



## Behavioral E3 Over SONET Generator and Analyzer Data Sheet

### Generator Features

- Completely supports the standard E3 generator.
- ITU-T G.707-1996 compliant G.751 & G.832 frame formats
- Completely supports standard Synopsys Telecom Workbench generator.
- VHDL/Verilog components generate E3 data. Standard Synopsys SONET Telecom Generator is used to carry the generated E3 payload.
- Completely configurable via a command language and command interpreter

### Generator Entity Description

Entity for STS12 Gen

ENTITY e3\_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 e3_sts12_gen;

```

### Analyzer Features

- Completely supports standard E3 Analyzer
- Completely supports standard Synopsys Telecom Workbench analyzer
- Supporting analyzer will monitor E3 over SONET data.
- Completely configurable via a command language and command interpreter.

### Analyzer Entity Description

Entity for STS12 Ana

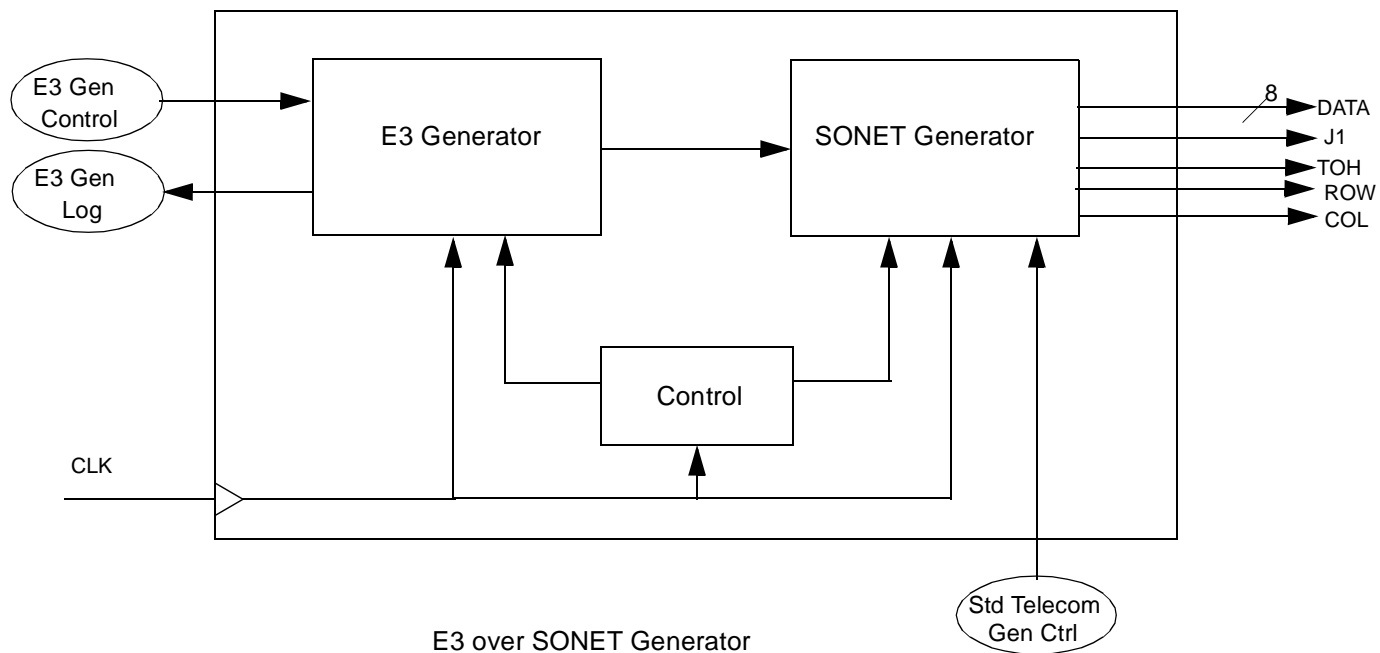
ENTITY sts12\_e3\_ana IS

```

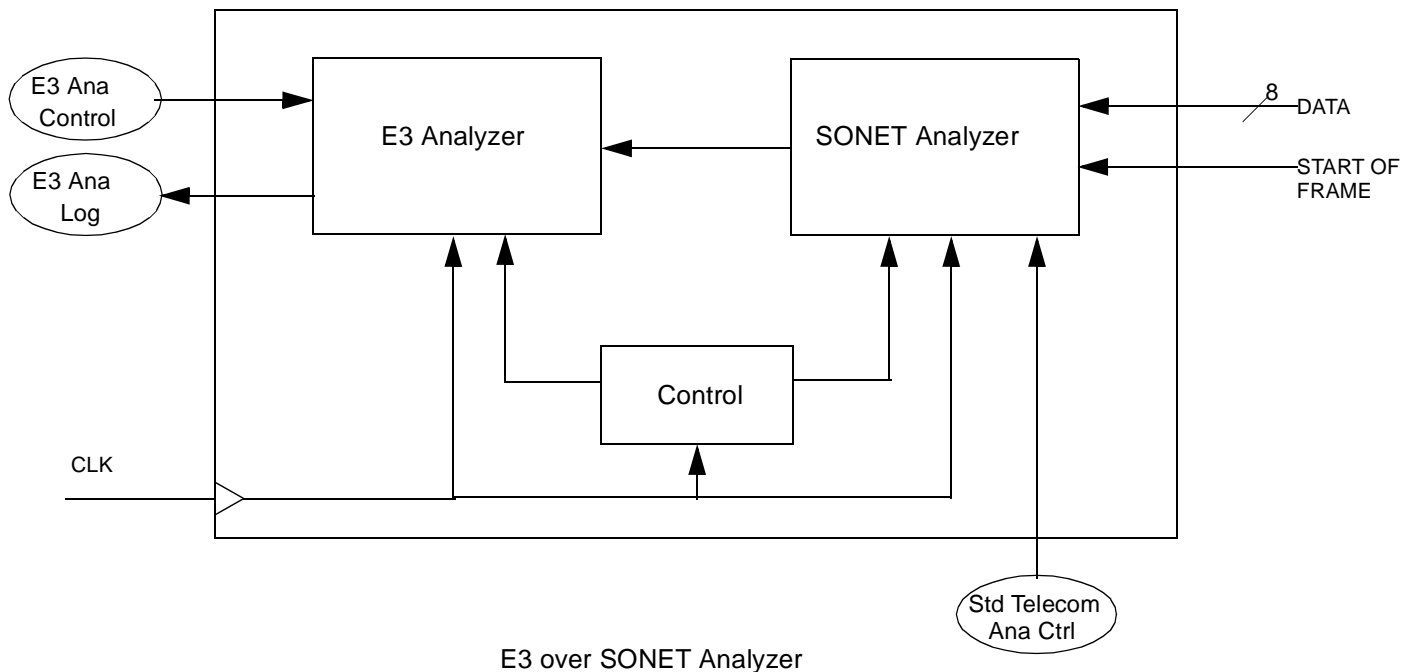
generic (
  sts12_command_file      : string;
  sts12_display_file      : string := "";
  sts12_dump_file         : string := "";
  sts12_display           : boolean := true;
  sts12_ref_file          : string := "";
  sts12_file_in           : string := "";
  DISTANCE                 : natural := 3;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

  AUTO_SYNC                : 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_e3_ana;

```



E3 over SONET Generator



E3 over SONET Analyzer