```
/* fract.yal with db.yal library - an MCSC std. cell benchmark circuit */

MODULE a2s;
  TYPE STANDARD;
  DIMENSIONS 31 -1 31 57 -1 57 -1 -1;
  IOLIST;
    a I 2.5 -1 3 METAL2;
    a I 2.5 57 3 METAL2;
    b I 10.5 57 3 METAL2;
    b I 10.5 -1 3 METAL2;
    q O 26.5 57 3 METAL2;
    q O 26.5 -1 3 METAL2;
    u1 F 18.5 57 3 METAL2;
    u1 F 18.5 -1 3 METAL2;
  ENDIOLIST;
ENDMODULE;
MODULE ai2s;
  TYPE STANDARD;
  DIMENSIONS 23 -1 23 57 -1 57 -1 -1;
  IOLIST;
    a I 2.5 -1 3 METAL2;
    a I 2.5 57 3 METAL2;
    b I 10.5 -1 3 METAL2;
    b I 10.5 57 3 METAL2;
    q O 18.5 -1 3 METAL2;
    q O 18.5 57 3 METAL2;
  ENDIOLIST;
ENDMODULE;
MODULE ai3s;
  TYPE STANDARD;
  DIMENSIONS 31 -1 31 57 -1 57 -1 -1;
  IOLIST;
    a I 2.5 57 3 METAL2;
    a I 2.5 -1 3 METAL2;
    b I 10.5 -1 3 METAL2;
    b I 10.5 57 3 METAL2;
    c I 18.5 -1 3 METAL2;
    c I 18.5 57 3 METAL2;
    q O 26.5 -1 3 METAL2;
    q O 26.5 57 3 METAL2;
  ENDIOLIST;
ENDMODULE;
MODULE ai4s;
  TYPE STANDARD;
  DIMENSIONS 39 -1 39 57 -1 57 -1 -1;
  IOLIST;
    a I 2.5 -1 3 METAL2;
    a I 2.5 57 3 METAL2;
    b I 10.5 -1 3 METAL2;
    b I 10.5 57 3 METAL2;
    c I 18.5 -1 3 METAL2;
    c I 18.5 57 3 METAL2;
    d I 26.5 -1 3 METAL2;
    d I 26.5 57 3 METAL2;
    q O 34.5 -1 3 METAL2;
    q O 34.5 57 3 METAL2;
  ENDIOLIST;
ENDMODULE;
MODULE aoi211s;
  TYPE STANDARD;
  DIMENSIONS 39 -1 39 57 -1 57 -1 -1;
  IOLIST;
    a1 B 2.5 57 3 METAL2;
    a1 B 2.5 -1 3 METAL2;
    a2 I 10.5 -1 3 METAL2;
    a2 I 10.5 57 3 METAL2;
    b I 18.5 -1 3 METAL2;
    b I 18.5 57 3 METAL2;
    c I 26.5 -1 3 METAL2;
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    c I 26.5 57 3 METAL2;
    q O 34.5 57 3 METAL2;
    q O 34.5 -1 3 METAL2;
  ENDIOLIST;
ENDMODULE;
MODULE aoi21s;
  TYPE STANDARD;
  DIMENSIONS 31 -1 31 57 -1 57 -1 -1;
  IOLIST;
    a1 I 2.5 -1 3 METAL2;
    a1 I 2.5 57 3 METAL2;
    a2 I 10.5 57 3 METAL2;
    a2 I 10.5 -1 3 METAL2;
    b I 18.5 -1 3 METAL2;
    b I 18.5 57 3 METAL2;
    q O 26.5 -1 3 METAL2;
    q O 26.5 57 3 METAL2;
  ENDIOLIST;
ENDMODULE;
MODULE aoi221s;
  TYPE STANDARD;
  DIMENSIONS 47 -1 47 57 -1 57 -1 -1;
  IOLIST;
    a1 I 2.5 57 3 METAL2;
    a1 I 2.5 -1 3 METAL2;
    a2 I 10.5 57 3 METAL2;
    a2 I 10.5 -1 3 METAL2;
    b1 I 26.5 -1 3 METAL2;
    b1 I 26.5 57 3 METAL2;
    b2 I 34.5 57 3 METAL2;
    b2 I 34.5 -1 3 METAL2;
    c I 18.5 57 3 METAL2;
    c I 18.5 -1 3 METAL2;
    q O 42.5 -1 3 METAL2;
    q O 42.5 57 3 METAL2;
  ENDIOLIST;
ENDMODULE;
MODULE aoi31s;
  TYPE STANDARD;
  DIMENSIONS 39 -1 39 57 -1 57 -1 -1;
  IOLIST;
    a1 I 2.5 -1 3 METAL2;
    a1 I 2.5 57 3 METAL2;
    a2 I 10.5 57 3 METAL2;
    a2 I 10.5 -1 3 METAL2;
    a3 I 18.5 57 3 METAL2;
