

DATA-AT-REST (DAR) ENCRYPTION FOR INTEGRATED STORAGE MEDIA

ABSTRACT

An improved system (300, 440) for providing transparent, in-line encryption of data-at-rest (DAR) stored by a host controller (220, 420) of a host device (200, 400). An encryption
5 core (320) is instantiated in a hardware device (310) physically coupled to a system board within the host device. The encryption core includes a storage device proxy (330), an encryption engine (340), and a plurality of host device proxies (350A, 350B, 100, 240, 450, 460). Each host proxy among the plurality of host proxies interfaces (110) the host controller to one persistent storage device among a plurality of persistent storage devices within the host
10 device via the storage device proxy. The storage device proxy exposes the plurality of persistent storage devices to the host controller as a single persistent storage device. The encryption core encrypts and decrypts DAR exchanged between the host controller and an encrypted storage device.

15 FIG. 3