

WCC-PCN- AES100GB-G

100Gbit/s transponder with BSI-approved Layer 1 encryption

Benefits

- **Built-in Layer 1 encryption functionality**
No need for additional equipment or software
- **BSI-approved; CC-certified**
"BSI-VSA-10333" approval for the transport of classified data up to "VS-NfD" level; Common Criteria (CC) certification (operating system level)
- **Tamper-evident case**
Hardware designed to avoid any unauthorized access or manipulation of security-sensitive components
- **Compact footprint**
Two-slot compact design enabling up to eight modules per 9RU shelf respectively one module per 1RU shelf
- **Multi-protocol support**
The module supports 100GbE as well as OTN OTU-4 client services
- **Comprehensive monitoring capabilities**
Fault and performance monitoring capabilities for both client as well as network interfaces

Overview

The **WCC-PCN-AES100GB-G** is a WDM transponder for the transport of encrypted 100GbE and OTU4 client services over optical networks. With our robust and reliable ConnectGuard™ Layer 1 encryption technology, this module satisfies the most stringent security demands. It has achieved the approval of the German Federal Office for Information Security (BSI) for the transport of classified data up to VS-NfD level ("BSI-VSA-10333").

Our WCC-PCN-AES100GB-G is a two-slot cryptographic WDM channel module with one 100Gbit/s client interface supporting QSFP28 pluggable transceivers and one 100Gbit/s network interface supporting CFP pluggable transceivers. The 10TCE-PCN-16GU+AES100G implements cryptographic functions such as encryption, decryption, and random number generation. The aggregate 100Gbit/s data stream is encrypted/decrypted using the advanced encryption standard (AES). Data encryption and the use of an endpoint authentication mechanism protect the network link between two communicating WCC-PCN-AES100GB-G modules against man-in-the-middle attacks. Our ConnectGuard™ Layer 1 encryption technology satisfies the strictest security standards such as FIPS 140-2. What's more, it has achieved BSI approval for transport of classified data up to VS-NfD level. This makes this module ideal for the transport of sensitive information that must be protected from unauthorized access.



WCC-PCN-AES100GB-G

High-level technical specifications

General information

- 100Gbit/s transponder
- 2-slot module
- Pluggable transceivers
- Embedded control channels
- Typical power consumption including pluggable transceivers: 75W

Client and network ports

- Client port:
 - 1x QSFP28
 - Protocols supported: 100GbE and OTU4
- Network port:
 - 1xCFP network port
 - Tuneable DWDM interface

Environmental information

- SH9HU shelf: Telcordia SR-3580 level 3 (NEBS), ETSI EN 300 019-1-3 Class 3.1 (9RU) or 3.1e (1RU)
- Operating temperature: +5°C to +40°C / -40°C to +65°C with 1RU E-Temp+ shelf
- 5% to 85% relative humidity (non-condensing)

Protection switching

- 1+1 unidirectional revertive and non-revertive switching
- Switching times <50ms
- Automatic protection switching (APS) channel per sub-aggregate service for client channel card protection

Encryption

- Encryption of payload according to AES-GCM with 256bit key
- Diffie-Hellman 4096 key exchange every minute
- Protection against modification
- Far-end authentication

Security certifications

- BSI approval for transport of classified data up to VS-NfD level ("BSI-VSA-10333")
- Common Criteria (operating system level)

Applications in your network

Secure high-speed connectivity over WDM network infrastructure

- Built-in Layer 1 encryption technology for robust protection of data in motion with 100% throughput and ultra-low latency
- Protocol-agnostic Layer 1 encryption protecting data at all layers in the network stack
- Most robust and reliable Layer 1 encryption on the market:
 - Approved by BSI for the transport of classified data up to VS-NfD level (BSI-VSA-10333)
 - Common Criteria certification (operating system level)
 - Adva Network Security is the only DWDM vendor that has achieved BSI approval