    a3 I 18.5 -1 3 METAL2;
    b I 26.5 57 3 METAL2;
    b I 26.5 -1 3 METAL2;
    q O 34.5 57 3 METAL2;
    q O 34.5 -1 3 METAL2;
  ENDIOLIST;
ENDMODULE;
MODULE aoi32s;
  TYPE STANDARD;
  DIMENSIONS 47 -1 47 57 -1 57 -1 -1;
  IOLIST;
    a1 I 2.5 -1 3 METAL2;
    a1 I 2.5 57 3 METAL2;
    a2 I 10.5 -1 3 METAL2;
    a2 I 10.5 57 3 METAL2;
    a3 I 18.5 -1 3 METAL2;
    a3 I 18.5 57 3 METAL2;
    b1 I 26.5 57 3 METAL2;
    b1 I 26.5 -1 3 METAL2;
    b2 I 34.5 -1 3 METAL2;
    b2 I 34.5 57 3 METAL2;
    q O 42.5 57 3 METAL2;
    q O 42.5 -1 3 METAL2;
```

```
    ENDIOLIST;
  ENDMODULE;
  MODULE aoi33s;
    TYPE STANDARD;
    DIMENSIONS 55 -1 55 57 -1 57 -1 -1;
    IOLIST;
      a1 I 2.5 -1 3 METAL2;
      a1 I 2.5 57 3 METAL2;
      a2 I 10.5 -1 3 METAL2;
      a2 I 10.5 57 3 METAL2;
      a3 I 18.5 -1 3 METAL2;
      a3 I 18.5 57 3 METAL2;
      b1 I 26.5 57 3 METAL2;
      b1 I 26.5 -1 3 METAL2;
      b2 I 34.5 -1 3 METAL2;
      b2 I 34.5 57 3 METAL2;
      b3 I 42.5 -1 3 METAL2;
      b3 I 42.5 57 3 METAL2;
      q O 50.5 -1 3 METAL2;
      q O 50.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE dr2s;
    TYPE STANDARD;
    DIMENSIONS 63 -1 63 57 -1 57 -1 -1;
    IOLIST;
      d I 2.5 57 3 METAL2;
      d I 2.5 -1 3 METAL2;
      reset I 18.5 -1 3 METAL2;
      reset I 18.5 57 3 METAL2;
      ck1 I 10.5 -1 3 METAL2;
      ck1 I 10.5 57 3 METAL2;
      ck2 I 42.5 -1 3 METAL2;
      ck2 I 42.5 57 3 METAL2;
      qb O 50.5 -1 3 METAL2;
      qb O 50.5 57 3 METAL2;
      q O 58.5 -1 3 METAL2;
      q O 58.5 57 3 METAL2;
      u1 F 26.5 -1 3 METAL2;
      u1 F 26.5 57 3 METAL2;
      u2 F 34.5 -1 3 METAL2;
      u2 F 34.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE dsr2s;
    TYPE STANDARD;
    DIMENSIONS 71 -1 71 57 -1 57 -1 -1;
    IOLIST;
      d I 10.5 57 3 METAL2;
      d I 10.5 -1 3 METAL2;
      scanin I 26.5 -1 3 METAL2;
      scanin I 26.5 57 3 METAL2;
      reset I 34.5 -1 3 METAL2;
      reset I 34.5 57 3 METAL2;
      ck1 I 2.5 -1 3 METAL2;
      ck1 I 2.5 57 3 METAL2;
      scan_clk I 18.5 -1 3 METAL2;
      scan_clk I 18.5 57 3 METAL2;
      ck2 I 50.5 -1 3 METAL2;
      ck2 I 50.5 57 3 METAL2;
      qb O 58.5 -1 3 METAL2;
      qb O 58.5 57 3 METAL2;
      q O 66.5 -1 3 METAL2;
      q O 66.5 57 3 METAL2;
      u1 F 42.5 -1 3 METAL2;
      u1 F 42.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE i1s;
```

```
    TYPE STANDARD;
    DIMENSIONS 15 -1 15 57 -1 57 -1 -1;
    IOLIST;
      a I 2.5 -1 3 METAL2;
      a I 2.5 57 3 METAL2;
      q O 10.5 -1 3 METAL2;
      q O 10.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE i2s;
    TYPE STANDARD;
    DIMENSIONS 15 -1 15 57 -1 57 -1 -1;
    IOLIST;
