Tsi110 Ballmap (Document number 80E5000_PN002_04)

		1	2	3	4	5	6	7		9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	-
А	1	NO BALL			SD_CLK_N[5]	SD_CLK_N[2]	SD_CLK_P[2]	SD_DQ[34]	SD_DQ[38]	SD_DQS_P[4]	SD_DQS_N[13]	SD_DQ[33]	SD_DQ[32]	SD_DQ[36]	SD_CLK_N[3]	SD_CLKFBO_N	SD_CLKFBI_P	SD_CLK_P[0]	SD_DQ(19)	SD_DQ(18)	SD_DQ[23]	SD_DQS_P[2]	SD_DQS_N[11]	SD_DQS_P[11]	SD_DQ[16]	SD_DQ(20)	SD_CLK_N[4]	SD_CLK_N[1]	SD_DQ[3]	SD_DQ[2]	SD_DQ[6]	SD_DQS_N[0]	VSS_IO	A
В	2	SD_DQS_P[16]		VSS_JO	NC	SD_CLK_P[5]	VSS_IO	SD_DQ[35]	SD_DQ[39]	VSS_IO	SD_DQS_N[4]	SD_DQS_P[13]	VSS_IO	SD_DQ[37]	SD_CLK_P[3]	VSS_JO	SD_CLKFBO_P	SD_CLKFBI_N	SD_CLK_N[0]	VSS_IO	SD_DQ[22]	SD_DQS_N[2]	VSS_IO	SD_DQ(17)	SD_DQ[21]	VSS_IO	SD_CLK_P[4]	SD_CLK_P[1]	VSS_IO	SD_DQ[7]	SD_DQS_P[0]	VSS_IO	SD_DQS_N[9]	В
С	3	VSS_IO			VDD_SD	SD_DQ[54]	SD_DQS_N[6]	VDD_SD	SD_DQ[53]	SD_DQ[43]	VDD_SD	SD_DQS_N[5]	SD_DQS_P[14]	VDD_SD	NC	NC	VDD_SD	NC	VDD_SD	NC	SD_DQ(26)	VDD_SD	SD_DQS_N[12]) NC	VDD_SD	SD_DQ(11)	SD_DQ[15]	VDD_SD	NC	VDD_SD	NC	SD_DQS_P[9]	SD_DQ[1]	С
D	4	SD_DQS_P[7]			SD_DQ[51]	SD_DQ[55]	SD_DQS_P[6]	SD_DQS_P[15	SD_DQ[48]	SD_DQ[52]	SD_DQ[47]	SD_DQS_P[5]	SD_DQS_N[14]	SD_DQ[40]	SD_DQ[44]	NC	NC	NC	NC	NC	SD_DQ(31)	SD_DQS_P[3]	SD_DQS_P[12]] SD_DQ(25)	SD_DQ[29]	SD_DQ[10]	SD_DQ[14]	SD_DQS_N[1]	SD_DQS_P[10]	SD_DQ[8]	NC	SD_DQ[0]	SD_DQ[5]	D
E	5	SD_DQ[63]		VSS_IO	NC	SD_DQ[50]	vss_io	SD_DQS_N[15	SD_DQ[49]	VSS_IO	SD_DQ[42]	SD_DQ[46]	VSS_IO	SD_DQ[41]	SD_DQ[45]	VSS_IO	NC	NC	NC	VSS_IO	SD_DQ(30)	SD_DQS_N[3]	VSS_IO	SD_DQ(24)	SD_DQ[28]	VSS_IO	SD_DQS_P[1]	SD_DQS_N[10]	VDD_SD	SD_DQ[13]	VSS_IO	SD_DQ[4]	CG_PB_SELECT	E
F	6	SD_DQ[59]	VSS_IO	NC	NC	NC	NC	SD_ODT[3]	NC	SD_CSn[1]	VDD_SD	SD_ODT[0]	NC	VDD_SD	SD_RASn	NC	SD_DLL_TEST(0	VDD_SD	SD_DLL_TEST[1] SD_DQ(27)	SD_A[6]	VDD_SD	SD_VREF[1]	SD_BA[2]	VDD_SD	NC	SD_CLKEN[1]	VSS_IO	SD_DQ[9]	SD_DQ[12]	PB_A[33]	PB_RSTn	CG_REF	F
