

quantumEdge

Serial-to-IP Edge Device

KRATOS



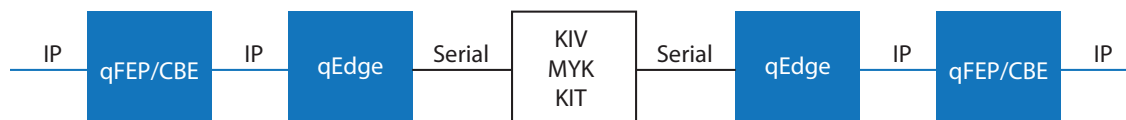
The Kratos quantumEdge (qEdge) serial-to-IP conversion device offers a low cost, small form factor solution supporting serial cryptographic devices within virtualized control center architectures as well as general purpose serial-to-IP conversion in non-virtualized designs. Kratos is leading the industry toward virtualized SW architectures for satellite control centers to reduce upfront costs, increase flexibility, improve security and reduce O&M support costs. However, it is common for existing missions to require backward compatibility with existing serial based cryptos to continue support for satellites in orbit. A Kratos quantumEdge provides an easy migration path allowing legacy missions to migrate to virtual architectures while maintaining support for serial crypto devices.

Overview

The quantumEdge solution provides generic serial-to-IP conversion of 1 to 40 serial channels. The serial channels and Ethernet connections are made via the 2RU quantumEdge front panel. The bidirectional solution then ingests IP data packets (typically commands) and sends out serial data while simultaneously ingesting other serial data (typically telemetry) and outputting IP packets. An industry standard control and status interface provides configuration and status monitoring.

This solution can be used in conjunction with our industry leading quantum Front End Processor (qFEP) and Crypto Book Ends (CBE) to support hybrid virtual/serial architectures. qFEPs and CBEs are run in platform independent Containers or Virtual Machines on any Linux compatible computer platform. This provides scalability, reduced HW costs, Fault Tolerant failover and ease of IT administration. A quantumEdge provides the IP-to-serial interface needed for legacy crypto devices. The qFEP also provides control and status to the legacy serial crypto.

A second quantumEdge provides the black side serial crypto interface and connection to



Key Features

- Low cost
- Low power
- Secure
- Small footprint/2RU high x 7" deep.
- Open standard I/Fs (GEMS, REST, JSON)
- Scalable

Serial Cryptos Supported

- KIV-7MS/C
- MYK
- KIT
- KI-17

Serial Technologies Supported

- TTL (16 lines), RS-422 (20 pairs), LVDS (20 pairs); RS-232 (16 lines)
- NRZ-L,M,S; Bi-Phase L

Timing Support

- IRIG-B
- IEEE-1588 Precision Time Protocol (PTP)

Network Support

- eNET 10/100/1GB
- UDP/TCP