

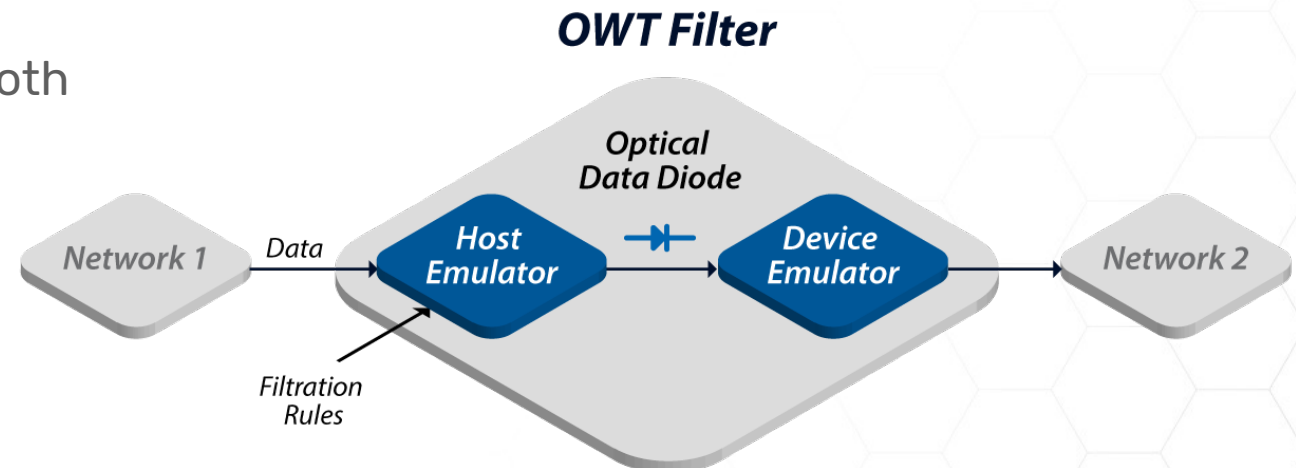
UNCLASSIFIED

Cross Domain Solutions

A portfolio of application-specific hardware-based managed data transfer solutions for the desktop

WHAT IS A CROSS DOMAIN SOLUTION?

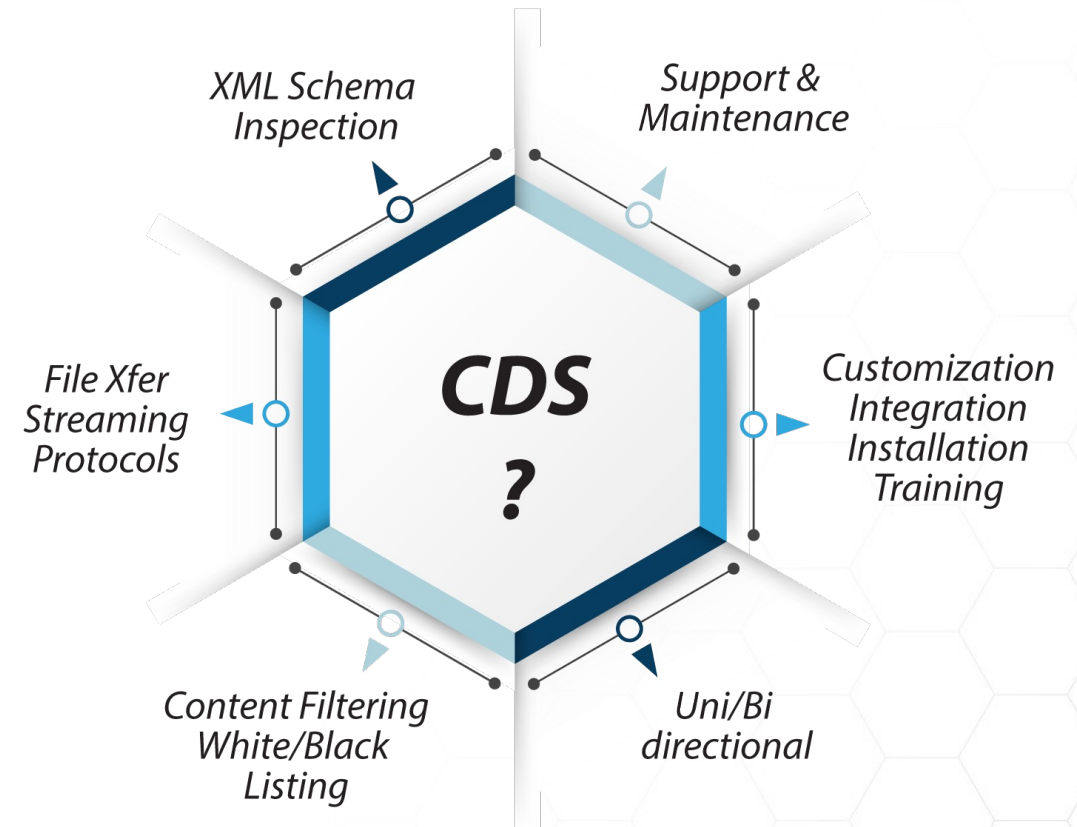
- A controlled interface for information transfer between different security domains.
- A typical Cross Domain Solution (CDS) will have one or both features:
 - **One way transfer (OWT)** – Typically a data diode device.
Data from the High (higher classification) is physically prevented from flowing down to the Low (lower classification)
 - **Filter** – Ensures that only authorized data transfers between domains.
- CDS may have both functions & protect both High → Low and Low → High transfers.



