Eclipse Inventory Modeling

Release Eterm

Legal Notices

Activant ® Eclipse™ Eterm Online Help System

Publication Date: June 11, 2010

Table of Contents

Inventory Modeling Overview

Inventory modeling provides a way to future plan for your branch inventory budgets. This modeling process lets you test setup scenarios to see the effects on other areas before committing those changes to your system. The spreadsheet gives you access to key fields that you can adjust to forecast what your purchasing model should look like to maintain a specific budget by branch.

Use the Inventory Modeling tool to help answer the following types of questions:

- What do I need to do to get my inventory to a specific number of turns?
- What do I need to do to get my inventory if I want to keep to a specific order cycle?

The system uploads values of five specific fields from the Inventory Modeling spreadsheet program for a specific branch in your system. When you upload the value of these fields, you change this value for *each product* listed in the spreadsheet.

After extracting your purchasing and forecasting parameters from your Eclipse system, use it for modeling inventory settings. After setting up the model to support your particular budget, you can upload the key values back into your Eclipse system.

Before you begin, review the setup parameters required to use Inventory Modeling.

> **Note:** If you do not have the inventory modeling program, all menu options related to inventory modeling will be grayed out.

Setup Requirements for Inventory Modeling

Following are the control maintenance records, authorization keys, and additional setup requirements for Inventory Modeling.

Control Maintenance Records

- Inventory Modeling Parameters
- Minimum Order Cycle Days For Suggested P/O

Authorization Keys

- PRODUCT.MAINT - higher than level 2
- PRODUCT.MAINT.LEVEL - higher than level 20
- In addition, all permissions that currently are applied to your user ID effect which price lines, buy lines, and products you may extract from and upload to the system.

Companion Products

Please contact your inside sales associate for more information about the following companion products. These products are not required, but further enhance some of the Inventory Modeling features:

- Outbound E-mail

  Note: If you are using Eterm and do not have outbound e-mail, save the file to your hold file and process using the Binary download option.

Extracting Inventory Data from Eclipse

To begin your inventory modeling process, you must first extract data from your database into a format that is easy to work with. The extract process pulls your inventory data from your database and formats it into an XML file that you can view and edit in Microsoft Excel.

Important: We recommend that you save the original extract file to your computer from the system-generated e-mail and make changes to a copy of the original. Making changes to a copy allows you to still have the original data to reference without having to create a new extract file, such as Branch#1_InventoryModel_01092009.xml.

If you do not have the Outbound E-mail companion product, you must send the file to your hold file and process the file from that window. For more information about processing this file, see Downloading Reports from Your Hold File.

The system uses the Inventory Valuation Report as a foundation for the extract. Access to the extract functionality requires authorization and that you populate the following fields in the Inventory Valuation Report window:

Field/Column Selection	Description
Branch	On the **Product Selection** tab, enter the branch from which you want to extract product data. This field must be set for *one branch only*. If you try to run the extract for more than one branch, the system displays an error.
As of Date	On the **Product Selection** tab, enter the system defaults to the current date.
Select By	On the **Product Selection** tab, enter the price line or buy line by which you want to extract data for the indicated branch. If you leave this field blank, the system displays an error.
Report Type	On the **Display Settings** tab, select **Detail** for the extract. If you leave this field set to a different report type, the system changes the setting when you begin the extract process.
Cost Basis	From the **File** menu, select **Report Column Selection** and add the column that contains the cost that you want to use in your modeling, for example COGS-COST.

The remaining fields should be populated based on which data you need to extract. For example, if you want to include negative on-hand quantities, set that field to **Yes**. For information about the regular input fields on this report, see Running the Inventory Valuation Report in the Purchasing documentation.

To extract data files for Inventory Modeling from Eterm:

1. From the **Purch > Reports** menu, select **Inventory Valuation** to display the Inventory Valuation Report screen.
2. Complete the Inventory Valuation fields, as needed for the branch for which you want to model inventory data and check the following:
   - Enter only one branch. You can only model inventory one branch at a time.
   - The **Detail/Summary** field must be set to **Detail** to run the extract. If you use the **Extract** hot key and this field is not set to **Detail**, the system changes it prior to running the extract.

