empirica
warehouse management software

Working Solutions for Logistics

High performance solutions for logistics

Empirica is a modular software suite for managing warehouses in any logistics environment which offers the scope and flexibility to adapt to varied physical storage systems and meet diverse operational needs.

Empirica suits smaller as well as larger warehouses. The entry level Empirica Lite system gives essential WMS functionality in an easily installed form, while for more advanced operation, the powerful Empirica WMS is a feature packed product to meet the demands of large DC's or multi-site facilities.
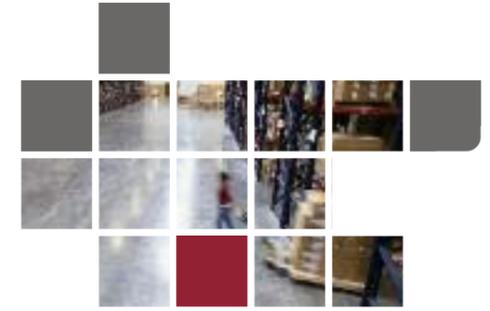
Whatever the type and size of your operation Empirica's WMS suite will help you achieve peak operational performance to deliver real benefits to your warehouse and the wider supply chain.

Empirica will provide benefits to:

- Ensure optimum accuracy and eliminate costly errors
- Maximise the efficiency of your handling processes
- Boost productivity of individuals, teams and shifts
- Achieve full utilisation of personnel and equipment resource
- Maintain fully disciplined procedures within your operation
- Generate real time information for tight operational control
- Ensure complete traceability of every product movement

About Chess

Chess Logistics Technology have specialised in logistics IT systems for over 20 years. We've delivered high performance solutions to customers in retail, logistics and manufacturing, helping them gain business benefits and provide a competitive edge to their operation.

We understand the dynamic nature of logistics, and the need to react quickly with systems that adapt to new challenges. Based on proven packages, our solutions combine essential features with unique ones to meet your individual requirements. We aim to meet your needs without compromise, using the best of our experience to give your business a clear advantage.

We take pride in our track record, customer base and reputation for service quality, and also in our people whose industry and product knowledge covers all aspects of logistics IT. This capability, and our commitment to delivering excellence are key factors in ensuring the success of your WMS project.

Empirica

Empirica Lite

Entry level WMS which is easy to implement and use

Empirica Lite is the ideal WMS for small or developing warehouses needing a robust, cost-effective system to manage pallet or item stock with control and efficiency. Empirica Lite offers good functionality to ensure structured, disciplined processes for receipt, despatch and stock management and offers excellent reporting and traceability features.

Empirica Lite can potentially grow with your operation, offering many add-on features and an option to upgrade to advanced Empirica WMS. Built-in interface tools allow easy integration and the system works with a range of extra modules including Task-RF and key reporting modules.

Empirica Lite Key Features:
- Flexible receipt and despatch
- Operational screen formatting
- Automatic or manual putaway
- Pallet or item numbering
- FIFO and BBE rotation
- Batch and serial number tracking
- Order or wave pick with bulk option
- Labelling and documentation
- Auto third party invoices
- Reporting and traceability
- Stock check and adjustment

Empirica Lite for Wireless Operation

Empirica Lite RF is an advanced wireless solution with options specially designed for smaller warehouses, giving you the power of real time working to guarantee accuracy and improve productivity.

Empirica Lite RF Key Features:
- Real time receiving
- Real time putaway
- Wireless order picking
- Remote despatch note print
- Real time replenishments
- Real time stock movements
- Paper free stock check

Reasons to choose Empirica Lite:
- Proven product based on full Empirica WMS
- Cost effective, with short ROI payback
- Rapid implementation in 4-6 weeks
- Friendly system for new or experienced users
- Guaranteed upgrade path for future growth

Empirica WMS

Advanced warehouse management system for single or multi-site operation

Empirica WMS is an advanced warehouse management system designed to handle any product type, storage system or operating practice. Its multi-company and depot format make it suitable for single or multi-site operation in own account, third party or contract based activities.

Empirica WMS has configurable processes for receipt, despatch, stock management and reporting. Processes are available as wireless options using mobile RF and voice equipment, and all forms of electronic data exchange are supported via inbuilt tools.

Empirica WMS is recommended for larger warehouses and high volume DC's with complex handling and processing activities. It can be used with additional modules including Task-RF and key reporting options including VT-Plan, KPI and Web-View.

