



Behavioral DS3 Over SONET Generator and Analyzer Data Sheet

-Generator Features

- Completely supports the standard DS3 generator.
- ANSI T1.107-1995 compliant DS3 frame formats.
- Completely supports standard Synopsys Telecom Workbench generator.
- VHDL/Verilog components generate DS3 data. Standard Synopsys SONET Telecom Generator is used to carry the generated DS3 payload.
- Completely configurable via a command language and command interpreter.

Generator Entity Description

Entity for STS12 Generator

ENTITY ds3_sts12_gen IS

```

generic (
  sts12_command_file      : string;
  sts12_display_file      : string := "";
  sts12_dump_file         : string := "";
  sts12_display           : boolean := true;
  DISTANCE                 : natural := 3;
  THREE_CONSECUTIVE       : positive := 3;
  N_CONSECUTIVE           : positive := 8;
  AIS_TO_LOP_ENABLE       : boolean := true;
  SS_BITS_REF              : std_ulogic_vector(1 downto 0)
                          := "00";

  MESSAGE                 : string := "";
  COMP_NO                 : positive; --Component number
  pdh_Cmd_File_Name       : string;
  pdh_Dump_File_Name      : string;
  pdh_Log_File_Name       : string;
  pdh_Payload_file_in     : string
)
  port (
    sts12                  : out std_logic_vector;
    clock                  : in std_logic;
    eog                    : out boolean := false;
    toh                    : out std_logic := '0';
    j1                     : out std_logic := '0';
    spe                    : out std_logic := '0';
    row                    : out positive;
    col                    : out positive;
    sts1                   : out positive
  );
END ds3_sts12_gen;

```

Analyzer Features

- Completely supports standard DS3 Analyzer
- Completely supports standard Synopsys Telecom Workbench analyzer
- Supporting analyzer will monitor DS3 over SONET data.
- Completely configurable via a command language and command interpreter