3. Use the **Extract** hot key and do one of the following: .

To..	Do this...
send the file using e-mail, if you have the Outbound E-mail companion product.	1. Enter **E** at the prompt. 2. In the **To** field, enter the e-mail address to which you want to send the extract spreadsheet. You can enter multiple addresses, if needed. 3. In the **Subject** field, change the subject line, if needed. The default is **Inventory Modeling: <Br # <current date>**. 4. In the **Body** field, enter a message to indicate which extract you are performing. For example, you can enter the branch and the buy line for which you are extracting data. This message will help you distinguish between other extract e-mails you may be archiving. 5. Press **Esc** to complete the extract and send the information to the indicated e-mail address.
send the file to your hold file	Enter **H** at the prompt to complete the extract and send the information to your hold file, where you can then download the file.

The extract process time varies depending on the size of the branch and its product line from which you are extracting data.

Note: Excel limits spreadsheets to 65,536 lines. If your product list exceeds this number, you need to extract your data in more than one file. Excel gives an error if you exceed the line limit after the extract when the Excel file attempts to open.

Uploading Your Inventory Model to Eclipse

After adjusting values on the Inventory Modeling spreadsheet to meet the needs for your business, you need to upload the values back to the system. The system only uploads specific fields from the spreadsheet, but uploads these field values to the product record for ***each product*** that is on the spreadsheet.

> **Note:** Depending on the number of products in the spreadsheet you are uploading, the upload process may take several minutes. The systems sends a message to you when the upload completes. If you are running an upload for a large buy line or several buy lines at once, you may want to run the upload during off hours.

To upload the values from your Inventory Modeling spreadsheet in Eterm:

1. From the **Purch > Inventory Modeling** menu, select **Inventory Modeling Upload** to display the Inventory Modeling Upload screen.
2. In the **Inventory Model File** field, use the **Choose File** hot key to browse and select the file from which you want to upload data to your product files.
3. Select which of the following fields to include in the upload. The default is **Y** on each.
   - Upload Item Safety Factor
   - Upload Buy Package
   - Upload Package Divisible
   - Upload Stock Item Flag
   - Upload Minimum Quantity
   - Upload Minimum Quantity Expiration Date
4. In the **Minimum Quantity Expiration Date** field, if you want the minimum quantity that is uploaded to be limited to a specified time frame, enter a date on which you want the minimum quantity value to expire. The default is one year from the current date.
5. Use the **Process** hot key to upload the values.

Applying Spreadsheet Parameters to Other Branches

After modeling your inventory to support a specific budget or turn cycle, you can apply the spreadsheet calculations to a different branch than the one from which you originally extracted data.

For example, you open a new branch in your network. You want the inventory modeled after the branch which is physically closest to the new branch to take advantage of the fact that they are going to have the same buy lines and price lines set up. The closest branch is branch 3. You extract data from branch 3 for all products in that branch. You modify the data to reflect the new branch's budget. Then, you upload the new data fields to the new branch *not* back to branch 3.

Important: An upload cannot be "unloaded" on site after being sent. If you upload changes and need to adjust fields, the adjustments must be done manually or through another extract and upload. We recommend saving a copy of the original extract.

Verifying Inventory Modeling Upload Changes

After running the Inventory Model Upload to your product files, you can verify changes by checking the maintenance log or by running a change log report.

Using the Product Maintenance Log

Check the product maintenance log to see if an Inventory Modeling update changed information. Checking the maintenance log verifies that a product's file changed due to an update.

To check the Product Maintenance Log in Eterm:

1. Display the product for which you want to check the maintenance log.
2. Use the **Log** hot key to display the Maintenance Log Viewing screen.

   A line item displays for the update: AUTO.UPD - Inventory Modeling Update.

   Individual line items that changed, such as Safety Factor, do not have an indicator that the change was made as part of the Inventory Modeling update. However, the date stamp generally matches the update line item.

   For example:

   JMARTIN 01/08/09 05:34pm AUTO.UPD - Inventory Modeling Update

   JMARTIN 01/08/09 05:34pm BR: 1; Safety Factor

   JMARTIN 01/08/09 05:34pm BR: 1; Stock Flag

   JMARTIN 01/08/09 05:34pm BR: 1; BuyPkg: 8

Running the Change Log Report

The system uses Eclipse Reports to build your Change Log Report. A report provides flexibility in viewing your data and lets you view data for the entire branch's products at one time. Create a report template and schedule this report to run regularly.

