

# Managed Services Solutions for Dark Fiber



## Challenges

- ◆ Deliver private, high capacity, fully managed dark fiber solutions
- ◆ Ability to offer scalable and flexible service modules and structure
- ◆ Need for data security and compliance with Layer-1 encryption regulations
- ◆ Ensure high network availability with full hardware redundancy
- ◆ Need fast and simple deployment of new services/customers
- ◆ Build cost-effective backbone that is easy to maintain and grow
- ◆ Offer enhance SLA with multiple pricing models
- ◆ Robust management system for NOC (Network Operation Center)



## Solution

- ◆ Lego blocks for flexible mix of services and capacity
- ◆ High capacity DWDM backbone network
- ◆ Multi-rate multi-type managed services including GbE/10/40/100Gb Eth and 8G/16G/32G FC
- ◆ Easily build private or shared services and fibers
- ◆ Layer-1 encryption (FIPS 140 Level 2 certified) on all data
- ◆ Pay-as-you-grow scalable architecture for quick and easy growth
- ◆ Easy to deploy and operate
- ◆ Low power consumption and compact 1U form factor guarantee low OPEX
- ◆ EMS/NMS - for easy management of multiple networks by a NOC 24x7



## Industries



Financial



Enterprises



Gaming



ISP & Cloud

# Case Studies

## Utilities Company, Switzerland

*Owns fiber optic backbone and provides managed services to enterprises*

- ◆ Using non-operational existing fiber backbone to provide fully managed services
- ◆ 24x7 monitored NOC
- ◆ Provide private dark fiber solution – managed services
- ◆ Sell value add - Layer-1 encryption for secure transport
- ◆ Easy manageable encryption functionality by end user
- ◆ Multiple Crypto officers in one box (crypto officer per service)

## Dark Fiber Provider, UK

*Sells private dark fiber networks to enterprises*

- ◆ 24x7 managed services solution by NOC
- ◆ Selling private dark fiber backbone to enterprises
- ◆ 4-hour SLA anywhere in the UK
- ◆ Offer quick deployment of new services
- ◆ Existing warehouse for expansions and spares
- ◆ Single fiber installation with hardware and fiber redundancy

## Managed Services Provider, Singapore

*Uses fiber optic cables that run alongside a network of train tracks*

- ◆ 24x7 managed services solution
- ◆ Offer reliable SLA
- ◆ Layer-1 encryption for secured services
- ◆ Full redundancy
- ◆ Scalable – add new services quickly from any site to any site using ROADM



Layer-1  
Encryption



Low Power  
Consumption



1U Rack Mount



Mix of  
Services