

EASY WIRING

INTERACTIVE
HARNESS
ASSEMBLY
BOARD



komax

EASY WIRING

EasyWiring is the ideal solution for production and prototyping of electrical harnesses

This interactive harness assembly board replaces paper plans with a dynamic display of electrical harness assembly instructions.

EasyWiring guides the operator throughout the entire production process.

Komax France offers a complete equipment comprised a display device, CAM software and removable accessories in various shapes suitable for all types of harness.

- Higher productivity
- Optimum quality
- Flexibility
- Shop floor layout optimization

► **Scalable, modular and flexible system**

EasyWiring
Interactive harness
assembly board

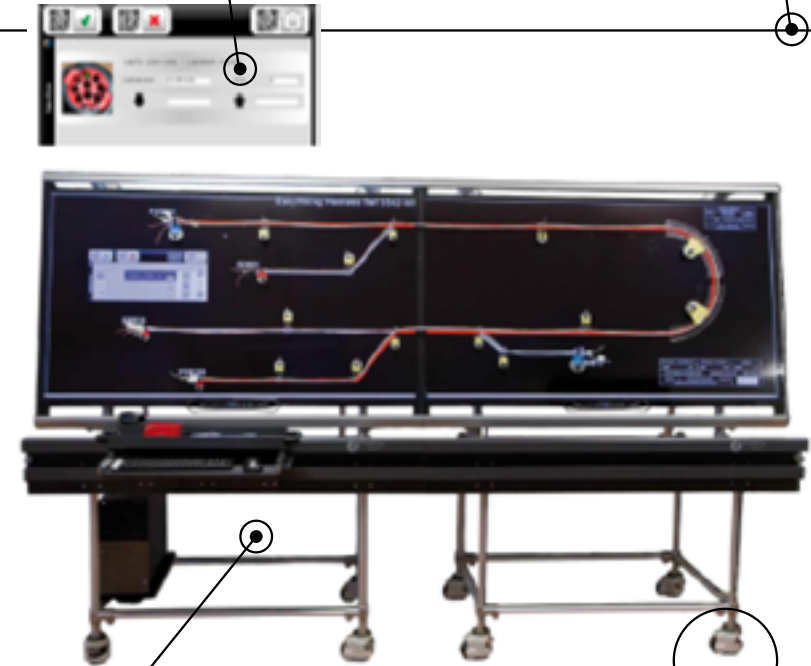
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COMPUTER AIDED MANUFACTURING

**CLEAR
INSTRUCTIONS**
FOR THE OPERATOR

**POLYCARBONATE
OR TEMPERED GLASS**
PROTECTS DISPLAY MONITOR FROM DAMAGE



FLEXIBLE
POSSIBILITY TO ADJUST
THE ANGLE OF INCLINATION

MOBILE

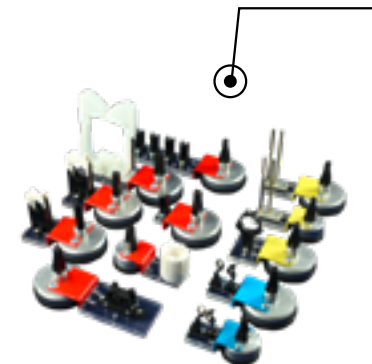
SLIDING TRAY
TOOLS AND KEYBOARD



**REAL-TIME
MONITORING**
OF PRODUCTION INDICATORS

- High definition display
- Video, photo, PDF instructions
- Interactive information windows
- Robust construction
- Optimization of workshop space
- Centralized data management

**FAST
RECONFIGURATION**
WITH ACCESSORIES





HIGHER
PRODUCTIVITY

- Streamlines the production of new harnesses
- Reduced training time for cable operators thanks to clear instructions
- Quick access to necessary information

OPTIMUM
QUALITY

- Repeatable assembly methods due to predefined steps
- Reduction of human errors thanks to step-by-step assistance and visual aids
- Optimal traceability
- Validation and control of the complete assembly process

FLEXIBILITY

- Accessories be easily repositioned for any harness
- Scalable and modular system

OPTIMIZATION
OF THE WORKSHOP AREA

- Capability of assembling hundreds of different harnesses on one system
- No more wooden boards to store

Fast reconfiguration
(with accessories)



