



Product Portfolio

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<p>DIAMES® Server</p> <p>is the core of the product portfolio. It exchanges on-line production data with the ERP system as well as with any individual work centre on the shop floor. The unique real-time based software package is the heart of a Manufacturing Execution System (MES) environment.</p> <p>It monitors and controls the entire business processes at the shop floor with emphasis on work in progress, performance, exceptions and critical conditions – in order to support World Class Manufacturing standards and benchmark procedures.</p> <p>Unique “Management by Exception” alert features are the base for significant manufacturing improvements - using existing resources!</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ Is a production management tool to improve productivity, capacity usage and shop order fulfillment in a real manufacturing environment. ○ Is a shop floor tool to reduce significantly non value added production conditions like work centre downtime and other non-productive time. ○ Enables activity based costing calculations at a keystroke that is true and transparent. ○ Automatically delivers business critical production information from the shop floor to the top floor. ○ Enhances almost any line of manufacturing.
<p>DIAMES-MDS (Message Distribution Services)</p> <p>is an optional system component to distribute exception and work in progress messages as well as any other general production related information - fully unattended - to designated staff.</p> <p>Dynamic information routing features alert particular staff members with context-related SMS, pager or e-mail messages. The next level of responsible associates will be notified if an exception has not been acknowledged within a predefined period</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ MDS is a tool that notifies associates immediately when planned production activities deviate from the actual output. ○ Personal experience combined with exception information on hand, enables staff to resolve shop floor problems faster and more effectively. ○ Supports an efficient “Management by Exception” approach – even remotely.
<p>DIAMES-APS (Advanced Production Scheduler)</p> <p>is an optional MS-Windows client application that provides finite production scheduling facilities to the DIAMES environment.</p> <p>A “job banking” feature that facilitates enhanced scheduling procedures for firm due date and capacity critical production tasks.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ Complements theoretical ERP based infinite capacity planning features with real-time constraints, actual shift related work capacity and the respective work in progress.
<p>DIAMES-MEM (Manufacturing Execution Manager)</p> <p>is an optional MS-Windows client application to visualize past, current and planned shop floor activities online.</p> <p>A key stroke starts, suspends and terminates a job on a work centre, sets down-time reasons and signs-on/off staff members.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ Displays user defined graphical and/or textual visualizations of shop floor related activities. ○ Staff members immediately become aware of random bottlenecks and exceptions as they occur on the shop floor.
<p>DIAMES-HRM (Human Resource Manager)</p> <p>is an optional MS-Windows client application to manage all production relevant information of associates working at shop floor as individuals and as crew members.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ Is a tool to organize all aspects of production related human resources regarding the DIAMES System and 3rd party HR applications.
<p>DIAMES-LEV (Log Event Viewer)</p> <p>is an optional MS-Windows client application to select, filter and visualize detailed production information that has been collected.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ Is a tool to drill down to individual production events that are recorded by the DIAMES Server.
<p>DIAMES-SFM (Shop Floor Manager)</p> <p>is an optional MS-Windows client application to drill-down to the particular information about plants, departments, machines, crews, single operators and shop order operations.</p> <p>Production resources can be added, changed or deleted on-line and remotely by authorized staff members.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ A tool to visualize and consolidate DIAMES Server data into functional and structured end-user information. ○ A data export function for MS-Office applications is a core functionality.
<p>DIAMES-DAR (Data Analyzer & Report Generator)</p> <p>is an optional MS-Windows client application to convert shop floor data into consolidated production information. User definable reports are used to inform staff and management about activities at the shop floor and their performance at a glance.</p> <p>Key-benchmark figures like Overall Equipment Efficiency (OEE) are available online – even during an active shift or period.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ Complex patterns of past and current and planned production activities concerning all resources (i.e. man, machinery, tools and material) become immediately transparent. ○ Such information together with personal experience will drastically increase effectiveness
<p>DIAMES-DPV (Dynamic Production Visualizer)</p> <p>is an optional MS-Windows client application to interactively visualize past, current and planned production activities.</p> <p>Comprehensive, complex production performance figures become fully transparent – especially consolidated for individual, particular staff and management requirements.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ Is a tool to visualize production information about performance and exceptions - in order to initiate and manage particular shop-floor improvements. ○ Benchmarks based on World Class Manufacturing standards are available at a key stroke.

