Omnitron Optical CWDM Transceivers

SFP Transceivers for CWDM Wavelengths

Omnitron Small Form Pluggable (SFP) optical CWDM transceivers are interchangeable compact fiber connectors that enable connectivity between existing network equipment and CWDM passive devices.

Omnitron optical CWDM transceivers can be used with iConverter®, FlexPoint™, OmniConverter®, RuggedNet® and miConverter™ products that support SFP transceivers. CWDM transceivers support single-mode dual fiber applications with Coarse Wave Division Multiplexing (CWDM) wavelengths.

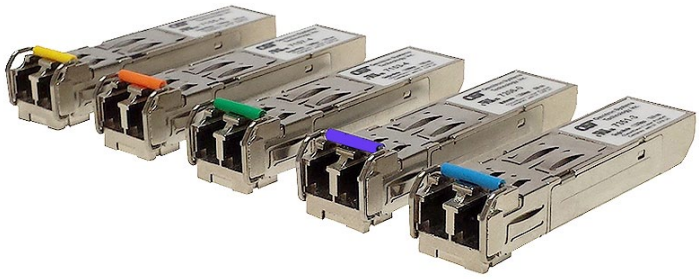
Omnitron optical CWDM transceivers can be installed in network equipment with SFP connectors to provide a CWDM wavelength that can be connected to a matching wavelength channel port on a CWDM multiplexer. For legacy equipment with copper of fixed fiber ports, transponders and media converters with SFP transceivers provide a convenient and inexpensive method to convert to CWDM wavelengths.

When used with CWDM Multiplexers, CWDM transceivers increase network capacity by transmitting multiple data channels using separate optical wavelengths (1270nm to 1610nm) on the same fiber pair. These wavelengths are compliant to the ITU-T G.694.2 CWDM standard.

CWDM transceivers reduce network equipment inventories by eliminating the need to maintain surplus units/devices of various fiber types for network repairs or upgrades. They also enable network upgrades by providing interchangeable fiber connectors that can easily adapt to and modify any existing network.

Based on the MSA SFF-8472 standard, Omnitron CWDM optical transceivers support digital diagnostic capabilities, providing enhanced diagnostic information to assist network administrators with network maintenance and management. When used with managed Omnitron products, CWDM optical transceivers can collect enhanced, real time optical diagnostic information including fiber optic TX and RX power, voltage and transceiver temperature.

By providing compact physical size and the ease of interchangeability, Omnitron optical transceivers provide a cost-effective and flexible solution for fiber optic network design.



KEY FEATURES

- Omnitron optical CWDM transceivers enable flexible fiber and copper connectivity between existing equipment and CWDM Multiplexers
- Compatible with Omnitron products that support SFP transceivers
- Compliant with IEEE 802.3u Fast Ethernet, IEEE 802.3z Gigabit Ethernet specifications
- Supports standard wavelengths in the spectrum defined by ITU-T G.694.2
- Compliant with MSA SFF-8472 standard, which provides interoperability with other network devices
- Digital Diagnostic capability
- Compliant with RoHS, WEEE, REACH and UKCA
- Low EMI metal enclosure
- Case Operating Temperature:
  Commercial (0° C to +70° C) and
  Industrial (-40° C to +85° C)
- One (1) Year Warranty and free 24/7 Technical Support

Omnitron Systems

ORDERING INFORMATION

Fiber CWDM SFPs supporting Fast Ethernet, SONET OC-3 and SDH STM-1 network protocols.									
Model	**Spec. Distance (km)**	**Wavelength (nm)**	**Center Wavelength (nm)**	**Min. Tx Power (dBm)**	**Max. Tx Power (dBm)**	**Min. Rx Sensitivity (dBm)**	**Max. Rx Power (dBm)**	**Min. Attenuation (dBm)**	**Link Budget (dBm)**
71λλ-1t	60	1270 to 1450	1271 to 1451	-5	0	-34	-3	3	29
71λλ-2t	80	1270 to 1450	1271 to 1451	-3	2	-36	-3	5	33
71λλ-3t	100	1270 to 1450	1271 to 1451	0	5	-36	-3	8	36
71λλ-4t	120	1470 to 1610	1471 to 1611	-5	0	-34	-3	3	29
71λλ-5t	140	1470 to 1610	1471 to 1611	-3	2	-36	-3	5	33
71λλ-6t	150	1470 to 1610	1471 to 1611	0	5	-36	-3	8	36

ITU-T G.652 single-mode fiber optic cable is not optimized for CWDM wavelengths from 1360nm to 1460nm due to high attenuation.

