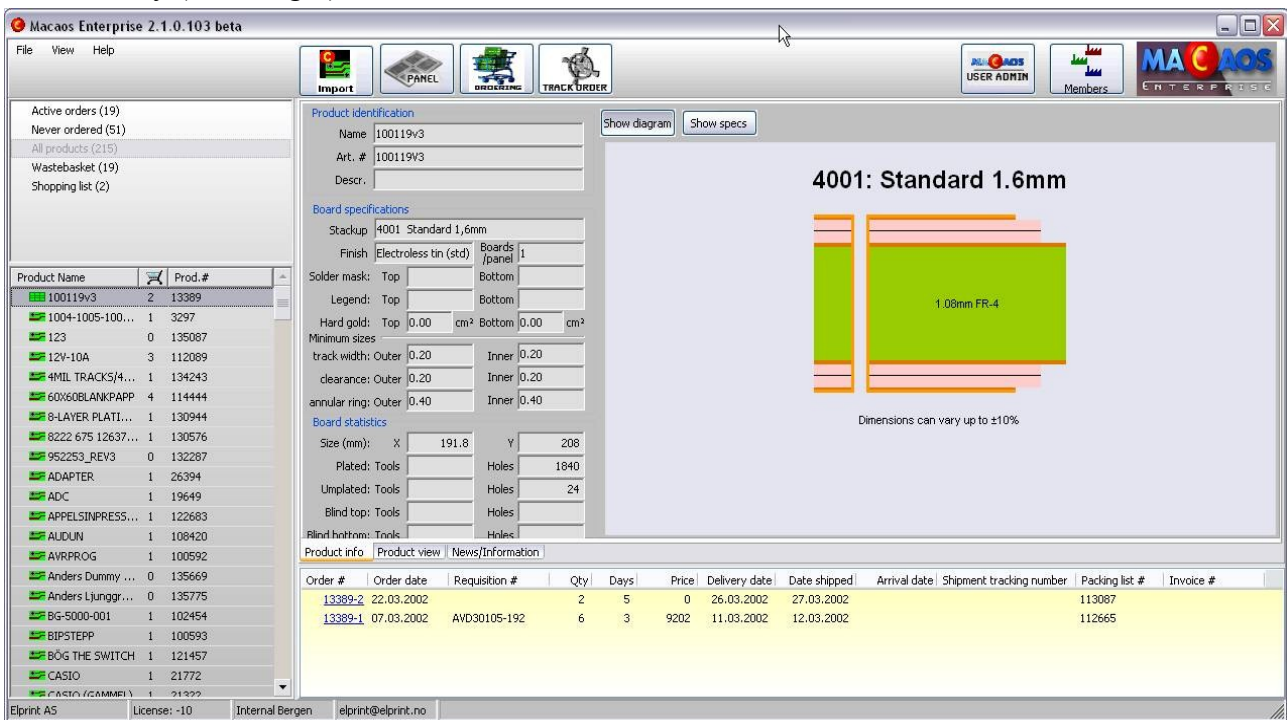


Macaos Enterprise

User's Guide

Macaos Enterprise is an online ordering system for printed circuit boards. The program's main window consists of three main elements: a product explorer (left), product details (upper right) and order history (lower right).



Ordering a product

To order a product, you need to do the following:

1. **Choose a product.** Locate and select the product in the *Product explorer*. If the product has not yet been created, click on the *Import* button to open the *Import module* and create the product. See the Import module user guide for more info.
2. **Obtain a price quotation.** Click on the *Ordering* button to open the *Quotation module*. Select one or more quantities and one or more delivery times (days) and then click on the *Get Price* button. Select the desired quantity/days/price combination for your order. See the *Quotations and the shopping basket* section for more information.
3. **Add to the Shopping basket.** Click on the *Add to Basket* button. A dialog box will open for you to specify delivery and invoice addresses. Click on the *OK* button to add the order to the *Shopping basket*. If you wish to order more of the same product, then select a new quantity/days/price combination and click *Add to Basket* again. If you wish to order additional products, then click the *Hide* button and repeat steps 1 to 3. To remove an order from the *Shopping basket* prior to check out, click on *Remove* (in the far right column of the *Shopping basket*).
4. **Place the order.** Click on the *Check Out* button in the *Quotation* dialog. Select a contact person for the order and, if desired, enter a requisition number. You may also add a comment to the order, but this will cause some delay in processing the order. Clicking on the *Final Ordering* button confirms all orders in the *Shopping basket*. Your order confirmation is displayed and the ordered products are added to the *On order* folder of the *Product explorer*.