      a I 2.5 -1 3 METAL2;
      a I 2.5 57 3 METAL2;
      q O 10.5 -1 3 METAL2;
      q O 10.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE oai211s;
    TYPE STANDARD;
    DIMENSIONS 39 -1 39 57 -1 57 -1 -1;
    IOLIST;
      a1 I 2.5 -1 3 METAL2;
      a1 I 2.5 57 3 METAL2;
      a2 I 10.5 -1 3 METAL2;
      a2 I 10.5 57 3 METAL2;
      b I 18.5 -1 3 METAL2;
      b I 18.5 57 3 METAL2;
      c I 26.5 -1 3 METAL2;
      c I 26.5 57 3 METAL2;
      q O 34.5 57 3 METAL2;
      q O 34.5 -1 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE oai21s;
    TYPE STANDARD;
    DIMENSIONS 31 -1 31 57 -1 57 -1 -1;
    IOLIST;
      a1 I 2.5 -1 3 METAL2;
      a1 I 2.5 57 3 METAL2;
      a2 I 10.5 -1 3 METAL2;
      a2 I 10.5 57 3 METAL2;
      b I 18.5 -1 3 METAL2;
      b I 18.5 57 3 METAL2;
      q O 26.5 -1 3 METAL2;
      q O 26.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE oai221s;
    TYPE STANDARD;
    DIMENSIONS 47 -1 47 57 -1 57 -1 -1;
    IOLIST;
      a1 I 2.5 -1 3 METAL2;
      a1 I 2.5 57 3 METAL2;
      a2 I 10.5 -1 3 METAL2;
      a2 I 10.5 57 3 METAL2;
      b1 I 26.5 -1 3 METAL2;
      b1 I 26.5 57 3 METAL2;
      b2 I 42.5 -1 3 METAL2;
      b2 I 42.5 57 3 METAL2;
      c I 18.5 57 3 METAL2;
      c I 18.5 -1 3 METAL2;
      q O 34.5 -1 3 METAL2;
      q O 34.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE oai22s;
    TYPE STANDARD;
```

```
    DIMENSIONS 39 -1 39 57 -1 57 -1 -1;
    IOLIST;
      a1 I 2.5 -1 3 METAL2;
      a1 I 2.5 57 3 METAL2;
      a2 I 10.5 -1 3 METAL2;
      a2 I 10.5 57 3 METAL2;
      b1 I 34.5 57 3 METAL2;
      b1 I 34.5 -1 3 METAL2;
      b2 I 18.5 -1 3 METAL2;
      b2 I 18.5 57 3 METAL2;
      q O 26.5 -1 3 METAL2;
      q O 26.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE oai31s;
    TYPE STANDARD;
    DIMENSIONS 39 -1 39 57 -1 57 -1 -1;
    IOLIST;
      a1 I 2.5 -1 3 METAL2;
      a1 I 2.5 57 3 METAL2;
      a2 I 10.5 -1 3 METAL2;
      a2 I 10.5 57 3 METAL2;
      a3 I 18.5 -1 3 METAL2;
      a3 I 18.5 57 3 METAL2;
      b I 34.5 57 3 METAL2;
      b I 34.5 -1 3 METAL2;
      q O 26.5 -1 3 METAL2;
      q O 26.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE oai32s;
    TYPE STANDARD;
    DIMENSIONS 47 -1 47 57 -1 57 -1 -1;
    IOLIST;
      a1 I 2.5 -1 3 METAL2;
      a1 I 2.5 57 3 METAL2;
      a2 I 10.5 -1 3 METAL2;
      a2 I 10.5 57 3 METAL2;
      a3 I 18.5 -1 3 METAL2;
      a3 I 18.5 57 3 METAL2;
      b1 I 34.5 -1 3 METAL2;
      b1 I 34.5 57 3 METAL2;
      b2 I 42.5 -1 3 METAL2;
      b2 I 42.5 57 3 METAL2;
      q O 26.5 -1 3 METAL2;
      q O 26.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE oai33s;
    TYPE STANDARD;
