8 BIT SUCCESSIVE ROXIMATION ANALOG/DIGITAL CONVERTER

CALIBRATION TRIMPOT

USER INTERFACE CONNECTOR

8 BIT INPUT PORT

8 BIT OUTPUT LATCH

GOLD PLATED CONNECTORS

ADDRESS SELECTION SWITCH

ADL6408 ANALOG to DIGITAL CONVERTER
for COMMODORE 64 COMPUTERS

Hardware Features:

8 Bit Successive Approximation Analog/Digital Converter

8 Latched TTL Compatable Output Bits

8 TTL Compatable Input Bits

Switch Selectable Operating Address

8 Analog Input Channels

Single Supply Operation

User Interface via 40 Pin Connector

8000 Conversions per Second

Circuit Board contained in Protective Case

Status Bit for ADC Busy

Calibration Trimpot for Precise Calibration

ADC Reference brought out to User Connector for External Scaling

+5 Volts and Ground at User Connector for Sensor Excitation

ADC Low Reference Input brought out to User Connector

ADC DAta Lines Buffered for High Reliability

+5.000 Volt Full Scale Range

Software Features:

Disk or Tape Software Included

Menu Driven No Programming Experience Necessary

Actual Data Acquisition via Machine Code Routine

Machine Code Program is INTERRUPT Driven

Software Driven Hardware REAL TIME CLOCK

Formatted HARD COPY of Data

DATA CRCHIEVAL of Data onto Tape or Disk

REAL TIME DATA taken to Disk or Tape (LIST MODE)

Data Transportable for later analysis

Applications:

Temperature Monitoring

Pressure Monitoring

Frequency (via External F/V Converter)

Current (External Resistor or Amplifier Rquired)

Voltage (+5.000 Volts Full Scale)

Slow Changing Periodic Waveforms

End Point Measurement of Chemical Reactions

Rate of Change Measurements

Position (potentiometric)

Light Intensity (Solar, Incandesant)
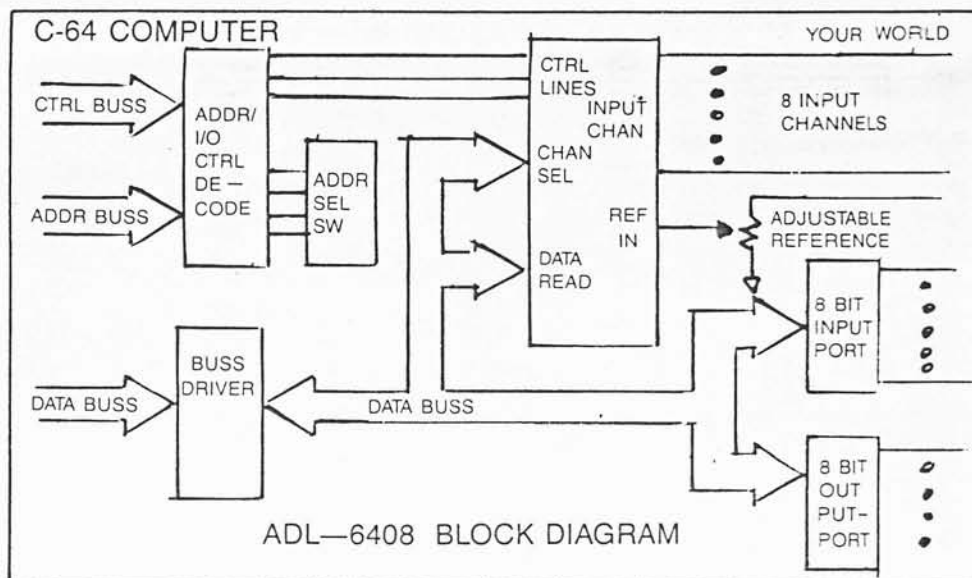
Humidity Measurement

Process Control Measurement

ADL-6408 HARDWARE + ADL-6408 SOFTWARE + C-64 COMPUTER

—SOPHISTICATED DATA
—ACQUISITION SYSTEM

ADL—6408 BLOCK DIAGRAM

HARDWARE CHARACTERISTICS

The ADL-6408 consists of an 8 channel multiplexor, an 8 bit unipolar Analog to Digital converter, 8 Digital Input lines and 8 Digital Output lines. The ADC utilizes the Successive Approximation technique which is the one of choice for high speed DATA ACQUISITION. The full scale range is +5.000 Volts with a precision of +/-20 millivolts. The input of the ADC is connected to the USER cardedge to allow for special analog processing if required. The multiplexor output is also available at the user connector. The ADL-6408 connects to the C-64 computer via the Expansion port and requires only 100 milliamps from the computer 5 volt power supply. Connection to the analog inputs is via a 40 pin male header.

ORDERING INFORMATION

ADL-6408 SYSTEM: 8 Channel, 8 Bit Analog to Digital Converter

ORDER: ADL-6408 $119.00

TERMS: Cash/Check with order, C.O.D. or purchase order (net 30 days)

SHIPPING: FOB Destination on prepaid orders in Continental USA

WARRANTY: 90 Day Replacement of Defective Parts/Labor

**Quantity Discounts Available
Calif. residents please add sales tax

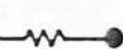*C-64 is a trademark of Commodore Business Machines

WHY THE C-64 COMPUTER

The Commodore 64 Computer is a high quality State-of-the-Art computer that is well suited for data collection, analysis and display. The C-64 offers low cost as well as high versatility and medium processing speed. The computer expansion port enables complete access to the microprocesor and interfacing the ADL-6408 as simple as plugging it in. Utilizing the Serial Buss output, any parallel printer can be utilized to provide Hard Copy of data from the ADL-7408. Additionally the 64K of memory allows approximately 16,000 data points to be acquired before exhausting memory. These features combined with the BASIC interpreter make the ADL-6408 operation equal to systems costing thousands of dollars.

SOFTWARE CHARACTERISTICS

The Main Data Acquisition program is a machine code program residing at the top of BASIC ram. This program is interrupt driven so that the computer can be used for other tasks while acquiring data. The software manages the internal hardware Real Time Clock of the C-64 for Data Acquisition. This Real Time Clock is operated from teh Line Frequency and can have accuracy of up to .1 seconds/month. Selected input channels are analyzed at periodic intervals of up to 16 hours or as little as .150 microseconds. Each data point is stored as 1 byte. This technique of storage utilizes memory efficiently. Several printout modes are available and each include time of acquisition as well as data. Data may be displayed on the screen concurrent with the print out or may be sent directly to a disk or tape file for later analysis. Additionally, displayed data may be either Raw or Scaled data. Data scaling is accomplished utilizing any of the C-64 BASIC functions thereby allowing for Real Time Scaling of Raw data. Thus, a sophisticated software package available for both tape or disk, combines with the speed of the ADC to provide ia versatile data acquisition system for all your measurement needs.