G	7	HLP_AD(0)	HLP_AD(1)	SD_I2C_CLK	SD_I2C_SD	HLP_AD(8)	HLP_AD(9)	VSS_IO	SD_ODT[1]	SD_CSn[3]	SD_A[13]	SD_ODT[2]	SD_CASn	SD_WEn	SD_CSn[0]	SD_A[10]	SD_A[0]	SD_A[2]	SD_A[1]	SD_A[4]	SD_A[9]	SD_A[8]	SD_A[11]	SD_A[14]	SD_A[15]	SD_CLKEN[0]	VDD_SD	NC	VSS_IO	OG_SD_SELECT	NC	VSS_IO	DG_SD_SELECT	G
н	8	HLP_AD(2)	HLP_AD(3)	HLP_AD(4)	VSS_IO	HLP_AD(5)	HLP_AD(6)	HLP_AD[7]	NC	VSS_IO	VDD_SD	VDD_SD	SD_VREF[0]	VSS_IO	SD_CSn[2]	SD_BA[0]	SD_BA[1]	VSS_IO	SD_A[3]	SD_A[5]	VSS_IO	SD_A[7]	SD_A[12]	VDD_SD	VDD_SD	VSS_IO	PB_A[34]	VDD_PB	CG_SD_SELECT	CG_PB_SELECT	VDD_PB	CG_PB_CLKO(1)	CG_PB_CLKO(0	н
J	9	KGEN_PLL_AVD	(GEN_PLL_AVS	HLP_AD(10)	HLP_AD[11]	HLP_AD[12]	HLP_AD[13]	HLP_AD[14]	HLP_AD[15]	VDD_PC	VSS_IO	VDD_SD	VSS_JO	VDD_SD	VSS_IO	VDD_SD	VSS_IO	VDD_SD	VSS_IO	VDD_SD	VSS_IO	VDD_SD	VSS_IO	VDD_SD	VSS_IO	PB_A[35]	PB_A[10]	PB_A[32]	PB_A[0]	PB_TSIZ[2]	NC :	CG_PB_SELECT	NC	J
к	10	HLP_AD(16)	VSS_IO	HLP_AD(17)	HLP_AD[18]	HLP_AD[19]	HLP_AD[20]	VSS_IO	HLP_AD[21]	VDD_PC	VDD_PC	VSS_IO	VDD_SD	VDD_SD	VDD_SD	VDD_SD	VDD_SD	VDD_SD	VDD_SD	VDD_SD	VDD_SD	VDD_SD	VDD_SD	VSS_IO	VDD_PB	PB_TT[3]	PB_A[8]	PB_A[6]	VSS_IO	KGEN_PLL_AVD	KGEN_PLL_AVS	VSS_IO	PB_A[4]	к
L	11	HLP_AD(22)	HLP_AD[23]	HLP_AD[24]	HLP_AD(25)	VSS_IO	HLP_AD[26]	HLP_AD[27]	HLP_AD[28]	VDD_PC	VDD_PC	VSS_IO	VSS_JO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VDD_PB	VDD_PB	RESERVED[21]	PB_TT[1]	VDD_PB	PB_TT[0]	PB_TT[4]	VDD_PB	SD_PLL_AVDD	SD_PLL_AVSS	L
М	12	HLP_WEn	HLP_CSn(0)	HLP_CSn(2)	HLP_CSn(3)	HLP_LE	HLP_AD[29]	HLP_AD[30]	HLP_AD[31]	VDD_PC	VDD_PC	VSS_IO	VSS	VDD	VSS	VDD	VSS	VDD	VSS	VDD	VSS	VDD	VSS_IO	VDD_PB	VSS_IO	PB_INTr(1)	PB_INTr(2)	PB_INTn(3)	PB_A[2]	PB_PLL_AVSS	PB_PLL_AVDD	PB_TSIZ[1]	SD_SYSCLK	М
N	13	HLP_CSn[1]	VSS_IO	HLP_RDYn	HLP_OEn	GPIO[0]	GPI0[1]	VSS_IO	U_1_RX	VDD_PC	VDD_PC	VSS_IO	VDD	VSS	VDD	VSS	VDD	VSS	VDD	VSS	VDD	VSS	VSS_IO	VDD_PB	VDD_PB	VSS_IO	RESERVED[0]	NC	VSS_IO	PB_BRn[0]	RESERVED(19)	VSS_IO	RESERVED(20)	N
