

Comparison TRANSCEIVERS : SN75976A / SN55976A and ISL83070E / ISL83071E / ISL83072E / and ADM3491

| | Power supply input range Vcc | n of differential channel | Data rate (intersil:receiverswitching) | driver switching | Power consumption | Data I/O voltage range (receiver output) | Size (pins included) (mm) | Area occupied on board (cm^2) | Receiver propagation delay time Tphl (max) (nsec) at 85 C | Driver propagation delay time Tphl(max) (nsec) at 85 C | Prize (euro) |
|----------------------------|---------------------------------|---------------------------|--|------------------|---------------------------------------|--|---------------------------|-------------------------------|---|--|--------------------------|
| SN7597A (Texas instrument) | -0.3 V to 6 V reccommended 5V | 9 driver 9 receiver | 20 Mbs | | (827-1600)mW at 70C | -0.3 V to Vcc+0.5V | 10.67 x16.00 | (1.067 X 1.600)x20= 34.14 | 13 nsec | 11 nsec | 8.4387 (on web) |
| ISL83070E, (intersil) | 3.0 V to 3.6V reccommended 3.3V | 1 driver 1 receiver | 12-20 Mbs | 250-800 kbps | 666 mW at 70C (not sure,wait answer!) | -0.3 V to Vcc+0.3V | 5.05 X3.05 | (0.505x0.305)x180= 27.72 | 120 nsec (NO temperature specified!) | 1210 nsec | 1.3189 (min 100 pieces) |
| ISL83071E (intersil) | | | | 250-800 kbps | | | | | | | |
| ISL83072E (intersil) | | | | 250-800 kbps | | | | | | | |
| ISL83073E (intersil) | | | | 500-1600 kbps | | | | | | | |
| ISL83075E (intersil) | | | | 500-1600 kbps | | | | | | | |
| ISL83076E (intersil) | | | | 20-28 Mbps | | | | | | | |
| ISL83077E (intersil) | | | | 20-28 Mbps | | | | | | | |
| ISL83078E (intersil) | | | | 20-28 Mbps | | | | | | | |
| ADM3491 | 3.3V +- 0.3V | 1 driver 1 receiver | | 20 Mbps | 500 mW | Vcc-0.4V | 20.19 X7.11 | (2.019x0.711)x180= 258.39 | 90 nsec | 35 nsec | 1.0561 (min 1000 pieces) |

Virtex 4 on the board Characteristic:

Select IO Technology: 1.5 to 3.3 V I/O Operation

we need 20 SN7597A on board (c.a. 20(chip) x 8.4387 = 168.77 euro)

or

we need 180 *ISL83070E (intersil) (9 channel for each transceiver on motherboard x 10 motherboard)* on board (c.a. 180 chip(channels) x 1.3189 = 237.402 euro)

or

we need 180 ADM3491 (analog devices) (*9 channel for each transceiver on motherboard x 10 motherboard*) on board (c.a. 180 chip(channels) x 1.0561 = 190.098 euro)