



PRODUCT CATALOGUE

GENIUS PCB HANDLING SYSTEM



a coesia company

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Patents

Essential parts of the FlexLink product range are protected by patents and design regulations. Drawings are made to European standards.

Genius PCB Handling System

FlexLink offers a complete line of PCB handling units which incorporate standard assembly features throughout the product range. All modules are CE marked.

The PCB product line incorporates modular stand-alone units that are truly independent from other modules in the system. Each module has an on-board control system which allows the unit to function independently. Each module is able to be linked to other modules in the system by utilizing their up line and down line SMEMA communication. The modules can also be linked to a higher level monitoring or routing system by utilizing a host control system.

A complete range

These high throughput modules provide transport, product buffering/accumulation and a full range of handling and routing alternatives.

The "open transfer" belt driver system eliminates shafts and bellows by incorporating a dual motor, ESD safe belt system. The motorized jog width adjust system serves as the base platform for all products.

Optional platform available, dual lane configuration and large board format 24"/609.6 mm.

The flexibility and quality of this system allows FlexLink to offer one of most technically advanced conveyor platforms in the business.

General specifications

Board length	75–508 mm (3"–20")
Board width	50–460 mm (3"–18")
Board thickness	0,6–6 mm standard. Consult factory for other thickness.
Board width	75–460 mm (3"–18") 1-DL, 1-TU, 1-CB, 1-MB
Board weight	Max. 3 kg (6,6 lbs.)
Magazine weight	Max. 60 kg (27,2 lbs.)
Allowable warpage/sag	Max. 1 mm
Required edge clearance	3,5 mm (0,14") on the outer two edges of the board
Allowable component clearance	50 mm (2") below and above conveying surface
Belt exposure	Standard width: 3 mm (0,12") Optional width: 5 mm (0,2")
Board transfer height	953 mm (37,5") ±50 mm
Flow direction	Left to right (reverse flow as option)
Standard interface	SMEMA 9851
Safety	CE compliant machines
Voltage	110V/60Hz, 240V/50Hz
Paint colour	RAL 9016
Control	PLC
Pneumatics	5 bar (72,5 psi) where applicable

GENIUS 1-SL



Single magazine line loader

The GENIUS 1-SL Single magazine line loader is used when a magazine of PC boards needs to be loaded into a production line. This unit is capable of handling one magazine that can easily be accessed from the front of the machine. It is used in low volume applications or bottom side process with a single magazine.

STANDARD FEATURES

- User friendly touchscreen display for function and alarm
- Electrical pusher to slide PCBs automatically out of magazine
- Magazine locking by upper and lower manual clamps
- Programmable pitch setting
- Tower light display for machine status
- SMEMA interface
- ESD transparent windows
- ESD hinged cover with safety interlock

GENIUS 1-SL

Module specification

Length	1545 mm
Height	1700 mm
Width	1000 mm
Colour	RAL 9016
Air pressure	Not required

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

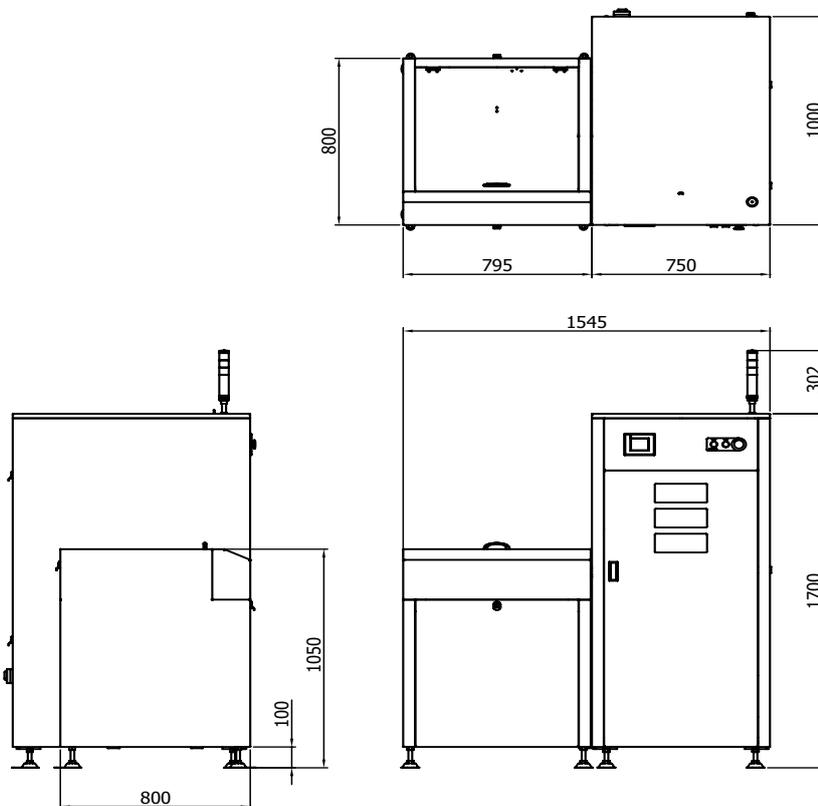
PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized
Buffer capacity	50 PCBs (pitch 10 mm) in each magazine
Pcb loading time	Approx. 7 sec
Magazine changeover time	Approx. 20 sec
Conveyor speed	Max. 15 m/min adjustable