Empirica WMS Standard Key Features:
- Pre-advised/blind receipt
- Multi-option putaway
- Stock status management
- Multiple order & pick options
- Load/capacity planning
- Flexible item pick options
- Multiple pick rules and criteria
- Auto, batch and ad-hoc replenishment
- JIT replenishment
- Route-based pick planning
- Load sorting and marshalling
- Load amend, de-pick and switch
- Despatch confirmation process
- Order/POD and exception reports
- Movements, transfers and housekeeping
- Stock ownership transfer
- Stock and status adjustment audit
- Ad-hoc and cyclic stock-checking
- Detailed stock and location reporting
- Detailed movement history/archive
- Auto charge calculation and invoice
- Definable screens
- Customised paperwork
- Document auto email
- RTF documents
- Report auto-email

Empirica WMS Advanced Key Features:
Multi-depot control
Delivery & despatch booking
Production receipt module
Cross-dock functions
Non-held stock function
Returns management
Receipt tolerance
Catch weight recording
QC sampling/Grading
Pre-allocation stock analysis
Demand-based picking
Product substitution
Kitting and sub-kitting
Serial number recording
Media (serial number) tracking
Consolidated replenishment
Cube based pick instruction
Pick weight tolerances
Multi-feature packing desk
Integrated electronic POD
Packaging waste audit
Stock processing/alteration
Advanced charging options
Variable level PI checking
Consolidated depot reporting
Auto EAN decoding
Performance exception reports

Reasons to choose Empirica WMS:
- Intuitive, well designed product
- Broad functionality profile
- Wireless, voice and RFID enabled
- High performance database engine
- In built interface tools
- Client server architecture
- Web-based options
- Multi-lingual capability
- ODBC access

Wireless mobile, or voice-directed technology?

Today's warehouses may use multiple technologies to deliver operational performance, and with the Empirica Task-RF module you can choose the one you need to maximise warehouse efficiency. For receipt and putaway, picking and despatch, replenishment, stocktaking or any other process, Task RF is a real time solution that will markedly increase accuracy and productivity.

The wireless mobile device is a well established technology, while voice directed solutions are becoming popular in logistics, particularly for high volume picking where the benefits are well proven.
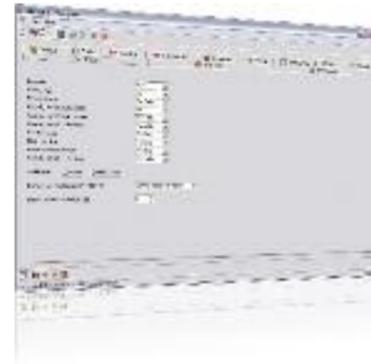
Using one or both technologies side by side, Task-RF creates the real time solution most suited to your warehouse. It deals with varied operational needs and makes automated decisions to manage workload, helping you harness real time efficiency benefits and deliver the highest service levels.

Is a Voice Solution What You Need?

Voice technology transforms warehouse operation by creating direct dialogue between the WMS and your operative staff. This dialogue is configured for your picking or movement process to reflect unique operating factors, so your staff can vary activity, deal with exceptions and increase task completion speed.

Wearing a headset and belt mounted computer, staff receive instructions direct from the system. They confirm tasks, query instructions or request help simply by speaking to the system. Working hands and eyes free means they work faster without working harder, resulting in many benefits, potential productivity gains of up to 35%, and over 99.95% pick accuracy.

With improvements like these it's not hard to see why voice directed solutions offer such a rapid return on investment.

Empirica Task RF

Advanced task management solution for wireless technology

Mobile communications using 802.11 standard wireless technology is used worldwide in retail, industrial and logistics applications. Combining this technology with purpose designed software will give your warehouse major benefits in accuracy and productivity from real-time instruction and confirmation.

Empirica Task-RF is an automated task management system which maximises the advantages of wireless mobile technology. Compatibility with leading mobile and voice-directed devices ensures a wide choice of available equipment to increase accuracy and productivity.
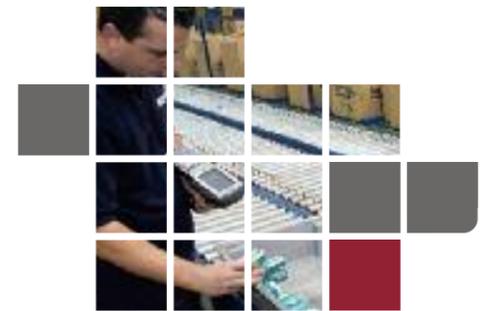
Empirica Task-RF has clear processes to perform warehouse tasks, simplifying work and improving efficiency and labour utilisation. The system's scheduler automates task allocation and allows fine-tuning and monitoring to give full management control and flexibility to handle demanding workloads.

