


THE BEST LOW-COST CAPACITY BOOST FOR ACCESS NETWORKS IS ALSO THE GREENEST



NEED TO INCREASE YOUR ACCESS NETWORK CAPACITY? THEN WE HAVE SOMETHING FOR YOU!

The requirement for greater capacity is forcing network operators, service providers and enterprises to think about how to increase access capacity as cost-effectively as possible.

The big challenge is to best utilize existing fiber infrastructure, while evolving networks to support all types of applications, including FTTx, Storage Area Networks (SAN), High security networks and various Residential & Enterprise offerings.

We tackled all this and more when designing our TG-Series passive optical platform. Featuring both CWDM and DWDM filters the TG-Series gives you:

- A green and affordable way to lift capacity in access networks
- Easy capacity expansion, anytime anywhere
- Support for all applications, architectures and infrastructures in one solution

In addition, you gain durability, security, a small footprint and the energy efficiency that comes with passive equipment.

A GREEN AND AFFORDABLE WAY TO LIFT CAPACITY IN ACCESS NETWORKS

TG-Series passive optical filters can immediately expand your fiber network to support WDM, thus adding all the capacity you need. The number of active aggregation locations can be radically reduced simply by adding passive aggregation locations and colored SFPs to access systems such as DSLAMs and MSANs. This can significantly lower both operational costs and power consumption.

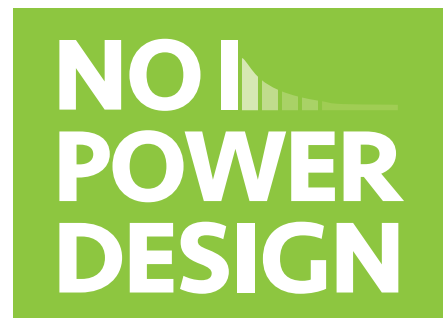
No need for power or software

Being a totally passive solution, the TG-Series requires neither power nor software. Thus, it's truly an environment-friendly approach. However, for a full overview of the passive nodes in your access network, Transmode's Network Management system (TNM) can be used.

Cost-efficient operations

Commissioning and installing the TG-Series is simple, which keeps training requirements low and time to revenue short. When troubleshooting is necessary, this is readily handled via special monitor ports

on the filters. In addition, the compact filter housing requires only a small footprint in offices, street cabinets or underground manholes – yet another reason why the TG-Series is so economical to operate.



With no power consumption and a small footprint, the TG-Series is good for both the environment and your business.



EXPAND YOUR CAPACITY, ANYTIME ANYWHERE

The beauty of WDM is that capacity is so easy to expand, over and over again. You simply add another wavelength. If another enterprise is being added to the access network, just provide the enterprise with a wavelength of its own. Or you can provide several wavelengths depending on the capacity required. The key here is that capacity to one customer is not fixed and can easily be increased.

Choose CWDM, DWDM or both!

TG-Series supports CWDM, DWDM or a combination of the two. This provides the ultimate in futureproofing. Up to 52 wavelengths (or channels) are supported with up to 10G per wavelength today and higher capacities in the future.

Taking WDM deeper

With the TG-Series' environmentally toughened optical filters, you can bring WDM to parts of the access network where it was previously inappropriate due to price/space/power issues. Transmode's own WDM

platforms – the TM-Series and the TS-Series, which originally were designed for metro networks – can with the deployment of TG-Series equipment be used deeper into access networks and applications. Your capacity will increase along with your business potential, as old and new customers sign up for additional bandwidth in residential and enterprise services.



Above is one example of a 40-channel filter. Combining it with CWDM filters carrying up to 12 additional wavelengths, provides up to 52 wavelengths to the access network.

TG-SERIES SUPPORTS ALL KINDS OF APPLICATIONS FROM ONE SHARED PASSIVE OPTICAL SOLUTION

FTTx



SAN



Enterprises



Residential



High-security



APPLICATION- AND ARCHITECTURE-AGNOSTIC FOR FREEDOM AND FLEXIBILITY

The TG-Series is designed to serve as shared infrastructure, regardless of whether the traffic flow comes from FTTx, Storage Area Networks or High-security networks between banks and, for instance, private homes or enterprises. One solution fits all – now and in the future!