Magazine handling

Buffer capacity	1 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G

Other sizes and types available upon request.



GENIUS 1-DL



Dual magazine line loader

The GENIUS 1-DL Dual magazine line loader is used when a magazine of PCB boards is required to be loaded into a production line. This unit is capable of handling two magazines that can easily be accessed from the side of the machine. It is used in low to medium volume applications that require medium capacity storage.

STANDARD FEATURES

- Motorized width adjustment
- User friendly touch screen display for function and alarms
- Dual servo drive for PCB positioning into magazine slot
- ESD hinged cover with safety interlock
- Configurable pitch selection
- Tower light and alarm

GENIUS 1-DL

Module specification

Length	1643 mm
Height	1204 mm
Width	1290 mm
Colour	RAL 9016

PCB dimensions

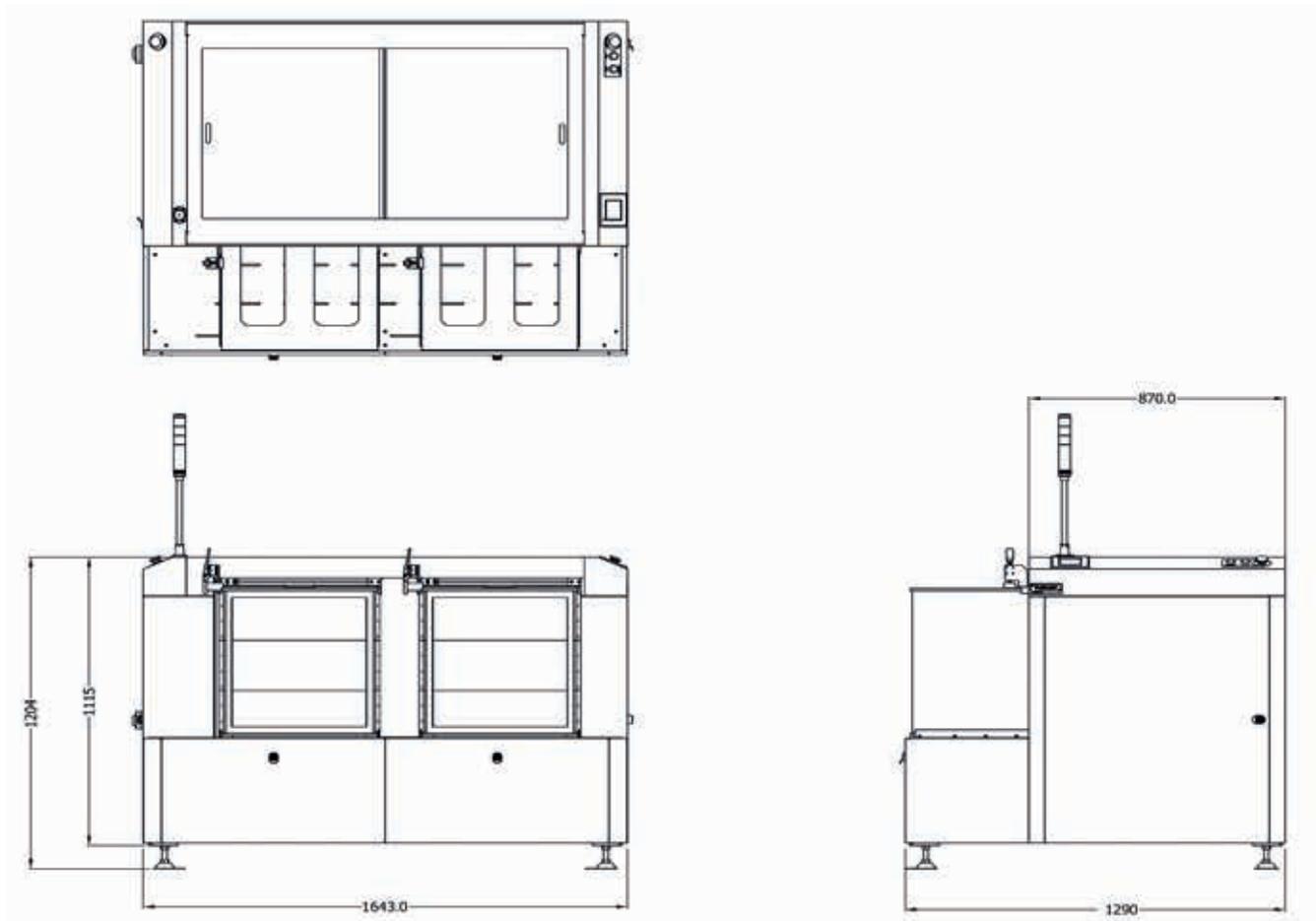
Board length	75 - 508 mm (3" - 20")
Board Width	75 - 460 mm (3" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized width adjust
Buffer capacity	90 at 10 mm pitch, 2 magazines
Conveyor speed	Max 15 m/min adjustable

