

# Layer-1 Encryption Solutions



## Benefits

- ◆ Encryption on all data transmitted over the fiber (no omissions)
- ◆ Transparent, maintaining full bandwidth of the traffic
- ◆ Supports low latency applications
- ◆ Fiber tapping detection and alarm
- ◆ Interface with existing DWDM infrastructure and OTN networks
- ◆ No need to change or upgrade Layer-2/3 switch/routers



## Industries



Government



Managed encrypted  
wavelengths



Financial



Medical



ISP and Cloud



DCI



Utilities



Police



## Solution features

- ◆ Muxponders, transponders, ADM
- ◆ Encryption per service or per uplink
- ◆ Supported services - GbE/10/40/100Gb Eth, STM-64/OC-192, 2/4/8/10/16/32G FC, OTU2/2e/3/4
- ◆ Low latency encryption
- ◆ Metro / short haul / long haul / DCI



# Security needs answered!

- ◆ **Confidentiality** - preventing disclosure of information
- ◆ **Data Integrity** - ensuring that messages have not been altered
- ◆ **Authentication** - ensuring parties are identified



## Products for this solution



**PL-2000T**  
800G platform



**PL-2000AD, PL-2000ADS**  
200G multi-rate ADM  
muxponder/transponder



**PL-2000M**  
200G multi-protocol  
coherent muxponder



**PL-1000TE**  
Multi-rate 1G-40G  
transponder



## Solution Highlights

### Tapping Detection

- ◆ Tampering evidence
- ◆ Tapping alarm

### Vendor Agnostic

- ◆ Any router/switch
- ◆ Compatible with existing DWDM Infrastructure and OTN networks

### Transparent Data Flow

- ◆ Low latency
- ◆ Full throughput

### Secured Management

- ◆ HTTPS, SNMPv3, SFTP, SSH, Firewall

### Supported Services

- ◆ GbE, 10/40/100Gb Ethernet
- ◆ 2/4/8/10/16/32G FC
- ◆ STM-64/OC-192
- ◆ OTU2/2e/3/4

### Standards Based

- ◆ GCM-AES-256 encryption
- ◆ FIPS 140-2 Level 2 certified
- ◆ Common Criteria EAL2 certified
- ◆ CNSA Top Secret Suite
- ◆ ECC CDH Diffie-Hellman
- ◆ Authentication using SHA-384