    DIMENSIONS 55 -1 55 57 -1 57 -1 -1;
    IOLIST;
      a1 I 2.5 -1 3 METAL2;
      a1 I 2.5 57 3 METAL2;
      a2 I 10.5 -1 3 METAL2;
      a2 I 10.5 57 3 METAL2;
      a3 I 18.5 -1 3 METAL2;
      a3 I 18.5 57 3 METAL2;
      b1 I 34.5 -1 3 METAL2;
      b1 I 34.5 57 3 METAL2;
      b2 I 42.5 -1 3 METAL2;
      b2 I 42.5 57 3 METAL2;
      b3 I 50.5 -1 3 METAL2;
      b3 I 50.5 57 3 METAL2;
      q O 26.5 -1 3 METAL2;
      q O 26.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE oi2s;
```

```
    TYPE STANDARD;
    DIMENSIONS 23 -1 23 57 -1 57 -1 -1;
    IOLIST;
      a I 18.5 -1 3 METAL2;
      a I 18.5 57 3 METAL2;
      b I 2.5 -1 3 METAL2;
      b I 2.5 57 3 METAL2;
      q O 10.5 -1 3 METAL2;
      q O 10.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE oi3s;
    TYPE STANDARD;
    DIMENSIONS 31 -1 31 57 -1 57 -1 -1;
    IOLIST;
      a I 2.5 -1 3 METAL2;
      a I 2.5 57 3 METAL2;
      b I 10.5 -1 3 METAL2;
      b I 10.5 57 3 METAL2;
      c I 26.5 -1 3 METAL2;
      c I 26.5 57 3 METAL2;
      q O 18.5 -1 3 METAL2;
      q O 18.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE oi4s;
    TYPE STANDARD;
    DIMENSIONS 39 -1 39 57 -1 57 -1 -1;
    IOLIST;
      a I 2.5 -1 3 METAL2;
      a I 2.5 57 3 METAL2;
      b I 10.5 -1 3 METAL2;
      b I 10.5 57 3 METAL2;
      c I 26.5 -1 3 METAL2;
      c I 26.5 57 3 METAL2;
      d I 34.5 -1 3 METAL2;
      d I 34.5 57 3 METAL2;
      q O 18.5 -1 3 METAL2;
      q O 18.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE tsbuffs;
    TYPE STANDARD;
    DIMENSIONS 63 -1 63 57 -1 57 -1 -1;
    IOLIST;
      data I 26.5 57 3 METAL2;
      data I 26.5 -1 3 METAL2;
      enable I 10.5 57 3 METAL2;
      enable I 10.5 -1 3 METAL2;
      q O 58.5 57 3 METAL2;
      q O 58.5 -1 3 METAL2;
      u1 F 2.5 -1 3 METAL2;
      u1 F 2.5 57 3 METAL2;
      u2 F 18.5 57 3 METAL2;
      u2 F 18.5 -1 3 METAL2;
      u3 F 34.5 -1 3 METAL2;
      u3 F 34.5 57 3 METAL2;
      u4 F 42.5 -1 3 METAL2;
      u4 F 42.5 57 3 METAL2;
      u5 F 50.5 -1 3 METAL2;
      u5 F 50.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE tscons0s;
    TYPE STANDARD;
    DIMENSIONS 63 -1 63 57 -1 57 -1 -1;
    IOLIST;
      enable I 10.5 57 3 METAL2;
      enable I 10.5 -1 3 METAL2;
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      q O 58.5 57 3 METAL2;
      q O 58.5 -1 3 METAL2;
      u1 F 2.5 -1 3 METAL2;
      u1 F 2.5 57 3 METAL2;
      u2 F 18.5 57 3 METAL2;
      u2 F 18.5 -1 3 METAL2;
      u3 F 26.5 -1 3 METAL2;
      u3 F 26.5 57 3 METAL2;
      u4 F 34.5 -1 3 METAL2;
      u4 F 34.5 57 3 METAL2;
      u5 F 42.5 -1 3 METAL2;
      u5 F 42.5 57 3 METAL2;
      u6 F 50.5 -1 3 METAL2;
      u6 F 50.5 57 3 METAL2;