THE COMPLEXITY OF A CENTRALIZED CDS

- Typically, CDS are centralized organization-wide solutions for managed data transfers across networks.
- A CDS must address diverse needs across many organizational roles and domains.
- The CDS must handle multiple applications and use cases, leading to **complex** solutions.
- This complexity leads to expensive, high maintenance solutions
- Complexity requires **SW-based** solutions, **inherently more vulnerable and less stable than HW-based** solutions.

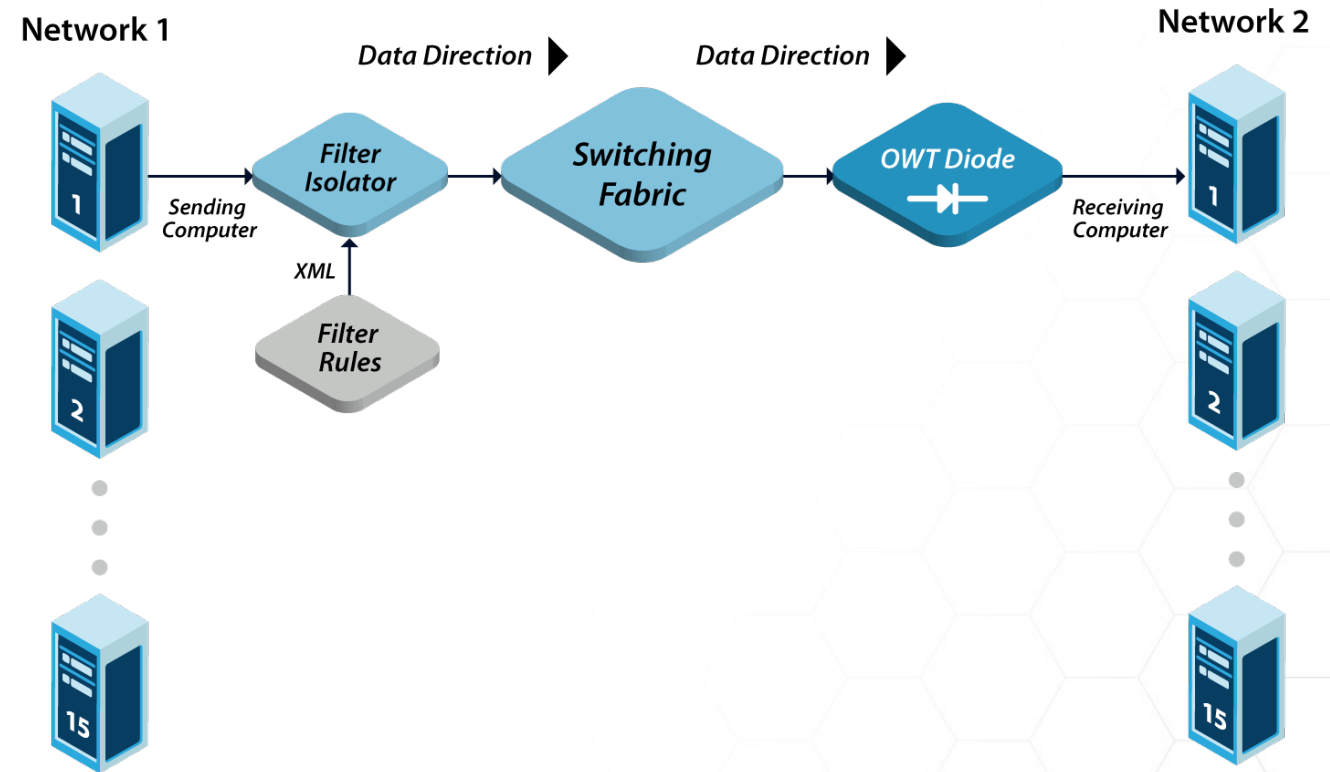
A centralized CDS is complex and expensive with SW-based vulnerabilities