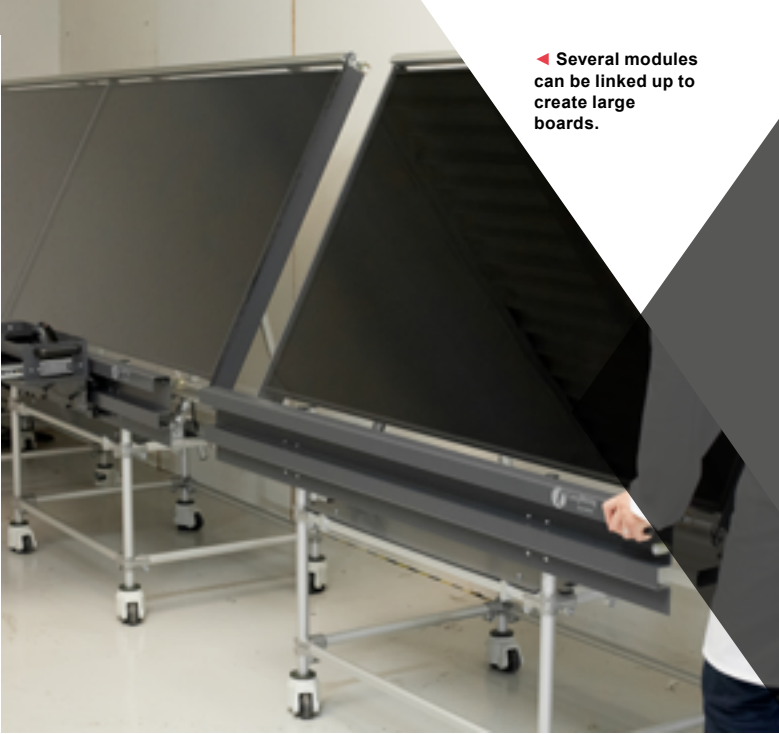
DISPLAY
UNIT

The display screen is protected by a polycarbonate or a safety tempered glass layer on which wire support accessories can be attached. It comes in two different formats: 75" and 86".

Display unit properties

Modules	75" PRO display 86" PRO display	
Dimensions - 1 module	L = 1650 mm H = 928 mm	L = 1892 mm H = 1060 mm
Dimensions - 2 modules	L = 3333mm H = 928 mm	L = 3820 mm H = 1060 mm
Dimensions - 3 modules	L = 5016 mm H = 928 mm	L = 5748 mm H = 1060 mm
Dimensions - 4 modules	L = 6699 mm H = 928 mm	L = 7676 mm H = 1060 mm
Dimensions - 5 modules	L = 8382 mm H = 928 mm	L = 9604mm H = 1060 mm
Dimensions - 6 modules	L = 10065 mm H = 928 mm	L = 11532mm H = 1060 mm
Maximum resolution	1 to 4 modules = 4 K 5 to 6 modules = HD	
Electrical supply	AC 100 - 240 V, 50/60 Hz	
Typical consumption	220 W	302 W
Operating temperature	0-40°C	
Certifications <ul style="list-style-type: none">– Safety– EMC– Energy saving	EnergyStar 6.0	
Warranty	2 years	

Note: above specifications may vary depending on supplier.



Several modules
can be linked up to
create large
boards.

CONNECTING
SEVERAL MODULES

Several modules can be connected together to create a larger system.

Up to 6 screens can be connected for tables up to 10 meters in length for 75" screens and 11 metres for 86" screens.

Formboard footprint

EasyWiring board footprint depends on the number (N) of modules:

	75" screen	86" screen	Unit
Length	N x 1682	N x 1932	mm
Height	1710	1800	mm
Width*	880	900	mm

DIFFERENT CONFIGURATIONS



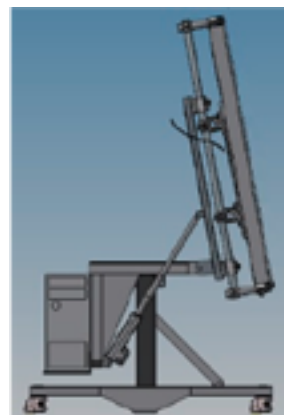
Standard stand module
75" and 86"

The stand features a removable sliding tray for tools and a sliding table top area for the mouse and keyboard.



