The PNP/2110 Pinout

The 169 pins of the PGA socket are associated to 17 lines and 17 columns. The individual lines are allocated to digits; letters localizes the columns.

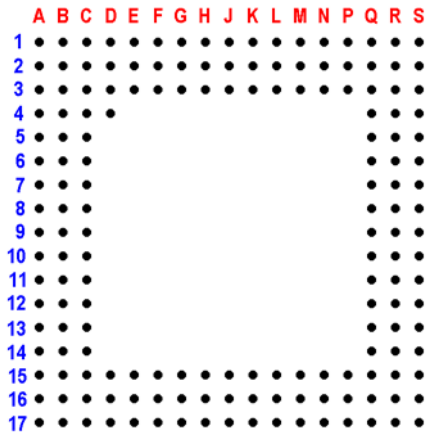

Fig. 1: PNP/2110 Pin Side View

The following tables 1-17 show the pinout of the PNP/2110. Please consider, that the notation of letters is not continuous. The letters „I“ and „O“ are not be provided.

Pin	Name	Function
A1	RX-	Ethernet LAN Interface, RX-
A2	TX-	Ethernet LAN Interface, TX-
A3	USB-	USB Interface USB- Pin
A4	SDA	I2C Interface – SDA Pin
A5	TMS	JTAG Interface, TMS Signal
A6	TDI	JTAG Interface, TDI Signal
A7	TRST	JTAG Interface, TRST Signal (Low-active)
A8	SA24	Expansion Bus, Address Bit 24
A9	SA22	Expansion Bus, Address Bit 22
A10	SA20	Expansion Bus, Address Bit 20
A11	SA18	Expansion Bus, Address Bit 18
A12	SA16	Expansion Bus, Address Bit 16
A13	SA13	Expansion Bus, Address Bit 13
A14	SA10	Expansion Bus, Address Bit 10
A15	SA8	Expansion Bus, Address Bit 8
A16	SA7	Expansion Bus, Address Bit 7
A17	SA6	Expansion Bus, Address Bit 6

Table 1: Pins A1 to A17

Pin	Name	Funktion
B1	RX+	Ethernet LAN Interface, RX+
B2	TX+	Ethernet LAN Interface, TX+
B3	USB+	USB Interface USB+ Pin
B4	SCL	I2C Interface – SCL Pin
B5	TCK	JTAG Interface, TCK Signal
B6	TDO	JTAG Interface, TDO Signal
B7	SA25	Expansion Bus, Address Bit 25
B8	SA23	Expansion Bus, Address Bit 23
B9	SA21	Expansion Bus, Address Bit 21
B10	SA19	Expansion Bus, Address Bit 19
B11	SA17	Expansion Bus, Address Bit 17
B12	SA15	Expansion Bus, Address Bit 15
B13	SA12	Expansion Bus, Address Bit 12
B14	SA9	Expansion Bus, Address Bit 9
B15	SA5	Expansion Bus, Address Bit 5
B16	SA3	Expansion Bus, Address Bit 3
B17	SA4	Expansion Bus, Address Bit 4

Table 2: Pins B1 to B17

Pin	Name	Funktion
C1	TXD1	COM1 Serial Port, TXD Pin
C2	RXD1	COM1 Serial Port, RXD Pin
C3	VBAT	Real Time Clock Battery Input
C4	GND	Ground
C5	RCME	Remote Console Mode Enable (Low-active)
C6	VCC	3.3 Volt Power Input
C7	GND	Ground
C8	GND	Ground
C9	GND	Ground
C10	GND	Ground
C11	GND	Ground
C12	VCC	3.3 Volt Power Input
C13	SA14	Expansion Bus, Address Bit 14
C14	SA11	Expansion Bus, Address Bit 11
C15	SA2	Expansion Bus, Address Bit 2
C16	SA0	Expansion Bus, Address Bit 0
C17	SA1	Expansion Bus, Address Bit 1

