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(57) Abstract:

The high-throughput parcel handling system (100) is designed to efficiently handle a large volume of parcels. At the core of the system is a conveyor belt (104) that transports parcels from the input point to a series of sorting stations (106). Each sorting station is equipped with sensors and cameras, enabling the identification and tracking of parcels as they move through the system. To coordinate the operation of the sorting stations, the system utilizes a central control unit (108). This control unit receives data from the sensors and cameras at the sorting stations in real-time. The central control unit analyzes this data to identify and track each parcel accurately. Once the central control unit determines the final destination, it coordinates the routing instructions for each parcel. These routing instructions are then communicated back to the sorting stations, guiding them in directing the parcels to the appropriate output stations (110). The output stations are strategically placed to facilitate the efficient delivery of parcels to their final destinations.

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