INTELLICYBER

Intellicyber Development Exchange
Material Handling Equipment

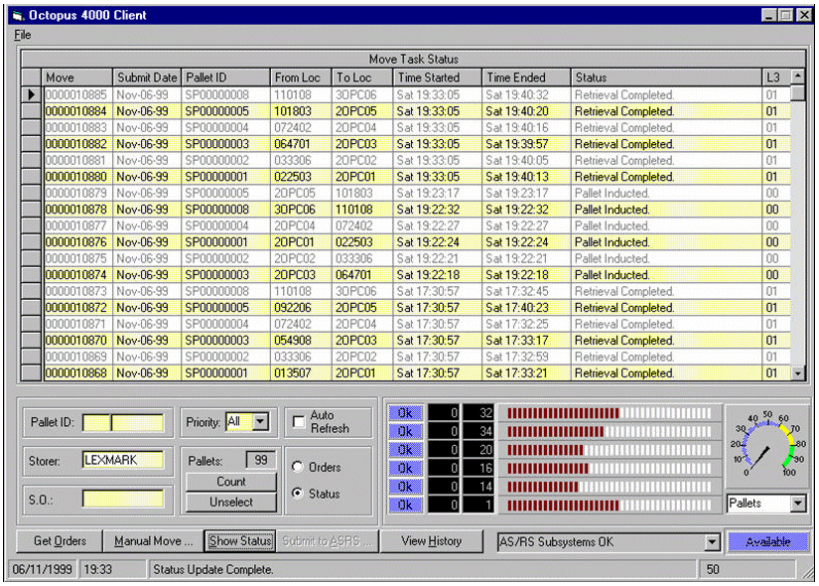
IDX MHE

White Paper

Table of Contents

The IDX MHE Product Suite

Intellicyber has extensive experience with interfaces to various types of warehouse automation equipment. Conveyors, carousels, pick-to-light, ASRS, and sortation systems have all been successfully interfaced to warehouse management systems.



IDX MHE provides a configurable link between supply chain execution / host systems and material handling equipment including AS/RS, carousels, conveyors, elevators, pick-to-light, and even gantry cranes. IDX MHE provides real-time interfaces between SCE systems and MHE controllers using industry-standard communication protocols including IP (TCP/UDP), FTP, socket communication, and Serial RS 232.
IDX MHE provides a focused window of functionality that allows users to maximize the efficiency of their MHE investment.

Benefits

Improved Execution Control

Granular visibility of inventory and selected control of physical MHE operations significantly empowers the warehouse floor and equipment workers.

Reusable Tool

IDX MHE provides customers with all the tools needed to become self sufficient in their MHE integration efforts. First line support and periodic modification resulting form changes business requirements can be done in-house - no more custom interface solutions requiring expensive external maintenance.

Operation Redundancy

Because IDX MHE is capable of operating as a standalone application and maintains its own database of transactions, your execution environment will be provided an addition layer of redundancy preventing your physical operations from being inflexibly tied to your host/WMS system status.

System Flexibility

IDX MHE's easily extendable architecture allows users to rapidly add functionality to manage additional material handling equipment and/or alternate WMS or other execution systems.

Key Features

Modular Architecture

IDX MHE leverages functions of the IDX product suite including an embedded development environment that encapsulate functions commonly used in MHE integration routines. This toolkit allows users to integrate with MHE systems of varying complexity without the burden of developing extensive new code.

Database Buffer

IDX maintains its own database of transactions providing redundancy and task synchronization utilities that will keep your host/warehouse system processes running even during equipment downtime or maintenance.

Error Logging

Comprehensive monitoring and error-handling capabilities with utilities for translation into meaningful messages to speed operator reaction and prevent equipment downtime.

Test Bench Utilities

Comprehensive suite of testing and simulation tools including a simulator and data generator to stress test the software operation prior to live testing ensuring proper burn in of the software and a robust implementation.

Cycle Count Utilities

IDX MHE supports discrete retrieval of pallets/bins by order key, priority, case Id, customer and others for the purpose of inventory stock checks. One or more output stations can be marked as cycle count stations and IDX MHE will coordinate flow of pallets to these locations for stock counting.

User Defined MHE Environment Settings

IDX MHE provides for easy configuration of the physical aspects of the MHE environment based on the size and type of material handled and the level of automation and control required including number of bins, tiers, and aisles, crane availability, equal crane use, optimization of double fork lifts and others.

Independent Put-away Logic

IDX MHE provides an independent layer of user defined put-away logic by zones (Normal, Hazard, etc), SKU ABC type, SKU across aisles, column weight, and pallet/bin height.

Role Based Security

IDX MHE has its own layer of application security providing flexibility and ensuring that flow control and system information is shared on a need-to-know/need-to-use basis.

Components

IDX Pro Manager

IDX Pro Manager provides the GUI to manage the interfaces between each of the systems / equipment. Setting up user security, managing servers and monitoring the state of the system, the IDX Pro Manager in the backbone of the system.

IDX Pro Client

The IDX Client allows networked users with appropriate security permission to view error logs, schedule jobs and monitor status of the IDX system

IDX MHE Runtime Engine

The runtime engines are required to run the code to collect information, interface the multiple systems, and sent the information to the corresponding equipment / system.

IDX SOS - Source Code Control Utility

IDX provides a remote access solution for collaborative interface development. Perfect for companies with remote development teams that need fast and secure read/write access to a centralized interface development file repository via any TCP/IP connection including the internet.

IDX Digital Dashboard

The IDX Digital Dashboard is a unique function of the IDX MHE product. It allows users to graphically view the state, status and condition of the material handing equipment. Giving immediate visibility into bottlenecks, delays and problems, it is an important tool for monitoring MHE as separated from information transfer.