T-52-33-03

# ST62C006
## I/O: I/O Controller

## FEATURES:

- Built-in 82C37 DMA controllers (x2)
- Built-in 82C59 DMA interrupt controllers (x2)
- Built-in 82C54 timer counter (1)
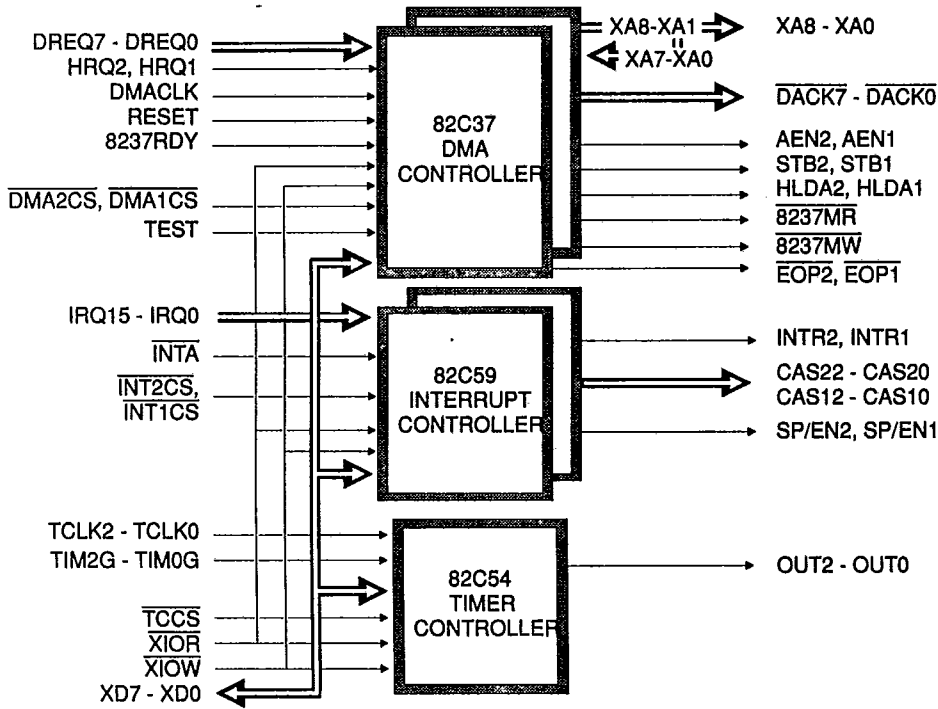- CMOS technology
- 100p flat package

## DESCRIPTION:

The ST62C006 is an LSI integration of two 82C37 DMA controllers, one 82C54 timer counter and two 82C59 interrupt controllers. CMOS process is used to achieve significant reduction in power consumption. It is housed in a 100-pin flat package to reduce the mounting area required. For a detailed operation of these peripheral components, please refer to the IBM AT® technical reference manual and the INTEL component data catalog.

## ST62C006-B FUNCTIONAL BLOCK DIAGRAM

DREQ7 - DREQ0 →
HRQ2, HRQ1 →
DMACLK →
RESET →
8237RDY →

DMA2CS, DMA1CS →
TEST →

**82C37 DMA CONTROLLER**

→ XA8-XA1 → XA8 - XA0
← XA7-XA0

→ DACK7 - DACK0

→ AEN2, AEN1
→ STB2, STB1
→ HLDA2, HLDA1
→ 8237MR
→ 8237MW
→ EOP2, EOP1

IRQ15 - IRQ0 →
INTA →
INT2CS, INT1CS →

**82C59 INTERRUPT CONTROLLER**

→ INTR2, INTR1
→ CAS22 - CAS20
CAS12 - CAS10
→ SP/EN2, SP/EN1

TCLK2 - TCLK0 →
TIM2G - TIM0G →

TCCS →
XIOR →
XIOW →
XD7 - XD0 ←

**82C54 TIMER CONTROLLER**

→ OUT2 - OUT0

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## ST62C006 PIN DIAGRAM

Pins along top (left to right): VDD3, DACK1, DACK2, DACK3, DACK4, DACK5, DACK6, DACK7, IRQ15, IRQ14, IRQ13, IRQ12, GND3, IRQ11, IRQ10, IRQ9, IRQ8, IRQ7, IRQ6, IRQ5, IRQ4, IRQ3, IRQ2, IRQ1, IRQ0

Pin numbers top: 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51

Left side:
| | |
|---|---|
| DACK0 | 76 |
| DREQ7 | 77 |
| DREQ6 | 78 |
| DREQ5 | 79 |
| DREQ4 | 80 |
| DREQ3 | 81 |
| DREQ2 | 82 |
| DREQ1 | 83 |
| DREQ0 | 84 |
| HRQ1 | 85 |
| HRQ2 | 86 |
| HLDA1 | 87 |
| GND4 | 88 |
| HLDA2 | 89 |
| DMA1CS | 90 |
| DMA2CS | 91 |
| RESET | 92 |
| 8237RDY | 93 |
| TEST | 94 |
| STB2 | 95 |
| STB1 | 96 |
| AEN2 | 97 |
| AEN1 | 98 |
| EOP1 | 99 |
| VDD4 | 100 |

Center label: SUNTAC ST62C006 I/O 100 PIN FLAT TOP VIEW

Right side:
| | |
|---|---|
| 50 | VDD2 |
| 49 | INTR1 |
| 48 | INTR2 |
| 47 | INTA |
| 46 | SP/EN1 |
| 45 | SP/EN2 |
| 44 | CAS22 |
| 43 | CAS12 |
| 42 | CAS21 |
| 41 | CAS11 |
| 40 | CAS20 |
| 39 | CAS10 |
| 38 | GND2 |
| 37 | INT2CS |
| 36 | INT1CS |
| 35 | XA8 |
| 34 | XA7 |
| 33 | XA6 |
| 32 | XA5 |
| 31 | XA4 |
| 30 | XA3 |
| 29 | XA2 |
| 28 | XA1 |
| 27 | XA0 |
| 26 | TCCS |

Pin numbers bottom: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Pins along bottom (left to right): EOP2, 8237MR, 8237MW, XIOR, XIOW, XD0, XD1, XD2, XD3, XD4, XD5, XD6, GND1, XD7, DMACLK, TCLK0, TCLK1, TCLK2, TIM0G, TIM1G, TIM2G, OUT0, OUT1, OUT2, VDD1