

Flexible OTN (FlexO) Common Elements

G.709.1 – Enhanced Features

Regen applications

Some FlexO overhead is dedicated to enabling FlexO regen applications.

Regen applications terminate only the regen overhead, the remainder of the overhead, FlexO frame and payload are transparent to regen nodes. An example application is shown in Figure 1.

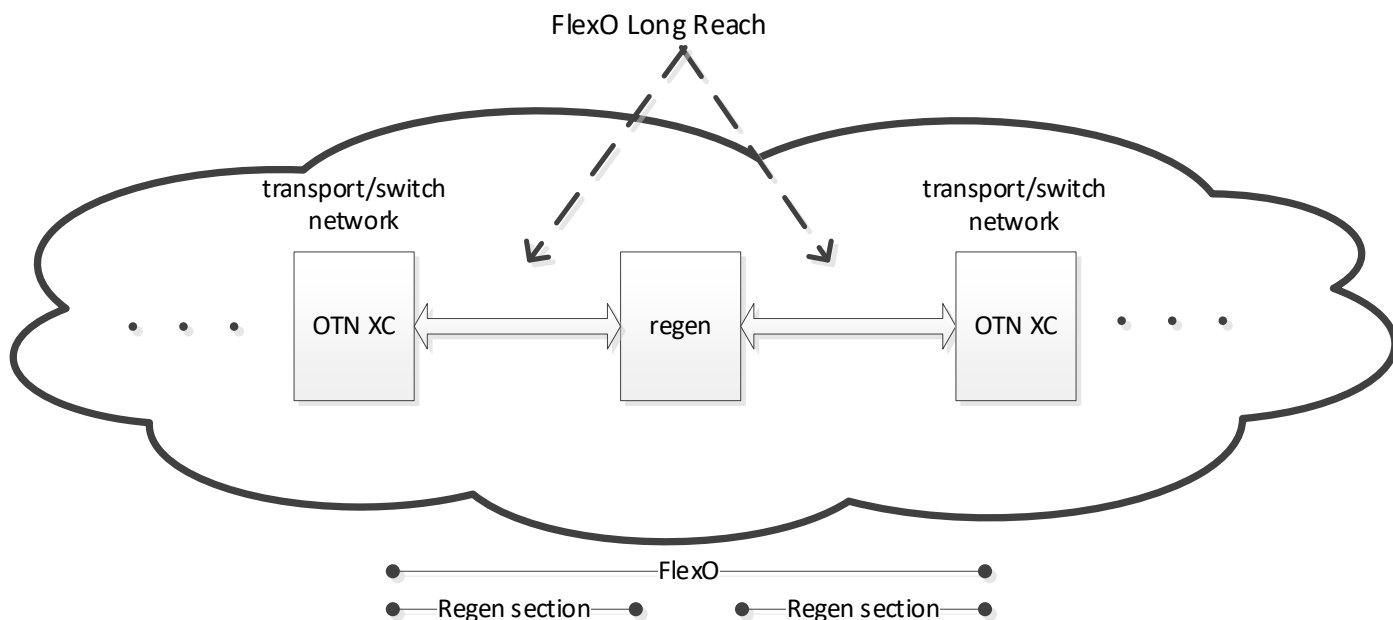


Figure 1 – FlexO regen application

Payload encryption

FlexOsec is an optional FlexO level encryption and authentication scheme based on AES-GCM-256 algorithms. It provides confidentiality and integrity protection for the FlexO frame structure and has dedicated overhead for these security functions.

Figure 2 illustrates the application of FlexOsec to the FlexO frame structure.

- The payload area is encrypted and authenticated.
- The alignment mechanism (AM) field is neither encrypted nor authenticated.
- The extended overhead (EOH) is not encrypted, and a part is authenticated.
- The basic overhead (BOH) is not encrypted and is authenticated.

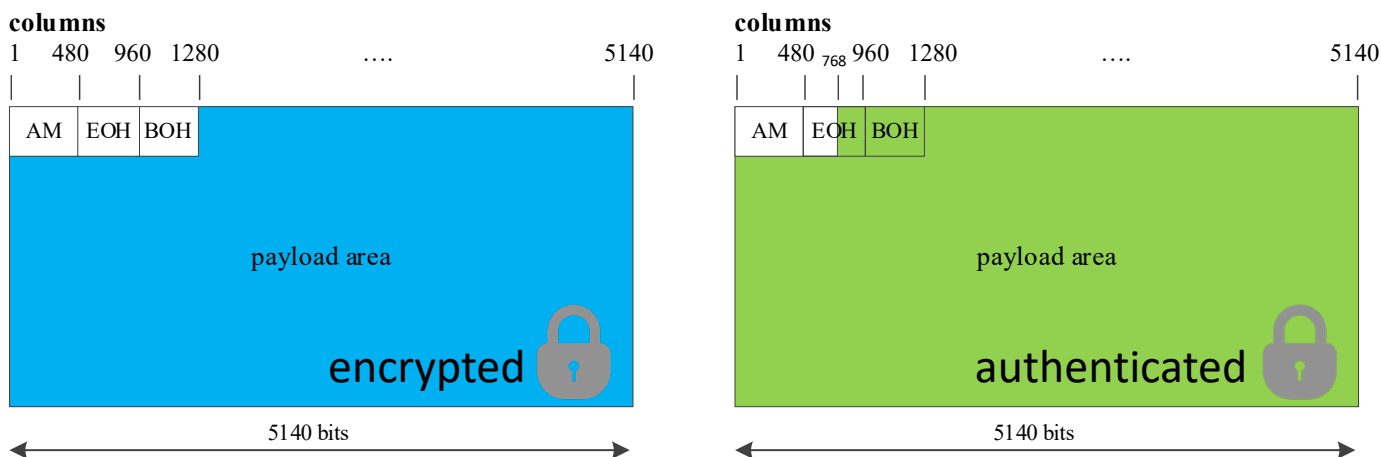


Figure 2 – Encrypted and authenticated FlexO signals