



**The FC 950 is a fast 2 channel coincidence logic with 4 NIM Inputs, 4 differential ECL Inputs, 1 direct NIM Output, 2 normal and inverted adjustable NIM Outputs and 4 adjustable differential ECL Outputs on each channel**

INPUT NIM	Lemo connector, NIM input input impedance 50 Ω "0" = 0V, "1" = -0.7V
INPUT ECL	16-pin flatcable connector, differential ECL input  pins 1 + 2 = IN1 CH A pins 3 + 4 = IN2 CH A  ... pins 13 + 14 = IN3 CH B pins 15 + 16 = IN4 CH B  right hand pins: high true signals, nom. -0.9V left hand pins: low true signal, nom. -1.7V input impedance 110 Ω differential
OUTPUT NIM	Lemo connector, NIM output, output impedance 50 Ω "0" = 0V, "1" = -0.7V
OUTPUT ECL	16-pin flatcable connector, differential ECL output  pins 1 + 2 / 3 + 4 / 5 + 6 / 7 + 8 = OUT CH A pins 9 + 10 / 11 + 12 / 13 + 14 / 15 + 16 = OUT CH B  right hand pins: high true signals, nom. -0.9V left hand pins: low true signal, nom. -1.7V drives 110 Ω differential
Switching times	$t_r = t_f$ ca. 250 ps
Delay	INPUT – DIR OUTPUT ... ns, INPUT – Shaper OUTPUT (NIM) ...ns INPUT – Shaper OUTPUT (ECL) ...ns
Skew	Output to Output (max) +/- 25 ps
Range of frequency	max. 1500MHz
Temperature range	0 – 50 °C
Dimension	6U-high, 4U-wide, VME unit
Power requirements	+ 5V    ...mA,    +12V    ...mA

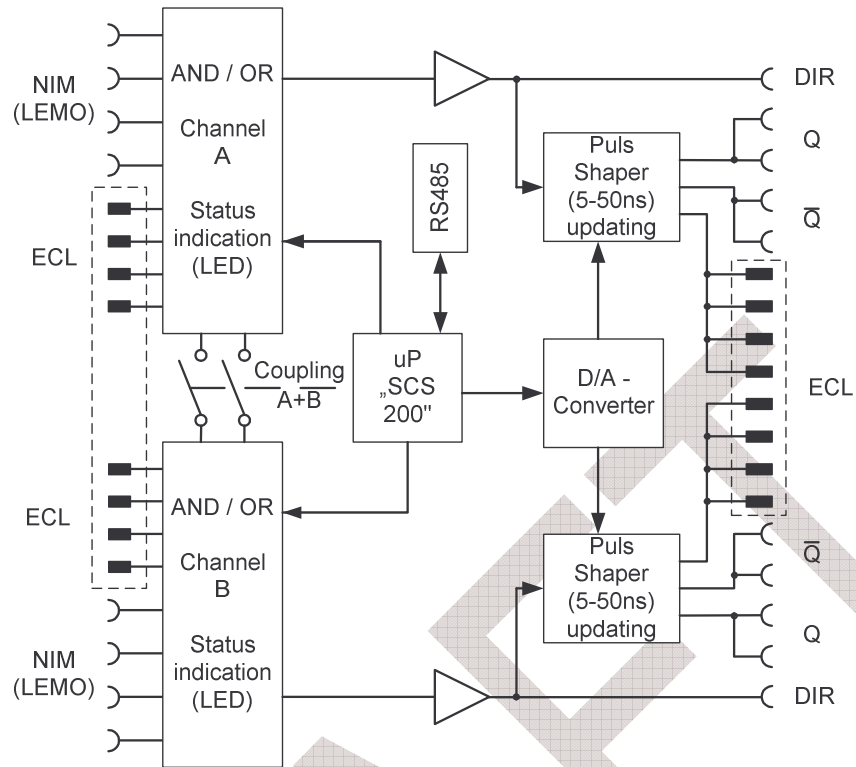


Figure 1. Functional Block Diagram

Variable	Value		Function
NIM Ch A + B	4	ON	AND, (yellow)
	5	ON	OR, (green)
ECL Ch A + B	6	ON	Invert, AND, (yellow)
	7	ON	Invert, OR, (green)
	0	OFF	Ch, OFF

Coupling: 0 = OFF, 1 = ON

Table 1. Status indication description

Bit Valency			
Bit 3	Bit 2	Bit 1	Bit 0
8	4	2	1
	0 = OFF 1 = ON	0 = No Invert 1 = Invert	0 = OR 1 = AND

Table 2. Variable Bit Valency

Variablenname	Einheit	Variable
+5V	Millivolt	user_data.voltage[0]
+1V	Millivolt	user_data.voltage[1]
-5V	Millivolt	user_data.voltage[2]
Voltage3	Millivolt	user_data.voltage[3]
Voltage4	Millivolt	user_data.voltage[4]
Voltage5	Millivolt	user_data.voltage[5]
Voltage6	Millivolt	user_data.voltage[6]
Voltage7	Millivolt	user_data.voltage[7]
Button	Byte	user_data.button
Channel	Byte	user_data.channelout
Mode	Byte	user_data.modeout
Width_B	Millivolt	user_data.width[0]
Width_A	Millivolt	user_data.width[1]
NIM_B_4	Byte	user_data.selection[0]
NIM_B_3	Byte	user_data.selection[1]
NIM_B_2	Byte	user_data.selection[2]
NIM_B_1	Byte	user_data.selection[3]
ECL_B_4	Byte	user_data.selection[4]
ECL_B_3	Byte	user_data.selection[5]
ECL_B_2	Byte	user_data.selection[6]
ECL_B_1	Byte	user_data.selection[7]
NIM_A_4	Byte	user_data.selection[0]
NIM_A_3	Byte	user_data.selection[1]
NIM_A_2	Byte	user_data.selection[2]
NIM_A_1	Byte	user_data.selection[3]
ECL_A_4	Byte	user_data.selection[4]
ECL_A_3	Byte	user_data.selection[5]
ECL_A_2	Byte	user_data.selection[6]
ECL_A_1	Byte	user_data.selection[7]
Coupling	Byte	user_data.coupling

**Table 4. Variable classification**

Value mscb	t [ns]
1023	300
980	50
970	40
960	30
920	20
850	10

**Table 5. Puls Shaper width**