Empirica Task-RF Processes:
- Receiving
- Putaway
- Cross docking
- Replenishment
- Picking full & item
- Sortation
- Location movement
- Vehicle loading
- Stock checking

Task-RF Key Features:
- Auto scheduling by priority/proximity
- Auto task priority escalation
- Equipment & task matching
- Fully definable menu options
- Group definable operations
- Order assignment to single/many
- Manual task release/escalation
- Excluded RF work areas
- Task interleaving
- Full paper backup option
- Real time task monitoring
- Real time problem management
- Task problem log and sin bin
- RF picking by full pallet or item
- Enhanced pick verification
- Two stage P&D movement
- P&D cap and flush control
- Vehicle loading checks
- RF stock check with location freeze
- Productivity reports by multi-criteria
- Work plan and completion summary
- Work in progress reporting

Benefits of Task-RF:

Improved productivity
Automated real time task processes minimise disruption, improve work continuity and boost productivity.

Error reduction
Real time instruction and verification of processes significantly reduces error count.

More efficient processes
Efficient RF based processes complete tasks using real time data access, update and confirmation.

Reduced supervisor input
Task automation and instruction diverts supervisor input towards system monitoring and adjustment to improve workrate.

Faster information
Real time information on labour and stock activity allows faster management decision making.

Reduced paperwork
Real time processes cut paperwork significantly transferring information and reporting to computer based resource.

Stock accuracy and availability
Stock transactions updated and verified in real time ensure high accuracy and better availability.

Empirica Task RF Voice & Empirica Enabler

Central Server-Host WMS

Middleware Server
Voice Console
Empirica Enabler

RF 802.11 Backbone Access Point(s)

Voice Terminal

Handheld Terminal

Vehicle Mount Terminal

Existing site LAN

Client access for:
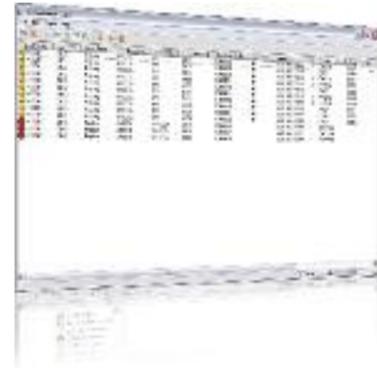· Task management
· Performance Reporting
· ODBC Reporting

Empirica Task-RF for voice

Delivering voice technology benefits to your warehouse

Wireless voice directed solutions are delivering major warehouse benefits, transforming their operations by creating direct dialogue between the WMS and operative staff. Dialogues are configured specifically for picking or movement processes to reflect unique operating factors and allow your staff to vary activity, handle exceptions and increase task throughput.

Empirica Task-RF (Voice) is an automated task management system which is designed specifically to utilise voice directed technology with a range of standard task options. Compatibility with standard voice hardware products ensures the widest choice of equipment available to increase accuracy and productivity.

Empirica Task-RF (Voice) has clear processes to perform warehouse tasks, simplifying work and improving efficiency and labour utilisation. The system's scheduler automates task allocation and allows fine-tuning and monitoring to give full management control and flexibility to handle demanding workloads.
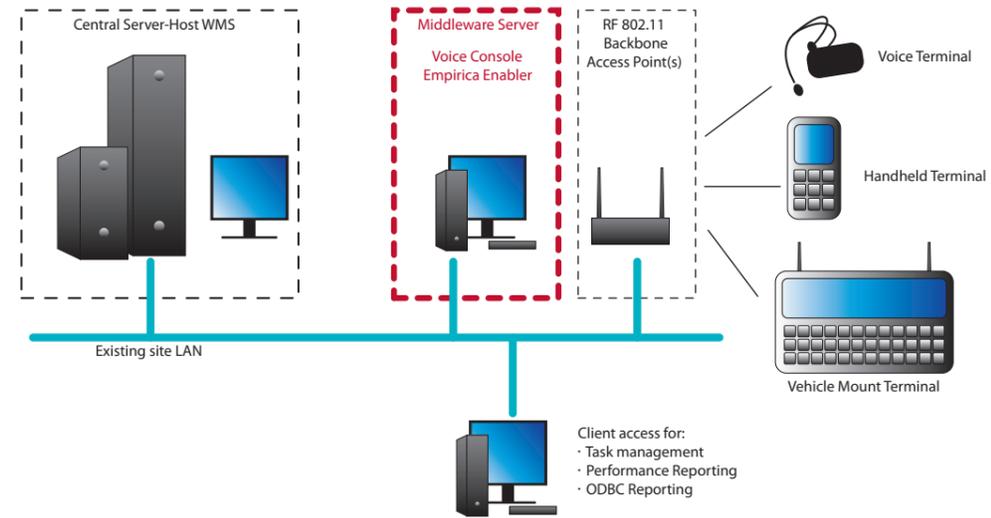
Empirica Task-RF (Voice) Benefits:

