



White Paper

Comment on NERC-CIP Compliance Application Notice – 0024

Introduction

NERC Compliance Application Notices (CAN) provide guidance to auditors when evaluating operator compliance to NERC-CIP standards. CAN-0024 addresses when the communication characteristics of data diode devices (as described in CIP-002 R3 Routable Protocols and Data Diode Devices) allow a Cyber Asset to be excluded from NERC Critical Infrastructure Protection (CIP) Standards.

Meeting these communication characteristics, Owl Computing data diodes protect operator Cyber Assets, and exclude them from being categorized as Critical Cyber Assets.

In NERC-CIP compliance audits, US Bulk Electric System (BES) operators, who have deployed Owl electronic perimeter defense solutions in their cyber asset installations, meet data diode non-routability requirements. Because of these successful regulatory examinations, operators continue further deployment of Owl cybersecurity solutions at electronic security perimeters throughout their BES facilities. Owl easy-to-use embedded data diodes do not employ routable communications. They are deployed to protect vital operator control systems.

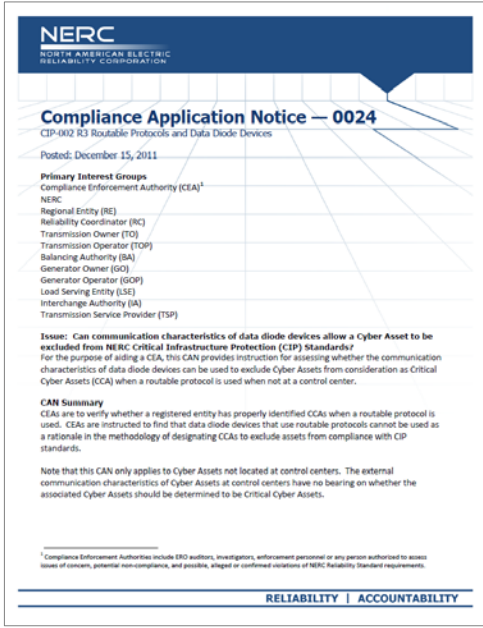
Their use confirms the exclusion of Cyber Assets from consideration as Critical Cyber Assets in accordance with **NERC-CIP Compliance Application Notice 0024 (CAN-0024)**.

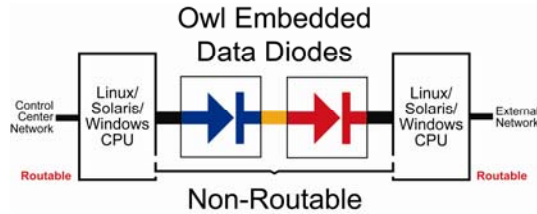
Owl Computing offers embedded data diode products, based on its DualDiode® technology, in each of Owl's alternative installation types: 1) a single rackmounted chassis containing independent Send and Receive processors, each mated with its own embedded diode; 2) two independent servers, dedicated to secure one-way information transfer, each containing its own embedded diode, and 3) two independent servers, performing secure transfer and other operator tasks (e.g., SCADA data collection), each with its own embedded diode.

All Owl solutions deploy embedded data diode technology:

- 1) Owl embedded data diodes use a non-routable protocol across the ESP.
- 2) Owl embedded data diodes are non-routable on the source and destination networks – they have *neither* an IP (Internet Protocol) *nor* a MAC (Media Access Control) address.

Owl embedded data diode devices do not use a routable protocol in their communications. The cyber assets therefore do not use a routable protocol to communicate outside the ESP; and based on CIP 002-R3, the associated cyber assets are not considered to be CCAs.





Owl embedded data diodes are not network interface cards because they cannot interface to a network. As endpoints to a non-routable, point-to-point connection, the Owl Send card only sends to the Receive card and the Owl Receive card only receives from the Send card.

The servers in which these cards are mounted will have standard network interface cards and connections to the networks of which they are a part. The Owl data diode elements (hardware & software) create an assured one-way link from inside the ESP to external business networks.

All Owl data diodes are embedded data diodes. Whether in PCI-x or PCI-e form factor mounted in customer-owned servers or in PC-104 industrial form factor mounted in the Owl Perimeter Defense (OPDS) integrated data diode solution, Owl data diodes perform the same functions and have the same capabilities. They provide a non-routable protocol break across the Electronic Security Perimeter.

About Owl Computing Technologies, Inc.

Owl Computing Technologies, Inc. is a privately owned and funded US company, with a U.S. controlled supply chain. Owl delivers NIAP Common Criteria EAL-4 certified one-way cross domain systems & electronic perimeter defense solutions to transport and protect an organization's most sensitive data between discrete domains of varying security levels and policies. Information sharing Secured by Owl® is enforced with Owl Computing proprietary DualDiode® technology. DualDiode one-way data diode transfer systems guard against data leakage and protect networks from unauthorized access. Owl systems meet the highest levels of information protection within the US Department of Defense, the Intelligence community, & the Power Generation industry, delivering secure, reliable, information transfer from multiple data sources, supporting multiple data types across single DualDiode systems -- any file size or data type. www.owlcti.com