Magazine handling

Buffer capacity	2 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G
Other sizes and types available upon request.	



GENIUS 1-ML



Multi magazine line loader

The GENIUS 1-ML Multi magazine line loader is used when a magazine of PC boards is required to be loaded into a production line. This unit is capable of handling five magazines that can easily be accessed from the side of the machine. It is used in high volume applications that require large capacity storage.

STANDARD FEATURES

- 5 magazine capacity for standard machine
- Electrical pusher to slide PCBs automatically out of the magazine
- Rack locking by upper and lower pneumatic clamps
- Programmable pitch setting
- User friendly touch screen display for function and alarm
- Tower light display for machine status
- SMEMA interface
- ESD transparent windows

GENIUS 1-ML

Module specification

Length	1926 mm
Height	1700 mm
Width	1000 mm
Colour	RAL 9016
Air pressure	5 bar

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

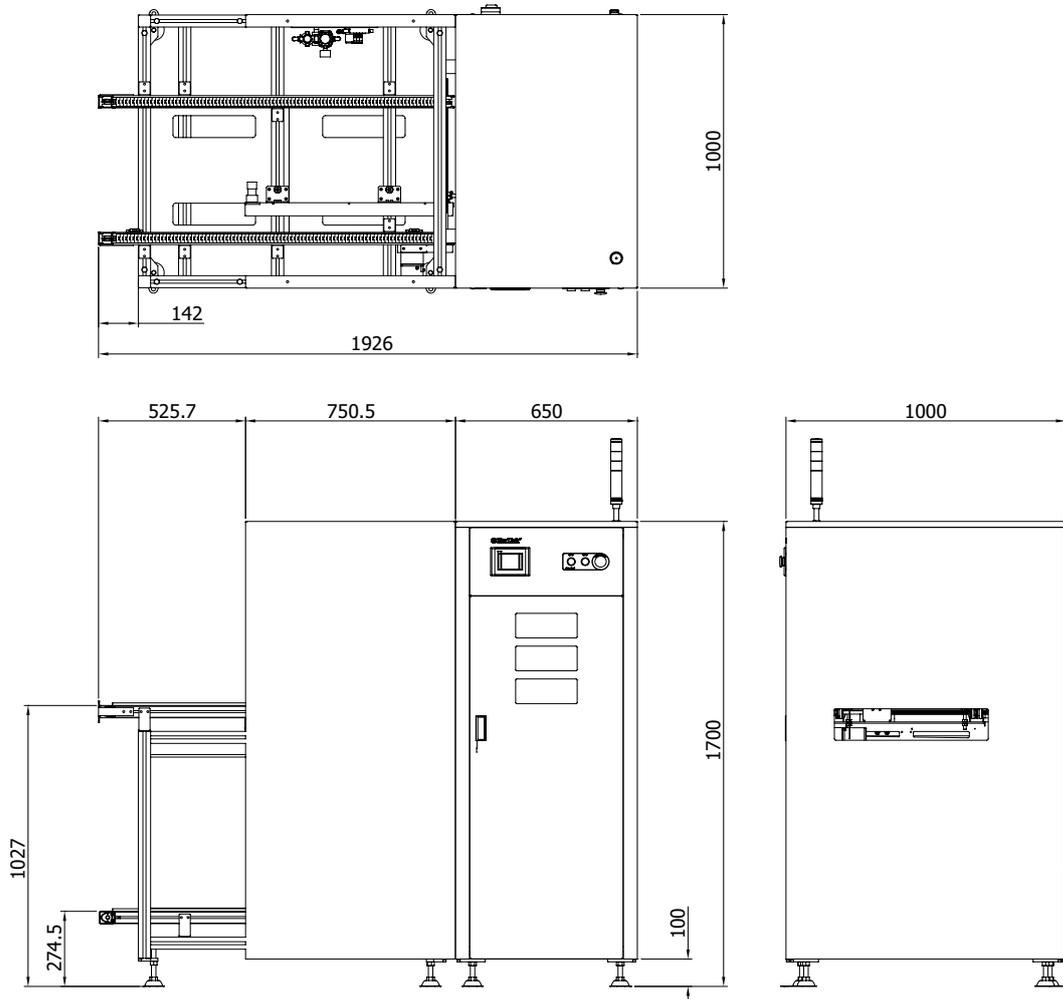
Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Buffer capacity	50 PCBs (pitch 10 mm) in each magazine
PCB loading time	Approx. 7 sec
Magazine changeover time	Approx. 20 sec

Magazine handling

Buffer capacity	5 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G
Other sizes and types available upon request.	

Optional

Buffer capacity	3 magazine buffer unit
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GENIUS 1-TL



Triple magazine line loader

The GENIUS 1-TL Triple magazine line loader is used when PCB boards in magazines are required to be loaded into a production line. This unit is capable of handling three magazines that can easily be accessed from the side of the machine. It is used in medium to high volume applications that require large capacity storage.

STANDARD FEATURES

- Dual servo drive for PCB positioning into magazine slot
- Motorized width adjustment
- User friendly touch screen display for function and alarm
- SMEMA interface
- ESD hinged cover with safety interlocks
- Configurable pitch selection
- Tower light and alarm

GENIUS 1-TL

Module specification

Length	1290 mm
Height	1208 mm
Width	2323 mm
Colour	RAL 9016

PCB handling

Transport system	Antistatic flat belt
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized with adjust system
Conveyor speed	Max. 15 m/min adjustable

