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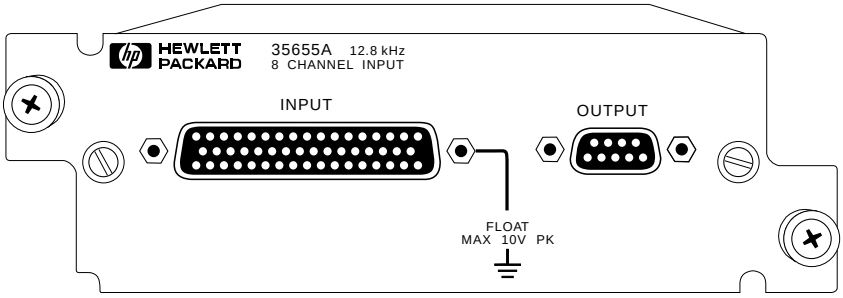
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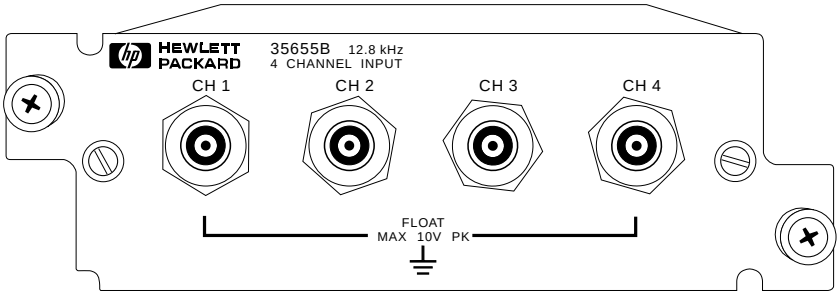
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Find the *Keysight / Agilent 35655A* at our website: ***Click HERE***

HP 35655A 8-Channel Input Module
HP 35655B 4-Channel Input Module

The HP 35655A provides eight separate analog input channels in one plug-in module. The HP 35655B provides four separate analog input channels in one plug-in module. Aside from the channel count, the two modules have the same specifications. Each input channel is sampled simultaneously. The maximum span is 12.8 kHz. While input circuitry for each channel is separate, hardware for digital filtering, zooming, and trigger detection and delay is common to all eight inputs. Thus, parameters such as measurement span and trigger delay are the same for all channels.





Other module features include:

- Two input modes: voltage and IEPE constant-current
- Full scale input ranges from 5 mV to 10 V in 2 dB steps
- Anti-alias protection on all spans
- Auto-ranging
- Digital zoom capability on all channels and all spans
- 72 dB dynamic range
- Buffered analog output on all input channels

* NOTE: The IEPE mode provides a 2.4 mA constant current supply for transducers. To operate with the HP 35655A module, IEPE transducers must be isolated from ground.

The HP 35655A module comes with one eight-input BNC breakout box (6 ft cable), one eight-output BNC breakout box for the analog outputs and a rack mount kit (HP 35655-00200). Option 905 substitutes microdot breakout boxes.

An HP 46298C 1600mm rack is recommended to house rack-mountable breakout boxes for HP 35655A input modules. An HP 46298C rack can hold up to 16 rack panels (equivalent to 256 channels). A special eight vertical slot rack kit (HP 35655-C02) is also available.

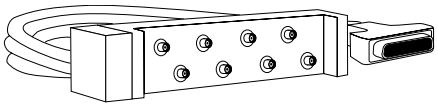
Specifications:

NOTE: HP 35655A input performance specifications apply only if the module's analog output is turned off (default is off). All specifications are measured at module front panel connector.