<p>DIAMES-CML (Common Message Link)</p> <p>is an optional DIAMES connectivity component consisting of a pair of modules that provide an active link between the real-time DIAMES Server and a general Microsoft Windows based Internet/Intranet client environment.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ Is a software module to actively exchange message-based data packages with external 3rd party applications that are not fully compliant with DIAMES.
<p>DBIC (Database Inbound Connector)</p> <p>is an optional MS-Windows connectivity-application that links the DIAMES Server on-line with an independent 3rd party SQL/OLAP Windows database environment.</p> <p>On the DIAMES Server, event data records are transformed directly into SQL conformant import, update or delete statements.</p> <p>The SQL Server with the DBIC client application active will retrieve such records from the associated DIAMES Server mailbox on-line.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ Is an independent software module to extract data records created and originating on the DIAMES Server directly into an external MS SQL Server, MS-Access database. ○ The module runs as an integrated on-line background Windows service on a database server. ○ This can be used as the DIAMES gateway into a strategic Business Intelligence "BI" environment!
<p>CXSRV (Communication eXchange Server)</p> <p>is an optional DIAMES Server application component to provide an active, bi-directional exchange of data records with structured sequential files that reside on the same computer.</p> <p>It connects efficiently and securely 3rd party production or general business related IT applications with the DIAMES Server core environment.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ Is a software module for concurrent bi-directional file based data exchanges between one or more 3rd party System and the DIAMES Server. ○ Ideal as a generic, fully user definable, bi-directional ERP – DIAMES exchange facility or as gateway into a strategic Business Intelligence environment!
<p>CXFileServer (Communication eXchange FileServer)</p> <p>is an optional DIAMES Server application component to extract structured event and exception messages from the server's internal message queues. Such records are extracted into daily, weekly, monthly or yearly organized files.</p> <p>File transfer programs make them available at other IT platforms that are connected to the company's network. Integrated garbage-collection features keep the DIAMES Server environment clean.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ An independent module to extract DIAMES Server messages for further usage or customized 3rd party reporting applications. ○ Messages are automatically extracted and transferred into user defined file directory trees. ○ It can also be used to connect DIAMES with a strategic Business Intelligence environment!
<p>MIC (Manufacturing Information Centre)</p> <p>is a Human-Machine-Interface that communicates actively with the work centre operator and links each work centre on-line with the DIAMES Server as well as with the physical production process.</p> <p>A keyboard and an alphanumeric LCD display are used to:</p> <ul style="list-style-type: none"> • visualize on-site information related to the active job, work in progress, or details of planned and assigned operations; • support business operation tasks interactively, e.g. <ul style="list-style-type: none"> – crew-member sign-on/off – start, suspend or terminate jobs – select appropriate downtime reasons – select and assign temporarily required production resources <p>Counter-inputs, digital IO's and serial RS232 ports interact directly with the currently active production process on the work centre.</p> <p>MAN (Manufacturing Access Node)</p> <p>is a machine-only interface that has the same work centre related connectivity and functionality – but without any direct human interaction facility on board.</p> <p>Production execution operations are managed with DIAMES Shop Floor Tools. These applications are available on dedicated PC's in the office area or touch screens located at prominent shop floor positions - or on wireless devices for highly mobile staff members.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ Is a DIAMES specific hardware unit that logically integrates unintelligent work centers into a fully functional DIAMES environment. ○ With Symbol keys the work centre operator communicates on-line with the DIAMES Server. Every keystroke initiates an immediate response. ○ Simple and effective, predefined procedures ensure easy to learn and error-free transactions. ○ The most common physical connection between an MIC / MAN and the work centre consists of an electronic sensor. A single sensor configuration can be used to derive all the basic key data (gross quantities, production-rates and run/stop conditions) required by DIAMES. <p>Additional sensors and devices enhance this basic functionality, i.e. to differentiate good vs. scrap quantities and to recognize downtime reasons automatically.</p> <p>Sophisticated numerical or PLC operated work centers are connected on-line via a serial MIC port connection. This often requires a customized communication protocol to support the particular work centre functionality.</p>
<p>TRS (Time Related Services)</p> <p>An easy to use DIAMES system that reflects the true business environment at the shop floor requires substantial commissioning support during the initial project phase and later enhancements.</p> <p>Only a DIAMES system that has been carefully commissioned and operates completely in synch with the requirements of the user's business organization, can unfold its effective potential benefit.</p>	<p>Features and Benefits</p> <ul style="list-style-type: none"> ○ Twenty years of worldwide experience with Manufacturing Execution System development and implementation activities in many industrial environments are our core competence that we would like to share. ○ ... <i>Ask for references or a live demonstration.</i>



Product Portfolio on one page

Corporate Data Warehouse (Business Intelligence)

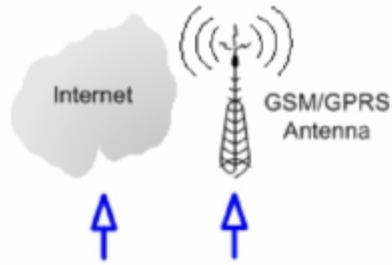
Consolidated information at the top floor

Corporate ERP or classical MRP environment
(SAP, Oracle, Baan, People Soft, JDE or proprietary)

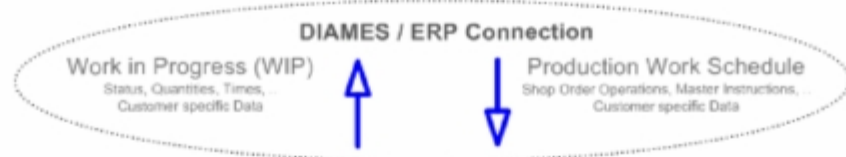
DIAMES / ERP Connection

Work in Progress (WIP)
Status, Quantities, Times, ...
Customer specific Data

Production Work Schedule
Shop Order Operations, Master Instructions, ...
Customer specific Data



MDS : Message Distribution Services



Visual Server GUI
DIAMES Server
(AIX or Win32 platform)

ISP : Information Server Platform
(DBIC, CML, CXSRV ...)



User Windows PC's

DAC: Definition & Administration Console



User Windows PC's

DTM: textual Terminal Manager



User Windows PC's

DIAMES Shop Floor Tools users

- APS - Advanced Production Scheduler
- MEM - Manufacturing Execution Manager
- HRM - Human Resource Manager
- LEV - Log Event Viewer
- SFM - Shop Floor Manager
- DAR - Data Analyser & Report Generator
- DPV - DIAMES Production Visualizer



Detailed data from the shop floor