    ENDIOLIST;
  ENDMODULE;
  MODULE xors;
    TYPE STANDARD;
    DIMENSIONS 39 -1 39 57 -1 57 -1 -1;
    IOLIST;
      a I 2.5 57 3 METAL2;
      a I 2.5 -1 3 METAL2;
      b I 10.5 -1 3 METAL2;
      b I 10.5 57 3 METAL2;
      q O 34.5 57 3 METAL2;
      q O 34.5 -1 3 METAL2;
      u1 F 18.5 -1 3 METAL2;
      u1 F 18.5 57 3 METAL2;
      u2 F 26.5 57 3 METAL2;
      u2 F 26.5 -1 3 METAL2;
    ENDIOLIST;
  ENDMODULE;


  MODULE s109;
    TYPE PARENT;
    DIMENSIONS 0.002 0 0.002 0.002 0 0.002 0 0;
    IOLIST;
      reset I TOP;
      Phi1H I TOP;
      Phi2H I TOP;
      X I TOP;
      Clear I TOP;
      CD16 I TOP;
      CD15 I TOP;
      CD14 I TOP;
      CD13 I TOP;
      CD12 I TOP;
      CD11 I TOP;
      CD10 I TOP;
      CD9 I TOP;
      CD8 I TOP;
      CD7 I TOP;
      CD6 I TOP;
      CD5 I TOP;
      CD4 I TOP;
      CD3 I TOP;
      CD2 I TOP;
      CD1 I TOP;
      CD0 I TOP;
      W O BOTTOM;
      Z O BOTTOM;
    ENDIOLIST;
  NETWORK;
    INS620 i1s I74 II6;
    INS621 oi2s I35 I88 W;
    INS622 oai22s I21 I74 YD2 I72 II5;
    INS623 aoi32s I56 I291 YD3 I22 I307 I39;
    INS624 aoi33s I23 I307 YD3 I82 I291 YD4 I40;
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    INS625 i1s I140 II158;
    INS626 i1s I148 II310;
    INS627 i1s I156 II462;
    INS628 oai22s I25 I140 YD6 I138 II157;
    INS629 oai22s I29 I148 YD10 I146 II309;
    INS630 oai22s I33 I156 YD14 I154 II461;
    INS631 aoi32s I58 I343 YD7 I26 I371 I47;
    INS632 aoi33s I27 I371 YD7 I84 I343 YD8 I48;
    INS633 oai32s I61 I350 I30 YD11 I410 II308;
    INS634 oai33s YD12 I410 I30 I87 I350 I31 II307;
    INS635 aoi32s I62 I359 YD15 I34 I451 I51;
    INS636 aoi33s I35 I451 YD15 I88 I359 YD16 I52;
    INS637 ai3s I285 I603 I610 Z;
    INS638 oi2s I21 I20 I57;
    INS639 ai2s YD6 YD5 I58;
    INS640 oi2s I29 I28 I61;
    INS641 oi2s I33 I32 I63;
    INS642 oi2s I1 YD1 I69;
    INS643 ai2s YD1 I291 I72;
    INS644 ai2s I20 I291 I74;
    INS645 ai2s YD3 I57 I82;
    INS646 oi2s I26 I58 I85;
    INS647 ai2s YD11 I61 I86;
    INS648 ai2s YD15 I63 I88;
    INS649 oi2s YD3 I482 I101;
    INS650 ai2s I101 I23 I122;
    INS651 ai2s YD5 I343 I138;
    INS652 ai2s I24 I343 I140;
    INS653 oi2s I28 I350 I147;
    INS654 ai2s I28 I351 I148;
    INS655 ai2s YD13 I359 I154;
    INS656 ai2s I32 I359 I156;
    INS657 oi2s YD5 I122 I159;
    INS658 ai2s I26 I487 I202;
    INS659 oi2s I202 YD8 I219;
    INS660 ai2s I28 I219 I226;
    INS661 ai2s I30 I519 I242;
    INS662 ai3s YD11 CD11 I519 I246;
    INS663 oi2s YD12 I242 I249;
    INS664 ai3s YD13 CD13 I249 I256;
    INS665 oi2s I522 YD14 I261;
    INS666 aoi211s X CD0 I559 I563 I277;
    INS667 ai3s I530 I555 I542 I282;