Р	14	JTAG_TDO	JTAG_TDI	GPIO[2]	VSS_IO	GPIO[3]	GPIO[4]	GPI0[5]	U_0_RX	VDD_PC	VDD_PC	VSS_IO	VSS	VDD	VSS	VDD	VSS	VDD	VSS	VDD	VSS	VDD	VSS_IO	VDD_PB	VSS_IO	RESERVED(17)	PB_TSIZ[0]	VDD_PB	PB_TT[2]	NC	VDD_PB	PB_TBSTn	PB_SYSCLK	Р
R	15	TEST_TM[1]	JTAG_TCK	GPIO[6]	INT[0]	GPIO[7]	GPIO[8]	GPIO[9]	U_1_TX	VDD_PC	VDD_PC	VSS_IO	VDD	VSS	VDD	VSS	VDD	VSS	VDD	VSS	VDD	VSS	VSS_IO	VDD_PB	VDD_PB	PB_QACKn[0]	PB_A[14]	PB_A[23]	PB_GBLn	PB_A[7]	PB_A[9]	RESERVED(18)	RESERVED(1)	R
т	16	TEST_TM[3]	VSS_IO	JTAG_TRSTn	GPI0[10]	GPIO[11]	INT[2]	VSS_IO	U_0_TX	VDD_PC	VDD_PC	VSS_IO	VSS	VDD	VSS	VDD	VSS	VDD	VSS	VDD	VSS	VDD	VSS_IO	VDD_PB	VSS_IO	PB_A[24]	PB_A[16]	PB_A[3]	VSS_IO	PB_A[1]	PB_A[12]	VSS_IO	PB_INTn[0]	т
U	17	TEST_TM[2]	JTAG_TMS	TEST_ON	INT[1]	VSS_IO	GPI0[12]	GPI0[13]	I2C_SCLK	VDD_PC	VDD_PC	VSS_IO	VDD	VSS	VDD	vss	VDD	vss	VDD	vss	VDD	vss	VSS_IO	VDD_PB	VDD_PB	VSS_IO	PB_TSn	VDD_PB	PB_A[21]	PB_DBWOn	VDD_PB	PB_A[20]	PB_TAn	U
v	18	TEST_TM[0]	TEST_BIDR_CT	OCN_RSTn	GPIO[14]	GPI0[15]	INT[3]	NC	I2C_SD	VDD_PC	VDD_PC	VSS_IO	VSS	VDD	vss	VDD	vss	VDD	vss	VDD	VSS	VDD	VSS_IO	VDD_PB	VSS_IO	PB_TEAn	PB_A[22]	PB_A[18]	NC	PB_BGr(0)	PB_A[5]	PB_A[13]	PB_RSTOD	v
w	19	E_MDIO	VSS_IO	E_MDC	E_1_TCG[9]	E_0_TCG[9]	E_0_TCG[8]	VSS_IO	E_0_TCG[7]	VDD_PC	VDD_PC	VSS_IO	VDD	VSS	VDD	vss	VDD	vss	VDD	vss	VDD	vss	VSS_IO	VDD_PB	VDD_PB	PB_A[11]	PB_AACKn	RESERVED(2)	VSS_IO	RESERVED[3]	NC	VSS_IO	PB_ARTRYn	w
Υ	20	E_REF125	E_1_TCG[7]	E_1_TCG[6]	VSS_IO	E_0_TCG(6)	E_0_TCG[5]	E_0_TCG[4]	E_0_TCG[3]	VDD_PC	VDD_PC	VSS_IO	VSS	VDD	vss	VDD	vss	VDD	vss	VDD	VSS	VDD	VSS_IO	VDD_PB	VSS_IO	PB_A[27]	PB_A[28]	PB_A[30]	PB_DBGn[0]	NC	PB_A[17]	PB_A[26]	NC	Y
AA	21	E_1_TCG(8)	E_1_TCG(5)	E_1_TCG[4]	E_1_TCG[3]	E_0_TCG[2]	E_0_TCG[1]	E_0_TCG[0]	E_0_TXCLK	VDD_PC	VDD_PC	VSS_IO	VDD	VSS	VDD	vss	VDD	vss	VDD	vss	VDD	vss	VSS_IO	VDD_PB	VDD_PB	VSS_IO	PB_A[19]	VDD_PB	NC	PB_QREQn(0)	VDD_PB	PB_A[15]	PB_A[29]	AA
