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(57) Abstract :

The present invention discloses a dual-factor USB device (100) incorporating a biometric scanner (102) and onboard encryption processor (104). Upon fingerprint verification, encrypted data stored in memory (112) is accessed securely using real-time AES decryption. A timeout unit (108) and tamper-detection circuit (116) further secure data integrity. The USB device functions independently across platforms, ensuring enhanced portable data security without external software dependency. A user-status LED (118) indicates authentication results and operational state.

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