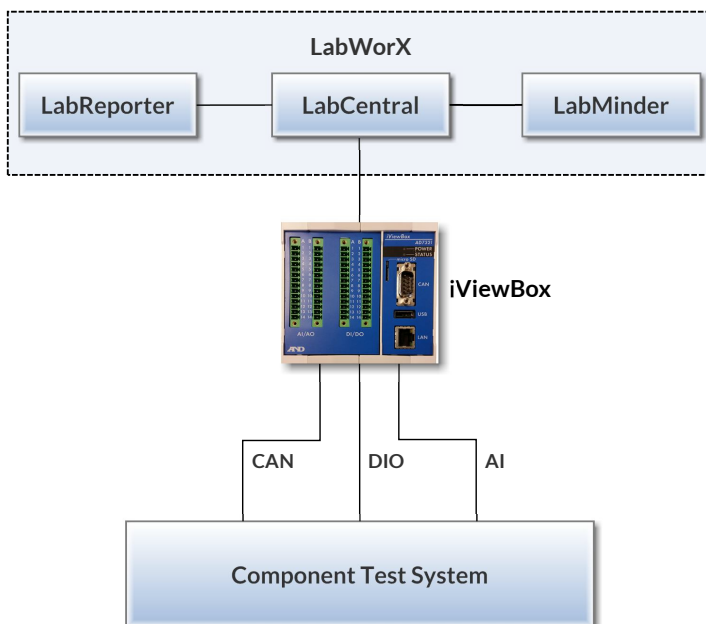
Lab management system interface for remote test system access

An integrated lab management system is an indispensable tool for addressing the challenges of today's lab manager. Centralized data storage and retrieval, automated reporting, and a single interface to all the test systems in the lab significantly increase efficiency. But what about those test systems that for various reasons are difficult to integrate?

iViewBox is A&D's solution for connecting test systems that are not compatible with iView to the LabWorX lab management system. These include any non-Windows 7 or XP systems, and those with embedded controllers, such as temperature chambers and component systems.

Like iView, iViewBox is configured and controlled through LabCentral. It monitors and controls test systems through built-in discrete I/O or the included CAN port, and can be extended with a variety of FieldIO modules (Analog, Digital, Thermocouple and Frequency). Systems can include as many as 100 discrete I/O channels, and 100 input or output data items on the CAN bus.

The standard iView functions that are supported by iViewBox include dashboard monitoring, dashboard remote control, utilization tracking, and diagnostic logging. iViewBox also acts as the LabMinder agent.



iViewBox in the LabWorX architecture

Benefits

- Allows integration of systems into LabWorX that would not otherwise be included.
- Integration with LabWorX provides dashboard monitoring and control capabilities.
- Queues data to upload in case of network problems
- Automated data upload, without test system triggering, makes easy integration
- Enforces data retention policy from server, keeping test system clean of old data

Features

- Monitors and controls test systems through built-in discrete I/O or CAN port
- Expandable via FieldIO modules (up to two of each)
 - Analog Input
 - Analog Output
 - Digital I/O
 - Thermocouple
 - Frequency

Specifications

iViewBox Base Module - AD7321

Item	Specification	
Interface	Ethernet	x1 (10Base-T, 100Base-TX)
	USB	x1 (USB2.0) Type A, firmware updates
	SD	micro SD
	CAN	x1 HighSpeed
	Analog Input	x8
	Analog Output	X4
	Digital Input	x8
	Digital Output	X4
Reset function	Reset Switch(Front Panel)	
Isolation Strength Voltage	DC500V	
Operating Temperature Range	0~40degC	
Humidity Range	5~90%RH(Non-condensing)	
Power Input Range	DC10~30V (Rating DC24V)	
Installation Mode	DIN rail	
Size	105(W)x110(H)x101(D)mm	

Thermocouple Module - AD7313-12

Item	Specification
Channels	8 channels
Input method	Differential, thermocouple, voltage input
Resolution	24 bits (effective bits: 19th bit onwards)
Cold junction compensation	PT100 Class A sensor with a built-in CJC module
Accuracy (typical)	± 0.01% of range(with low electromagnetic noise) ± 1.0°C (with low electromagnetic noise) ± 2.0°C (according to EN61326:2006, appendix A)
Input range	K: -270 to 1370 °C T: -270 to 400 °C J: -210 to 1200 °C E: -270 to 1000 °C
Voltage	±80 mV

Analog Output Module - AD7313-21

Item	Specification
Channels	8 channels
Output form	Single-end voltage output
Resolution	16 bit
Accuracy (typical) 50Hz/60Hz rejection mode	± 0.02% of range (with low electromagnetic noise) ± 0.05% of range
Maximum externally applied voltage	± 20V (up to 1 minute)
Output range	± 10VDC
Output over range	110%
Rated output current	± 10mA

Digital Input/Output Module - AD-7313-31

Item	Specification
Channels	8 channels (I/O can be specific on each channel)
Input form	Voltage input (Low: ≤2.0V, High: ≥5.0V)
Maximum voltage	DC 50V
Maximum current	1.5mA (DC)
Output form	Open collector
Maximum voltage	DC 50V
Maximum current	500mA
Isolation	Between channels: No isolation Between power supplies: Isolation Between communication interfaces: Isolation
Isolation Voltage	DC 500V
Power consumption	3W

Frequency Input/Output Module - AD7313-41

Item	Specification
Channels	8 channels (I/O can be specified on each channel)
Input	Frequency measurement, duty measurement
Input form	Voltage input
Input level	Low: ≤1.0V, High ≥3.5V)
Minimum pulse width	1 μsec
Frequency measurement	0.1Hz to 2MHz
PWM Measurement	Frequency: 0.1Hz to 10kHz Duty: 0 to 100% (accuracy 1%)
Gate time at frequency measurement	1msec to 10sec
0Hz detection time at frequency measurement	100msec to 10sec
Maximum voltage	30V
Input current	1.5mA
Output	Single-phase PWM output (variable frequency and duty)
Minimum pulse width	1 μsec
Output frequency range	0.1Hz to 10kHz
Duty	0 to 100% (setting resolution 0.1%)
Maximum current	100mA

Analog Input Module - AD7313-11

Item	Specification
Channels	8 channels
Input method	Differential, voltage input
Resolution	24 bit
Maximum rating voltage (differential voltage)	± 14V
Input range	± 2V, ± 10V

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