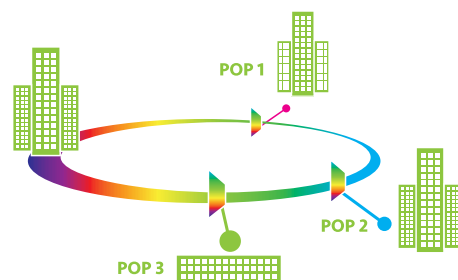
Likewise, in terms of architecture the TG-Series supports point-to-point, mesh, bus or ring networks as well as single fiber and fiber pair – all with full flexibility and related gains in cost-efficiency.

Rugged and secure

With its durable design and construction the TG-Series works in harsh conditions such as underground and extreme temperature installations. The TG-Series enables the moving of passive filters away from sensitive locations and to places where they are less vulnerable to accidental or deliberate fiber breakage.

This is of particular value in high-security networks carrying sensitive traffic, and where Service Level Agreement (SLA) conflicts can lead to

revenue loss. The filters allow fiber to be spliced in underground chambers instead of in Optical Distribution Frames (ODF), in public collocation facilities or in exchange buildings, thus diminishing the risk of traffic disruptions.



The TG-Series of optical filters placed in manhole locations. Add/drop only the wavelengths required for the particular spur – the rest of the spectrum is bypassed. This is particularly valuable in high-security applications.

TG-SERIES PORTFOLIO

The list below gives details of some of the available options within the TG-Series. Please contact Transmode for further product details on these or the full range of TG-Series components.

| CWDM FILTERS | DESCRIPTION |
|-----------------------------------|--|
| CO-4 | 8+1ch CWDM MDU (1550), 1310 nm port |
| CO-5 | 8 ch CWDM MDU (1310) |
| CO-6 | Optical Band Unit (1310/1550) |
| CO-7 and CO-9 | 4ch MDU |
| CO-8 and CO-10 | 4ch MDU with two upgrade ports |
| CO-11/x | OADM single sided |
| CO-12/x | OADM dual sided |
| CO-13/xy | 2ch OADM single sided |
| CO-14/xy | 2ch OADM dual sided |
| CO-SF4-TA/1470 and CO-SF4-TB/1470 | 4ch Single Fiber MDU, A and B version |
| CO-SF4-EA/1270 and CO-SF4-EB/1270 | 4ch Single Fiber MDU, A and B version, with upgrade port |
| CO-SF1/yyyy | 1ch Single Fiber OADM single sided |
| CO-SF2x1/yyyy | 1ch Single Fiber OADM dual sided |
| CO-OCU8020 | Optical Coupler Unit 80/20 |
| CO-OCU9010 | Optical Coupler Unit 90/10 |

| DWDM FILTERS | DESCRIPTION |
|--------------|--------------------------------------|
| CO-D919-926 | 8ch MDU ch 919-926 with upgrade port |
| CO-D927-934 | 8ch MDU ch 927-934 with upgrade port |
| CO-D935-942 | 8ch MDU ch 935-942 with upgrade port |
| CO-D943-950 | 8ch MDU ch 943-950 with upgrade port |
| CO-D951-958 | 8ch MDU ch 951-958 with upgrade port |
| CO-D40EV | 40ch MDU |
| CO-D40EV-E | 40ch MDU with 1310 port |
| CO-BSU1x5EV | 5 port Optical Band Unit |

| PHYSICAL AND ENVIRONMENTAL | DESCRIPTION |
|----------------------------|--|
| Dimensions | 160 (L) x 29 (W) x 130 (H) mm / 6.3 (L) x 1.1 (W) x 5.1 (H) in |
| Operating temperature | -40 to +70 °C / -40 to +158 °F |
| Operating humidity | Max 95% (non-condensing) |

| CHASSIS | DESCRIPTION |
|-------------|------------------------------------|
| RMP-9014/01 | 19" 14 slot 3RU rack mounted panel |
| RMP-9003/01 | 19" 3 slot 1RU rack mounted panel |



TG RMP-9014



TG RMP-9003



TM-Series Ethernet Demarcation Unit
in TG-Series Chassis



Fiber Management

Transmode is a leading provider of optical networking solutions for transport of data, voice and video traffic, based on CWDM and DWDM technology (Coarse/Dense Wavelength Division Multiplexing).

Transmode's unique Intelligent WDM (iWDM™) approach has led to widespread deployment of over 20000 systems in a customer base consisting of more than 300 fixed and mobile network operators, service providers, large enterprises and public institutions across Europe, the Americas and Asia.

Transmode's comprehensive product portfolio and strong global organization enable our customers to grow the capacity and to improve the service level of their regional, metro and metro access networks, on a cost-efficient basis without compromising on functionality.

www.transmode.com