Total Traceability

Product Information

Features

When you need to be able to record the source of all components in a PCB assembly, Europlacer have developed the Total Traceability system. This records all the data automatically and not just component batch numbers.

Total Traceability allows users to introduce full traceability into their production system as an integrated solution.

No need for an external barcode scanner, the PCB camera reads board code and the Intelligent Feeders hold batch data.

Europlacer Intelligent Feeders record their component identity, inventory count and pickup correction. This data can then be used by the machine for component traceability.

Additionally PROMON software can utilise the data for production monitoring of the process.

This option (E172829) allows to generate one .csv or .xml file for each PCB or circuit produced on the machines.

It is used to record individual product data:

- product reference
- serial number of the board
- date of libraries
- production date and time
- component's data (item code, item name, lay-out reference)
- electrical test result (option)

The file's formats used for the data storage, permits remote access over networks in a universal format to suit proprietary software.

Example of Traceability File Format XML

```
<?xml version="1.0" encoding="UTF-8" ?>
<Order VersionApp="1.1" DateFormat="yyyy/MM/dd">
            <Action>TRACEABILITY</Action>
            <Object>BOARD</Object>
            <Data>
            <HEADER>
                        <MANUFACTURERORDER> Work Order (Product batch number) (max. 32 char.)
                        </MANUFACTURERORDER>
                        <CUSTOMER> Customer name (max. 20 char.) </CUSTOMER>
                        <PRODUCT> Product name (max. 20 char.) </PRODUCT>
                        <INDEX> Program issue (max. 20 char.) </INDEX>
                        <MACHINE> Europlacer machine name (max. 8 char.) </MACHINE>
                        <BEGINDATE> Date of beginning for the board production (DD/MM/YYYY) </BEGINDATE>
                        <BEGINTIME> Hour of beginning for the production of the board (HH:mm:ss) </BEGINTIME>
                        <ENDDATE> Date of end for the production of the board (DD/MM/YYYY) </ENDDATE>
                        <ENDTIME> Hour of end for the production of the board (HH:mm:ss) </ENDTIME>
                        <FLAGPRODUCTION> F, P or E (F means there has been a problem on at least one component, P if there
                        has been no default during the production of the board or E if the production has never been finished
                        correctly) </FLAGPRODUCTION>
            </HEADER>
            <SERIALPCB id= Board serial number (max. 20 char.) >
                        <PANEL id= Pattern name (max. 11 char.) >
                        <REFERENCE id= Topographical mark (max. 8 char.) >
                        <CARRIER /> Reel code if Stock management activated (max. 10 char.) </CARRIER>
                        <ARTICLE> Item code used for the production (max. 18 char.) </ARTICLE>
                        <ERROR> Code showing the result of the operation (same format as CSV)</ERROR>
                        <ACOMMENT> Item name </ACOMMENT>
                        <BATCH /> Batch number of the item </BATCH>
                        <ASOURCE /> Item code of reference for the program if the substitution item is used
                        </ASOURCE>
                        <FEEDERSERIAL> Serial number of the feeder </FEEDERSERIAL>
                        <FEEDERSLOT> Slot number of the feeder </FEEDERSLOT>
                                    <ELECTRICAL> Only if the electrical test is used
                                    <THEORICALVALUE> Theorical elec. value of the component </THEORICALVALUE>
                                    <TOLERANCE> Accepted tolerance in % for the electrical value </TOLERANCE>
                                    <PROCEDURE> Electrical test procedure </PROCEDURE>
                                    <MEASUREDVALUE> elec. value measured for the component </MEASUREDVALUE>
                                    </ELECTRICAL>
                        <CUSTOM1> Comment in Custom field 1 </CUSTOM1>
                        <CUSTOM5> Comment in Custom field 5 </CUSTOM5>
                        </REFERENCE>
                        </PANEL>
            </SERIALPCB>
            </Data>
</Order>
```

