Model 3470

24-bit Input Register w/Strobes

INSTRUCTION MANUAL

February, 1987

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24-bit Input Register with Strobes

Features

- **24-bit data input register**
- **Front-panel switch to select external strobe or continuous load mode of operation**
- **Six independent 4-bit registers with strobe**
- **LAM status bits for interrupt-driven systems**
- Multipurpose input that accommodates contact And voltage input logic

Typical Applications

- **General-purpose data acquisition**
- **Several data sources, each connected to one or more strobes**
- **Keyboard interface**

General Description   *(Product specifications and descriptions subject to change without notice.)*

The 3470 is a single-width CAMAC module with a 24-bit register for holding binary input data. The module consists of six 4-bit registers, each having a strobe to allow independent latching of data from various sources. The strobes can be paralleled to allow strobing wider data words from one source. The incoming data is latched two microseconds after the negative going edge of the strobe, which allows the strobe to be generated simultaneously with the data in the external device. The Read command causes the entire 24-bit register to be gated onto the Dataway. Internal strobing of the data is allowed on command, and an input gate (continuous load) mode of operation is selectable by a front-panel switch.

Interrupt Capability

LAM status flip-flops that are associated with the six external strobes become set two microseconds after the negative-going edge of a strobe. The six LAM-status bits are ORed and the result can be enabled to produce a LAM request. Which strobe caused the LAM request can be determined by reading the LAM status register via the F(0)·A(0) read and clear command.

Inputs

All external connections are made via the 36-pin edge connector located above the Dataway connector. All inputs (data and strobe) are low-true with a TRUE input being represented by an impedance to ground of less than 500 OHMS. (Noise immunity improves as the impedance to ground is reduced.) Ground-connected relay contacts, TTL outputs, and common emitter transistor circuits are satisfactory sources of data. The inputs are diode-protected, and voltages applied to the input terminals may safely range between ±10 volts.
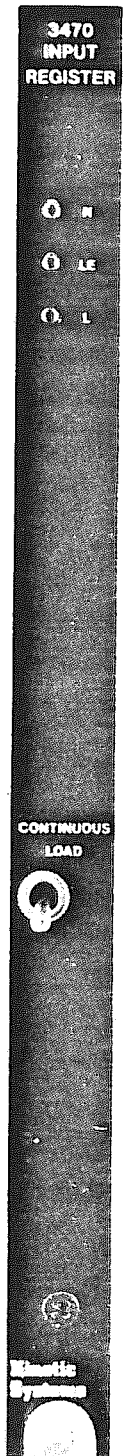
Function Codes

Command		Q	Action
F(0)·A(0)	RD1	1	Reads and clears the LAM Status register.
F(0)·A(1)	RD1	1	Reads the Input Data register.
F(6)·A(0)	F06	1	Reads the module identifying number ($3470 = 6616_8$).
F(8)·A(0)	TLM	LR	Tests whether a LAM request is present.
F(9)·A(1)	CL1	1	Clears the Input Data register.
F(10)·A(0)	CLM	1	Clears the LAM Status register.
F(12)·A(0)	F12	1	Clocks external data into the Input Data register.
F(14)·A(0)	F14	1	Sets the LAM Status register.
F(24)·A(0)	DIS	1	Disables the LAM request.
F(26)·A(0)	ENB	1	Enables the LAM request.
C	CC	0	Clears the LAM Status register and Input Data register.
Z	CZ	0	Clears the LAM Status register and Input Data register, disables LAM request.
Note: The 3470 returns X = 1 for all commands directed to it.			