Product explorer

The *Product explorer* allows you to find and organize your company's products. The upper portion lists your product folders and the lower portion lists the products in the selected folder.

Managing folders

Product folders help you to organize your products, so that you can easily locate the product you wish to view or order. Although a product may be “stored” in more than one folder, the product is not duplicated; the folders simply give you multiple ways to locate the product of interest.

There are five standard folders:

- **Active orders** lists all products which have been ordered but are not yet delivered.
- **Never ordered** lists all products which have been created but have not been ordered.
- **All products** lists all products (except those in the Wastebasket)
- **Wastebasket** lists deleted products. These are typically products which will not be ordered in the future.
- **Shopping list** lists products that are to be ordered. This folder is useful, for example, when an engineer in a company specifies the products to order but the order will be placed by someone in the purchasing department.

Active orders (19)		
Never ordered (51)		
All products (215)		
Wastebasket (19)		
Shopping list (2)		

Product Name		Prod.#
100119v3	2	13389
1004-1005-100...	1	3297
123	0	135087
12V-10A	3	112089
4MIL TRACKS/4...	1	134243
60X60BLANKAPP	4	114444
8-LAYER PLATI...	1	130944
8222 675 12637...	1	130576
952253_REV3	0	132287
ADAPTER	1	26394
ADC	1	19649
APPELSINPRESS...	1	122683
AUDUN	1	108420
AVRPROG	1	100592
Anders Dummy ...	0	135669
Anders Ljunggr...	0	135775
BG-5000-001	1	102454
BIPSTEPP	1	100593
BÖG THE SWITCH	1	121457
CASIO	1	21772
CASIO (GAMME)	1	21322

You can create additional folders to organize your products by department, person, project or whatever. The folders you create can have subfolders.

To create a new folder, right-click in the space below the last folder in the folder list, choose *Add folder*, and give the new folder a name. To create a subfolder, right-click on the parent folder. To delete or rename a folder, right-click on the folder and choose *Delete folder* or *Rename folder*.

Managing products

To add a product to a folder, locate the product in any folder (such as the *All products* folder) and drag and drop the product to the desired folder.

To remove a product from a folder, right-click on the product and choose *Remove from this folder*. The product will only be removed from the current folder.

Deleting a product does not actually delete the product, but rather adds the product to the *Wastebasket* folder and removes it from all other folders. It is still possible to view the product, order history, etc. from the *Wastebasket* folder. To delete a product, right-click on the product and choose *Delete from all folders*.

Products in the *Wastebasket* may be undeleted by right-clicking on the product and choosing *Undelete*. This will restore the product to the *All products* folder (and the *Active orders* or *Never ordered* folder, if appropriate). A product in the *Wastebasket* folder must be undeleted before it can be added to any other folder.

If a product in the *Wastebasket* folder has never been ordered, it may be deleted completely from the system, by right-clicking on the product and choosing *Permanently delete product*. A product which has been deleted in this manner can not be restored.

Searching for products

If your company has many products, it may be difficult for you to locate the product you are looking for. To help you locate products, you can show/hide columns in the product list with the *View|Show/hide columns* menu. The list may be sorted by clicking on the header of the sort column. Clicking a second time sorts in reverse order. The column order may be changed by dragging a column to its new position.

Each product is shown with an icon, which indicates if the product is a single board, a panel of boards or a paste mask (stencil).

Icon bar



The Icon bar allows you to access various modules in the program.

- *File|Login* allows you to log in as a different user
- *File|Quit* closes the program
- *View|Refresh* reloads the product explorer
- *Import* opens the Import module, for creating new PCB products. See the separate Import module user guide.
- *Panel* allows you to specify stepping up of a single board product to a panelized product. See the *Panelization* section.
- *Ordering* opens the Quotations module. See the *Quotations and the shopping basket* section.
- *User admin* allows you to modify your contact information and password
- *Members* displays information about participating manufacturers in the Macaos system
- *Macaos Enterprise* logo opens the Macaos web site

Product info

Product identification

Name: 100119v3
Art. #: 100119v3
Descr.:

Board specifications

Stackup: 4001 Standard 1,6mm
Finish: Electroless tin (std)
Boards/panel: 1
Solder mask: Top: Bottom:
Legend: Top: Bottom:
Hard gold: Top: 0.00 cm² Bottom: 0.00 cm²
Minimum sizes
track width: Outer: 0.20 Inner: 0.20
clearance: Outer: 0.20 Inner: 0.20
annular ring: Outer: 0.40 Inner: 0.40
Board statistics
Size (mm): X: 191.8 Y: 208
Plated: Tools: Holes: 1840
Unplated: Tools: Holes: 24
Blind top: Tools: Holes:
Blind bottom: Tools: Holes:
Minimum hole: 0.50 Scoring: ☒

