ETACOM 16

Asynhronous serial board - current loop

1998

ETACOM 16 CL

The board is designed as two modules: an internal controller (ISA bus) for the computer and an external part.

The internal controller consist of:
- Buffers for address bus, data bus;
- Decoder of addresses and control of IRQ.

The external controller contains:
- Buffers of data and addresses;
- 16C554 (four-channel asynchronous. .communicational port with 16-bytes FIFO registers for accepting and transfering).
- 16 optically isolated curent loops.
- Scheme for automatic switch on & switch off of the supplying of the external.
- registers for position of lines for interrupting IRQ of the ports.

The addressing space can be chosen with jumpers:

Internal controller All the ports can work with common IRQ.

Interruptions can be chosen with jumpers:

Channel A, J3=1-2 (external controller)

J1=ON	IRQ 3	
J2=ON	IRQ 4	
J3=ON	IRQ 5	Note: Only one jumper
J4=ON	IRQ 10	
J5=ON	IRQ 12	
J6=ON	IRQ 15	

Channel B, J3=3-4 (external controller)

J7=ON	IRQ 3	
J8=ON	IRQ 4	
J9=ON	IRQ 5	Note: Only one jumper
J10=ON	IRQ 10	

All the ports can work with common IRQ.
Interruptions can be chosen with jumpers:

Channel A, J3=1-2 (external controller)

J1=ON	IRQ 3
J2=ON	IRQ 4
J3=ON	IRQ 5 - Note: Only one jumper
J4=ON	IRQ 10
J5=ON	IRQ 12
J6=ON	IRQ 15

Channel B, J3=3-4 (external controller)

J7=ON	IRQ 3
J8=ON	IRQ 4
J9=ON	IRQ 5 - Note: Only one jumper
J10=ON	IRQ 10
J11=ON	IRQ 12
J12=ON	IRQ 15

Note: It is important to know that IRQ of ETACOM 8RS must not be doubled with other modules in the PC!

Addresses of registers for IRQ

Internal controller		External controller	Address of IRQ register
J18	J13	J1	
3-4	CLOSE	1-2	1C0
3-4	OPEN	1-2	1D0
3-4	CLOSE	3-4	2C0
3-4	OPEN	3-4	2D0
1-2	X	1-2 or 3-4	DISABLE

The register for IRQ is used for quickens the handling of IRQ interruptions. Every byte responds to the state of signal IRQ for the related channel.

Example: The contents of the register 1C0=11000100 (0xC4) means there are requests for interruptions from channels with numbers 8,7 and 3.

Some programmes used masks in processing of this register.
In the file MUMPS.HDW should have similar line:
COM 280, 287, 290, 297, 2A0, 2A7, 2B0, 2B7
POLL=2C0, FF, 0000; IRQ=5
The address of channels 1-8 is 0x280, IRQ=5, the address of IRQ register=2C0 register for IRQ is not used, the line does not contain POLL=…….

COM 280, 287, 290, 297,2A0, 2A7, 2B0, 2B7; IRQ=5
(The address and IRQ can be changed!)

Micronetics' products (MSM up to version 4.0.11) do not use this register. The external module consists of two chips 16C554.

Canon 25M - pin No	Signal
1	Case
2	TxD
3	RxD
4	RTS
5	CTS
6	DSR
7	GND
8	CD
20	DTR
22	RI