Analyzer Entity Description

Entity for STS12 Analyzer

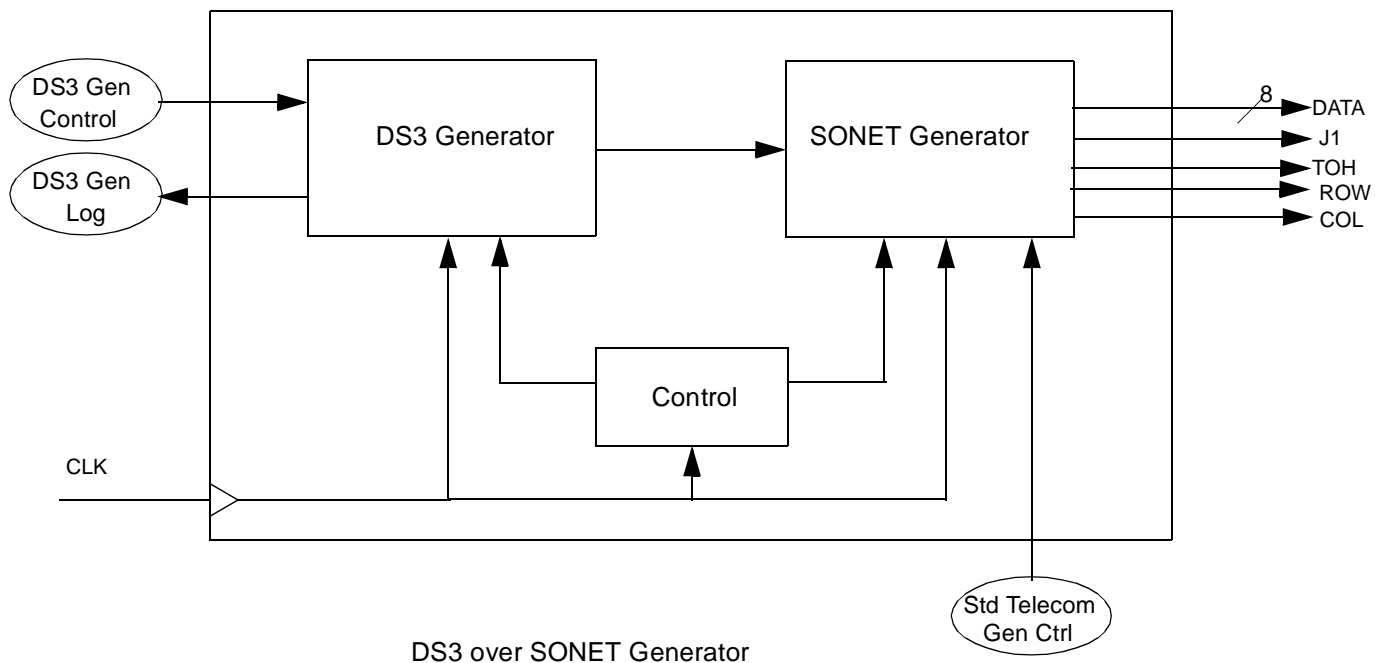
ENTITY sts12_ds3_ana IS

```

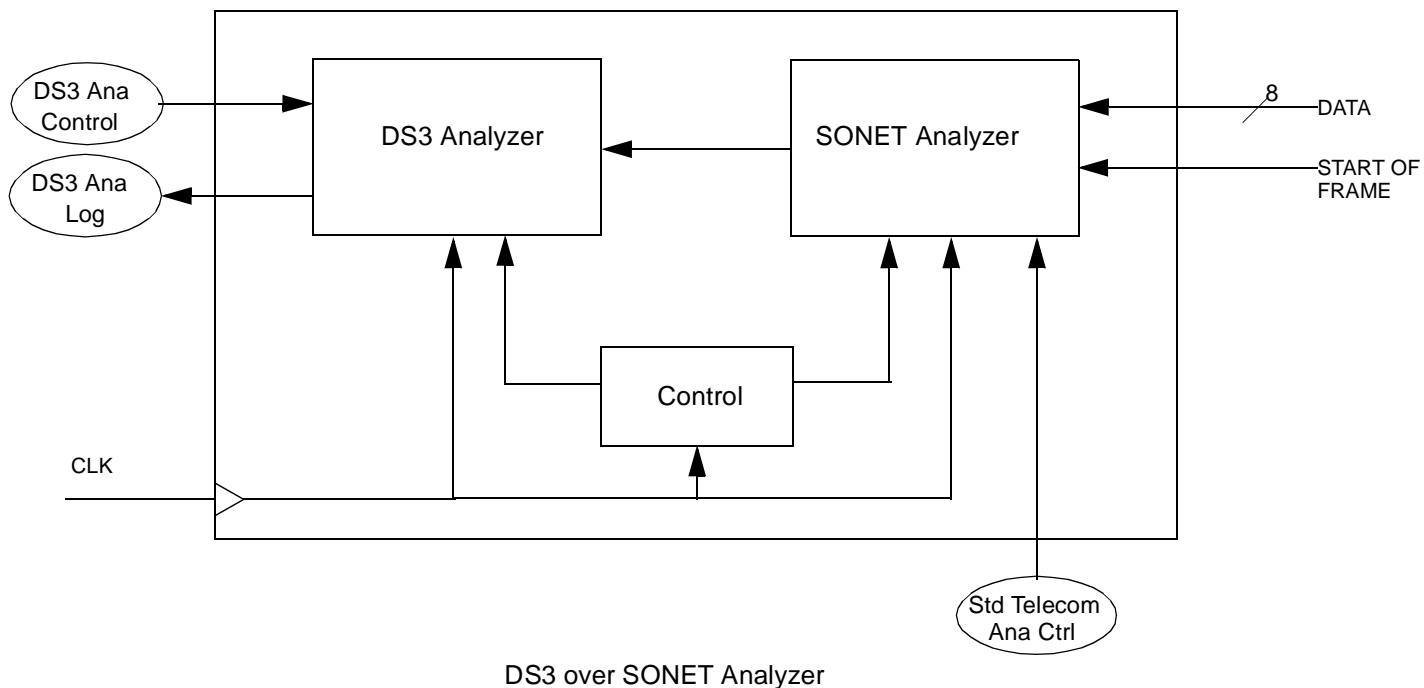
generic (
  sts12_command_file      : string;
  sts12_display_file      : string := "";
  sts12_dump_file         : string := "";
  sts12_display           : boolean := true;
  sts12_ref_file          : string := "";
  sts12_file_in           : string := "";
  DISTANCE                 : natural := 3;
  THREE_CONSECUTIVE       : positive := 3;
  N_CONSECUTIVE           : positive := 8;
  AIS_TO_LOP_ENABLE       : boolean := true;
  SS_BITS_REF              : std_ulogic_vector(1downto 0)
                          := "00";

  AUTO_SYNCH               : boolean := true;
  MAX_INT                  : natural := 0;
  MESSAGE                 : string := "";
  ds3_Cmd_File_Name       : string;
  ds3_Dump_File_Name      : string;
  ds3_Log_File_Name       : string;
  ds3_Payload_file_in     : string;
  framer_ext               : boolean
);
  port (
    sts12                  : in std_logic_vector;
    clock                  : in std_logic;
    start_of_frame         : in std_logic
  );
END sts12_ds3_ana;

```



DS3 over SONET Generator



DS3 over SONET Analyzer