Upper frame
75" and 86"

The complete display screen with polycarbonate or tempered glass protection is available without the frame to meet customer needs.

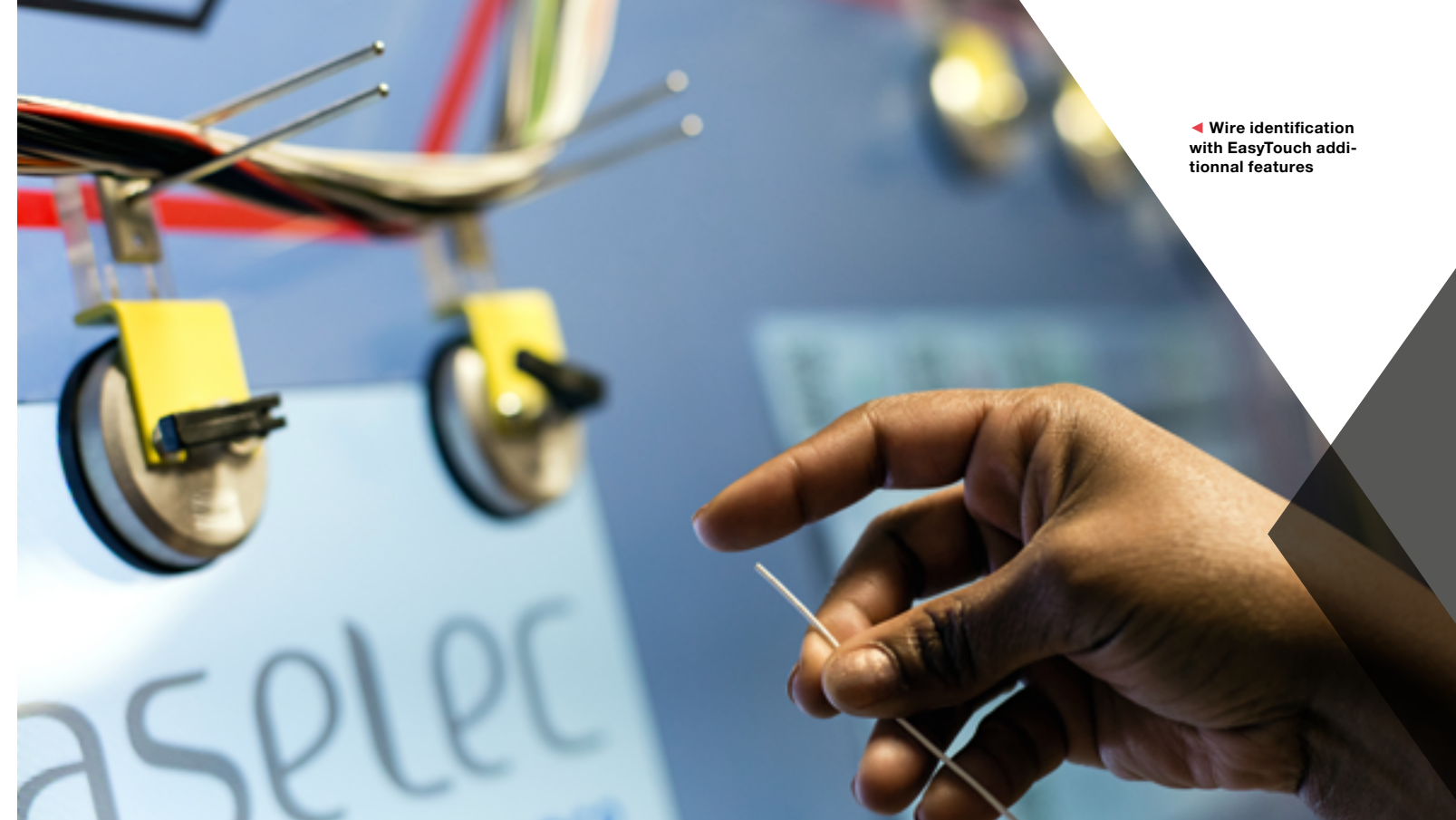


Motorized stand module
75" and 86"

The Easywiring modules can be provided with a motorized frame that allows the positioning of display units to be adjusted:

- The board can be moved up or down
- The board can be rotated from vertical to horizontal

The sliding tray is also available for the optional motorized version.