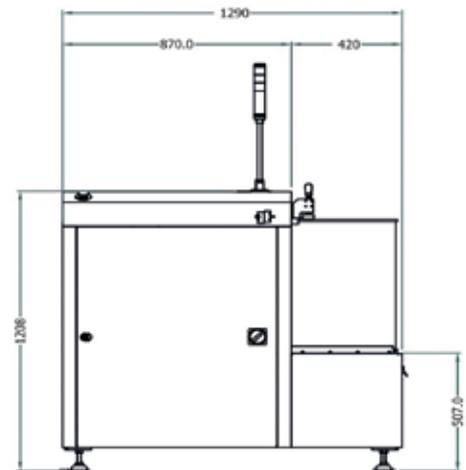
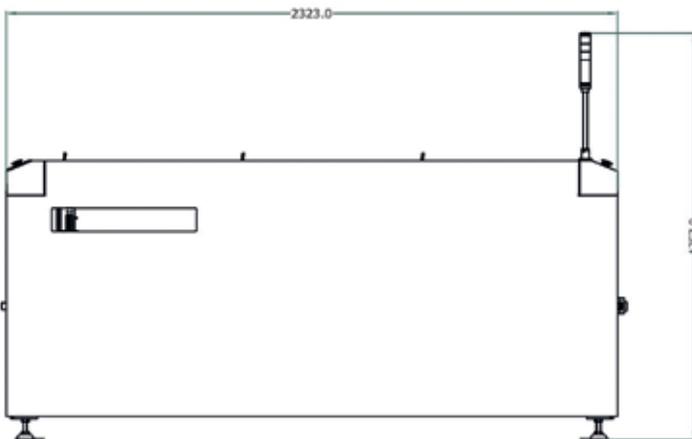
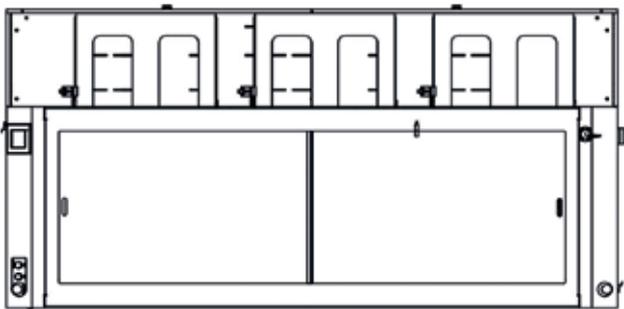
PCB Dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

Magazine handling

Buffer capacity	3 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G

Other sizes and types available upon request.



GENIUS 1-DK



Destacker

The GENIUS 1-DK Destacker is used when unpopulated PC boards are to be introduced to a production line. The module can hold up to a 200 mm (7.8") stack of unpopulated PC boards at a weight of 15 kg (33 lbs). The unit is able to segregate one board from its stack onto the production line by utilizing a technically advanced releasing mechanism. The unit is able to achieve cycle times of less than 9 seconds per board.

STANDARD FEATURES