To run the Change Log Report for Inventory Modeling:

1. Access Eclipse Reports and log in.

   Note: Since Eclipse Reports uses a single Solar licence, if you have a Solar session running, launch Eclipse Reports from the **n** menu. If you are not running Solar, then launch Eclipse Reports from the web site. For detailed information about how to use each page in the report wizard, click the **Help** icon in Eclipse Reports.

2. Click **Create Report**.
3. From the **Category** field, select **Inventory**.
4. From the **Source** field, select **Product Change Log**.
5. In the **Title** and **Description** fields, enter information about this report that will help you distinguish it from other report templates.

6. Use the following fields to indicate what type of template you are creating:
   - **Favorite** - Indicate if you want this report template to display in your **Favorites** list.
   - **Access Type** - Indicate if you want to keep this report private.
   - **Copies** - Indicate if you want to overwrite the report each time it is run. By leaving this check box selected, the system saves server space. If you need a separate copy for this report each time it is run archiving each version, deselect this check box.
   - **User** - Enter any user IDs who you want to receive the report in addition to yourself.
7. Click **Next** and enter a date parameter if you want to limit the report to a specific time frame. We recommend leaving this range blank and applying a run-time after the report runs.
8. Click **Next** to display the Schedule Report page. Use the field parameters to indicate how often you want to run the report. If you want to run the report once, leave the fields blank.
9. Click **Finish** to display the Sample Report Data page.
10. Use the **Available Columns** area and folders to add columns to the report.
11. Use the **Actions** menu to move, delete, or add sorting to columns.
12. Use the **Run-Time Filters** tab to apply any post-filters you want to use, such as limiting the data to a date range or buy line.
13. After adjusting the column layout as needed, click **Run** to run the report.

Inventory Modeling Spreadsheet Header

The following descriptions provide information on each of the fields in the header of the Inventory Modeling spreadsheet tool. The system divides the output data into areas so you can review the actual inventory costs, adjust the modeling parameters, and calculate the effect of the changes and how that adjusts your inventory budget.

For information about the columns listed on the spreadsheet, see Inventory Modeling Spreadsheet Column Descriptions.

Actual Inventory

Field	Description	Data Source
Branch __ Inventory Model As-Of <date>	(View Only) The branch and the date selected for which data pulled use for inventory modeling.	Defined during data extraction
Actual Inventory $	(View Only) The sum of all values in the **Onhand$** column.	Calculation
Budget Difference $	(View Only) The value of the **Actual Inventory** field minus the **Inventory (Budget)** field.	Calculation
Model Difference $	(View Only) The value of the Actual Inventory field minus the **Inventory (Model)** field.	Calculation
Actual Turns	(View Only) How many turns you actually get currently for the inventory you display in the model.	Current System Setup
Annualized Sales at Cost	(View Only) The cost value is entered when running the extract. Defined as follows: • **At product level -** The total units sold as calculated by the Gross Margin Return On Investment (GMROI) value from the previous 365 days multiplied by the Cost Basis selected when running the extract. • **At header level -** Sum on the product level with the same basis calculation (GMROI from previous 365 days X Cost Basis).	

Inventory Model

Field	Description	Data Source
Inventory (Model) $	(View Only) The suggested inventory level that would be carried based on the value entered in the **Restocking Period** field.	Calculation
Model w/Min Qty Overrides	(View Only) The suggested inventory level that would be carried based on the value entered in the **Restocking Period** field plus total cost of all minimum overrides entered on the spreadsheet.	Calculation

