

## NS ONE-net – 2020

### 1 Gigabit to 25 Gigabit Passive Optical Multiplexer



### Patented 25 Gigabit Single Fiber Bidirectional 40 Channel DWDM Drop and Insert Multiplexing for Metro and Data Center applications

#### Features Overview

- Compact 1RU (1.75") 19" rack architecture
- Up to 25 Gigabit add/drop multiplexing in one unit
- ITU and IEEE standard compliance
- 100% passive, no power required
- Single fiber technology cuts fiber cost by 50%
- Transport per circuit at 50/100GHz per channel bandwidth
- 40 Full Duplex outputs on one fiber pair
- Supports diverse routing for fiber protection
- Supports both Ring and Point-to-Point topologies
- Standard LC/UPC or APC connectors
- Industry standard compliance
- TAA Compliant model available

### 25 Gigabit Single Fiber Solution

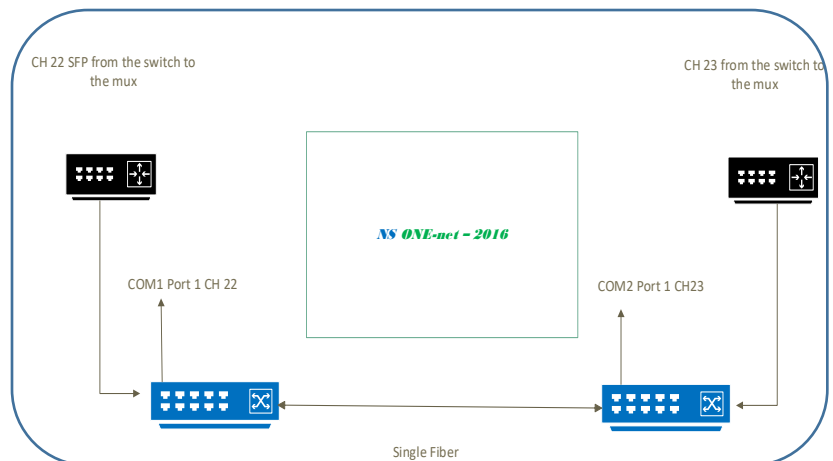
The NS ONE-net family line of products consists of the model **NS ONE-net – 2020**, which provides 40 channels on a Single fiber in a passive optical add/drop design for use in the local, metro or core access markets requiring up to 25 Gigabits of bandwidth. NS Telecomm patented "One Fiber" design allows diverse routing of mission critical circuits while adhering to International Telecommunications Union (ITU) and Institute of Electrical and Electronics Engineers (IEEE) standards.

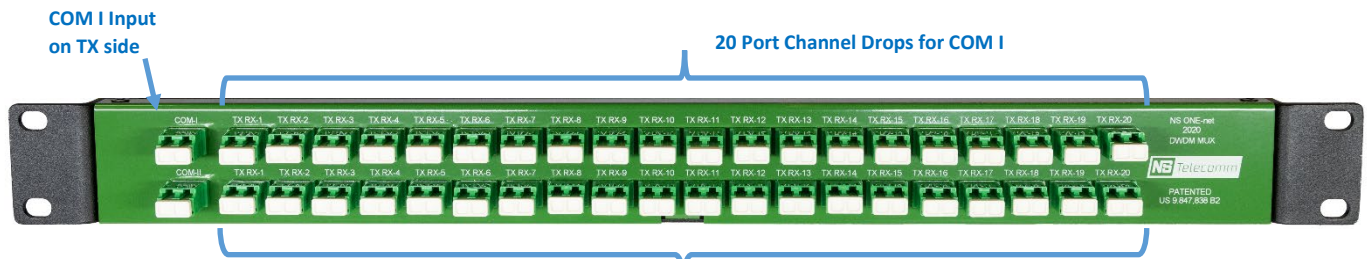
The NS ONE-net is designed to use only one rack unit (1RU) of height in a 19" rack for simple efficient installation. The NS ONE-net provides the greatest density of DWDM channels in a compact 1RU "Plug and play" chassis.

The NS ONE-net provides the highest cost savings for network and data center designers by employing a single strand of fiber per 20 channels of full duplex DWDM bandwidth.

The NS ONE-net supports diverse routing for ring or point-to-point configurations to protect against unexpected fiber cuts.