- Large stack capacity
- Easy adjustment for PCB thickness
- Uninterrupted loading
- Motorized width adjust
- Adjustable conveyor speed
- Antistatic edge belts
- SMEMA interface

GENIUS 1-DK

Module specification

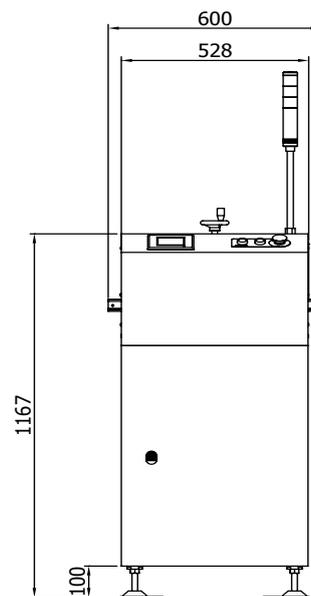
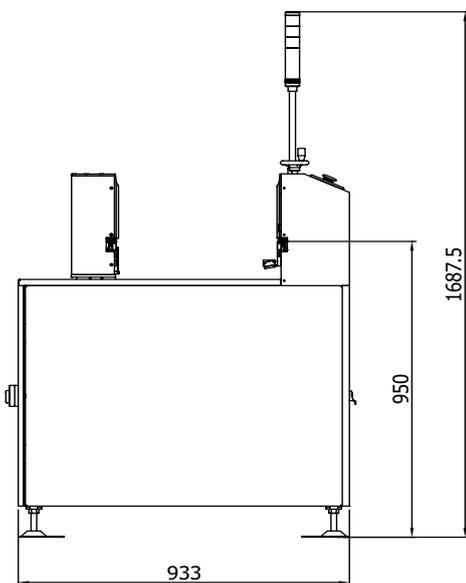
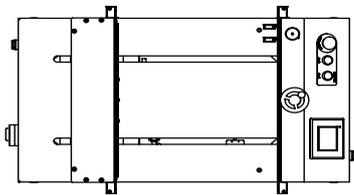
Length	600 mm
Height	1167 mm
Width	933 mm
Colour	RAL 9016
Air pressure	5 bar (72.5 psi)

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized
Cycle time	Approx. 10 sec
Conveyor speed	Max. 15 m/min adjustable



GENIUS 1-EB



Edge belt conveyor

The GENIUS 1-EB-500 to 1-EB-1500 Edge belt conveyor is a cost effective solution to handle board buffering, indexing and standard board transfers. The unit is designed to be a dependable and efficient transfer conveyor.