Field	Description	Data Source
Restocking Period (Days)	The spreadsheet uses the Minimum Order Cycle Days for Suggested P/O control maintenance record value as the default. This is the base value used to calculate the Grand Total Inventory Model value. .	
Demand Threshold-Rounding*	In standard Eclipse calculations, demand is always rounded up. The Demand Threshold Rounding value on the Inventory Modeling spreadsheet provides a way to model your inventory without demand being rounded. The default is zero. Use the Inventory Modeling Parameters control maintenance record to set a value before running the extract. Use this tool to analyze rounding in high dollar items. One point change could affect your total inventory dollars.	Control Maintenance Record
Hit Cutoff*	The system uses the default value set in the Global Hits Definition Maintenance control maintenance record for the branch selected when running the extract. Change this field to limit products based on their hits whether they contribute to the Grand Inventory Model value.	Current System Setup
Include NonStock*	User-indicated field. Default is No. If you want to consider all non-stock items as stock for modeling purposes, enter yes.	User entered on spreadsheet
Med Sale Qty Mult*	The default is 1. The system uses this value to complete the **Demand with buy package and rounded to mean sale quantity** column. Changing this field lets you increase the median sales quantity by this factor. For example, if you want to double the median sales quantity, enter 2. This entry can affect your Grand Inventory Total Model.	
Model Turns	The number of turns you want to aim for in modeling your inventory. The spreadsheet uses this field to calculate the Turns S.F. column values. Entering a value here changes the Grand Total Inventory Model calculation and all products' safety factors.	User Entry

Inventory Budget

Field	Description	Data Source
Inventory (Budget) $	(View Only) The difference between the budget (the target dollars you are aiming to use for your inventory supply) and the **Grand Inventory Model** field.	Calculation
(Budget - Model) Difference $	(View Only) The result of the inventory budget minus the current inventory cost.	Calculation

Field	Description	Data Source
Annualized Sales at Cost	(View Only) These three fields work together to help you project if you should adjust your annualized sales based on the GMROI value. When running the extract, you decide to use the value as one of the following: • **At product level** - The total units sold as calculated by the Gross Margin Return On Investment (GMROI) value from the previous 365 days multiplied by the Cost Basis selected when running the extract. • **At header level** - Sum on the product level with the same basis calculation (GMROI from previous 365 days * Cost Basis). Use the **% to Adjust Annualized Cost** field to try out different adjustments to see what will benefit your business. This field defaults to zero. The **Adjusted Annualized Sales at Cost** field displays what the new adjusted annualized sales at Cost will be based on the percentage entered in the **% to Adjust Annualized Cost** field. The system assumes the percentage calculation, so only enter an integer. For example, for 2 percent enter "2" for -1 percent enter -1.	Defined during data extraction
% to Adjust Annualized Cost		User Entry
Adjusted Annualized Sales at Cost		On-the-fly calculation based on the previous field.
Budgeted Turns	The ratio defined by the following calculation: annual cost of goods sold (COGS) divided by the on-hand dollars.	

*** Indicates an editable field.**

Inventory Modeling Spreadsheet Column Descriptions

The following descriptions provide information on each of the columns on the Inventory Modeling spreadsheet tool. For information about the header portion of the spreadsheet, see Inventory Modeling Spreadsheet Header.

Spreadsheet Columns

The following display details about the use and the data source of the column information.

Column	Description
Product ID	(View Only) System-assigned number connected to each product so each can be identified individually, such as in a search.
Buy Line	(View Only) Buy lines are groups of products that you purchase together to meet the vendor target. For inventory modeling, this buy lines corresponds with the product identified in the **Product ID** column.
Description	(View Only) The product description as listed in the product file in Product Maintenance. This description is defined when the product is first entered into the system.
S.F. Rank	(View Only) The product rank used for safety factor calculations. This value is set before extract in the Inventory Modeling Parameters control maintenance record. The Inventory Modeling tool lets you change safety factors by rank.
Rank 1	(View Only) Ranks assigned to products as outlined in the Product Ranking program. For more information about how the system uses product ranking or how to set up your products with product ranks, see Product Ranking Method and Breakpoint Rules and Product Ranking Information Uses.
Rank 2	
Rank 3	
Rank 4	
Rank 5	
Total On-Hand	(View Only) The total number of products per unit you have available in your warehouse. Click here to see the calculation.
Cost (Basis)	(View Only) You select this cost when running the extract. A basis name used in pricing to indicate the cost of a product. This value is set per product in Product Maintenance.
Onhand$	(View Only) Total value in dollars of on-hand inventory. Click here to see the calculation.
Forecast Period Hits	(View Only) Number of hits recorded during the forecast period. The system uses the number of sales occurrences to determine the amount of sales history to review. Also referred to as ”r;raw hits.”
Monthly Hits	(View Only) Number of hits recorded in a month. The system uses the raw hits calculation and divides by 12. For more information about hits and how the system defines them, see Defining Hits.
Daily Demand	This value is pulled from Product Maintenance for each branch for each product on the spreadsheet. Click here to see the calculation.
Median Sale Qty	(View Only) Median sale quantity from the Demand Calculation Audit screen.