HSL'S TARGETED CROSS DOMAIN APPROACH

- Create application **specific**, non-complex, **high security** CDS
- A dedicated protocol/application specific product can have **HW-based security**
 - Application/protocol dedicated security mechanism
 - Specific protocols or data types
 - Specific transfer direction
- HSL's CDS products are **cost effective**, targeted for use at the desktop level
- No infrastructure changes needed
- Straightforward & simple installation

Example of Application Specific XML Filter Diode



HSL'S CDS PRODUCTS



- **RS232 Filters**

- FT11N-4* – Secure Unidirectional RS232 Isolator Diode
- FF11N-4* – Secure Unidirectional Configurable RS232 Filter
- FT10N-N* – RS232 to HID (USB) Unidirectional Filter
- FB11N-4+ – Secure Bi-Directional RS232 Filter
- FF11ET-4+ – Secure Unidirectional Configurable IP based RS232 Filter

- **XML and JSON Diode**

- FXJ11N-4+ – Secure Unidirectional RS232 XML and JSON Filter
- FXJ11ET-4+ – Secure Unidirectional RS232, IP Based XML and JSON Filter

- **Uni-Directional File transfer**

- FT11USB-60+ – Secure Unidirectional File Transfer Diode, 60GB

- **H264 unidirectional filter**

- FVETHH264+ – Secure Unidirectional H264/5 Filter

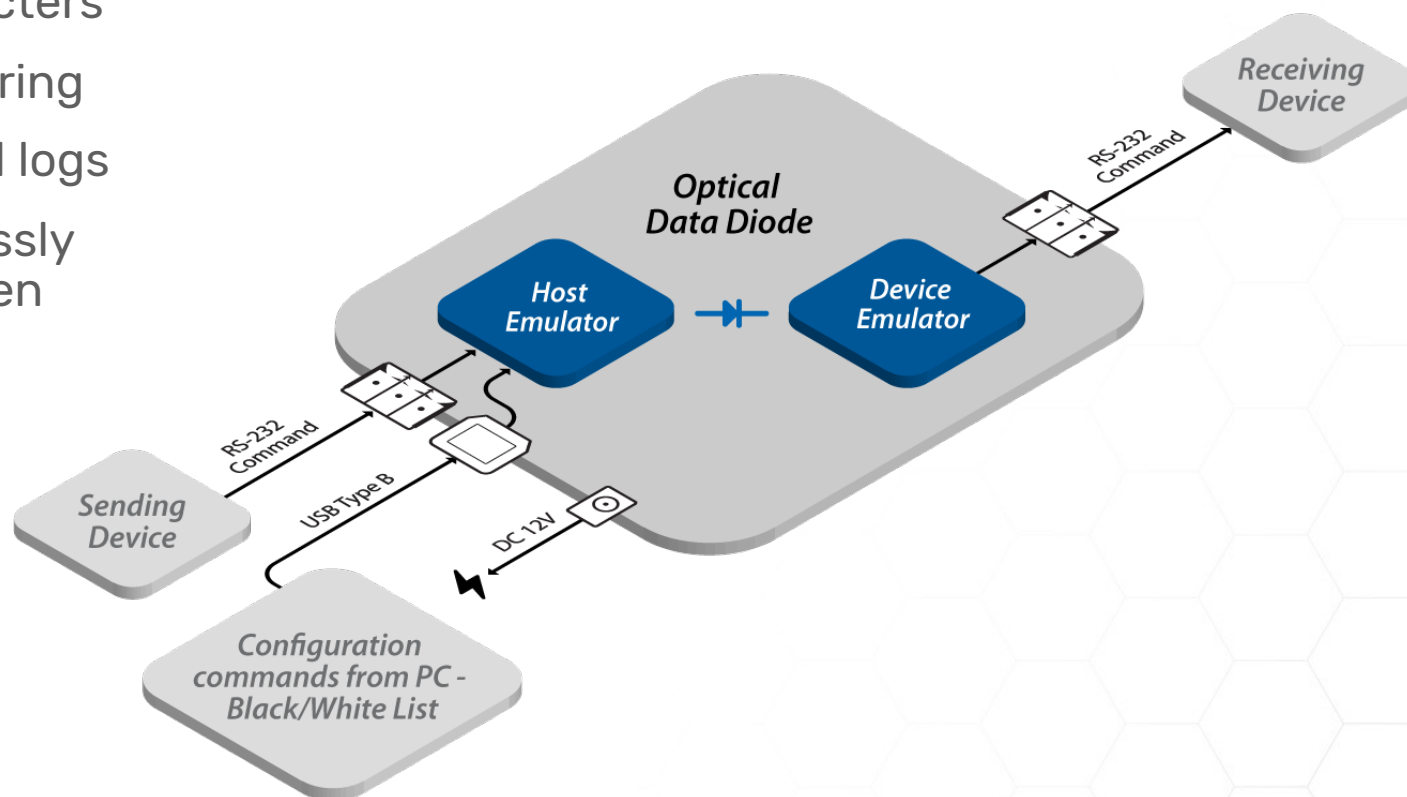
- **HSL Secure Connector**

- FIETHRDP+ – Secure Unidirectional RDP Filter

* Available Now
+ Coming Soon

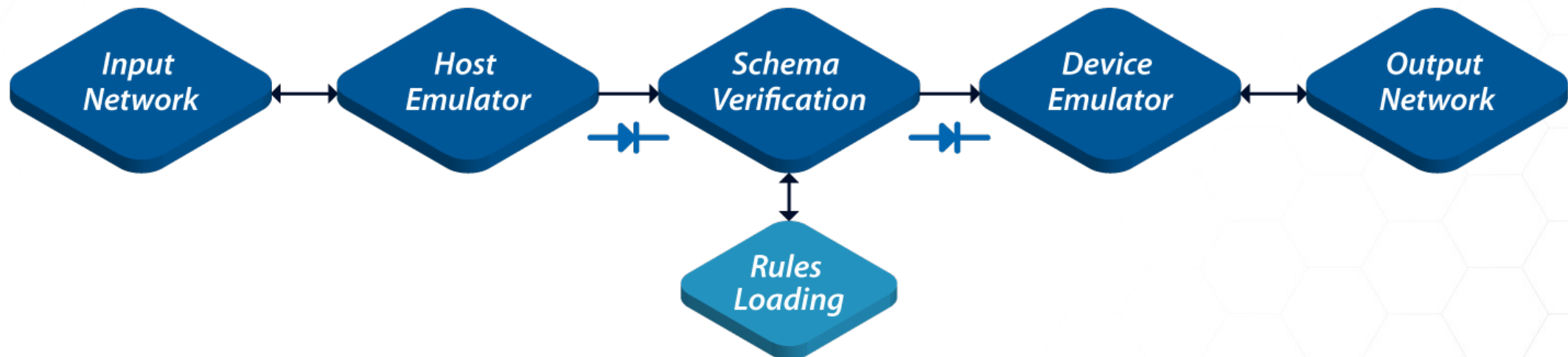
RS-232 FILTERS

- **HW enforced** unidirectional flow
- Message transfers up to 256 characters
- Regular expression rule-based filtering
- Confirmation/Reject messages and logs
- **Copy-Paste** application to seamlessly transfer textual information between systems