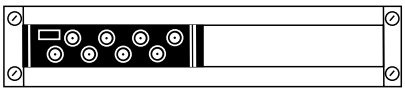
Frequency

Range: dc to 12.8 kHz

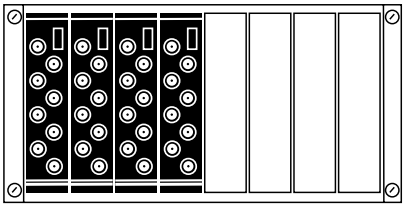
Spans and block sizes: see page 4



BNC breakout box
35655 - 61600 BNC
35655 - 61601 micro dot

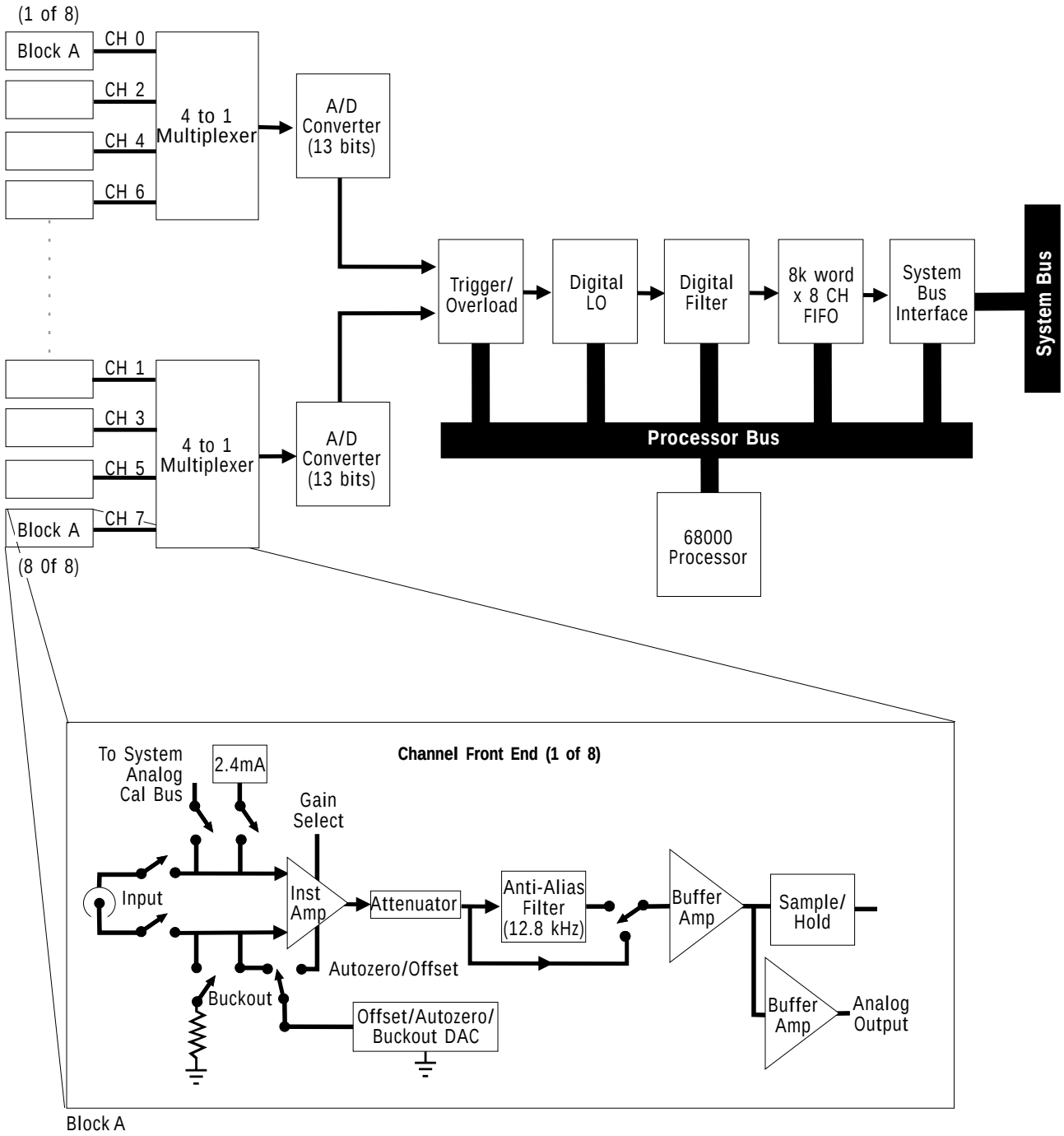


The HP 35655-00200 shown with one breakout box installed

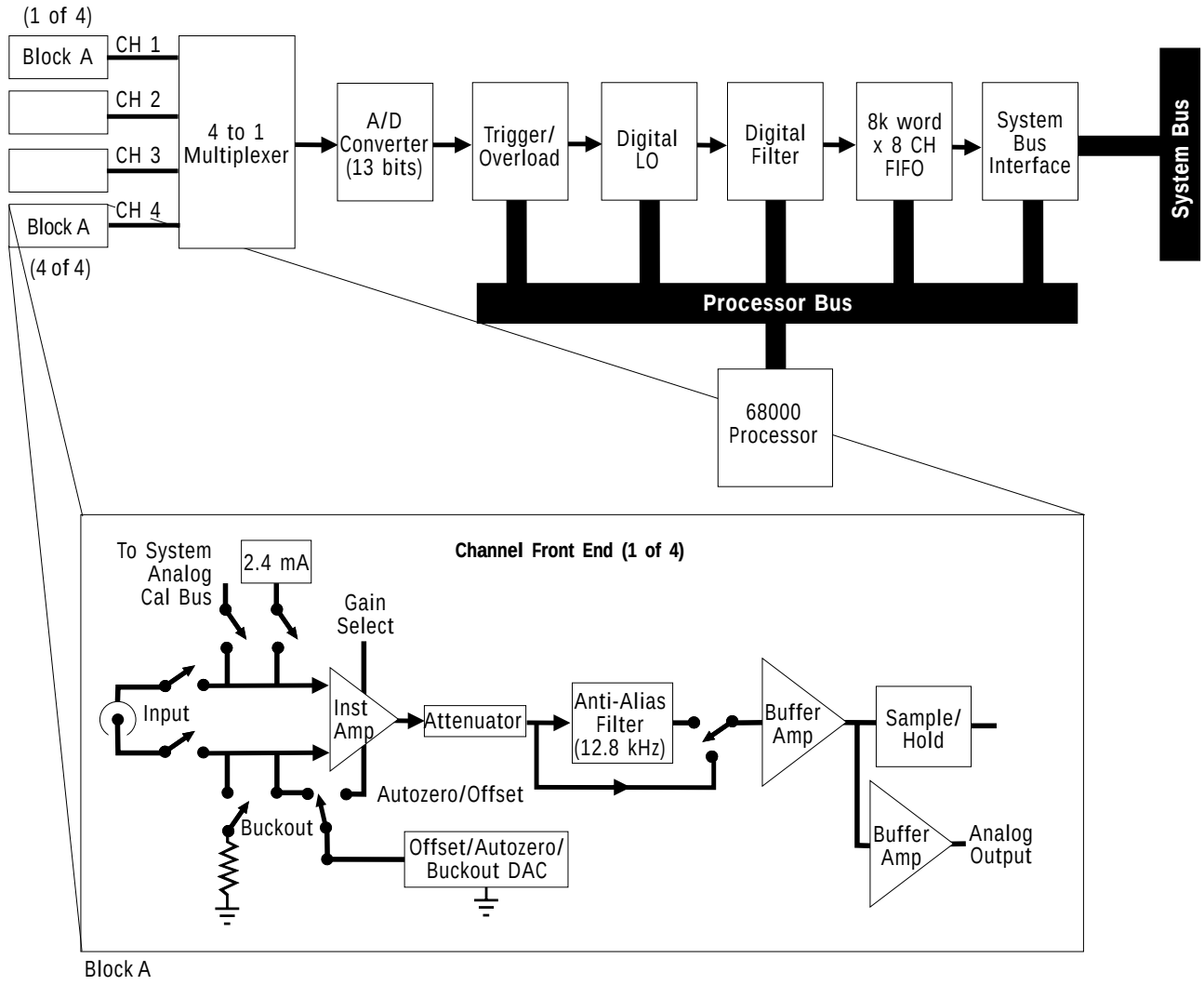


The HP 35655-C02 shown with four breakout boxes installed

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Voltage Input Accuracy

Single-Channel Amplitude:
(relative to 1 kHz full scale sine wave input)

Calibrated with HP 35653C source cal signal and calibration routine available with HP 35630B and HP 35635R software

Frequency	Input Range	Accuracy
All	20 dBvp to -46 dBVp	± 0.15 dB

Uncalibrated; after software correction of digital filter characteristics

Frequency	Ranges	Accuracy
30 Hz to 2 kHz	All Ranges	± 1.05 dB
2 kHz to 12.8 kHz	All Ranges	± 1.8 dB