◀ Wire identification with EasyTouch additional features

EASYTOUCH

With the "Touch mode", the operator only needs to touch the extremity of the wire to identify it and display routing and pinning information directly on the EasyWiring harness assembly board.

With the "Continuity test mode", the operator can perform a continuity test on a single connector during the harness assembly process and correct any errors directly on the assembly board. By connecting all connectors to the EasyTouch Test Unit, a final test is completed on the entire harness and a traceable test report is generated.

ACCESSORIES

Komax France offers a variety of accessories for supporting wires and cables on the assembly board.

A lever-controlled suction cup guarantees a firm hold, fast implementation and high configuration flexibility.

The suction cups can support a vertical breakout force of:

- 3 to 4 kg for a suction pad 36 mm in diameter
- 9 kg for a suction pad 55 mm in diameter

Note : Komax France provides a design service to produce specific accessories according to your needs.

EASYCONTROL

EasyControl makes EasyWiring software control even easier. No need to move in front of the table to use the mouse or keyboard: the operator controls the assembly board directly from the Blue-tooth wristband unit.



BARCODE READER

By connecting the barcode reader to the system, barcodes printed on the cable can be validated. The barcode accessory helps reduce production errors, control the assembly process and provides optimal traceability.



SOFTWARE

Computer hardware

The interactive table is controlled by a PC, supplied with the machine.

Minimum requirement:

- Windows 10
- Min 8 Gb of RAM
- Intel Core i5 or similar
- SSD Disk 250 GB
- Graphics card with 4 mini DVI outputs

Data protection: an optional RAID 1 configuration protects the system against drive failure and data loss.

EasyWiring Light software

EasyWiring Light is a manufacturing software which displays harness drawing in digital format (DXF).

The operator simply selects the harness to produce from the list and it will be displayed on a scale of 1:1 on the screen.

Very simple to put in place, “EasyWiring Light” is the first step towards harness board digitalization.

EasyWiring Interactive software

“EasyWiring Interactive” is the most advanced software. The harness assembly board becomes interactive: EasyWiring guides the operator throughout the electrical harness production process while ensuring traceability.

It consists of a supervision/preparation license for software programming and an interactive manufacturing license for operators.

SUPERVISION LICENSE

The supervision station allows the software to be programmed before the electrical harness is produced.

This station is connected to a server which centralises all information flows from supervision stations, cabling tables or cabling stations.

The supervision station allows Methods and Engineering departments to access the following menus:

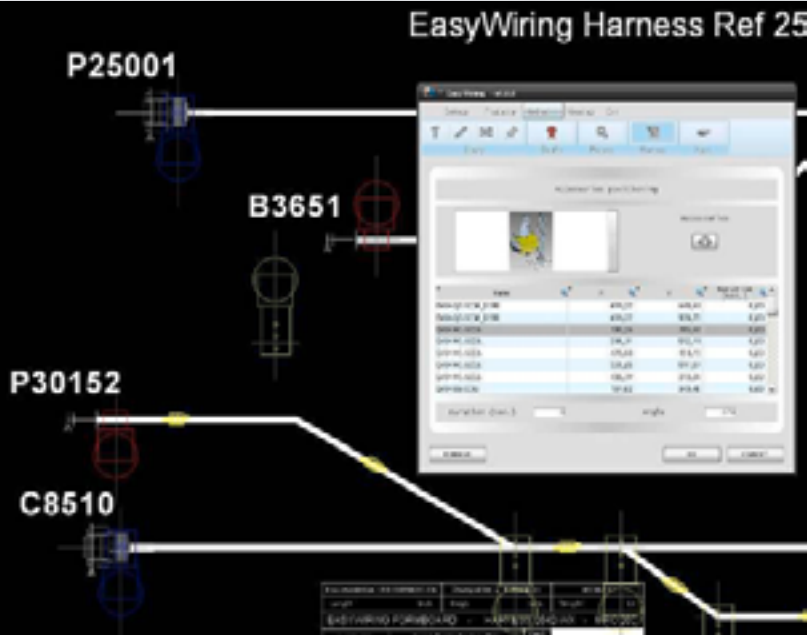
- Data library: contains features of the tools used in production, electrical elements and accessories.
- Harness preparation process:
 - Management of plans in DXF format
 - Electrical data import
 - Adding information on the DXF
 - Adding instructions
 - Definition of production process sequencing
- Metrology and tool management
- Management of operators/skills
- Production planning