Read Circuit (one 4-bit register shown)
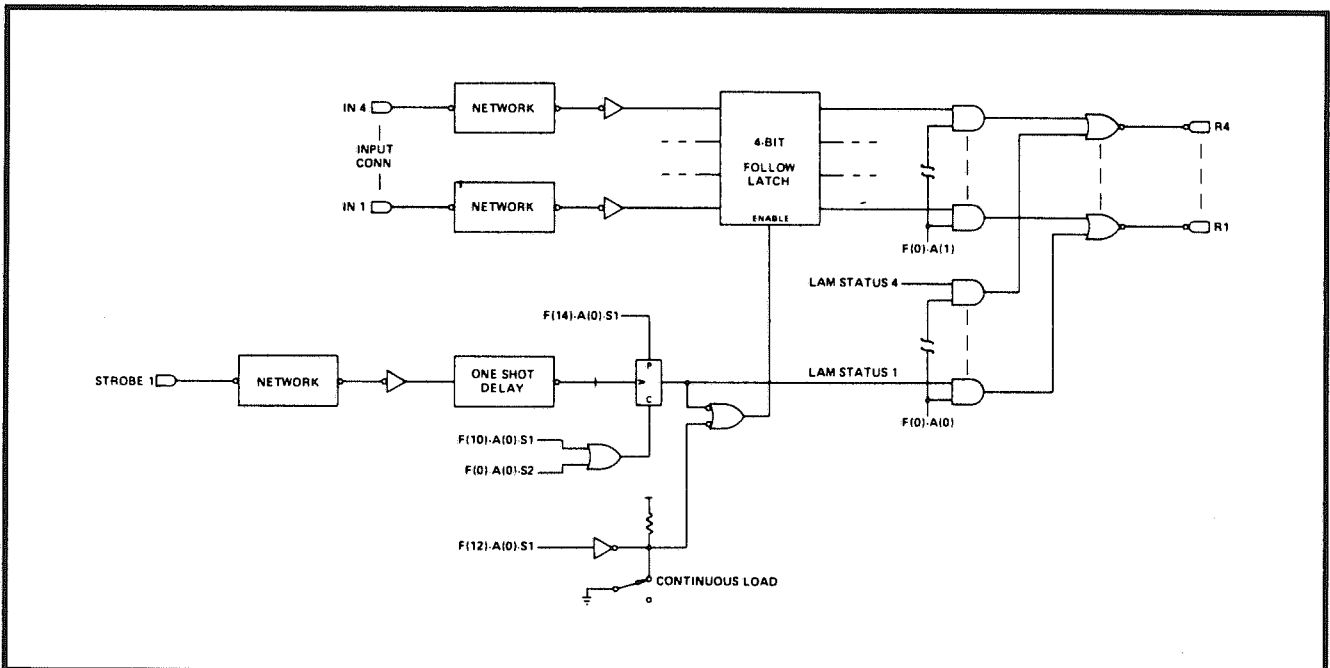
Power Requirements

+6 volts: 600 mA

Ordering Information

Model 3470-P1A   Input Register with Strobes, 24 bits, 36-pin PC edge connector

Related Products

Model 5960-Z1A or 5960-Z1B   Mating Connector
Model 1850-P1D   Rack Termination Panel

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FRONT PANEL

A jack-screw is provided which functions both in insertion and in extraction of the module. The status indications are:

    N light -- Flashes whenever this module is addressed.

    LE light -- ON whenever the LAM request is enabled.

    LS light -- ON whenever the LAM source is true.

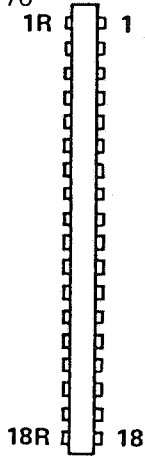A switch selects strobe or continuous load mode of operation.

STROBE JUMPERS

Forks are provided on the module to parallel two or more strobes. Jumpers can be soldered to the appropriate forks. The layout is as follows:

Top of Module

● S2   ● S1

● S6   ● S3

● S4   ● S5

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```
1R ▯ ▯ 1
   ▯ ▯
   ▯ ▯
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   ▯ ▯
18R ▯ ▯ 18
```

FACE VIEW

Pin/Wire List

18/36 POSTION P.C. EDGE

PIN NO.		PIN NO.	
1R	Ground	1	Ground
2R	Strobe 1	2	Strobe 2
3R	Strobe 3	3	Strobe 6
4R	Strobe 5	4	Strobe 4
5R	Bit 7	5	Bit 2
6R	Bit 3	6	Bit 0
7R	Bit 8	7	Bit 9
8R	Bit 10	8	Bit 6
9R	Bit 18	9	Bit 13
10R	Bit 1	10	Bit 16
11R	Bit 19	11	Bit 21
12R	Bit 12	12	Bit 11
13R	Bit 17	13	Bit 23
14R	Bit 5	14	Bit 4
15R	Bit 22	15	Bit 14
16R	Bit 20	16	Bit 15
17R		17	Interrupt Status
18R		18	