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```
H,FLASHBOARD,12345,BAT 05,RC 5.17.A0,R7.01,02/15/2024-02/16/2024,09:03:55,02/23/2024,10:20:11,
02/23/2024,IINEO-122,F

P,Customer,Index1

T,A0805-D,chip 0805,U156,-,060309,batch1,65523,015,A0805,BOB0001,0,+3.00E+03,010,RESISTOR,+3.00E+03
T,A0805-D,chip 0805,U138,-,060309,batch1,65523,015,A0805,BOB0001,0,+3.00E+03,010,RESISTOR,+3.06E+03
T,A0805-D,chip 0805,U138,-,060309,batch1,65523,015,A0805,BOB0001,0,+3.00E+03,010,RESISTOR,+3.06E+03
T,A1210  ,chip 1210,U111,-,060309,      ,     ,   ,     ,       ,0,+9.20E-08,010,C2      ,+9.14E-08
T,A1210  ,chip 1210,U112,-,060309,      ,     ,   ,     ,       ,0,+9.20E-08,010,C2      ,+8.92E-08
T,ASOT143,Sot 143  ,U125,-,060309,      ,     ,   ,     ,       ,0
T,ASOT143,Sot 143  ,U124,-,060309,      ,     ,   ,     ,       ,0
T,ASOT89 ,Sot 89   ,U126,-,060309,      ,     ,   ,     ,       ,0
T,ASOT89 ,Sot 89   ,U100,-,060309,      ,     ,   ,     ,       ,2 *
T,ASOT89 ,Sot 89   ,U99 ,-,060309,      ,     ,   ,     ,       ,2
T,ASOT89 ,Sot 89   ,U100,-,060309,      ,     ,   ,     ,       ,0 **
T,ASOT89 ,Sot 89   ,U99 ,-,060309,      ,     ,   ,     ,       ,0
```

H	: header describing general information about the file
FLASHBOARD	: product reference
12345	: product serial number (manual input or by bar code). If there is no serial number, then a generic serial number is created : NOBARCODE_XX (XX is the serial number of the board in progress of placement)
BAT 05	: product batch number (manual input or by bar code)
RC 5.15.D	: version of RC software
R7.01	: version of the traceability file
11/26/2013	: date of the item library
11/27/2013	: date of the package library
09:03:55	: beginning time for the production of the board
12/04/2014	: beginning date for the production of the board
10:20:11	: end time for the production of the board
12/04/2014	: end date for the production of the board
IINEO-122	: Europlacer machine identification
F or P or E	: F if there has been a problem on at least one component or P if there has been no default during the production of the board or E if the production has never been finished correctly.

P	: additional header describing general information about the file
Customer	: customer name
Index1	: program issue

T	: header for each operation
A0805-D	: item code used for the production
chip 0805	: item name
U156	: topographical mark
-	: concerned pattern (- for root, 1 for each pattern call of order 1, ...). See the column "Pattern" in the menu "Placement program modification"
060309	: pattern serial number
batch1	: batch number of the item
65523	: serial number of the feeder
015	: slot number of the feeder
A0805	: item code of reference for the program if the substitution item is used
BOB0001	: reel code if the option Stock management is activated
0	: code to indicate if the component is placed or not, the different codes are : - 0 : the component has been placed successfully - 2 : the component has been rejected by the vision before electrical test - 3 : the component has been rejected by the vision after electrical test - 4 : the component has been rejected by the electrical test - 5 : the component has not been placed (lost after electrical test) - 6 : the component has not been taken by the machine
+3.00E+03	: the theorical electrical value of the component
010	: the accepted tolerance in % for the electrical value
RESISTOR	: the electrical test procedure
+3.00E+03	: the measured electrical value for the component.

Label Formats

Total Traceability support the following barcode formats:

- Code 39, 128, 93, Ean 8, Ean 13, i2of5
- Datamatrix / QR Codes can be used with the option E174176

Product Changeover

The Total Traceability option can be used to allow automatic product change-over. The PCB camera reads the program name on the label and switch immediately to the new placement program.