Options

- Data visualisation: production/statistical indicators
- Data visualisation: traceability, non-conformity investigation
- Data export: production/statistical indicators
- Data export: traceability/non-conformity investigation
- Generating an EasyProd production file (for Komax France laser marking machines)

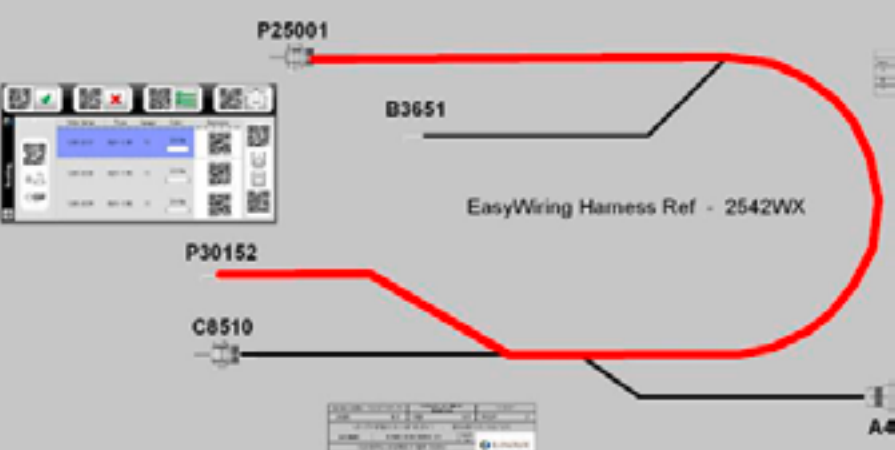


Adding information on the DXF plan (accessory positioning) ▶





Accessory positioning



Cable routing stage

MANUFACTURING LICENSE

Intended for operators to assemble the harness on an interactive table or on a workbench for certain steps, this license includes a local supervision module and a manufacturing module for the operator.

The local supervision module contains the supervision license functions as well as the following:

- Configuration of the harness assembly board: managing the dimensions of the drawing and the borders of the module.
- Display verification and scaling to ensure a ratio of 1 : 1
- Choice of background and foreground colours
- Production plan menu

The manufacturing module for cable operators includes all stages of electrical harness production defined by Methods and Engineering departments:

- Accessory (suction cups) positioning
- Cable routing
- Installation of special accessories (frets, ducts, cable ties, labels etc.)
- Quality control
- Connector assembly: wire stripping, crimping contacts, plugging of contacts into the connector

MAINTENANCE CONTRACT

The software support contract (including software updates) allows optimal use of the EasyWiring software thanks to the support team advices.

You can benefit from the latest features with a new software version (Interactive) every quarter.

Customers on maintenance contracts benefit from priority processing of their requests.

EasyWiring softwares

Option/Manufacturing license	EAW Light	EAW Interactive*	EAW Interactive Premium*
Display the DXF Drawing scale 1:1	Yes	Yes	Yes
Manufacturing guidance (manufacturing steps/validation))		Yes	Yes
Automatic change of the DXF		Yes	Yes
Manufacturing instructions documents display		Yes	Yes
DXF layer display		Yes	Yes
Cable routing		Option	Yes
Accessory (suction cups) positioning		Option	Yes
Cable ties positioning		Option	Yes
Manufacturing guidance for connectors and extremities		Option	Yes
Automatic validation by Timer		Option	Yes

*requires supervision/preparation license

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EasyWiring meets the requirements of all industries (aeronautics, automotive...) ▶

Komax – leading the field now and in the future

As a pioneer and market leader in automated wire processing, Komax provides its customers with innovative solutions. Komax manufactures series and customer-specific machinery, catering to every degree of automation and customization. Its range of quality tools, test systems, and intelligent software and networking solutions complete the portfolio, and ensure safe, flexible, and efficient production.

Komax is a globally active Swiss company with highly qualified employees and development and production facilities on several continents. It provides local support to customers worldwide through its unique sales and service network and offers services that help them get the most out of their investments.

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