

Configuring Channelized STM1 Interfaces

To specify the channel number, include it after the colon (:) in the interface name. For example, a Channelized STM1-to-E1 PIC in FPC 1 and slot 1 will have the following physical interface, depending on the media type:

```
e1-1/1/0:x
```

The E1 channel number can be from 0 through 62.

This section contains the following topics:

- Configuring Channelized STM1 Interface Properties on page 1
- Configuring Virtual Tributary Mapping of Channelized STM1 Interfaces on page 2

Configuring Channelized STM1 Interface Properties

To configure the interface properties for Channelized STM1-to-E1 PICs, include the **e1-options** and **sonet-options** statements for both sides of the connection. The following configurations list all the valid statements.

To specify options for each of the E1 channels on the Channelized STM1-to-E1 PIC, include the **e1-options** statement at the [edit interfaces *interface-name*] hierarchy level:

```
[edit interfaces interface-name]  
e1-options {  
    bert-error-rate;  
    bert-period;  
    fcs (16 | 32);  
    [Unresolved xref] (g704 | g704-no-crc4 | unframed);  
    idle-cycle-flag (flags | ones);  
    [Unresolved xref] (local | remote);  
    start-end-flag (filler | shared);  
    timeslots time-slot-number;  
}
```



NOTE: When a channelized STM1 interface experiences a line transition, the E1 channels configured in unframed mode log a large number of drops (around 24,000) as the channelized STM1 interface clocks resynchronize. This does not occur on framed channels, because the framing resynchronizes clocks very quickly.

To specify options for the SONET/SDH side of the connection, include the **sonet-options** statement at the [edit interfaces *interface-name*] hierarchy level:

```
[edit interfaces interface-name]  
sonet-options {  
    aps {  
        [Unresolved xref] milliseconds;  
        authentication-key key;
```

```

force;
[Unresolved xref] milliseconds;
lockout;
neighbor address;
paired-group group-name;
protect-circuit group-name;
request;
revert-time seconds;
switching-mode (bidirectional | unidirectional);
working-circuit group-name;
}
bytes {
  e1-quiet value;
  f1 value;
  f2 value;
  s1 value;
  z3 value;
  z4 value;
}
[Unresolved xref] (local | remote);
}

```



NOTE: On channelized STM1 interfaces, you should configure the clock source on one side of the connection to be internal (the default JUNOS configuration) and on the other side of the connection to be external.

For information about Frame Relay DLCI limitations for channelized interfaces, see [\[Unresolved xref\]](#). For more information about Frame Relay DLCIs, see *Configuring Frame Relay DLCIs*. For information about DLCI sparse mode, see the *JUNOS System Basics Configuration Guide*.

For more information about specific statements, see [\[Unresolved xref\]](#), [\[Unresolved xref\]](#), and [\[Unresolved xref\]](#). For a configuration example, see [\[Unresolved xref\]](#).

Configuring Virtual Tributary Mapping of Channelized STM1 Interfaces

You can configure virtual tributary mapping to use KLM mode or ITU-T mode. To configure virtual tributary mapping, include the `vtmapping` statement at the `[edit chassis fpc slot-number pic pic-number]` hierarchy level:

```

[edit chassis fpc slot-number pic pic-number]
vtmapping (klm | itu-t);

```

By default, virtual tributary mapping uses KLM mode. For more information, see the *JUNOS System Basics Configuration Guide*.

For the Channelized STM1 IQ and IQE PICs, you can configure virtual tributary mapping by including the `vtmapping` statement at the `[edit interfaces cau4-fpc/pic/port sonet-options]` hierarchy level:

```

[edit interfaces cau4-fpc/pic/port sonet-options]

```

vtmapping (klm | itu-t);

Table 1 lists the KLM mappings used by the channelized STM1-to-E1 PIC interfaces. The PIC defaults to KLM numbering with an offset of –1; for example, KLM 1 = STM1 PIC 0.

Table 1: Channelized STM1-to-E1 Channel Mapping

Channel Number	KLM Number	Tributary Unit Group 3	Tributary Unit Group 2	Virtual Tributary	ITU-T Number
0	1	1	1	1	1
1	2	1	1	2	22
2	3	1	1	3	43
3	4	1	2	1	4
4	5	1	2	2	25
5	6	1	2	3	46
6	7	1	3	1	7
7	8	1	3	2	28
8	9	1	3	3	49
9	10	1	4	1	10
10	11	1	4	2	31
11	12	1	4	3	52
12	13	1	5	1	13
13	14	1	5	2	34
14	15	1	5	3	55
15	16	1	6	1	16
16	17	1	6	2	37
17	18	1	6	3	58
18	19	1	7	1	19
19	20	1	7	2	40
20	21	1	7	3	61
21	22	2	1	1	2
22	23	2	1	2	23

Table 1: Channelized STM1-to-E1 Channel Mapping *(continued)*

Channel Number	KLM Number	Tributary Unit Group 3	Tributary Unit Group 2	Virtual Tributary	ITU-T Number
23	24	2	1	3	44
24	25	2	2	1	5
25	26	2	2	2	26
26	27	2	2	3	47
27	28	2	3	1	8
28	29	2	3	2	29
29	30	2	3	3	50
30	31	2	4	1	11
31	32	2	4	2	32
32	33	2	4	3	53
33	34	2	5	1	14
34	35	2	5	2	35
35	36	2	5	3	56
36	37	2	6	1	17
37	38	2	6	2	38
38	39	2	6	3	59
39	40	2	7	1	20
40	41	2	7	2	41
41	42	2	7	3	62
42	43	3	1	1	3
43	44	3	1	2	24
44	45	3	1	3	45
45	46	3	2	1	6
46	47	3	2	2	27
47	48	3	2	3	48
48	49	3	3	1	9
49	50	3	3	2	30

Table 1: Channelized STM1-to-E1 Channel Mapping *(continued)*

Channel Number	KLM Number	Tributary Unit Group 3	Tributary Unit Group 2	Virtual Tributary	ITU-T Number
50	51	3	3	3	51
51	52	3	4	1	12
52	53	3	4	2	33
53	54	3	4	3	54
54	55	3	5	1	15
55	56	3	5	2	36
56	57	3	5	3	57
57	58	3	6	1	18
58	59	3	6	2	39
59	60	3	6	3	60
60	61	3	7	1	21
61	62	3	7	2	42
62	63	3	7	3	63

