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(57) Abstract :

A smart laptop dock (100) is disclosed, integrating an embedded security key (101), encryption control circuit (102), and tamper detection unit (103) to enable secure device docking and real-time encrypted peripheral access. The dock includes USB ports (104), video and Ethernet interfaces (105), a microcontroller (106), and biometric module (107) for access override, ensuring robust physical and cybersecurity integration for personal and enterprise environments.

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