Up to 35% productivity improvement
Hands and eyes free operation without screens or keys focuses attention on working productively.

99.9% plus accuracy
Improved visual recognition, focus and real-time update produce high levels of accuracy.

Eliminate unnecessary processes
Removes time and cost of keying and amendment processes.

Cut unwanted paperwork
Voice instruction makes pick and checklists redundant removing paper and print costs.

Reduce dead time
Instructions allocated direct to operative improve continuity and reduce dead time.

Reduce administration
System instructed working reaps major savings in administration and supervision time.

Improve health and safety
Freedom of movement and better task focus reduce risk of accident or injury.

Labour flexibility and training
Simpler working practices cut staff reliance to improve flexibility and staff training.

Empirica Enabler

RF and voice integration for ERP and WMS

Empirica Enabler brings the dynamic benefits of wireless technology to your warehouse. If you want mobile or voice technology for existing ERP or WMS with low development costs and high returns, this product is for you.

Enabler is for ERP or WMS users who want real time technology without major system development. A unique wireless integration module for mobile capability, it can integrate hardware and software to provide genuine real time updates with minimal customisation and no extra middleware.

Enabler provides more than simple connectivity, and is designed to produce maximum benefit from real time technology. As a middleware option it converts orders to electronic pick lists, but with many advanced functions it is also a dynamic tool for managing and scheduling work in real time.

Enabler's scheduler automates task allocation and allows fine-tuning and monitoring to give management control and flexibility to handle demanding workloads. Excellent work in progress and productivity analysis is also provided.

Empirica Enabler Benefits:

- Productivity
- Error reduction
- More efficient processes
- Reduced supervisor input
- Faster information
- Reduced paperwork
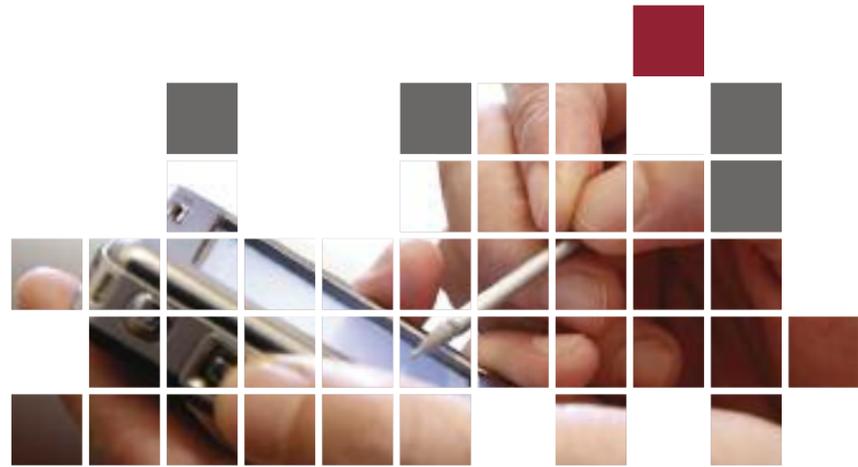- Stock accuracy and availability

Reasons to choose Empirica Lite:

- Purpose-designed 'enabling' module for wireless technology
- Application interfacing without extra middleware
- Genuine real-time updates between warehouse and host
- Proven solution working in large operations
- Extensive features for user and warehouse set-up
- Advanced task management, with priority escalation
- Real time work in progress and task timetable view
- Detailed productivity analysis and movement history
- ODBC access for user-defined reporting

Mobile Solutions

Capture data and communicate with your workforce, wherever they are

Mobile technology systems which allow workers on the move to capture and transfer data in real time are increasingly vital. Supply chain operators want real time information to verify deliveries, report exceptions, manage returns and streamline goods flow. Field service and mobile sales personnel need on-line information to check details, process records and update billing transactions. In all areas there are potentially large savings from improved performance, efficiency and responsiveness.