Column	Description
Hi(gh) Qty not Excluded in Excep	(View Only) Item calculation. The largest transaction that is not included in Exceptional Sales as identified in the Demand Calculation Audit screen.
Buy Package Qty**	The buy package quantity for the product used in purchasing and branch transfers. The system populates the unit of measure for the buy package quantity, using the unit of measure defined for purchasing. For more information see, Fields that Upload from Spreadsheet.
Pkg Div**	Indicates whether the buy package can be divided and the item procured in a quantity other than the buy package quantity. You can assign one of the following divisibility settings to a product's buy package quantity: • **Y** - (Yes) Allow the buy package quantity to be divided. • **N** - (No) Do not allow the buy package quantity to be divided. • **O** - (Only) Allow the buy package quantity to be divided in procurement only, but require the branch to take the remaining amount into stock. If this is not a procurement, this selection works the same as No. For more information see, Fields that Upload from Spreadsheet.
Restocking Period with Safety	(View Only) The days demand calculation plus the safety days. The field populates based on the value in the **Restocking Period** field in the header. This value is rounded up or down based on the demand threshold information in header.
Restocking Period of Buy Package Qtys	(View Only) The days demand calculation rounded to buy package quantity. The field populates based on the value in the **Restocking Period** field in the header.
Minimum Qty**	Represents the minimum value of a product. If any product on the extract has a minimum quantity has a minimum the product is not included. This overrides previous settings. This field uses the following scenarios: • If the minimum is set to zero (0), then the system sets both the minimum and the maximum to zero (0) and set the expiration date activates. • If this field is set to null or blank, the system deletes values for minimum, maximum, and the expiration date. • If the field is set to a number, the system sets the minimum, delete the maximum, and set the expiration date. **Note:** This only occurs if you are importing this value and users receive a warning before proceeding. For more information about the fields the system uploads see, Fields that Upload from Spreadsheet.
Demand with buy package and rounded to median quantity if suggested qty is less than median qty * 1	(View Only) The days demand calculation with safety days rounded to buy package. This calculated value is compared to the median sales quantity multiplied by the average quantity factor. By default, the Average Quantity is set to 1. The system uses the greater of the two values. **Note:** The Demand Threshold Rounding field directly affects the daily demand.

Column	Description
Cal'd Cost	(View Only) The days demand calculation with buy package. If the suggested quantity is less than median sale quantity, then this value is rounded to median sale quantity. Click here to see the calculation.
Total Cost (accounting for overrides)	If override quantity is empty then 'days demand value' days demand rounded **multiplied by** 'entered cost at input' divided by pqty else override quantity times 'entered cost at input' **divided by** pqty
Inv$ Diff	(View Only) The total cost minus the on-hand dollars.
PUOM	(View Only) Product Price Sheet unit of measure
Pqty	(View Only) Product Price Sheet unit of measure quantity.
Current Days Supply	(View Only) Based on your current total inventory for the product and how many days supply you have. The formula is the total on-hand divided by the daily demand. **Note:** If the total on-hand is less than the daily demand the system displays the fraction.
Actual Calc'd Days Supply	If Daily Demand is greater than zero 'days demand value' days demand of buy ***divided by*** daily demand. Else if 'days demand value' days demand of buy is greater than zero use 999 else use 0
Projected Inventory Level	(View Only) The quantity of a product used for predicting purchasing needs. The quantity you physically have on hand, minus the quantity committed to orders, plus the quantity coming in on transfers and purchase orders. Each product has its own projected inventory level. The formula is **PIL = ((on hand committed) + on transfer + on purchase order)**
PIL$	(View Only) The current cost based on the projected inventory level. The formula is **PIL = ((on hand committed) + on transfer + on purchase order)**
PIL Check	(View Only) Answers the question: Is PIL$ is greater than onhand? Valid entries: **Yes** and **No**.
Stock Item?	(View Only) Indicates if the item is normally a stock item. The system pulls the stock item flag from Product Maintenance.
Safe Days	(View Only) Extra time added to the calculation of the order quantity to compensate for delays in receiving the product and increased demand. Demand Days + Safety Days = Safe Days Safety days are added to order points and line points at purchasing branches to compensate for vendor lead times and order cycle days.