Channel-to-Channel Amplitude and Phase Accuracy:

Calibrated with HP 35653C source cal signal and calibration routine available with HP 35630B and HP 35635R software

Amplitude	Phase
± 0.1 dB	± 0.5 degree

Uncalibrated; after software correction of digital filter characteristics

Frequency	Ranges	Accuracy
1 kHz	All Ranges	.25 dB nominal

Phase: (signal level > -40 dBfs, at 1 kHz) ±1.0 degree

Full Scale Range: 5 mVpk (–46 dBVp) to 10 Vpk (+20 dBVp) in 2 dB steps

Input Resistance (IEPE source off, dc coupled or ac coupled above 1 Hz) High or low to case, differential mode: 1 MΩ ±5%

Input Capacitance (IEPE source off) High or low to case: <200 pF

AC Coupling: 3 dB ac rolloff <1 Hz

Common Mode Rejection Ratio (dB):
(Rs = 0Ω, differential mode)

Frequency	Input Ranges	Accuracy
0 to 66 Hz	-46 to -22 dBVp	>80 dB
(dc coupled)	-20 to -2 dBVp	>74 dB
	0 to +20 dBVp	>58 dB
66 Hz to 1 kHz	-46 to -22 dBVp	>60 dB
(dc coupled)	-20 to -2 dBVp	>50 dB
	0 to +20 dBVp	>34 dB
47 to 66 Hz	All Ranges	>45 dB
(ac coupled)		

Dynamic Range: 72 dB
(16 averages, Rs = 50Ω, common mode signal < +20 dBfs)

Harmonic Distortion:
(relative to full-scale sine wave input)

Ranges	Frequency	Accuracy
-46 to +8 dBVp	All (internal sampling	<-72 dB
	All (external sampling)	<-60dB
+10 to +20 dBVp	<1.3 kHz (internal sampling)	<-72 dB
	<1.3 kHz (external sampling)	<-60 dB
	>1.3 kHz	<-154 + 20 Log (freq)+range dB

Intermodulation Distortion:
(relative to two -6.02 dBfs in-band sine wave input signals)

Ranges	Frequency	Accuracy
-46 to +8 dBVp	All (internal sampling)	<-72 dB
	All (external sampling)	<-60 dB
+10 to +20 dBVp	<2.6 kHz (internal sampling)	<-72 dB
	<2.6 kHz (external sampling)	<-60 dB
	>2.6 kHz	<-160 +20 Log (freq)+range dB

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Channel-to-Channel Crosstalk (50Ω source, 50Ω termination on all unused channels, relative to full scale signal on offending channel):

IEPE Current Source Off: <MAX(-72 dBfs, -123 dB)
IEPE Current Source On: <MAX (-72 dBfs, -110 dB)

Autozero Modes: see HP 35652A/B specifications on page 12.

Common Mode Range (differential mode): Absolute maximum signal level of either high or low terminal, with respect to chassis, including signal, common mode voltage, and noise shall not exceed: ±10 Vpk

Spurious or Residual Responses: (in-band input signal, full scale)

Int. Sample Clock: <-72 dBfs
Ext. Sample Clock: <-60 dBfs

Transducer Power Supply

Current: 2.4 mA nominal (into 50 Ω)

Maximum Voltage: 24 V nominal, relative to shell of BNC

Note: IEPE transducer must be isolated from ground to achieve +24 volts open circuit. When IEPE is turned on, the shell of the BNC is pulled to -10 volts, requiring ground isolation of the transducer.

Analog Output

Output Level for Any Full-Scale Input: 2 Vpk nominal

Output Impedance: 2 kΩ

Noise (measured on most sensitive range):

20 to 1000 Hz (frequency dependent):<2260/$\sqrt{(f)}$ nVrms/$\sqrt{(Hz)}$
>1000 Hz (frequency independent): <70 nVrms/$\sqrt{(Hz)}$

Abbreviations

The following abbreviations are used in the previous specifications:

dB - decibel

dBVp - dB relative to 1 volt peak

dBfs - dB relative to full scale

nVrms/$\sqrt{Hz}$ - nano-volts rms per square root hertz

fs - full scale

Rs - resistance of source or termination connected to an input

Vs - voltage level of source connected to an input

MAX(x,y) - the specification is the greater of the two values, x and y

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