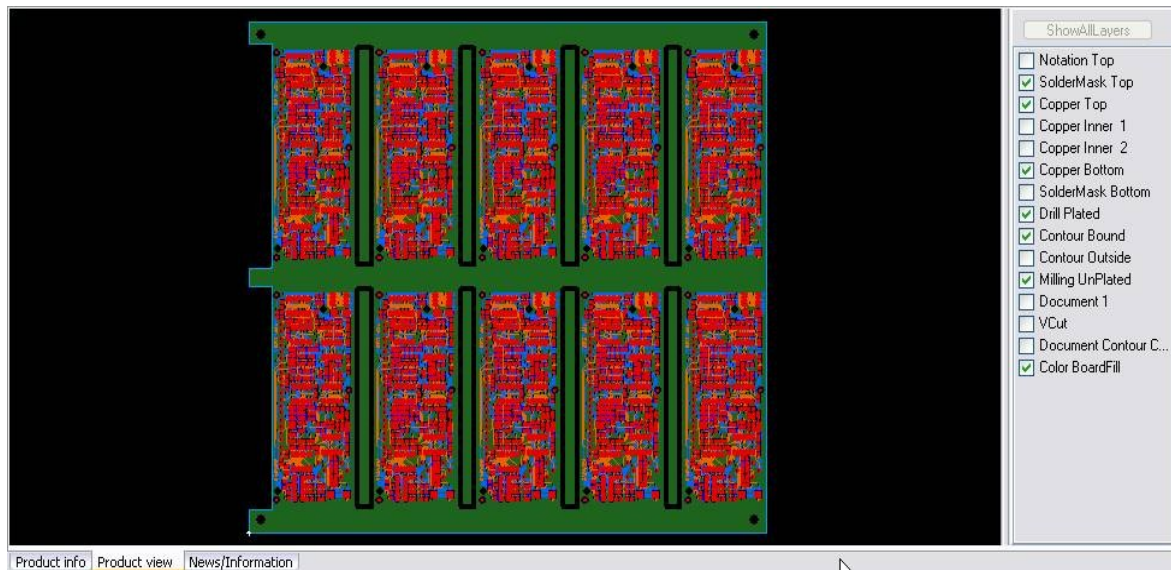
4001: Standard 1.6mm

1.08mm FR-4

Dimensions can vary up to ±10%

The *Product info* tab displays product properties. These include the product name, article number and description; board specifications, minimum tolerances, and board statistics. The board stackup is displayed as a diagram. For multi-layer boards, the stackup can also be viewed in tabular form by clicking on the *Show specs* button.

Product view



The *Product view* tab displays the product graphically. Initially, only the board contour and drill holes are shown. To view additional layers, click on the *ShowAllLayers* button. Use the check boxes to show/hide individual layers.

Panning and zooming is possible as follows:

- **pan**: right-click at the new center point, or right-click and drag horizontally or vertically.
- **zoom in**: right-click and drag up to the right to select the desired region.
- **zoom out**: right-click and drag down to the left.
- **zoom-to-fit**: right-click and drag up to the left.

Order history

Order #	Order date	Requisition #	Qty	Days	Price	Delivery date	Date shipped	Arrival date	Shipment tracking number	Packing list #	Invoice #
13389-2	22.03.2002		2	5	0	26.03.2002	27.03.2002			113087	
13389-1	07.03.2002	AVD30105-192	6	3	9202	11.03.2002	12.03.2002			112665	

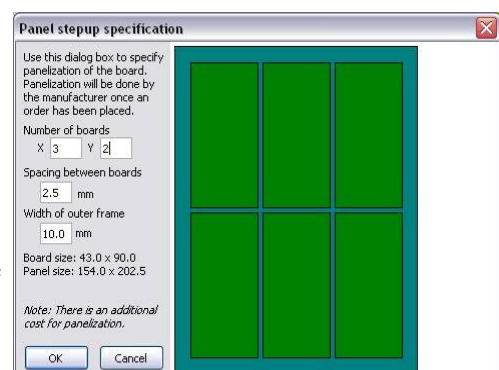
The *Order history* panel lists the order history for the selected product. For each order, the relevant numbers and dates are shown. Clicking on an order number opens a PDF viewer displaying the order confirmation. Clicking on an underlined shipment tracking number opens a web browser with shipment tracking info, if available.