Column	Description
Item S.F.**	Item safety factor. Defaults to one (1) to make sure each product starts with the same safety factor. If an item has no daily demand, the system uses a default of one (1). You can change the safety factor for each product if you want to account for a different safety factor individually. For more information see, Fields that Upload from Spreadsheet. You can also handle safety factors based on turns or product rank. **Note:** If the **Item S.F.** value displays as ***.01*** in red, bold, italic font the actual safety factor is negative and the system defaults to .01.
Adj S.F.	(View Only) Adjusted safety factor. The hits related safety coefficient (HRSC) for the product at the branch multiplied by the value in the **Safety Factor (SF)** field. The hits adjusted safety factor affects the adjusted gross margin, projected service level, projected turns, order point safety days and line point safety days. • If Annualized Hits is greater than 3 then divide 4 by the Forecast period hits multiply by .6 and multiply by the item safety factor. • If Annualized Hits is less than or equal to 3 multiply the item safety factor by 1.6. • If Forecast Period Hits is Greater than 3 then divide 4 by the Forecast period hits multiply by .6 and multiply by the item safety factor. • If Forecast Period Hits is less than or equal to 3 multiply the item safety factor by 1.6
Model Projected Turns	Weighted turns calculation entered when projecting the inventory model. Entered when running the inventory model.
Current Projected Turns	The number of turns your inventory is currently modeled for, as reflected by the GMROI Report.
Current Projected Service Level	The service level entered when projecting the inventory model.
Lead Time	Current lead time of the product. The lead time is traditionally the number of days it takes for you to prepare and process the purchase order, the vendor to ship the material, and your warehouse to receive the material. Lead time affects order points, line points, and safety stocks; therefore, accurate lead times are critical to accurate purchase planning. For more information, see How the System Calculates Lead Time in the purchasing documentation.
Annual Cost $	The value of the cost of good sold over a 365 day period. This formula is as follows: Total Sales Qty X Cost Basis entered on the extract.
Annualized Hits	The number of hits determined by the demand forecast period annualized. For more information about demand forecast, see Entering Forecast Period Parameters in the purchasing documentation.

Column	Description
Order Cycle	Current order cycle of the product based on the buy line target. Traditionally, the order cycle is the normal number of days between your purchasing. The amount of days in an order cycle is based on the order point, plus the lead time, plus the time to get to the vendor target. Each product has its own order cycle. For more information about order cycles, see Order Points and Line Points Overview in the Purchasing documentation.
Manual Safety Stock	Also known as service stock. Current service stock loaded for the product. For more information, see Adding Customer Service Stock in the purchasing documentation.
EOQ	The current Economic order quantity (EOQ) used for inventory forecasting.
Purchasing Per	The unit of measure (UOM) in which the product must be purchased as indicated in Product Maintenance. **Note:** Default UOMs are defined at the price line level. If you add any units of measure to the product, remember to update the price line.
EOQ Buy Qty	(View Only) rounded to the buy quantity. This value is needed for the turns and annualized hits calculation. The EOQ is the most cost-efficient quantity of product to purchase when replenishing stock. The EOQ balances the cost of carrying inventory with the cost of replenishing the inventory and considers more than just the cost of the product to determine the best quantity to buy. For more information, see How the System Uses the Economic Order Quantity.
Turns S.F.	Safety factor based on product turns. The default is 1 if the value is less than or equal to zero. If the safety factor falls below zero into the negative range, the spreadsheet uses .01 as the calculating value.
Rank S.F.	Product rank safety factor as populated from the Safety Factors worksheet in the spreadsheet tool. A value in this column overrides the Item Safety Factor. For more information about using rank values, see Using the Spreadsheet.

*** Indicates an editable field.**

**** Indicates a field that is editable and uploads to Eclipse. For more information see, Fields that Upload from Spreadsheet.**

Inventory Modeling Spreadsheet Calculations

The system uses the following calculations when modeling inventory on the Inventory Modeling spreadsheet. Columns not in this list do not have a calculation applied to them.

