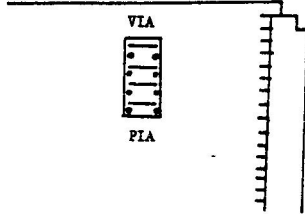


CUBIO - 64 Channels of digital I/O and eight timers

1) DEVICE SELECT

The board can hold four VIA's or PIA's. Set SW1 towards the board edge for the VIA devices.



2) ADDRESS SELECT

SW2 Block
SW3 Page
IC5 Link 0,4,8,C

e.g

Block = 9
Page = 1
Link = 0

Gives address \$9100

IC4 will be at \$9100
IC3 will be at \$9110
IC2 will be at \$9120
IC1 will be at \$9130

The example of \$9100 was chosen as the next address space after the CUBIT VIA at \$9000

A second CUBIO could then be used at \$9140, by using the link. The links are on an 0.1" radius.

3) VIA I/O Connector

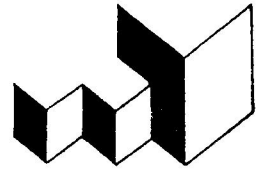
| | | | |
|-----|----|----|-----|
| GND | 26 | 25 | GND |
| N/C | 24 | 23 | N/C |
| CA1 | 22 | 21 | CA2 |
| PA0 | 20 | 19 | PA1 |
| PA2 | 18 | 17 | PA3 |
| PA4 | 16 | 15 | PA5 |
| PA6 | 14 | 13 | PA7 |
| PB0 | 12 | 11 | PB1 |
| PB2 | 10 | 9 | PB3 |
| PB4 | 8 | 7 | PB5 |
| PB6 | 6 | 5 | PB7 |
| CB1 | 4 | 3 | CB2 |
| +5V | 2 | 1 | +5V |

Control Universal Ltd
Manufacturers of the CUBE Range of
Industrial Microcomputer Systems
Andersons Court
Newnham Road
Cambridge CB3 9EZ
Tel: Cambridge (0223) 358757
Telex 995801 GLOTX-G