Table 3: Pins C1 to C17

Pin	Name	Funktion
D1	TXD2	COM2 Serial Port, TXD Pin
D2	RXD2	COM2 Serial Port, RXD Pin
D3	GND	Ground
D4	GND	Ground
D15	CS3	Chip Select Output 3 (Low-active)
D16	CS1	Chip Select Output 1 (Low-active)
D17	CS2	Chip Select Output 2 (Low-active)

Table 4: Pins D1 to D17

Pin	Name	Funktion
E1	LCD.D14	LCD Controller, Data Bit 14 (alternative INT4, if LCD in 8-bit mode)
E2	LCD.D13	LCD Controller, Data Bit 13 (alternative INT3, if LCD in 8-bit mode)
E3	LCD.D15	LCD Controller, Data Bit 15 (alternative INT5, if LCD in 8-bit mode)
E15	RDY	External Ready Input
E16	CS4	Chip Select Output 4 (Low-active)
E17	CS5	Chip Select Output 5 (Low-active)

Table 5: Pins E1 to E17

Pin	Name	Funktion
F1	LCD.D12	LCD Controller, Data Bit 12 (alternative INT2, if LCD in 8-bit mode)
F2	LCD.D11	LCD Controller, Data Bit 11
F3	VCC	3.3 Volt Power Input
F15	VCC	3.3 Volt Power Input
F16	OE	Expansion Bus, Output Enable (Output - Low-active)
F17	WE	Expansion Bus, Write Enable (Output - Low-active)

Table 6: Pins F1 to F17

Pin	Name	Funktion
G1	LCD.D10	LCD Controller, Data Bit 10
G2	LCD.D9	LCD Controller, Data Bit 9
G3	GND	Ground
G15	GND	Ground
G16	PCC.OE	PC Card Interface, Output Enable (Output - Low-active)
G17	PCC.WE	PC Card Interface, Write Enable (Output - Low-active)

Table 7: Pins G1 to G17

Pin	Name	Funktion
H1	LCD.D8	LCD Controller, Data Bit 8
H2	LCD.D7	LCD Controller, Data Bit 7
H3	GND	Ground
H15	GND	Ground
H16	PCC.IOR	PC Card Interface, I/O Read (Output - Low-active)
H17	PCC.IOW	PC Card Interface, I/O Write (Output - Low-active)

Table 8: Pins H1 to H17

Pin	Name	Funktion
J1	LCD.D6	LCD Controller, Data Bit 6
J2	LCD.D5	LCD Controller, Data Bit 5
J3	GND	Ground
J15	GND	Ground
J16	PCC.WAIT	PC Card Interface, WAIT Signal (Input - Low-active)
J17	PCC.REG	PC Card Interface, REG Signal (Output - Low-active)

Table 9: Pins J1 to J17

Pin	Name	Funktion
K1	LCD.D4	LCD Controller, Data Bit 4
K2	LCD.D3	LCD Controller, Data Bit 3
K3	GND	Ground
K15	GND	Ground
K16	PCC.IOCS16	PC Card Interface, IOCS16 Signal (Input - Low-active)
K17	PCC.SKTSEL	PC Card Interface, SKTSEL Signal (Output)

Table 10: Pins K1 to K17

Pin	Name	Funktion
L1	LCD.D2	LCD Controller, Data Bit 2
L2	LCD.D1	LCD Controller, Data Bit 1
L3	GND	Ground
L15	GND	Ground
L16	PCC.CE1	PC Card Interface, Chip Enable 1 (Output - Low-active)
L17	PCC.CE2	PC Card Interface, Chip Enable 2 (Output - Low-active)

Table 11: Pins L1 to L17

Pin	Name	Funktion
M1	LCD.D0	LCD Controller, Data Bit 0
M2	LCD.BIAS	LCD Controller, BIAS Signal
M3	VCC	3.3 Volt Power Input
M15	VCC	3.3 Volt Power Input
M16	RD/WR	Read/Write Signal (Output - Write is Low-active)
M17	INT1	Interrupt Input 1