Column	Formula / Calculation
Grand Total Inventory Model	(Day demand entry during extract + Safety Days) rounded to pack = Grand Total Inventory
	If (Median Sales Quantity X Avg. Qty Factor) > Grand Total Inventory *(above calculation)* Then (Median Sales Quantity X Avg. Qty Factor) X Cost Basis = Grand Total Inventory
Grand Total Inventory Model (w overrides)	Same as above calculation except any product with a quantity loaded in the **Minimum Qty** field is used instead of the calculated value.
Total Cost (w overrides)	Sum of all values in **Total Cost (accounting for overrides)** columns. This value results from adding all values in the AC column, from AC7 to the final row.
Inventory Budget	(Annual COGS / Target Turns) = Inventory Budget
Current Budget Remaining	Inventory Budget – Grand Total Inventory Model with Overrides = Current Budget Remaining
Total On-Hand	Stock On-hand + RFO On-hand (return, defective, and overstock) + Display On-hand = Total On-hand
On-Hand$	On-Hand from Row N X Cost Basis entered during Extract = On-hand$
Calc'd cost	(Quantity* X cost basis entered during extract / Price Sheet Per Quantity) = Calculated Cost *Qty = 'days demand value' with buy package. If the suggested quantity is less than median sale, this value rounds to median sale quantity.

<table>
<tr><th>Column</th><th>Formula / Calculation</th></tr>
<tr><td>Inv$ Diff</td><td>Total Cost
– On-hand dollars
= Inventory Dollar Difference</td></tr>
<tr><td>PIL$</td><td>Projected Inventory Level (PIL)
X 'entered cost' from Inventory Modeling extract
= PIL$</td></tr>
<tr><td>Safe Days</td><td>Safety days for inventory modeling are determined based on lead time:
<table>
<tr><th>If the Lead Time is...</th><th>The base Lead Time Safety Days calculation is...</th></tr>
<tr><td>less than 15 days</td><td>Day demand entry during extract
+ Seven days
= Safe Days</td></tr>
<tr><td>greater than 15 but less than 60 days</td><td>(Day demand entry during extract / 2) + 15 Days
= Safe Days</td></tr>
<tr><td>greater than 60 days</td><td>{ (Day demand entry during extract / 4) + 30 Days }
= Safe Days</td></tr>
</table></td></tr>
<tr><td>Lead Time</td><td>The system does not have a single lead time calculation. For a full description, see How the System Calculates Lead Time in the purchasing documentation.</td></tr>
<tr><td>Demand Per Day</td><td>Daily Demand – Raw Demand / Demand Period Used = Demand per Day</td></tr>
<tr><td>Monthly Hits</td><td>{ Raw Hits / 12 } = Monthly Hits</td></tr>
</table>

Fields that Upload from Inventory Modeling

The system uploads the following fields' values from the Inventory Modeling spreadsheet program. You do not have to upload all fields. During the upload process, you select which fields you want to upload to your system.

Review the following information to understand the impact on your system changing these fields may have. When you upload the value of these five fields, you change this value for *each product* listed in the spreadsheet.

Important: We recommend that you save the original extract file to your computer from the system generated e-mail and make changes to a copy of the original. Making changes to a copy allows you to still have the original data to reference without having to create a new extract file.

Buy Package

The quantity multiple in which stock may be purchased or transferred, depending on the product divisibility (whether or not your system allows a package to be broken to fulfill an order) and economic order quantity relative to transfers and the availability of stock in the parent branch.

Inventory Modeling Use	Restrictions or Requirements
Change the buy package	If this field is left blank or null the system updates with a null in the record. This setting causes the field to default to the branch hierarchy setting.

Buy Package Division

Indicates whether the buy package can be divided and the item procured in a quantity other than the buy package quantity.

Inventory Modeling Use	Restrictions or Requirements
Change whether you want to allow splitting buy packages.	If this field is left blank or null the system updates with a null in the record. This setting causes the field to default to the branch hierarchy setting.

How the System Uses Buy Package and Buy Package Division

The buy package and package division fields work together.

