



# Enabling Support for Tunable DWDM-XFP-C

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The dense wavelength-division multiplexing (DWDM) wavelengths of the DWDM-XFP-C module on the Cisco ASR 1000 Series Aggregation Services Routers is tunable. You can configure the DWDM ITU wavelengths using the **itu channel** command in the interface configuration mode. The **itu channel** command ensures that the traffic continues to flow.

The following table contains the wavelength mapping information for the DWDM-XFP-C module.

**Table 1: DWDM-XFP-C Wavelength Mapping**

Channel	Frequency (THz)	Wavelength (nm)
1	191.95	1561.83
2	192.00	1561.42
3	192.05	1561.01
4	192.10	1560.61
5	192.15	1560.20
6	192.20	1559.79
7	192.25	1559.39
8	192.30	1558.98
9	192.35	1558.58
10	192.40	1558.17
11	192.45	1557.77
12	192.50	1557.36
13	192.55	1556.96
14	192.60	1556.55
15	192.65	1556.15

<b>Channel</b>	<b>Frequency (THz)</b>	<b>Wavelength (nm)</b>
16	192.70	1555.75
17	192.75	1555.34
18	192.80	1554.94
19	192.85	1554.54
20	192.90	1554.13
21	192.95	1553.73
22	193.00	1553.33
23	193.05	1552.93
24	193.10	1552.52
25	193.15	1552.12
26	193.20	1551.72
27	193.25	1551.32
28	193.30	1550.92
29	193.35	1550.52
30	193.40	1550.12
31	193.45	1549.72
32	193.50	1549.32
33	193.55	1548.91
34	193.60	1548.51
35	193.65	1548.11
36	193.70	1547.72
37	193.75	1547.32
38	193.80	1546.92
39	193.85	1546.52
40	193.90	1546.12
41	193.95	1545.72
42	194.00	1545.32
43	194.05	1544.92

<b>Channel</b>	<b>Frequency (THz)</b>	<b>Wavelength (nm)</b>
44	194.10	1544.53
45	194.15	1544.13
46	194.20	1543.73
47	194.25	1543.33
48	194.30	1542.94
49	194.35	1542.54
50	194.40	1542.14
51	194.45	1541.75
52	194.50	1541.35
53	194.55	1540.95
54	194.60	1540.56
55	194.65	1540.16
56	194.70	1539.77
57	194.75	1539.37
58	194.80	1538.98
59	194.85	1538.58
60	194.90	1538.19
61	194.95	1537.79
62	195.00	1537.40
63	195.05	1537.00
64	195.10	1536.61
65	195.15	1536.22
66	195.20	1535.82
67	195.25	1535.43
68	195.30	1535.04
69	195.35	1534.64
70	195.40	1534.25
71	195.45	1533.86

## Configuring the DWDM-XFP-C Module

Channel	Frequency (THz)	Wavelength (nm)
72	195.50	1533.47
73	195.55	1533.07
74	195.60	1532.68
75	195.65	1532.29
76	195.70	1531.90
77	195.75	1531.51
78	195.80	1531.12
79	195.85	1530.72
80	195.90	1530.33
81	195.95	1529.94
82	196.00	1529.55

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# Configuring the DWDM-XFP-C Module

Perform the following procedure to configure the DWDM-XFP-C module.

## SUMMARY STEPS

1. **enable source-interface gigabitethernet slot/port**
2. **configure terminal**
3. **interface tengigabitethernet slot/port**
4. **itu channel number**

## DETAILED STEPS

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	<b>enable source-interface gigabitethernet slot/port</b>  <b>Example:</b>  Router# enable	Enables the privileged EXEC mode. If prompted, enter your password.
<b>Step 2</b>	<b>configure terminal</b>  <b>Example:</b>	Enters the global configuration mode.

	<b>Command or Action</b>	<b>Purpose</b>
	Router# configure terminal	
<b>Step 3</b>	<b>interface tengigabitethernet slot/port</b>  <b>Example:</b> Router(config)# interface tengigabitethernet 4/11	Specifies the 10-Gigabit Ethernet interface to be configured.  Here: slot/port—Specifies the location of the interface.
<b>Step 4</b>	<b>itu channel number</b>  <b>Example:</b> Router(config-if)# itu channel 28	Sets the ITU channel.  number—Specifies the ITU channel number. The acceptable values are from 1–82.

## Verifying the ITU Configuration

The following example shows how to use the **show hw-module subslot** command to check an ITU configuration:

```
Router# enable
Router# conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int tenGigabitEthernet 1/2/0
Router(config-if)#itu channel 20
Router(config-if)#
Router#
Router# show hw-module subslot 1/2 transceiver 0 idpr dump
Description = XFP optics (type 6)
Transceiver Type: = TUNABLE DWDM XFP (194)
Product Identifier (PID) = DWDM-XFP-C
Frequency Set for Tunable DWDM = 195.5 THz
Vendor Revision = 00
Serial Number (SN) = JFX1617800W
Vendor Name = CISCO-JDSU
Vendor OUI (IEEE company ID) = 00.01.9C (412)
CLEI code = IP9IAGGCAB
Cisco part number = 10-2544-02
Device State = Disabled.
XFP IDPROM Page 0x0:
000: 0C 00 49 00 F8 00 46 00 FB 00
010: 00 00 00 00 00 00 00 A6 04
020: 09 C4 8C A0 13 88 9B 83 13 93
030: 62 1F 1F 07 0F 8D 00 0A 09 CF
040: 00 10 00 18 FF E8 00 0C FF F4
050: 00 00 00 00 00 00 00 00 00 00
060: 00 BF 25 1C 00 C4 00 00 01 F4
070: 00 00 00 00 00 00 00 00 00 00
080: 00 00 00 00 9E 20 00 00 00 00
090: 00 00 00 00 00 00 1E 7C 00 00
100: 00 00 00 01 00 00 00 00 00 00
110: E2 98 00 14 00 00 00 00 00 00 <<See byte 113, the hexa decimal
equivalent for ITU channel 20>>
120: 00 00 00 00 00 00 00 01
XFP IDPROM Page 0x1:
128: 0C 98 07 00 00 00 00 00 00 00
138: 08 B4 63 71 50 00 00 00 00 9F
148: 43 49 53 43 4F 2D 4A 44 53
```

## Verifying the ITU Configuration