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(57) Abstract :

A system and method for one or more cellular Internet of Things (IoT) devices (108-1, 108-n) including a firmware upgrade server (102) configured to host a firmware upgrade package (104); a device management platform (106) configured to manage the devices and verify the firmware upgrade package; and a cellular IoT device (108) configured to receive the firmware upgrade package and securely install it, wherein the firmware upgrade server, device management platform, and cellular IoT device communicate with each other over a secure communication channel having cryptographic methods hosted on a cloud-based platform. The firmware upgrade package comprises updated firmware and instructions for the upgrade process. The device management platform verifies the firmware upgrade package authenticity and compatibility with the cellular IoT device, wherein the cellular IoT device install only after the verification. The system provides rollback capability in case of upgrade failure, automatic backup of the device configuration before upgrade and notification to the user or administrator of the upgrade status.

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