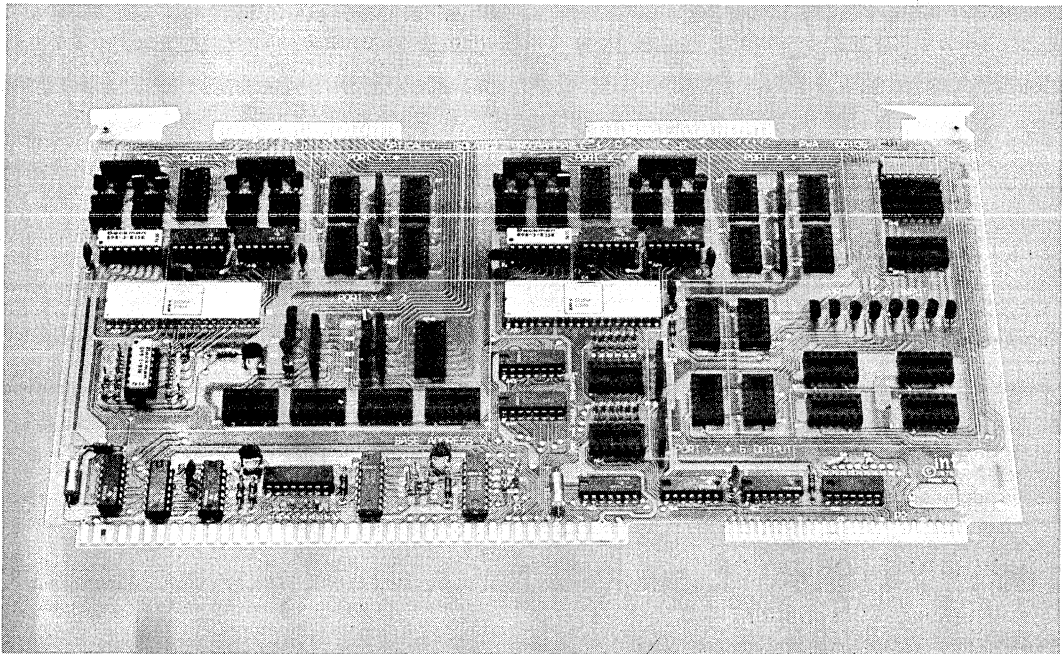




iSBC 556 OPTICALLY ISOLATED I/O BOARD

- iSBC 80 and MULTIBUS compatible
- Up to 48 digital optically isolated input/output data lines
- Choice of
 - 24 fixed input lines
 - 16 fixed output lines
 - 8 programmable lines
- Provisions for plug-in, optically isolated receivers, drivers, and terminators
- Voltage/current levels
 - Input up to 48V
 - Output up to 30V, 60 mA
- Common interrupt for up to 8 sources
- +5V supply only

The iSBC 556 Optically Isolated I/O Board provides 48 digital input/output lines with isolation between process application or peripheral device and the iSBC 80 series single board computers. The iSBC 556 contains two 8255A programmable interface devices, and sockets for user supplied optically isolated drivers, receivers, and input resistor terminators, together with common interrupt logic and iSBC 80 bus interface logic. Input signals can be single-ended or differential types with user defined input range (resistor terminator and opto-isolated receiver selection), allowing flexibility in design of voltage and threshold levels. The output allows user selection of Opto-Isolated Darlington Pair which can be used as an output driver either as an open collector or current switch.



ISBC 556

Table 1. I/O Ports Opto-Isolator Receivers, Drivers, and Terminators

Port No. X = I/O Base Address	Type of I/O	Lines (qty)	Resistor Terminator Pac Rp 16-Pin DIP Bourns 4116R-00 or Equivalent	Dual Opto-Isolator 8-Pin Dip Monsanto MC T66 or Equivalent	Dual Opto-Isolator Darlington Pair 6-Pin DIP Monsanto 4N29, 30 31, 32 or Equivalent	Driver 7438 or Equivalent	Pull-Up ISBC 902
X+0	Input	8	1	4	—	—	
X+1	Output	8	—		8	—	
X+2	Input/ Control	8	1		8	—	
X+4	Input	8	1	4	—	—	
X+5	Output	8			8	—	
X+6	Input/ Output	8	1 if input		8	2 if output	2 if input
X+7	Control						

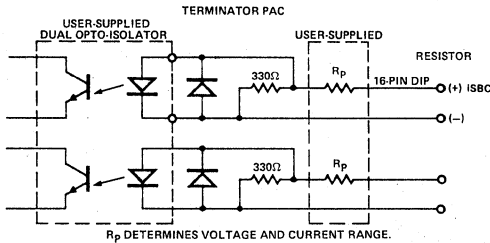
SPECIFICATIONS

Number of Lines

24 input lines
16 output lines
8 programmable lines: 4 input — 4 output

I/O Interface Characteristics

Line-to-Line Isolation — 235V DC or peak AC
Input/Output Isolation — 500V DC or peak AC



Bus Interface Characteristics

All data address and control commands are iSBC 80 bus compatible.

I/O Addressing

Port	8255 #1			Control	8255 #2			Control
	A	B	C		A	B	C	
Address	X+0	X+1	X+2	X+3	X+4	X+5	X+6	X+7

Where:
base address is from 00H to 1FH (jumper selectable)

ORDERING INFORMATION

Part Number	Description
SBC 556	Optically Isolated I/O Board

Connectors

Interface	Pins (qty)	Centers		Mating Connectors
		in.	cm	
P1 ISBC bus	86	0.156		Viking 3KH43/9AMK12
J1 16 fixed input & 8 fixed output lines	50	0.1		3M 3415-000 or TI M312125
J2 8 fixed output, 8 fixed output, & 8 programmable input/output lines	50	0.1		3M 3415-000 or TI M312125

Physical Characteristics

Width — 12.00 in. (30.48 cm)
Height — 6.75 in. (17.15 cm)
Depth — 0.50 in. (1.27 cm)
Weight — 12 oz (397.3 gm)

Electrical Characteristics

Average DC Current

$V_{CC} = +5V \pm 5\%$, 1.0A without user supplied isolated receiver/driver

$I_{CC} = 1.6A$ max with user supplied isolator receiver/driver

Environmental Characteristics

Temperature — 0°C to 55°C

Relative Humidity — 0 to 90%, non-condensing

Reference Manual

9800489-02 — iSBC 556 Hardware Reference Manual (NOT SUPPLIED)

Reference manuals are shipped with each product only if designated SUPPLIED (see above). Manuals may be ordered from any Intel sales representative, distributor office or from Intel Literature Department, 3065 Bowers Avenue, Santa Clara, California 95051.