    INS668 oi3s I584 I578 I282 I285;
    INS669 oi2s Clear I1 I291;
    INS670 oi2s I21 I72 I307;
    INS671 oi3s Clear I23 I82 I343;
    INS672 oi3s Clear I27 I84 I351;
    INS673 oi3s Clear I31 I86 I359;
    INS674 oi2s I25 I138 I371;
    INS675 ai2s YD10 I147 I410;
    INS676 oi2s I33 I154 I451;
    INS677 ai2s I21 I69 I482;
    INS678 oi2s YD6 I158 I487;
    INS679 aoi33s YD7 CD7 I487 CD6 YD6 I159 I503;
    INS680 aoi33s YD8 CD8 I203 YD4 CD4 I101 I515;
    INS681 oi2s YD10 I226 I519;
    INS682 ai2s I249 I32 I522;
    INS683 ai3s CD15 YD15 I261 I530;
    INS684 ai4s CD16 YD16 I34 I261 I542;
    INS685 ai4s I256 I503 I246 I515 I554;
    INS686 oi3s I22 I16 I482 I559;
    INS687 oi3s I31 I7 I242 I563;
    INS688 oai31s I14 I24 I122 I277 I578;
    INS689 oai33s I9 I29 I226 I33 I5 I522 I584;
    INS690 aoi33s X CD1 YD1 CD2 YD2 I69 I603;
    INS691 ai3s CD9 YD9 I219 I610;
    INS692 i1s X I1;
    INS693 i1s CD14 I5;
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    INS694 i1s CD12 I7;
    INS695 i1s CD10 I9;
    INS696 i1s CD5 I14;
    INS697 i1s CD3 I16;
    INS698 i1s YD1 I20;
    INS699 i1s YD2 I21;
    INS700 i1s YD3 I22;
    INS701 i1s YD4 I23;
    INS702 i1s YD5 I24;
    INS703 i1s YD6 I25;
    INS704 i1s YD7 I26;
    INS705 i1s YD8 I27;
    INS706 i1s YD9 I28;
    INS707 i1s YD10 I29;
    INS708 i1s YD11 I30;
    INS709 i1s YD12 I31;
    INS710 i1s YD13 I32;
    INS711 i1s YD14 I33;
    INS712 i1s YD15 I34;
    INS713 i1s YD16 I35;
    INS714 i1s I39 II4;
    INS715 i1s I40 II3;
    INS716 i1s I47 II156;
    INS717 i1s I48 II155;
    INS718 i1s I51 II460;
    INS719 i1s I52 II459;
    INS720 i1s I57 I56;
    INS721 i1s I63 I62;
    INS722 i1s I85 I84;
    INS723 i1s I86 I87;
    INS724 i1s I147 I146;
    INS725 i1s I159 I158;
    INS726 i1s I202 I203;
    INS727 i1s I351 I350;
    INS728 i1s I554 I555;
    IIFS1 dr2s II3 reset Phi1H Phi2H II7 YD4;
    IIFS10 dr2s II308 reset Phi1H Phi2H II312 YD11;
    IIFS11 dr2s II309 reset Phi1H Phi2H II313 YD10;
    IIFS12 dr2s II310 reset Phi1H Phi2H II314 YD9;
    IIFS13 dr2s II459 reset Phi1H Phi2H II463 YD16;
    IIFS14 dr2s II460 reset Phi1H Phi2H II464 YD15;
    IIFS15 dr2s II461 reset Phi1H Phi2H II465 YD14;
    IIFS16 dr2s II462 reset Phi1H Phi2H II466 YD13;
    IIFS2 dr2s II4 reset Phi1H Phi2H II8 YD3;
    IIFS3 dr2s II5 reset Phi1H Phi2H II9 YD2;
    IIFS4 dr2s II6 reset Phi1H Phi2H II10 YD1;
    IIFS5 dr2s II155 reset Phi1H Phi2H II159 YD8;
    IIFS6 dr2s II156 reset Phi1H Phi2H II160 YD7;
    IIFS7 dr2s II157 reset Phi1H Phi2H II161 YD6;
    IIFS8 dr2s II158 reset Phi1H Phi2H II162 YD5;
    IIFS9 dr2s II307 reset Phi1H Phi2H II311 YD12;
    ENDNETWORK;
  ENDMODULE;
```