Table 12: Pins M1 to M17

Pin	Name	Funktion
N1	LCD.PCLK	LCD Controller, PCLK Signal (LCD Pixel Clock)
N2	LCD.LCLK	LCD Controller, LCLK Signal (LCD HSYNC)
N3	LCD.FCLK	LCD Controller, FCLK Signal (LCD VSYNC)
N15	CLKOUT	Clock Output (Default 3.6864 MHz)
N16	RESIN	RESET Input (Low-active)
N17	RESOUT	RESET Output (Low-active)

Table 13: Pins N1 to N17

Pin	Name	Funktion
P1	PC2	Parallel I/O, Port C, Bit 2
P2	PC1	Parallel I/O, Port C, Bit 1
P3	PC3	Parallel I/O, Port C, Bit 3
P15	SD2	Expansion Bus, Data Bit 2
P16	SD0	Expansion Bus, Data Bit 0
P17	SD1	Expansion Bus, Data Bit 1

Table 14: Pins P1 to P17

Pin	Name	Funktion
Q1	PC0	Parallel I/O, Port C, Bit 0
Q2	PB2	Parallel I/O, Port B, Bit 2
Q3	PB5	Parallel I/O, Port B, Bit 5
Q4	PA5	Parallel I/O, Port A, Bit 5
Q5	PA2	Parallel I/O, Port A, Bit 2
Q6	VCC	3.3 Volt Power Input
Q7	GND	Ground
Q8	GND	Ground
Q9	GND	Ground
Q10	GND	Ground
Q11	GND	Ground
Q12	VCC	3.3 Volt Power Input
Q13	SD17	Expansion Bus, Data Bit 17
Q14	SD14	Expansion Bus, Data Bit 14
Q15	SD5	Expansion Bus, Data Bit 5
Q16	SD3	Expansion Bus, Data Bit 3
Q17	SD4	Expansion Bus, Data Bit 4

Table 15: Pins Q1 to Q17

Pin	Name	Funktion
R1	PB0	Parallel I/O, Port B, Bit 0
R2	PB4	Parallel I/O, Port B, Bit 4
R3	PB7	Parallel I/O, Port B, Bit 7
R4	PA3	Parallel I/O, Port A, Bit 3
R5	PA0	Parallel I/O, Port A, Bit 0
R6	SD30	Expansion Bus, Data Bit 30
R7	SD28	Expansion Bus, Data Bit 28
R8	SD26	Expansion Bus, Data Bit 26
R9	SD24	Expansion Bus, Data Bit 24
R10	SD22	Expansion Bus, Data Bit 22
R11	SD20	Expansion Bus, Data Bit 20
R12	SD18	Expansion Bus, Data Bit 18
R13	SD15	Expansion Bus, Data Bit 15
R14	SD12	Expansion Bus, Data Bit 12
R15	SD8	Expansion Bus, Data Bit 8
R16	SD6	Expansion Bus, Data Bit 6
R17	SD7	Expansion Bus, Data Bit 7

Table 16: Pins R1 to R17

Pin	Name	Funktion
S1	PB1	Parallel I/O, Port B, Bit 1
S2	PB3	Parallel I/O, Port B, Bit 3
S3	PB6	Parallel I/O, Port B, Bit 6
S4	PA4	Parallel I/O, Port A, Bit 4
S5	PA1	Parallel I/O, Port A, Bit 1
S6	SD31	Expansion Bus, Data Bit 31
S7	SD29	Expansion Bus, Data Bit 29
S8	SD27	Expansion Bus, Data Bit 27
S9	SD25	Expansion Bus, Data Bit 25
S10	SD23	Expansion Bus, Data Bit 23
S11	SD21	Expansion Bus, Data Bit 21
S12	SD19	Expansion Bus, Data Bit 19
S13	SD16	Expansion Bus, Data Bit 16
S14	SD13	Expansion Bus, Data Bit 13
S15	SD11	Expansion Bus, Data Bit 11
S16	SD10	Expansion Bus, Data Bit 10
S17	SD9	Expansion Bus, Data Bit 9

Table 17: Pins S1 to S17

Document History

Revision	Date		Name
1.00	14.08.2003	First Version.	KDW
1.01	29.08.2003	Final Pinout for USB and I2C.	KDW

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