

# SCALABLE CWDM SOLUTION FOR HIGH-CAPACITY MEDIA NETWORKS

## Nimbra 120

is a compact and easy-to-deploy CWDM filter solution that provides scalability and cost-effectiveness for service providers and professional media network operators.

Together with CWDM SFP modules in the Nimbra One/300/600 family of multiservice switches, the Nimbra 120 forms a scalable and highly flexible optical networking solution.

Main applications for the Net Insight CWDM solution are found in the high-capacity professional media, CATV, and IPTV market segments. In many of those networks multiple 2.5 Gbps links are needed to interconnect sites. The Nimbra 120 CWDM solution will eliminate the need for multiple fiber pairs by optically multiplexing a number of OC-48/STM-16 or OC-12/STM-4 signals onto a single fiber. Service providers and broadcasters will hence benefit from higher fiber utilization and lower fiber leasing costs. Network expansion is seamlessly achieved by adding more trunk modules with CWDM SFPs in the Nimbra One/300/600 switches and connecting those to the optical multiplexing ports of the Nimbra 120.

The optical multiplexing functionality is housed in a compact 1 RU high chassis that can be installed in a standard 19" rack. Nimbra 120 is an entirely passive, high-reliability device that does not require any power feeding. The chassis houses two slots for plug-in modules that can be selected from a wide range of optical add-drop multiplexers (OADMs) and terminating multiplexers/demultiplexers (mux/demux). Nimbra 120 supports both fiber-pair and single-fiber solutions with unidirectional or bidirectional transmission of wavelengths.

The Net Insight CWDM solution can be deployed in any network topology; point-to-point, bus, ring, or mesh. The combination of the scalable optical layer in Nimbra 120 with the powerful switching and end-to-end provisioning in the Nimbra One/300/600 products offers an unprecedented networking flexibility.



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**COST-EFFECTIVE AND HIGHLY RELIABLE PASSIVE CWDM FILTER  
SOLUTION FOR HIGH-CAPACITY PROFESSIONAL MEDIA AND TRIPLE  
PLAY NETWORKS**

## KEY FEATURES

The most important characteristics of the Net Insight CWDM solution are:

- > **Scalability.** Nimbra 120 supports up to 8 CWDM wavelengths corresponding to 20 Gbps capacity per singlemode fiber. Express channels on mux/demux units allow for easy capacity upgrades. A DWDM option allows for up to 16 x 10Gbps capacity.
  - > **Easy Deployment.** The Nimbra 120 is a passive device and requires no power. Neither the filter modules nor the SFP modules in the Nimbra One/300/600 switches require any configuration which makes the solution true plug-and-play.
  - > **High Availability.** The passive nature of the Nimbra 120 and the use of proven thin film technology ensures extremely high reliability. Restoration functions in the Nimbra switches further strengthen the end-to-end availability.
  - > **Interoperability.** The Net Insight CWDM solution complies with ITU-T G.694.2 and G.695. This means that the Nimbra 120 can also be used with other vendor equipments supporting standard CWDM interfaces.
- > **Flexible Implementation.** The Nimbra 120 supports any network topology, such as point-to-point, bus, ring, and mesh. This is facilitated by a range of different plug-in units:
    - 1-channel OADM East+West** - This device allows you to add and drop two channels of the same wavelength into two directions (east and west) of an optical ring or bus. There is also a version for bidirectional transmission over a single fiber.
    - 4-channel mux/demux** - This device allows you to multiplex and demultiplex four channels of different wavelengths into one fiber pair of a point-to-point link or a ring. Using four other wavelengths in the opposite direction will allow for single-fiber operation.
    - 8-channel mux/demux** - This device allows you to multiplex and demultiplex eight separate wavelengths into one fiber pair. The main applications for this module are in point-to-point links or in a ring hub node.

## TECHNICAL SPECIFICATIONS:

### Nimbra 120 General

<b>Dimensions: (HxWxD)</b>	44 x 433 x 277 mm (1.75" x 17.1" x 10.9")
<b>Number of slots:</b>	2, can be fitted freely with the plug-in modules specified below
<b>Power:</b>	No power required, passive device
<b>Environmental conditions:</b>	
Operating temp.	-5 to +65°C (23 to 149F)
Storage temp.	-40 to +85°C (-40 to 185F)
<b>Center wavelengths:</b>	1471, 1491, 1511, 1531, 1551, 1571, 1591, 1611 nm to ITU-T G.694.2
<b>Passband width:</b>	> 12 nm
<b>Connector type:</b>	Duplex SC/UPC
<b>Fiber type:</b>	Singlemode SMF-28/ITU-T G.652

### 1-channel OADM East+West

<b>Max Insertion loss:</b>	
Add	1.3dB
Drop	1.6dB
Pass-through	1.2dB
<b>Min Isolation:</b>	30dB

### 4-channel mux/demux

<b>Max Insertion loss:</b>	
Add	2.3dB (fiber pair) / 3.0dB (single fiber)
Drop	2.3dB (fiber pair) / 3.0dB (single fiber)
Express	2.0dB (fiber pair)
<b>Min Isolation:</b>	30dB

### 8-channel mux/demux

<b>Max Insertion loss:</b>	
Add	3.0dB
Drop	3.0dB
<b>Min Isolation:</b>	30dB

### Ordering information

NPQ0010-W001	Nimbra 120 CWDM chassis
NPA0024-H101	CWDM 4ch Mux/Demux 1550,1570,1590,1610
NPA0024-L101	CWDM 4ch Mux/Demux 1470,1490,1510,1530
NPA0052-L10B	CWDM 4ch Mux/Demux Bi-Dir 1470 - 1590
NPA0052-H10B	CWDM 4ch Mux/Demux Bi-Dir 1490 - 1610
NPA0025-8001	CWDM 8ch Mux/Demux 1470-1610
NPA0026-xxxx	CWDM 1ch OADM East+West xxxx nm
NPA0053-xxx0	CWDM 1ch OADM Bi-Dir xxx0 nm
NPA0021-0201	Patch Cable, SM duplex LC-SC, 2m

## NET INSIGHT - FOR SCALABLE MULTISERVICE NETWORK SOLUTIONS

Net Insight delivers the world's most efficient and scaleable optical transport solution for Broadcast and Media, Digital Terrestrial TV, Mobile TV and IPTV/CATV networks.

Net Insight products truly deliver 100 percent Quality of Service with three times improvement in utilization of bandwidth for a converged transport infrastructure. Net Insight's Nimbra™ platform is the industry solution for video, voice and data, reducing operational costs by 50 percent and enhancing competitiveness in delivery of existing and new media services.

World class customers run mission critical video services over Net Insight products for more than 100 million people in more than 20 countries. Net Insight is quoted on the OMX Nordic Exchange Stockholm. For more information, visit: [www.netinsight.net](http://www.netinsight.net)

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