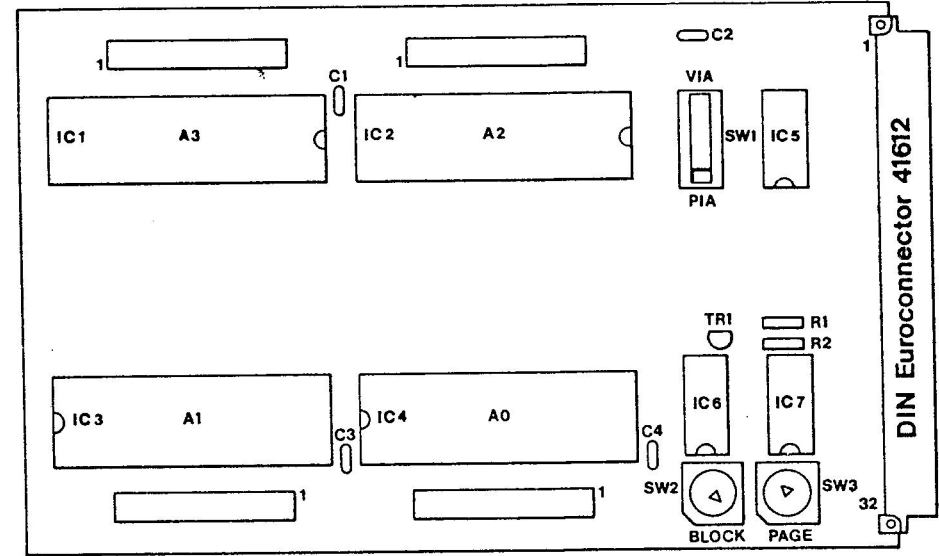
Distributed by

Control Universal Ltd

CUBIO Technical Manual



1984



CUBIO

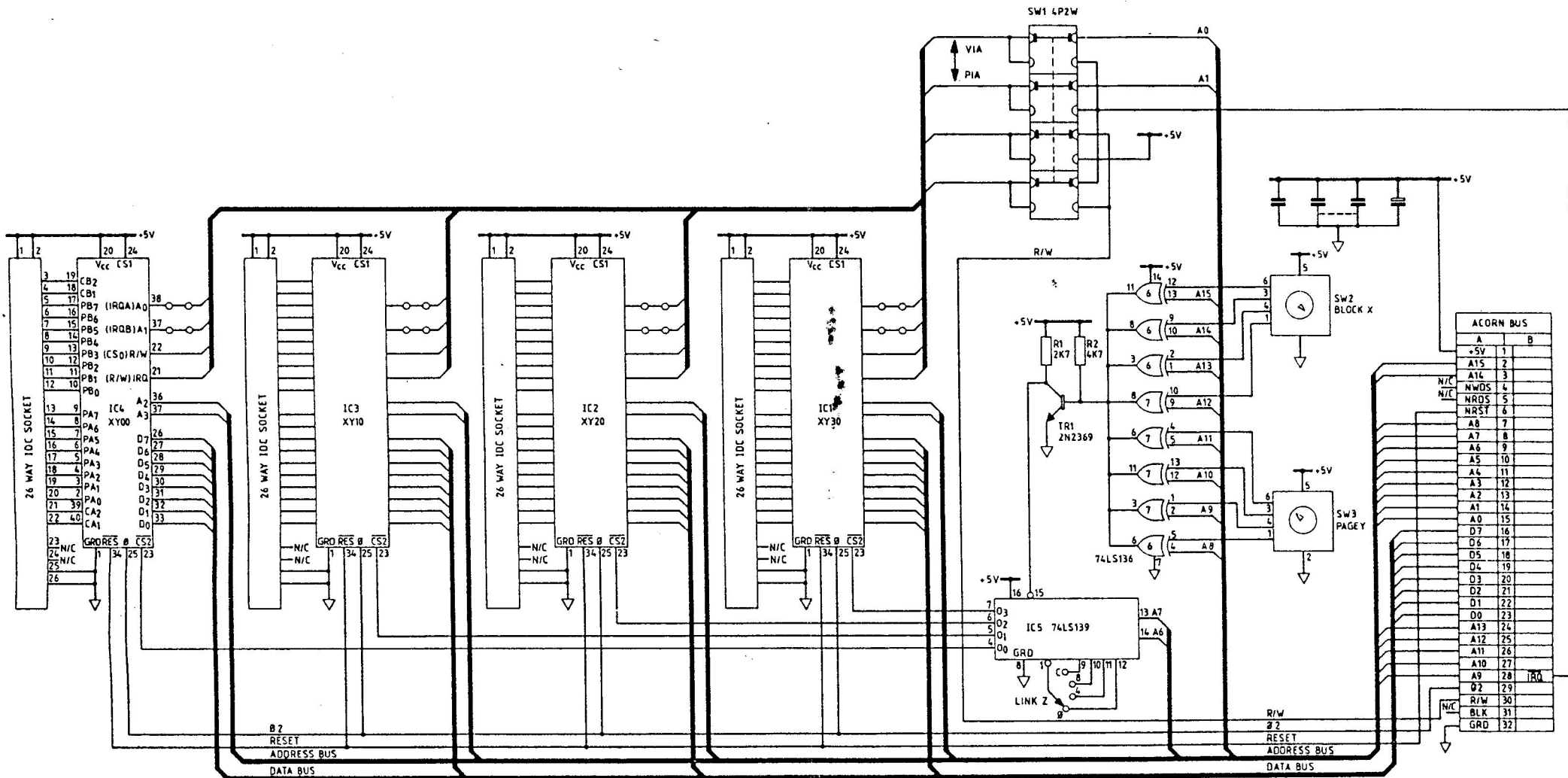
64/80 CHANNEL DIGITAL I/O MODULE

- ★ Carries four i/o chips, which are switch selectable to be either PIA (6821) or VIA (6522) devices.
- ★ Provides either 64 i/o channels, or 80 i/o channels, plus timers.

CUBIO is the 64/80 channel digital i/o Eurocard (100x160mm) of the CUBE range. It is an exceptionally versatile unit and is equipped with 40 pin sockets to take either PIA (Peripheral Interface Adaptor) or VIA (Versatile Interface Adaptor) devices.

The cheaper PIAs are sold as either the Motorola 6821 or the Rockwell 6520 chip. The more expensive, but higher performance VIAs, are sold as either the Rockwell or Synertek 6522 chip.

PIAs have 16 i/o lines, as has the VIA, but the VIA has in addition 4 control lines, which can be used as i/o, two timers, serial/parallel and parallel/serial shift registers and interrupt handling facilities.



| | VIA | PIA | |
|---|-------------------|-------------|-------|
| 0 | PB | | } PA |
| 1 | PA | | |
| 2 | ODRB | | |
| 3 | ODRA | | |
| 4 | T1L | } +T1 LATCH | } CRA |
| 5 | T1H | | |
| 6 | T1L | | |
| 7 | T1H | | |
| 8 | T2L | } +T2 LATCH | } PB |
| 9 | T2H | | |
| | SR | | |
| A | ACR | | |
| C | PCR | | } CRB |
| D | IFR | | |
| E | IER | | |
| F | PA - NO HANDSHAKE | | |

BOARD DECODE
 BLOCK X, PAGE Y, LINK Z, (0,4,8,C)
 ADDRESS OF CHIPS XYZ0 TO
 XY(Z+3)0
 EG WITH SWITCHES SET AS SHOWN
 ADDRESSES ARE :-
 IC4 IC3 IC2 IC1
 6F00 6F10 6F20 6F30

CU-BIO
 4xVIA or 4xPIA

| ISSUE | COMMENT | DATE | DM |
|-------|---------|------|----|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

10330

Control Universal Limited

Unit 2, Andersons Court
 Newnham Road
 Cambridge CB3 9EZ
 Tel: (0223) 358757