Empirica Mobile is an application framework for data capture and transfer which uses an efficient, intuitive interface. Operating on Windows Mobile™ the framework provides host and client applications to communicate over wired or wireless connections for fast two way data.
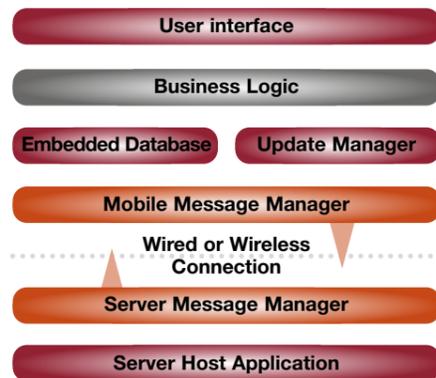
Reasons to choose mobile solutions:

- Permanently on-line workforce
- Real time work in progress and issue reporting
- Improved management information flow
- Enhanced customer service and responsiveness
- Faster billing and problem resolution
- Visibility of daily activity and workload
- Personnel tracking and reporting

Empirica Mobile communicates via one of more of the following:

- Wired (USB/serial)
- Wireless Bluetooth
- Wireless 802.11 b/g/n
- Wireless mobile network (HSDPA, 3G, GPRS, GSM)

Empirica Mobile's built-in intelligence selects the preferred communication method, allowing data traffic to be managed efficiently and cost effectively without user intervention. This gives the flexibility to operate the solution remotely or at fixed locations while ensuring data transfer via the most economic route.

Offering full integration with the Empirica WMS suite, the open architecture of Empirica Mobile also supports third party integration and is suitable for any mobile application where real time information, data accuracy and customer responsiveness are key. Empirica Mobile has integrated rapid development tools to make creating new applications easy and straightforward.

User interface
Business Logic

Embedded Database	Update Manager

Mobile Message Manager
Wired or Wireless Connection
Server Message Manager
Server Host Application

IXact & Reporting Options

Empirica IXact

The fastest route to successful integration

WMS systems must integrate with other applications to share data, initiate actions and synchronise records. Key to implementation, interfaces can involve complexity, time and cost. Empirica IXact is a design tool for creating and managing the exchange of data between systems to reduce these to a minimum.

IXact uses flexible processes to reduce development time for integrated solutions, minimising cost and delivering faster implementation. IXact also manages the scheduling and transmission of interfaces between the applications, provides error trap and exception reporting, with detailed auditing and analysis.

Our Integration experience

Chess is an experienced solutions integrator with many years' experience of interfacing WMS systems with leading business applications. Our approach to interface work is a pragmatic one, based on experience and common sense using standard tools to ensure successful results.

Empirica Reporting

Flexible, dynamic reporting of key business information

Empirica standard reporting gives essential real-time and historical data via multiple formats. For more advanced analysis there are specialist modules and the freedom of ODBC custom reporting.

Standard reporting includes:

- Stock and location data
- Receipt, despatch and order analysis
- Movement transaction history
- Real time task activity analysis
- Task workload/WIP analysis

KPI reporting

The Empirica KPI module examines supplier and contractor performance across key activity areas in delivery and order compliance, including full order OTIF statistics. It also measures internal factors like receipt process times, vehicle start/finish, load, offload, pick and despatch times.

Empirica Web-View

Online access to WMS data is now a key requirement, especially within 3PL operation. Empirica Web-View gives access to data on stock, orders, transactions, shipments and standard reporting options. Custom reporting is available, as are solutions for web ordering, fulfillment and tracking.

Empirica VT-Plan Module

The Empirica VT-Plan module is an advanced planning tool for real-time system users who need key data on operating efficiency. It can be used to measure volumes, analyse performance and calculate future labour requirements.

Volumes analysis

Volumes can be examined by trend and average for defined periods across a range of categories including receipts, products, pallets, returns, orders, pallets and items picked, loaded and dispatched.

Labour performance reporting

Performance reporting gives accurate data on employee productivity based on defined achievement targets with totals and completion time by individual or group.

Labour planning

VT-Plan can calculate the work to be completed in a defined period, and the resource needed to complete it based on actual or targeted performance data. Adjustments can be made to predicted volumes for the analysis period, and task allocation can be defined to factor in employee skills, utilisation levels and scheduled absences.