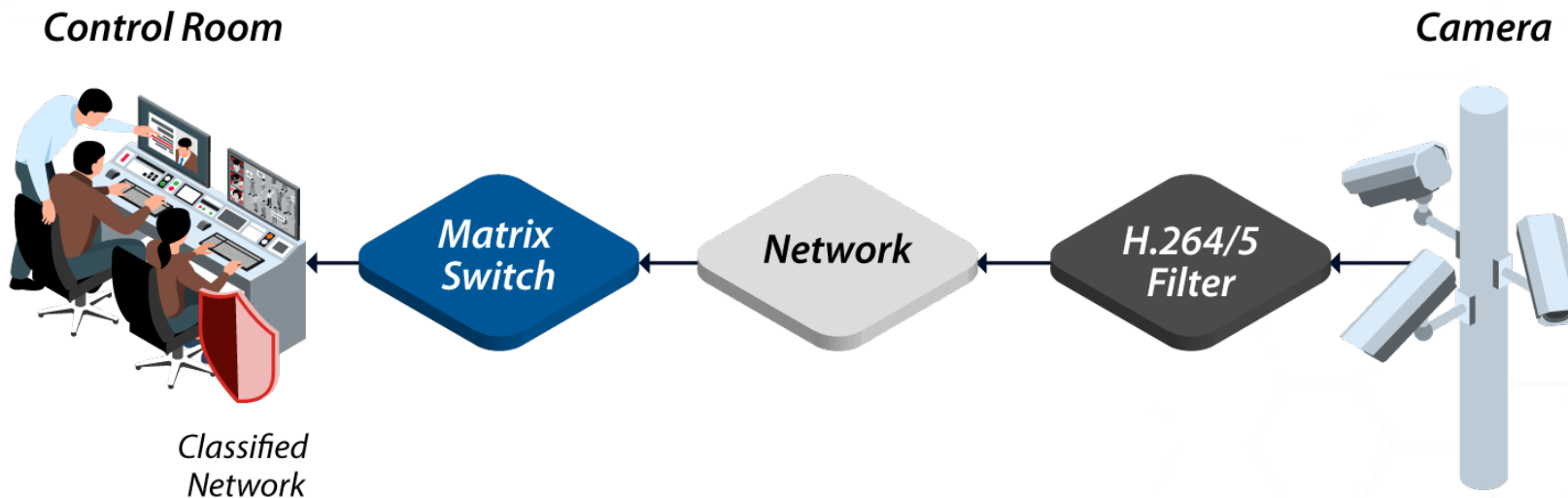
XML\JSON UNIDIRECTIONAL FILTER

- HW enforced unidirectional flow
- Upload allowed schemas and content
- Confirmation/Reject messages and logs
- RS232 or LAN based interfaces

