



Owl Secure Acknowledgement Engine

The Owl Secure Acknowledgement Engine OSAE is an appliance with attendant software used with Owl secure one-way transfer platforms. Based on the Owl US Patent #7,675,867, OSAE provides the user-sender with explicit confirmation that information transferred across an Owl one-way system has, in fact, been received at the user destination. The acknowledgement and the path it takes are completely independent of and discrete from the unidirectional data transfer path. Absolute assurance of one-way transfer is maintained.



Acknowledgement flow using OSAE

A broad range of acknowledgement schemes is available.

An example -- for process-oriented data transfers, user source registers possible return codes with OSAE software. This application calculates and stores mathematical values for each of the return codes. With successful transfer, the user destination creates an acknowledgement packet, returning this value to the Owl transfer platform as UDP datagrams. OSAE hashes these packets. This value is sent to the OSAE appliance for re-hashing of the mathematical value. OSAE reads the hash packet, performs another hash operation, and sends the new hash packet to OSAE software. It evaluates the received hash value and compares it to the registered return codes, responding to the user-sender with the appropriate return code match.

File transfer-oriented acknowledgements may be configured differently. In lieu of acknowledgements compared to return codes, the user destination may generate an ACK packet that will contain specific information returned to the user-sender, such as timestamps, retransmit requests, etc.

OSAE Architecture

OSAE is a 1U rackmountable chassis supporting two Owl secure one-way transfer systems -- one at the inlet site to receive the destination acknowledgement packet; the second, at the outlet to transfer the re-calculated acknowledgement packet on to the user source. Between these transfer systems, a security engine processor performs the required re-calculations.

- Absolute one-way transfer
- DualDiode® Technology
- Total network isolation/Discrete domain separation



SECURE. RELIABLE. FAST.

FEATURES:

- Independent acknowledgement path for one-way transfers
- Flexible acknowledgement options
- Compact design with multiple controlled interfaces for security
- Operates with all iterations of Owl transfer platforms

BENEFITS:

- Application-layer delivery assurance
- System feedback with absolute transfer security
- Cost-effective use of management & admin staff

*Security & Reliability
In One-Way Information
Transfer*

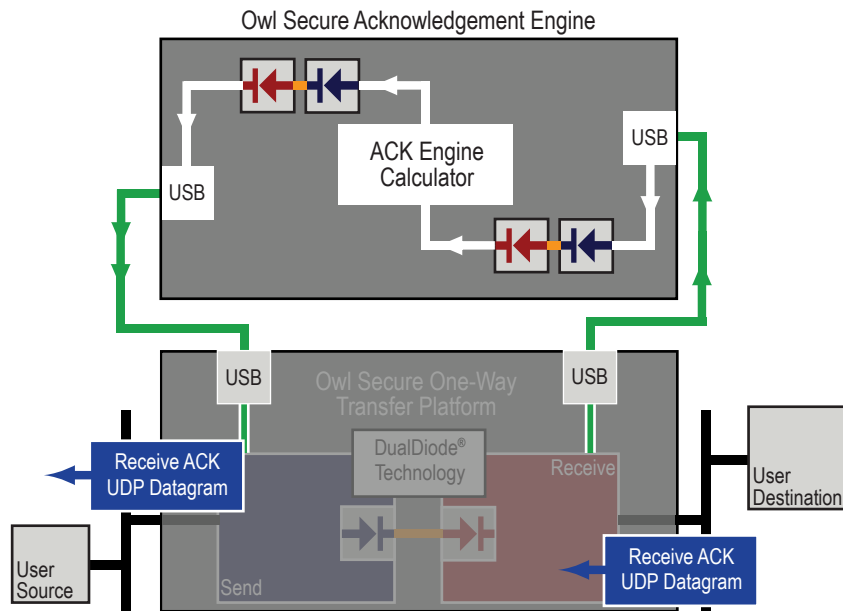


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OWL SECURE ACKNOWLEDGEMENT ENGINE



Example -- ACK response to successful file transfer

DualDiode® Technology (in standalone server applications)

A pair of Owl Communication Cards (Send-only and Receive-only), with Owl internally developed drivers, forms a Dual in-line Diode; each card is custom-manufactured to permit one-way-only data transfer. Security for the one-way transfer is enforced at both the send and receive nodes in this exclusive Owl design - neither diode requires a trusted state with the other. Application-specific software (for files, TCP packets, etc.) completes the individual Owl product offering.

Owl One-Way DualDiode Technology design securely protects the send- and receive-network domains. No information of any kind, including handshake protocols (TCP/IP, SCSI, USB, serial/parallel ports, etc.), pass from the destination computer/network back to the source computer/network. Owl's one-way transfer is a dedicated point-to-point link and requires no additional machine configuration (such as IP). This "trust-nothing" design ensures that data residing on each isolated network is fully protected.

There are over 1000 deployments Secured by Owl throughout the Department of Defense and the US Intelligence community, and the industrial control system industry.

About Owl Computing Technologies: a U.S.-owned & operated Small Business Owl Computing Technologies, Inc., based in Ridgefield, Connecticut, is a privately funded US company.

Owl has an exclusive licensing agreement with Sandia National Laboratories, with worldwide rights to develop and market products originally based on Sandia's patented data diode technology. Sandia National Laboratories is a U.S. National Laboratory operated by Sandia Corporation, for the U.S. Department of Energy.

Owl Computing develops and markets Secure Information Transfer Systems for files and directories, UDP- and TCP-based traffic, for multiple streaming video sessions, and other formats — please call for more information.

OWL COMPUTING BUSINESS DIFFERENTIATORS

- Multiple data sources & types across a single, secure one-way system
- Compliance with NERC-CIP non-routable data requirements
- Common Criteria EAL-4 Certified DualDiode® Technology

Physical:

Width: 16.5 in. (41.91 cm)
-- w/ears, 19 in. (48.26 cm.)
Height: 1.75 in. (4.45 cm.) -- 1U
Depth: 13 in. (33.02 cm.)