Base Model Number: 71λλ-xt

Select the model from ordering table above.

Add the wavelength (λλ) and operating temperature range (**t**) to the model type selected.

Wavelength Options (λλ):

27 (1270nm)	35 (1350nm)	43 (1430nm)	51 (1510nm)	59 (1590nm)
29 (1290nm)	37 (1370nm)	45 (1450nm)	53 (1530nm)	61 (1610nm)
31 (1310nm)	39 (1390nm)	47 (1470nm)	55 (1550nm)	
33 (1330nm)	41 (1410nm)	49 (1490nm)	57 (1570nm)	

For 71λλ-1t, 71λλ-2t and 71λλ-3t wavelengths 1270 to 1450 are only available (60km, 80km and 100km distance).

For 71λλ-4t, 71λλ-5t and 71λλ-6t wavelengths 1470 to 1610 are only available (120km, 140km and 150km distance).

Case Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 70°C)	**Z** = Industrial temperature (-40 to 85°C) Not available on all models. Contact Omnitron to verify.

End user needs to ensure case temperature is not exceeded for the model purchased.
Contact Omnitron for other fiber options.

Fiber CWDM SFPs supporting Gigabit Ethernet, SONET OC-12 and SDH STM-4 network protocols.									
Model	**Spec. Distance (km)**	**Wavelength (nm)**	**Center Wavelength (nm)**	**Min. Tx Power (dBm)**	**Max. Tx Power (dBm)**	**Min. Rx Sensitivity (dBm)**	**Max. Rx Power (dBm)**	**Min. Attenuation (dBm)**	**Link Budget (dBm)**
73λλ-1t	40	1270 to 1610	1271 to 1611	-5	0	-24	-3	3	19
73λλ-4t	80	1470 to 1610	1471 to 1611	0	5	-24	-3	8	24
73λλ-5t	120	1470 to 1610	1471 to 1611	0	5	-32	-9	14	32
73λλ-6t	150	1470 to 1610	1471 to 1611	2	7	-35	-9	16	37

ITU-T G.652 single-mode fiber optic cable is not optimized for CWDM wavelengths from 1360nm to 1460nm due to high attenuation.

Base Model Number: 73λλ-xt

Select the model from ordering table above.

Add the wavelength (λλ) and operating temperature range (**t**) to the model type selected.

Wavelength Options (λλ):

27 (1270nm)	35 (1350nm)	43 (1430nm)	51 (1510nm)	59 (1590nm)
29 (1290nm)	37 (1370nm)	45 (1450nm)	53 (1530nm)	61 (1610nm)
31 (1310nm)	39 (1390nm)	47 (1470nm)	55 (1550nm)	
33 (1330nm)	41 (1410nm)	49 (1490nm)	57 (1570nm)	

For 73λλ-1t, wavelengths 1270 to 1610 are available (40km distance).

For 73λλ-4t, 73λλ-5t and 73λλ-6t wavelengths 1470 to 1610 are only available (80km, 120km and 150km distance).

Case Operating Temperature Options (t):

<leave blank> = Commercial temperature (0 to 70°C)	**Z** = Industrial temperature (-40 to 85°C) Not available on all models. Contact Omnitron to verify.

End user needs to ensure case temperature is not exceeded for the model purchased.
Contact Omnitron for other fiber options.

In most case, a CWDM network design will include multiplexers and/or add/drop devices. These devices will have insertion loss. When selecting a CWDM SFP transceiver, select the model that will meet the link budget of the network design. The link budget includes multiplexer, add/drop devices and the loss across the fiber. Always add an additional 3dBm to the link budget for a safety margin. Register to access the white paper titled "CWDM Design Guide" for more information on designing CWDM network over single-mode fiber.