**NS ONE-net 2020 DELIVERS 40 CHANNELS ON ONE FIBER PAIR RING**  
APPLICATION OF ONE FIBER PAIR DELIVERS 40 EACH FULL DUPLEX CHANNELS IN A FULL DIVERSITY RING TOPOLOGY  
MAXIMUM PAYLOAD CAN DELIVER 4,000 GIGABIT/S BANDWIDTH





## NS ONE-net Channel Listing:

20 Port Channel Drops for COM II

Common Channel	Port Channel	Transmit Channel	Transmit Frequency	Receive Channel	Receive Frequency
COM-I	1	22	1559.79	23	1558.98
COM-I	2	24	1558.17	25	1557.36
COM-I	3	26	1556.55	27	1555.75
COM-I	4	28	1554.94	29	1554.13
COM-I	5	30	1553.33	31	1552.52
COM-I	6	32	1551.72	33	1550.92
COM-I	7	34	1550.12	35	1549.32
COM-I	8	36	1548.51	37	1547.72
COM-I	9	38	1546.92	39	1546.12
COM-I	10	40	1545.32	41	1544.53
COM-I	11	42	1543.73	43	1542.94
COM-I	12	44	1542.14	45	1541.35
COM-I	13	46	1540.56	47	1539.77
COM-I	14	48	1538.98	49	1538.19
COM-I	15	50	1537.40	51	1536.61
COM-I	16	52	1535.82	53	1535.04
COM-I	17	54	1534.25	55	1533.47
COM-I	18	56	1532.68	57	1531.90
COM-I	19	58	1531.12	59	1530.33
COM-I	20	60	1529.55	61	1528.77
COM-II	1	23	1558.98	22	1559.79
COM-II	2	25	1557.36	24	1558.17
COM-II	3	27	1555.75	26	1556.55
COM-II	4	29	1554.13	28	1554.94
COM-II	5	31	1552.52	30	1553.33
COM-II	6	33	1550.92	32	1551.72
COM-II	7	35	1549.32	34	1550.12
COM-II	8	37	1547.72	36	1548.51
COM-II	9	39	1546.12	38	1546.92
COM-II	10	41	1544.53	40	1545.32
COM-II	11	43	1542.94	42	1543.73
COM-II	12	45	1541.35	44	1542.14
COM-II	13	47	1539.77	46	1540.56
COM-II	14	49	1538.19	48	1538.98
COM-II	15	51	1536.61	50	1537.40
COM-II	16	53	1535.04	52	1535.82
COM-II	17	55	1533.47	54	1534.25
COM-II	18	57	1531.90	56	1532.68
COM-II	19	59	1530.33	58	1531.12
COM-II	20	61	1528.77	60	1529.55

## SPECIFICATIONS:

Parameter	Description	Specification	Unit
Operating Wavelength	20 Port Channel Drops (DWDM)	1528.77 – 1559.79	Nanometer (nm)
ITU Channel Number	Port Channel Assignment (DWDM)	22-61	
Channel Spacing	ITU Standard 100GHz Grid	100/200	GigaHertz (GHz)
Bandwidth	Per Port Channel Drop	±0.11	Nanometer (nm)
Insertion Loss	Per Port Channel Drop	3.2 Typical, 5.0 Maximum	Decibels (dB)
Ripple	Per Port Channel Drop	≤0.5	Decibels (dB)
Polarization Dependent Loss	Per Port Channel Drop	≤0.25	Decibels (dB)
Adjacent Channel Isolation	Per Port Channel Drop	≥25	Decibels (dB)
Non-adjacent Channel Isolation	Per Port Channel Drop	≥45	Decibels (dB)
Directivity	Per Port Channel Drop	≥50	Decibels (dB)
Return Loss	Per Port Channel Drop	≥45	Decibels (dB)
Operating Temperature Range	Per Unit	-5 ~ +75	Degrees Celsius (°C)
Operating Relative Humidity	Per Unit	85% Maximum, non-condensing	
Storage Temperature Range	Per Unit	-40 ~ +85	Degrees Celsius (°C)
Storage Relative Humidity	Per Unit	5 ~ 95% Maximum, non-condensing	
Size	Height x Width x Length	1.75 x 19 x 12	Inches (in)
Weight	Per Unit	8.75	Pounds (lbs)
Warranty	Mux Warranty	3	

Note: All per port channel drop data does not include connectors.

## ORDERING INFORMATION:

Model Name	Description	Ordering Number
NS ONE-net 2020	Single fiber bidirectional inputs (COM I & II) to 40 Port Channels DWDM Multiplexer	NS1R19MXBL20202261
NS ONE-net 2020 TAA	Single fiber bidirectional inputs (COM I & II) to 40 Port Channels DWDM Multiplexer	NS1R19MXBL20202262

## NS ONE-net – 2020

20 Ports Com I / 20 Ports Com II



NS Telecomm  
10323 Lomond Drive  
Manassas, VA 20109-3113, USA

Main: 703-392-1695  
Fax: 703-392-1784

Website: [www.nstelecomm.com](http://www.nstelecomm.com)  
Email: [nstelecomm@novec.com](mailto:nstelecomm@novec.com)