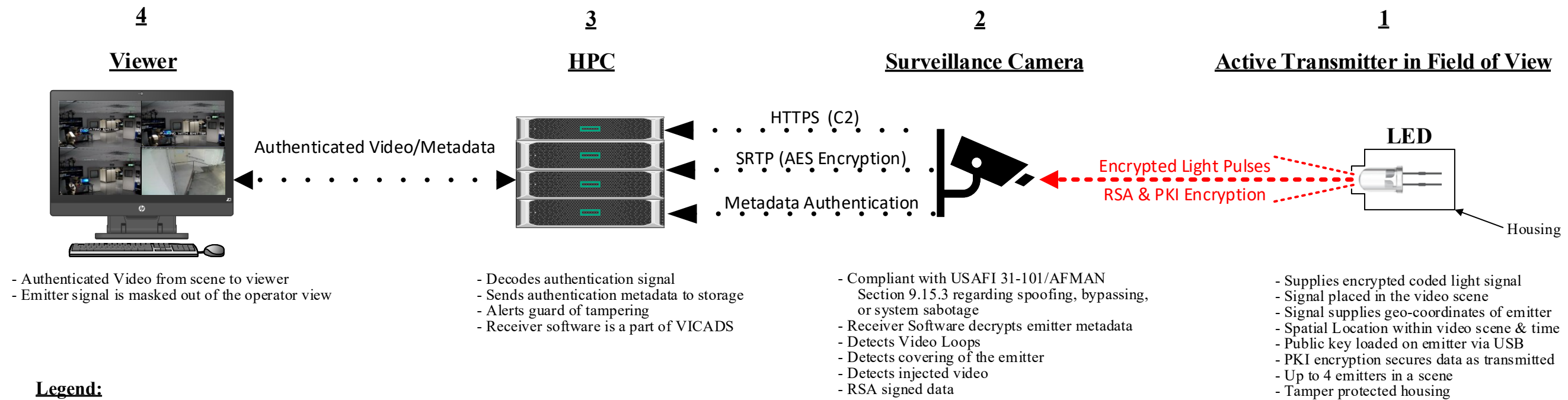


Scene Authentication Data Flow Diagram

Scene Authentication Ensures Unmanipulated Video From the Scene to the Viewer

- (1) Emitter in camera FOV transmits encrypted light stream to camera
- (2) Camera video with encrypted & encoded data is transmitted to receiver software
- (3) Receiver Software authenticates Image and verifies that it is current information
- (3) Video and metadata are stored on V-100 cluster
- (4) Authenticated Video delivered to Viewer



- Authenticated Video from scene to viewer
- Emitter signal is masked out of the operator view

- Decodes authentication signal
- Sends authentication metadata to storage
- Alerts guard of tampering
- Receiver software is a part of VICADS

- Compliant with USAFI 31-101/AFMAN Section 9.15.3 regarding spoofing, bypassing, or system sabotage
- Receiver Software decrypts emitter metadata
- Detects Video Loops
- Detects covering of the emitter
- Detects injected video
- RSA signed data

- Supplies encrypted coded light signal
- Signal placed in the video scene
- Signal supplies geo-coordinates of emitter
- Spatial Location within video scene & time
- Public key loaded on emitter via USB
- PKI encryption secures data as transmitted
- Up to 4 emitters in a scene
- Tamper protected housing

Legend:

- ← - - - - Red = Encrypted Light from emitter
- ← . . . Black = Authenticated Video / Metadata over IP

Acronyms:

- RSA Encryption - Asymmetric private / public key encryption
- PKI - Public Key Infrastructure to authenticate users and devices
- SRTP – Secure Real Time Protocol (AES ENCRYPTION for video)

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