Panelization

The panel stepup specification dialog allows you to specify how a single board product should be stepped up to an array (panelized product). Specify the number of boards in the x and y directions, the spacing between the boards and the border around the panel. Spacing between boards should be 2.5mm for routing between boards, or 0.5mm for scoring.

Clicking *OK* causes a new product number to be added to the database with the specifications of the panelized product.

Panelization will be carried out by the manufacturer, at an additional cost, the first time the product is manufactured.



Quotations and the shopping basket

The Quotation application window displays the following information:

- Product:** 8222 675 12637 01, **Prod. #:** 130576
- Quote No.:** 310507-1559-4180, **Currency:** NOK, **Prices Ex. Vat**
- Delivery Date:** 06.06.2007, **Latest Ordering Time:** 31-05-2007 16:59, [Conditions](#)
- Quantity Selection:** A grid of checkboxes for quantities from 1 to 5000. Quantity 20 is selected. [Click](#) links are provided for each quantity.
- Days Selection:** A grid of checkboxes for delivery times from 12h to 10 weeks. 4 days is selected.
- Price Matrix:** A table showing the total price for the selected quantity and days.

Quantity	Description	Unit Price	Total price
20	CARD	526.75	10535

Total price without VAT: 10535 NOK

Summary Table:

Product	Days	Qty	Unit Price	Price	Delivery Date	Delivery Addr.	Invoice Addr.	
8222 675 12637 01	4	20	526.750	10535	06.06.2007	ELPRINT AS	ELPRINT AS	Remove

Quotations

Printed circuit board prices depend on how many boards you want and how soon you want them, as well as the technical specifications and characteristics of the board. To help you decide how many and how soon, you can view a matrix of prices for the selected product based on quantity and days.

Check off one or more quantities and one or more days to specify the matrix column and row headers. Then click on the *Get Price* button. The requested prices will be calculated and displayed in the matrix. To select a quantity other than those shown, click on one of the *Click here* texts in the rightmost column and enter the desired quantity.

You can view prices in the matrix as total price or unit price by selecting the appropriate radio button just below the matrix. If the product is a panel of several boards, then you can also view price per panel in the matrix. Clicking on a price in the matrix causes the price breakdown to be shown below the matrix, and the delivery date to be shown above the matrix. Note that the delivery date is the date the order is to be shipped from the manufacturer (not necessarily the date the order will arrive at its destination).

Shopping basket

Once you have selected your desired quantity/days/price combination, click the *Add to Basket* button. In the *Address info* dialog box, specify the delivery and invoice addresses for the order. You must specify a contact person for delivery, but invoice contact person is optional.

The **frmAddressInfo** dialog box contains the following fields:

- Delivery Address:**
 - Company: T & O STELECTRIC A/S
 - Address: LANGELANDSVEJ 6
 - Postcode: 8900, City: RANDERS
 - Country: DENMARK
 - Alt: Annette Westergaard
- Invoice Address:**
 - Company: T & O STELECTRIC A/S
 - Address: LANGELANDSVEJ 6
 - Postcode: 8900, City: RANDERS
 - Country: DENMARK
 - Alt: (empty)

Clicking on the *OK* button in the *Address info* dialog box adds the order to the *Shopping basket* at the bottom of the *Quotations* module. Additional orders may be added to the *Shopping basket*, either by selecting another quantity/days/price combination for the current product, or by locating a new product and getting a new price quotation for that product.

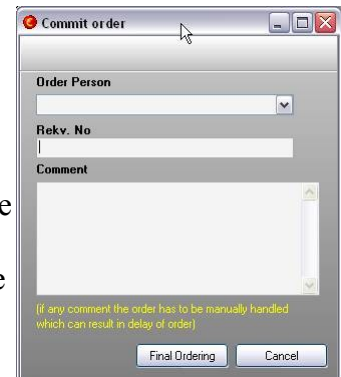
Check Out

Once your *Shopping basket* is full (or at least as full as you want it to be), you can complete your order by clicking on the *Check out* button.

In the Commit Order dialog box, select a contact person for the order and enter a requisition number (if desired).

You may also add a comment to the order. If a comment is added, then the order can not be processed automatically, which may lead to some delay in processing the order. Comments should therefore be avoided if they are not absolutely necessary.

Finally, click on the *Final Ordering* button to place the order.



Commit order

Order Person

Rekv. No

Comment

(if any comment the order has to be manually handled which can result in delay of order)

Final Ordering Cancel