Note: The combination of the buy package quantity and divisibility produces different results for automated purchasing and transfers, depending on whether the vendor will divide the package quantity and whether a child branch expects a full or divided package quantity.

Also consider that when calculating the line buy quantities, the system may round to package quantities. Package quantities and their divisibility may be set at a product level, or branch level if the branch is a child branch in a central warehouse procurement path. For more information about package quantities and

the economic order quantity or examples of how these quantities change in Primary Inventory Maintenance, see How Eclipse Uses Package Quantities in Line Buy Calculations.

What to Consider When Using the Spreadsheet for Buy Package and Buy Package Division

Inventory Modeling simulates how buying in package quantities changes what you keep on hand and how you purchase your inventory. Normally, the vendor indicates if package quantities can be divided. This indication directly effects how the system calculates demand which in turn changes how you manage your inventory. Use the **Buy Package Qty** and **Pkg Div** fields on the spreadsheet to evaluate the best combination for your company.

For the *buy package*, the system uses the unit of measure that is identified in Product Maintenance for each product, such as each, box, or case. Use the system validated abbreviations, such as **ea** for each.

For the package division, the system uses the division specified in Primary Inventory Maintenance off Product Maintenance. You can assign one of the following divisibility settings to a product's buy package quantity:

- **Yes** - Enter **Y** to allow the buy package quantity to be divided.
- **No** - Enter **N** to disallow the buy package quantity to be divided.
- **Only** - Enter **O** to allow the buy package quantity to be divided, but require the branch to take the remaining amount into stock.

Stock Item

The flag set that indicates if the product is normally in stock. Normally, the system bases inventory calculations on products that are in stock. However, you can change the inventory modeling spreadsheet to see how your stock values changed based on having all the products in stock.

Inventory Modeling Use	Restrictions or Requirements
Use this flag if all items should be considered as stock items regardless if they usually are nonstock items, normally.	If this column is left blank/null, then the system updates the stock item flag with a null and display a dash (-). Again, this is how they get rid of an existing override in the system.
	If this field is set to Y in the system when the data is extracted and it is changed to N on the spreadsheet *and* the Stock Item flag is selected to upload, the system updates the field in Product Maintenance. The system captures this change in the Product Change Log.

Minimum Quantity

The estimated minimum quantity to stock in your warehouse for each product.

Inventory Modeling Use	Restrictions or Requirements
The minimum quantity uploads to **Min** field on the User Controls window through Primary Inventory Maintenance. For more information, see Setting Product User Control Parameters.	If this column is left blank/null, then the system deletes out the minimum, the maximum, and the expiration date fields

Inventory Modeling Use	Restrictions or Requirements
This minimum quantity value on the spreadsheet changes the **Grand Total Inventory (Model)** and **Grand Total Inventory (Model) w/ overrides fields** which work together.	

Troubleshooting the Inventory Modeling Upload Process

The following are the potential errors that may show up in the error report when running the Inventory Modeling upload.

Error Message	Description
No data to upload.	Generated when there is nothing in the .xml file uploaded.
Unable to locate Branch to be updated.	Generated when the system cannot parse out the branch to update.
Invalid Branch: ###	Generated when the branch the system parses is not a valid branch in the system (either does not exist or is a territory).

The following errors do not cause the processing to stop, but it skips the update of the product it occurs on:

Error Message	Description
Invalid Product ID on Row ### PN=#####	Generated when the part number is null or not found in the PRODUCT file.
Invalid Product Status on Row ### PN=#####	Generated when the status of the product (main Product Maint screen) is not Stock or NonStock.
Invalid Override Quantity on Row ### PN=#####	Generated when the override quantity entered in not null/blank or numeric.
Invalid Buy Package Quantity on Row ### PN=#####	Generated when the buy package quantity entered in not null/blank or numeric.
Invalid Stock Item Flag on Row ### PN=#####	Generated when the stock item flag entered is not Y/N/-/null/blank. This validation is not case sensitive.
Invalid Safety Factor on Row ### PN=#####	Generated when the safety factor entered is an alpha character or anything other than 1, 2, 3, 4, 5, 6, 7, 8, or 9.
Invalid Package Divisibility on Row ### PN=#####	Generated when the buy package divisibility entered is not Y/N/O/null/blank. This validation is not case sensitive.

Index