AB	22	E_1_TXCLK	VSS_IO	E_1_TCG[1]	E_1_TCG[0]	E_0_PCOL_RB0	E_0_PRBS_PAS	s vss_io	E_0_ECMDT	VDD_PC	VDD_PC	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VSS_IO	VDD_PB	VSS_IO	PB_D[39]	RESERVED[23]	RESERVED(22)	VSS_IO	RESERVED(24)	PB_A[25]	VSS_IO	PB_A[31]	AB
AC	23	E_1_TCG[2]	_1_PCRS_SDE	E_1_PCOL_RBC	E_1_PRBS_PAS	SS VSS_IO	E_0_PRBSEN	E_0_RXCLK	E_0_RCG[0]	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VSS_IO	VDD_PB	VSS_IO	VDD_PB	VDD_PB	PB_D[33]	PB_D[37]	PB_D[19]	PB_D[34]	PB_D[35]	PB_D[56]	RESERVED[27]	RESERVED(29)	AC
AD	24	E_GTXCLK[0]	E_1_EWRAP	VSS_IO	E_0_PCRS_SD8	ET E_0_RCG[1]	E_0_RCG[2]	E_0_RCG[3]	VSS_IO	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VDD_PC	VSS_IO	VDD_PB	VDD_PB	VDD_PB	VSS_IO	PB_D[58]	RESERVED[25]	VDD_PB	PB_D[23]	PB_D[26]	VDD_PB	PB_D[32]	PB_D[54]	AD
AE	25	E_1_ECMDT	E_1_RCG[0]	E_1_PRBSEN	E_0_EWRAP	E_0_RCG[4]	E_0_RCG[5]	E_0_RCG[6]	PCI_AD[26]	PCI_AD[20]	PCI_AD[16]	PCI_DEVSELn	PCI_M66EN	PCI_AD[5]	PCI_CBEn[6]	PCI_AD(60)	PCI_AD(57)	PCI_AD(50)	PCI_AD(44)	PCI_AD(38)	PWRUP_PCI_HO	NC	RESERVED[4]	RESERVED[5]	VDD_PB	PB_D[60]	PB_D[57]	RESERVED(26)	VSS_IO	PB_D[18]	RESERVED(28)	VSS_IO	PB_D[36]	AE
AF	26	E_1_RXCLK	VSS_IO	E_1_RCG[1]	VSS_IO	E_0_RCG[7]	E_0_RCG[8]	VSS_IO	PCI_AD[27]	PCI_AD[21]	VSS_IO	PCI_STOPn	PCI_AD[11]	VSS_IO	PCI_CBEn[5]	PCI_AD(61)	VSS_IO	PCI_AD[51]	PCI_AD(45)	VSS_IO	PCI_AD(34)	NC	VSS_IO	RIU	PB_D[31]	VSS_IO	PB_D[30]	PB_D[7]	PB_D[15]	PB_D[14]	PB_D[20]	PB_D[29]	PB_D[62]	AF
AG	27	E_1_RCG[2]	E_1_RCG[3]	E_1_RCG[4]	E_1_RCG[5]	E_0_RCG[9]	PCI_REQn(3)	PCI_AD[31]	PCI_AD[28]	PCI_AD[22]	PCI_CBEn[2]	PCI_PERRn	PCI_AD[12]	PCI_AD[6]	PCI_CBEn[0]	PCI_AD(62)	PCI_AD(58)	PCI_AD[52]	PCI_AD(46)	PCI_AD(39)	PCI_AD(35)	PB_SENSE	RESERVED[6]	VDD_PB	PB_D[59]	PB_D[27]	PB_D[38]	VDD_PB	PB_D[6]	PB_D[11]	VDD_PB	PB_D[17]	PB_D[22]	AG