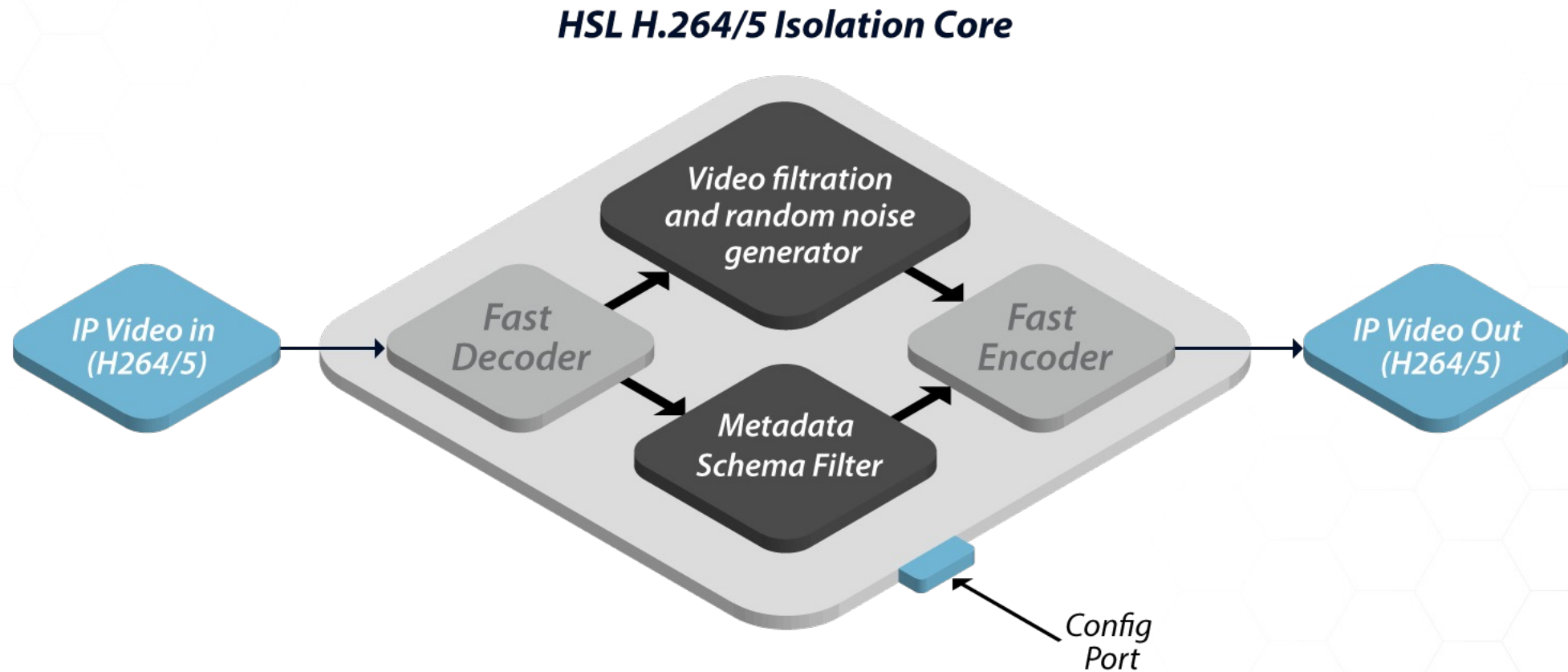


H.264/H.265 ISOLATOR

- Manages transfer of video data to a classified network
- IP to IP Video Isolator filter (H264/H265)
- Isolation is achieved by **decoding** and **encoding** the video stream
- Added filtration by video noise injection after decoding
- Each device supports 2x4K 30Hz streams
- Metadata channel isolates and filters textual data

