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--  BSDL model for ISSI's IS61NLP/NVP/NLF/NVF25636 NoWait SRAM
--  Author: S.J. JANG
--  Revision History: Rev0.0 (9/6/05)
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------------------------------------------------------------------

entity IS61NXX25636 is

   generic (PHYSICAL_PIN_MAP : string := "BGA_11x15");

   port (   A   :   in      bit_vector(0 to 17);
      ADV   :   in      bit;
      BW_A_b   :   in      bit;
      BW_B_b   :   in      bit;
      BW_C_b   :   in      bit;
      BW_D_b   :   in      bit;
      CLK      :   in      bit;
      DP_A     :   in      bit;
      DP_B     :   in      bit;
      DP_C     :   in      bit;
      DP_D     :   in      bit;
      DQ_A     :   in      bit_vector(0 to 7);
      DQ_B     :   in      bit_vector(0 to 7);
      DQ_C     :   in      bit_vector(0 to 7);
      DQ_D     :   in      bit_vector(0 to 7);
      CE_b     :   in      bit;
      CE2      :   in      bit;
      CE2_b    :   in      bit;
      TCK      :   in      bit;
      TDI      :   in      bit;
      TDO      :   out      bit;
      TMS      :   in      bit;
      MODE     :   in      bit;
      OE_b     :   in      bit;
      CKE_b    :   in      bit;
      WE_b     :   in      bit;
      NC       :   linkage   bit_vector(0 to 20);
      Vdd      :   linkage   bit_vector(0 to 17 );
      Vddq     :   linkage   bit_vector(0 to 19);
      Vss      :   linkage   bit_vector(0 to 33);
      ZZ       :   in      bit);

   use STD_1149_1_1994.all;

   attribute COMPONENT_CONFORMANCE of IS61NXX25636 : entity is
      "STD_1149_1_1993";

   attribute PIN_MAP of IS61NXX25636 : entity is
      PHYSICAL_PIN_MAP;

      constant BGA_11x15: PIN_MAP_STRING :=

   " A: (R6, P6, P4, R4, R3, A10, R11, R10, P10, P9, R9, R8, P8," &
   "                 P3, A2, A9, B2, B10),        " &
   " ADV:      A8,                     " &
   " BW_A_b:   B5,                     " &
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" BW_B_b:   A5,                    " &
" BW_C_b:   A4,                    " &
" BW_D_b:   B4,                    " &
" CLK:      B6,                    " &
" DP_A:     N11,                   " &
" DP_B:      C11,                    " &
" DP_C:      C1,                     " &
" DP_D:      N1,                     " &
" DQ_A:      (J10, K10, L10, M10, J11, K11, L11, M11),    " &
" DQ_B:      (D10, E10, F10, G10, D11, E11, F11, G11),    " &
" DQ_C:      (G2, F2, E2, D2, G1, F1, E1, D1),         " &
" DQ_D:      (M2, L2, K2, J2, M1, L1, K1, J1),         " &
" CE_b:      A3,                     " &
" CE2:       B3,                     " &
" CE2_b:     A6,                     " &
" TCK:       R7,                     " &
" TDI:       P5,                     " &
" TDO:       P7,                     " &
" TMS:       R5,                     " &
" MODE:      R1,                     " &
" OE_b:      B8,                     " &
" CKE_b:     A7,                     " &
" WE_b:      B7,                     " &
" NC:  (A1, B1, H1, P1, C2, H2, N2, P2, R2, H3, N5, N6, N7, B9, H9, " &
"      C10, H10, N10, A11, B11, P11),            " &
" Vdd: (D4, D8, E4, E8, F4, F8, G4, G8, H4, H8, J4, J8, K4, " &
"      K8, L4, L8, M4, M8 ),            " &
" Vddq: (C3, D3, E3, F3, G3, J3, K3, L3, M3, N3, C9, D9, E9, " &
"       F9, G9, J9, K9, L9, M9, N9),           " &
" Vss:  (C4, N4, C5, D5, E5, F5, G5, H5, J5, K5, L5, M5, C6, " &
"       D6, E6, F6, G6, H6, J6, K6, L6, M6, C7, D7, E7, F7, " &
"       G7, H7, J7, K7, L7, M7, C8, N8),         " &
" ZZ:       H11                    " ;

attribute TAP_SCAN_IN      of   TDI : signal is true;
attribute TAP_SCAN_OUT      of   TDO : signal is true;
attribute TAP_SCAN_MODE      of   TMS : signal is true;
attribute TAP_SCAN_CLOCK    of   TCK : signal is (100.0e6, BOTH);

attribute INSTRUCTION_LENGTH   of   IS61NXX25636 : entity is 3;

attribute INSTRUCTION_OPCODE   of   IS61NXX25636 : entity is
   "EXTEST      (000),   " &
   "IDCODE      (001),   " &
   "SAMPLEZ      (010),   " &
   "SAMPLE      (100),   " &
   "BYPASS      (111)    " ;

attribute INSTRUCTION_CAPTURE   of   IS61NXX25636 : entity is "001";

attribute IDCODE_REGISTER   of   IS61NXX25636 : entity is
   "0000"            &   -- Die Revision Code
   "0011100100"      &   -- Defines depth and width
   "000000"          &   -- vendor definition
   "00011010101"     &   -- ISSI JEDEC ID
   "1"               ;   -- Presence Register
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attribute REGISTER_ACCESS    of   IS61NXX25636 : entity is
   "BOUNDARY   (EXTEST, SAMPLE, SAMPLEZ),   " &
   "BYPASS      (BYPASS)         " ;

