

# ProtecD@R® Multi-Platform Encryptor (KG-204)

*High Speed Classified Data Protection for Unattended Systems*



Protection of Top Secret and Below Data

High Speed Encryption (24 Gb/s)

Low latency, Transparent to End Users

Supports Unattended Operations

Operating System & Host Agnostic

Standard SATA Interfaces for Ease of Integration

Standalone, Rack mounted or Embedment

MIL-STD Ruggedized for Air, Land & Sea

Key Discovery for Simplified Key Management

Configuration, Management & Recovery  
via SNMPv3

Black Key Fill over DS-101 Interface  
via Local Mini-USB Port

## Overview

The ability to protect sensitive Data at Rest is often critical to mission success. The loss of sensitive mission data to our adversaries could have immeasurable consequences. It has therefore become imperative that stored mission data be protected with the highest levels of assurance.

The ProtecD@R Multi-Platform (KG-204) is the latest in the line of ProtecD@R Data at Rest encryptors that prevents unauthorized access to classified information if the hard drives are lost or stolen. ProtecD@R Multi-Platform incorporates a ruggedized flexible design using standard interfaces that allows it to function in a wide spectrum of environments; from desktop to the harshest tactical locations. At 24 Gb/s throughput, the ProtecD@R Multi-Platform has the horsepower for high speed data storage, but is small enough for desktop or embedded use.

As the use of unmanned vehicles increase the risk of data loss to our adversaries increases. The ProtecD@R Multi-Platform is the first Data at Rest encryptor planned to be certified by NSA for protection of Top-Secret and Below data in Unattended Operations.

The ProtecD@R Multi-Platform is the ideal solution for tactical deployments. Its ruggedized small form factor combined with Gigabyte speeds provides our soldiers with the ideal tool for securing data from adversaries in forward deployed locations and in autonomous vehicle operations.

## Applications

The ProtecD@R Multi-Platform is rugged and Size Weight and Power (SWaP) optimized to support the most stringent tactical environments. With throughput speeds of 24 Gb/s, the KG-204 is the ideal data protection solution for applications with real-time performance requirements like video streaming and data analytics:

- ISR data collection on manned and unmanned platforms
- Tactical platform embedment (ground, air, sea)
- Data Centers

# ProtecD@R® Multi-Platform Encryptor (KG-204)

## Extensible for Multi-Platform Use

The ProtecD@R Multi-Platform has been specifically designed with multiple configuration options to allow optimal placement in a wide range of systems. It provides all interfaces needed for management easily accessible on the unit to allow its use as a standalone system. It also provides a remote interface connector which allows the CIK, Key Fill, and LEDs to be brought out to a front panel. This allows the unit to be easily embedded into Network Attached Storage systems such as the Curtiss-Wright Unattended Network Storage (UNS). The unit height is less than 1U allowing for a simple rack configuration with three (3) units across.

## Unattended Operation

The ProtecD@R Multi-Platform is the first Data At Rest encryptor planned to be certified for unattended operations. This feature allows for the encryptor to protect data while in unmanned environments such as unmanned underwater vehicles (UUV) or unmanned air vehicles (UAV). When transitioning to an unmanned environment, the CIK can be removed and the encryptor will be expecting a periodic heartbeat message delivered via SNMPv3. If the heartbeat stops or the system directs a zeroize, the unit will remove all keys. The unit is easily recoverable with the physical CIK and the data can be recovered by reloading the keys.

## Key Discovery

The ProtecD@R Multi-Platform is designed to ease key management across multiple locations. The encryptor uses Pre-Placed Keys which are filled in Black Key format. The use of symmetric Pre-Placed Key (PPK) allows the same key to be loaded onto multiple encryptors. This feature allows a disk to be encrypted in one location and moved to another location where it can be decrypted. To simplify key management, the encryptor identifies the key used to encrypt data on the drive when encryptor starts up. If the key is loaded in the ProtecD@R Multi-Platform, the unit establishes an association automatically even if this is the first time this encryptor has seen the drive. If the key is not loaded, the encryptor will identify the necessary key to be loaded. This feature prevents accidental overwriting of data along with simplified startup configuration.

## Technical Specifications

- **Size**
  - 1.615" H x 5.75" W x 9.2" D
  - 19" Rack mountable, 3 Across, 1U
  - Weight: <5 lbs based upon configuration
- **Power**
  - 29 Watts (4xLanes at Max throughput)
  - Battery: External user replaceable battery, one "1/2 AA" lithium cell
  - A full size lithium or alkaline "AA" battery is supported with a battery cap extender
  - Standard and MIL-STD 461F compliant power supply
- **Performance**
  - Four 6 Gb/s SATA III lanes for 24 Gb/s
- **Reliability**
  - 68,000 Hrs MTBF at 30C in Airborne Inhabited Cargo (AIC) environments
  - 83,000 Hrs MTBF at 30C in Ground Benign environments
- **Environment**
  - MIL-STD-810G
  - Operating Temp: -40° to +70°C (-40° to +158°F)
  - Storage Temp: -55°C to +85°C (-67° to +185°F)
  - Humidity: 95% RH, Non-condensing
  - Altitude: Operational sea level to 65,000 ft above sea level
  - Storage/transit: 1,500 ft below sea level to 70,000 ft above sea level
  - Shock/Vibration: 20g shock, 11ms
  - Transportation Vibration, General Vibration, Category 4
  - Sand: 40 mph winds
  - Dust: 20 mph winds
  - EMI / TEMPEST: In accordance with NSTISSAM TEMPEST/1-92 Level 1
- **Standards Compliance**
  - SATA III Compliant
- **Warranty**
  - 2 year hardware and software warranty
- **Keying**
  - Supports NSA Black Key Fill for Encryption Keys
  - Software upgradeable to support Crypto Modernization
- **Interfaces**
  - Plaintext/Ciphertext Data Interface: Mini Serial Attached Small Computer System Interface (SCSI) (SAS) Hard Drive (HD)
  - Console Management Interface: Electrical/Mechanical: IEEE 802.3/Ethernet2; copper RJ-45 10/100 Base-T
  - Key Fill: Universal serial bus (USB) Micro AB supporting DS-101 protocol
  - CIK port: DataKey Electronics SR4310 Serial Memory Receptacle
  - Remote Connector: DB-25
  - Remote CIK
  - Tamper, Alarm, Zeroize, Operational Status
  - Remote Zeroize
  - Primary power 5VDC
- **Availability:** The ProtecD@R Multi-Platform (KG-204) Encryptor is currently in development and is expected to be submitted for certification 1Q2019.

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