AH	28	E_GTXCLK[1]	E_1_RCG[6]	E_1_RCG[7]	PCI_SENSE	PCI_GNTn[3]	PCI_REQn(2)	PCI_ES	VSS_IO	PCI_AD[23]	PCI_FRAMEn	PCI_SERRn	PCI_PAR	PCI_AD[7]	VSS_IO	PCI_AD[63]	PCI_CBEn[4]	PCI_AD[53]	PCI_AD[47]	PCI_AD(40)	VSS_IO	RESERVED[7]	RESERVED[8]	RESERVED[9]	PB_D[63]	PB_D[61]	PB_D[52]	PB_D[53]	VSS_IO	PB_D[12]	PB_D[10]	VSS_IO	PB_D[16]	АН
AJ	29	E_1_RCG[8]	VSS_IO	PCI_INTCn	PCI_PCIXCAP[nj vss_io	PCI_GNTn[7]	PCI_REQr(6)	PCI_AD[29]	PCI_AD[24]	PCI_AD[17]	VSS_IO	PCI_CBEn[1]	PCI_AD[8]	PCI_AD[1]	PCI_AD(0)	PCI_PAR64	VSS_IO	PCI_AD(48)	PCI_AD(41)	PCI_AD(36)	PCI_CLK	RESERVED(10	RESERVED[11]	VSS_IO	PB_D[25]	VSS_IO	PB_D[43]	PB_D[51]	PB_D[0]	PB_D[2]	PB_D[9]	PB_D[8]	AJ
AK	30	E_1_RCG[9]	PCI_RSTDIR	PCI_PCIXCAP(PCI_INTAn	PCI_GNTn[2]	PCI_GNTn[6]	PCI_REQr(5)	PCI_REQr(1)	PCI_CBEn[3]	PCI_AD[18]	PCI_ENUMn	PCI_AD[13]	PCI_AD[9]	PCI_AD[2]	PCI_ACK64n	PCI_AD(59)	PCI_AD(54)	PCI_AD(49)	PCI_AD(42)	PCI_AD(37)	PCI_AD[32]	RESERVED(12	VDD_PB	PB_D[24]	PB_D[28]	PB_D[48]	VDD_PB	PB_D[40]	PB_D[5]	VDD_PB	PB_D[1]	PB_D[13]	AK
AL	31	PCI_RSTn	PCI_INTDn	PCI_LEDn	VSS_IO	PCI_GNTn[1]	PCI_GNTn[5]	VSS_IO	PCI_PMEn	PCI_IDSEL	VSS_IO	PCI_IRDYn	PCI_AD[14]	VSS_IO	PCI_AD[3]	PCI_REQ64n	VSS_IO	PCI_AD(55)	CG_PCI_CLKO(:	g vss_io	PCI_AD(43)	PCI_PLL_AVSS	VSS_IO	RESERVED[13]	RESERVED[14]	VSS_IO	PB_D[21]	PB_D[47]	VSS_IO	PB_D[42]	PB_D[55]	VSS_IO	PB_D[3]	AL
AM	32	VSS_IO	PCI_HEALTHY	PCI_HS64ENn	PCI_INTBn	PCI_REQn(7)	PCI_GNTn[4]	PCI_REQn(4)	PCI_AD[30]	PCI_AD[25]	PCI_AD[19]	PCI_TRDYn	PCI_AD[15]	PCI_AD[10]	PCI_AD[4]	PCI_AD(33)	PCI_CBEn[7]	CG_PCI_CLKO(pg_PCI_CLKO(pg_pci_clkop	PCI_AD(56)	PCI_PLL_AVDI	RESERVED(15	RESERVED[16]	PB_D[45]	PB_D[41]	VDD_PB	PB_D[46]	PB_D[44]	PB_D[50]	PB_D[49]	PB_D(4)	VSS_IO	AM
			2								10	- 11	12	42	14	15	16	17	19	19	20	24	22	22	24	25	26	27	20	29	20	21	22	

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80E5000_PN002_04, Formal, October 2009. This version was rebranded as IDT. It does not include any technical changes.