



# GreyOrange Butler

# Get ready for Industry 4.0 warehousing with **GreyOrange Butler!**

Achieve lower warehousing cost, accurate and faster order fulfilment, higher inventory traceability. Automate inventory put-away, replenishment and picking operations with GreyOrange Butler.

Make your supply chain competitive with a network of efficient, flexible and scalable warehouses powered by GreyOrange Butler. Combine goods-to-person robotics with artificial intelligence, advanced analytics, sophisticated sensors, and seamless human-machine interactions. Get ready for Industry 4.0!

## Four Design Pillars of The Butler System



### Intelligent Warehousing

- Order consolidation
- Smart storage allocation and improved volumetric utilization
- Real-time ABC analysis and popularity, velocity-based rack placement
- Real-time stock check and audits
- Intelligent auto-charging



### World-Class Safety and Reliability

- Compliance with international standards and certification
- Information security
- High availability with built-in fault tolerance, redundancy and diversity
- Energy-neutral operations
- Multilingual operator interfaces and documentation



### Ease of Use and Adaptability

- Accommodates workflows as per customer's warehouse
- Seamless integration with enterprise systems
- Supports warehouse fulfilment and inventory management policies
- Adaptable to both greenfield and brownfield warehouse environments
- Real-time visualization and reporting



### Scalability and Flexibility

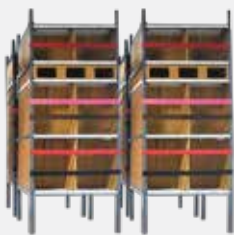
- Bi-directional growth in storage and processing capacity
- Versatility in managing SKUs
- Handles variable demand and peaks
- Allows various packaging types
- Supports units, totes, bins, cases and other storage containers

# System Components



## The Butler Robot

- AI-powered intelligent robot that navigates through the warehouse and brings racks to the operator
- Carries payload up to 500kg
- Runs at up to 1.5 meters/sec
- Supports throughput of up to 600\* picks per hour per picker



## Mobile Storage Units

- Store big and small cases, individual items, apparel, and many more types
- Ability to reconfigure when inventory characteristics change over time
- Available in over 300 variants and each with a typical capacity of 2 cbm
- Ensure up to 60% higher volumetric storage utilization, with n-deep



## Pick-Put Stations

- Ergonomically designed multi-purpose workstation for high-speed, error-free Put, Pick, Audit and Returns operations
- Accelerates operator productivity by 8-10 times
- Enables Operator to fulfil up to 48 orders simultaneously using GreyOrange's proprietary Pick-Put-To-Light (PPTL) technology
- Efficient pick-to-pack integration



## Smart Charging Station

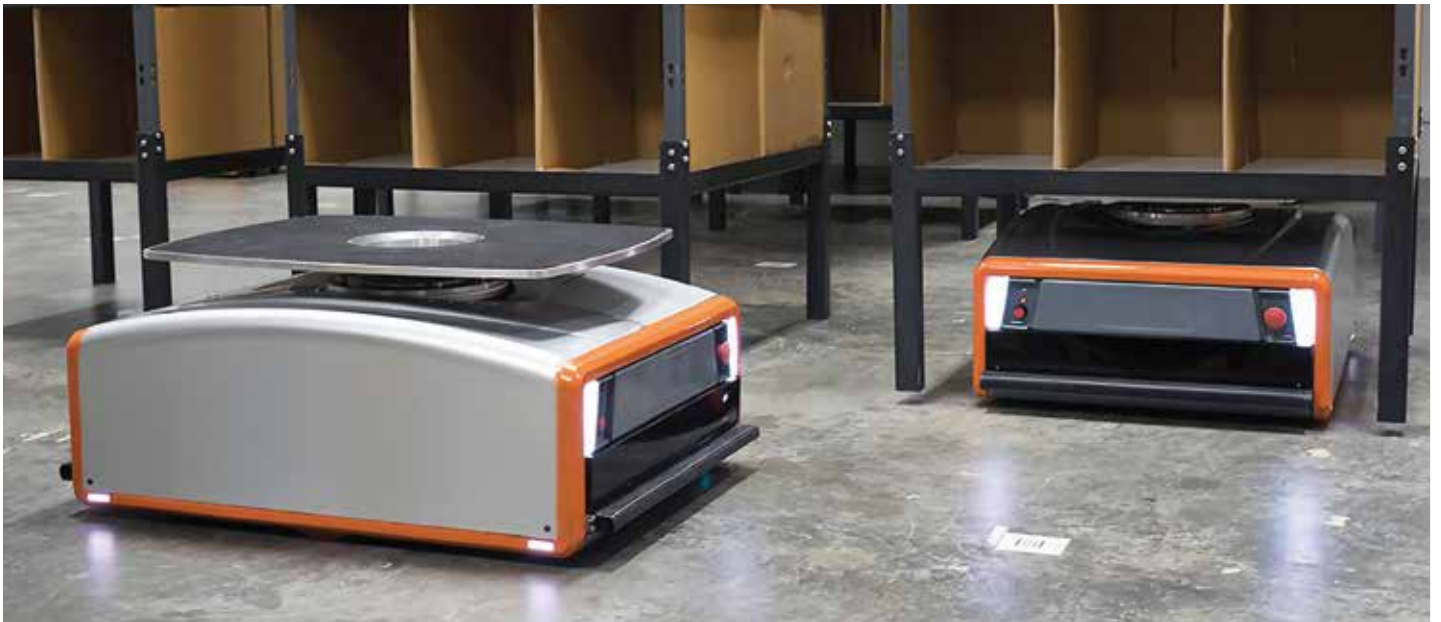
- Butler robots automatically dock at the charging station and recharge themselves, when they are idle or low on power
- Intelligent charging algorithm that enables opportunity charging
- A full charge of 30 minutes ensures up to 8 hours of operation, while a quick charge of 5 minutes ensures 5 hours of continuous operations



## Butler Warehouse Control System

- Orchestrates hardware agents and smart sensors by leveraging artificial intelligence to optimise business metrics based on diverse operational parameters
- Intelligently manages a fleet of hundreds of robots for efficient inventory movement, storage and retrieval in large- to medium-scale warehouses
- Seamlessly integrates with customers' WMS, ERP as well as material handling systems

\*Depending on warehouse operations flow, order processing and inventory characteristics



# The GreyOrange Advantage

- Offers holistic customer experience - from designing solution to providing world-class integration and installation services, followed by comprehensive warranty and maintenance support
- Accelerated delivery time with installation of GreyOrange Butler System within weeks
- Modular architecture to adapt to dynamic business needs
- 24x7 multi-lingual global customer support

## About GreyOrange

GreyOrange is a multinational firm that designs, manufactures and deploys advanced robotics systems for automation at warehouses, distribution and fulfilment centres. With deep domain expertise, world class hardware and software engineering and the passion to solve complex business problems, the company is disrupting the way logistics and supply chain processes across the world are being optimized. Founded in 2011, GreyOrange is headquartered in Singapore with offices in India, Hong Kong, Japan, Germany and UAE, and a state-of-the-art Research and Development center in Gurgaon, India. To know more, visit [greyorange.com](http://greyorange.com)



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