attribute BOUNDARY_LENGTH   of   IS61NXX25636 :   entity is 75;

attribute BOUNDARY_REGISTER   of   IS61NXX25636 : entity is

"0   (BC_4,   MODE,          input,      X),   " &
"1   (BC_4,   *,             internal,   X),   " &
"2   (BC_4,   *,             internal,   X),   " &
"3   (BC_4,   A(12),         input,      X),   " &
"4   (BC_4,   A(11),         input,      X),   " &
"5   (BC_4,   A(10),         input,      X),   " &
"6   (BC_4,   A(9),          input,      X),   " &
"7   (BC_4,   A(8),          input,      X),   " &
"8   (BC_4,   A(7),          input,      X),   " &
"9   (BC_4,   A(6),          input,      X),   " &
"10   (BC_4,   ZZ,           input,      X),   " &
"11   (BC_4,   DP_A,         input,      X),   " &
"12   (BC_4,   DQ_A(7),      input,      X),   " &
"13   (BC_4,   DQ_A(6),      input,      X),   " &
"14   (BC_4,   DQ_A(5),      input,      X),   " &
"15   (BC_4,   DQ_A(4),      input,      X),   " &
"16   (BC_4,   DQ_A(3),      input,      X),   " &
"17   (BC_4,   DQ_A(2),      input,      X),   " &
"18   (BC_4,   DQ_A(1),      input,      X),   " &
"19   (BC_4,   DQ_A(0),      input,      X),   " &
"20   (BC_4,   DQ_B(7),      input,      X),   " &
"21   (BC_4,   DQ_B(6),      input,      X),   " &
"22   (BC_4,   DQ_B(5),      input,      X),   " &
"23   (BC_4,   DQ_B(4),      input,      X),   " &
"24   (BC_4,   DQ_B(3),      input,      X),   " &
"25   (BC_4,   DQ_B(2),      input,      X),   " &
"26   (BC_4,   DQ_B(1),      input,      X),   " &
"27   (BC_4,   DQ_B(0),      input,      X),   " &
"28   (BC_4,   DP_B,         input,      X),   " &
"29   (BC_4,   *,             internal,   X),   " &
"30   (BC_4,   A(5),         input,      X),   " &
"31   (BC_4,   A(17),        input,      X),   " &
"32   (BC_4,   A(15),        input,      X),   " &
"33   (BC_4,   *,             internal,   X),   " &
"34   (BC_4,   ADV,          input,      X),   " &
"35   (BC_4,   OE_b,         input,      X),   " &
"36   (BC_4,   CKE_b,        input,      X),   " &
"37   (BC_4,   WE_b,         input,      X),   " &
"38   (BC_4,   CLK,          input,      X),   " &
"39   (BC_4,   *,             internal,   X),   " &
"40   (BC_4,   *,             internal,   X),   " &
"41   (BC_4,   CE2_b,        input,      X),   " &
"42   (BC_4,   BW_A_b,       input,      X),   " &
"43   (BC_4,   BW_B_b,       input,      X),   " &
"44   (BC_4,   BW_C_b,       input,      X),   " &
"45   (BC_4,   BW_D_b,       input,      X),   " &
"46   (BC_4,   CE2,          input,      X),   " &
"47   (BC_4,    CE_b,        input,      X),   " &
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    "48   (BC_4,   A(14),        input,      X),   " &
    "49   (BC_4,   A(16),        input,      X),   " &
    "50   (BC_4,   *,            internal,   X),   " &
    "51   (BC_4,   DP_C,         input,      X),   " &
    "52   (BC_4,   DQ_C(7),      input,      X),   " &
    "53   (BC_4,   DQ_C(6),      input,      X),   " &
    "54   (BC_4,   DQ_C(5),      input,      X),   " &
    "55   (BC_4,   DQ_C(4),      input,      X),   " &
    "56   (BC_4,   DQ_C(3),      input,      X),   " &
    "57   (BC_4,   DQ_C(2),      input,      X),   " &
    "58   (BC_4,   DQ_C(1),      input,      X),   " &
    "59   (BC_4,   DQ_C(0),      input,      X),   " &
    "60   (BC_4,   DQ_D(7),      input,      X),   " &
    "61   (BC_4,   DQ_D(6),      input,      X),   " &
    "62   (BC_4,   DQ_D(5),      input,      X),   " &
    "63   (BC_4,   DQ_D(4),      input,      X),   " &
    "64   (BC_4,   DQ_D(3),      input,      X),   " &
    "65   (BC_4,   DQ_D(2),      input,      X),   " &
    "66   (BC_4,   DQ_D(1),      input,      X),   " &
    "67   (BC_4,   DQ_D(0),      input,      X),   " &
    "68   (BC_4,   DP_D,         input,      X),   " &
    "69   (BC_4,   A(13),        input,      X),   " &
    "70   (BC_4,   A(4),         input,      X),   " &
    "71   (BC_4,   A(3),         input,      X),   " &
    "72   (BC_4,   A(2),         input,      X),   " &
    "73   (BC_4,   A(1),         input,      X),   " &
    "74   (BC_4,   A(0),         input,      X)    " ;

   attribute DESIGN_WARNING of IS61NXX25636:entity is
   "WARNING: THIS DEVICE OPERATES ON A SUBSET OF IEEE STANDARD 1149.1, "&
         "THE JTAG INSTRUCTIONS EXTEST IS NOT 1149.1 COMPLIANT.";


end IS61NXX25636;
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