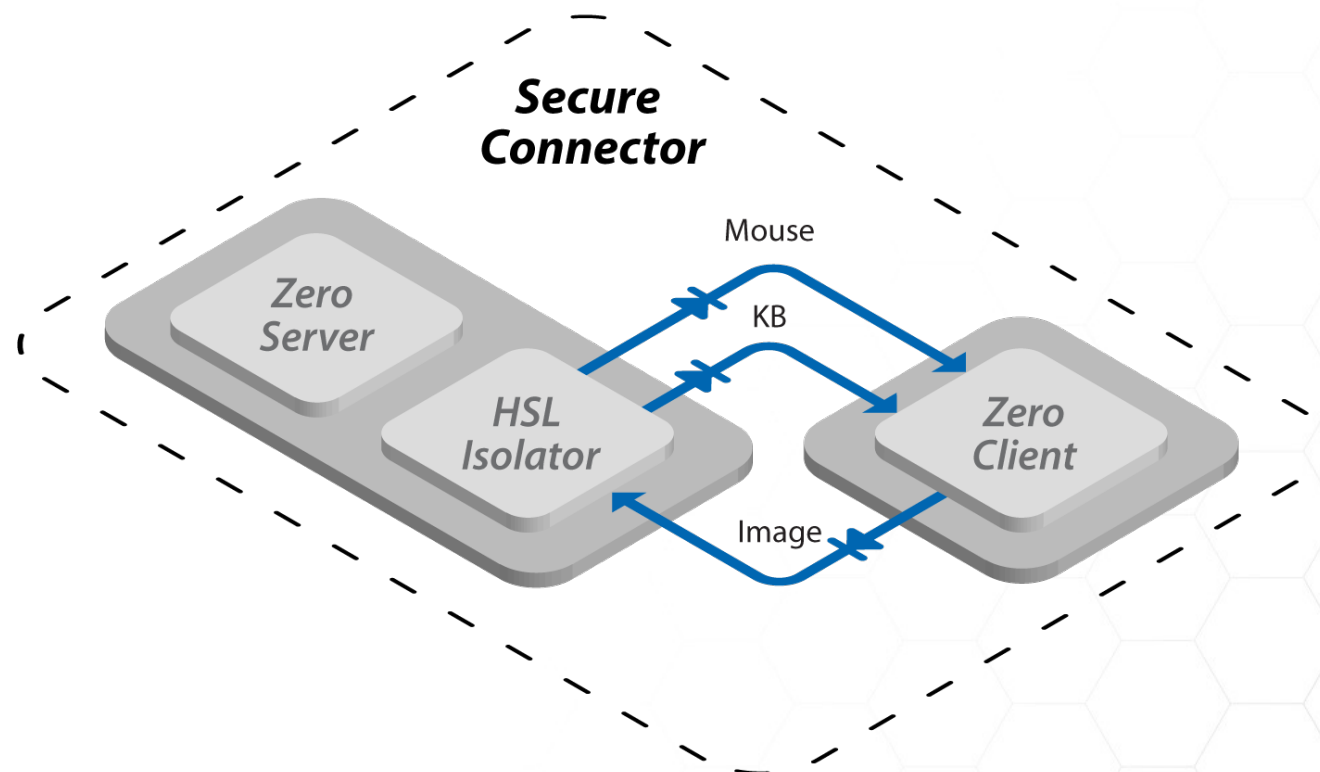


SECURE H264/5 ISOLATOR DIAGRAM



SECURE CONNECTOR

- Securely control a PC on a different network
- Secure Connector enforces KBD/Mouse commands from Network 1 to Network 2 and image display from Network 2 to Network 1.
- Separation is HW based, using HSL's patented isolation techniques



Thank You

For more info:



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