STANDARD FEATURES

- Motorized width adjust system
- Adjustable conveyor speed
- Operator inspect feature
- SMEMA interface

Optional

ESD hinged cover with safety interlock
Additional motor driver
Cooling fan

GENIUS 1-EB

Module specification

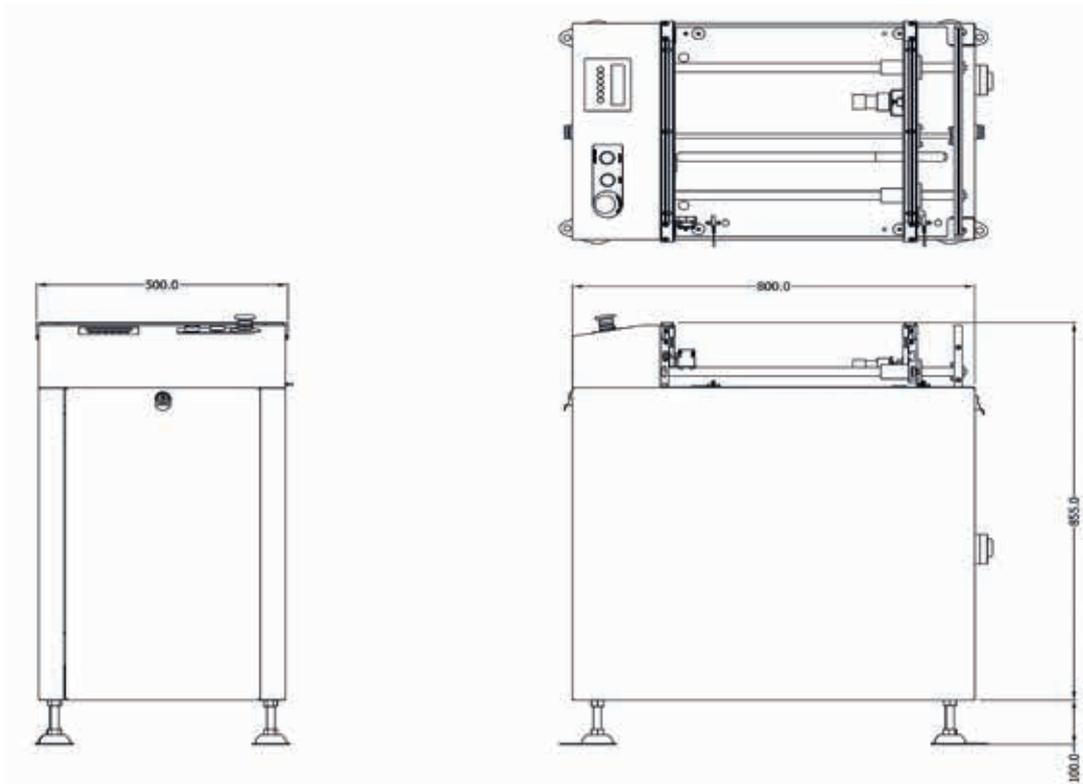
Length base	500 mm (Apply for length of railset 500-999 mm) 1000 mm (Apply for length of railset 1000-1499 mm) 1500 mm (Apply for length of railset 1500-2000 mm)
Length of railset	500-2000 mm
Height	955 mm
Width	800 mm
Colour	RAL 9016

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic flat belt
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized
Cycle time	Approx. 10 sec
Conveyor speed	Max. 15 m/min adjustable



GENIUS 1-WS



Inline workstation

The GENIUS 1-WS workstation can support a full array of workstation components. It can be arranged with just an inspect feature or be suited with a full assortment of lights, shelves, document holder, and other workstation components. The customer can mix and match which accessories best suits their individual needs. The module comes equipped with an ESD safe work surface and an operator inspect feature. The module can be configured to function with only one work position, or in combination with additional buffer sections.

STANDARD FEATURES

- Motorized width adjust system
- Antistatic work surface
- Operator inspect feature
- SMEMA interface

Standard accessories

- Foot rest
- Suspension rail
- Steel shelf
- Light support with overhead light

GENIUS 1-WS

Module specification

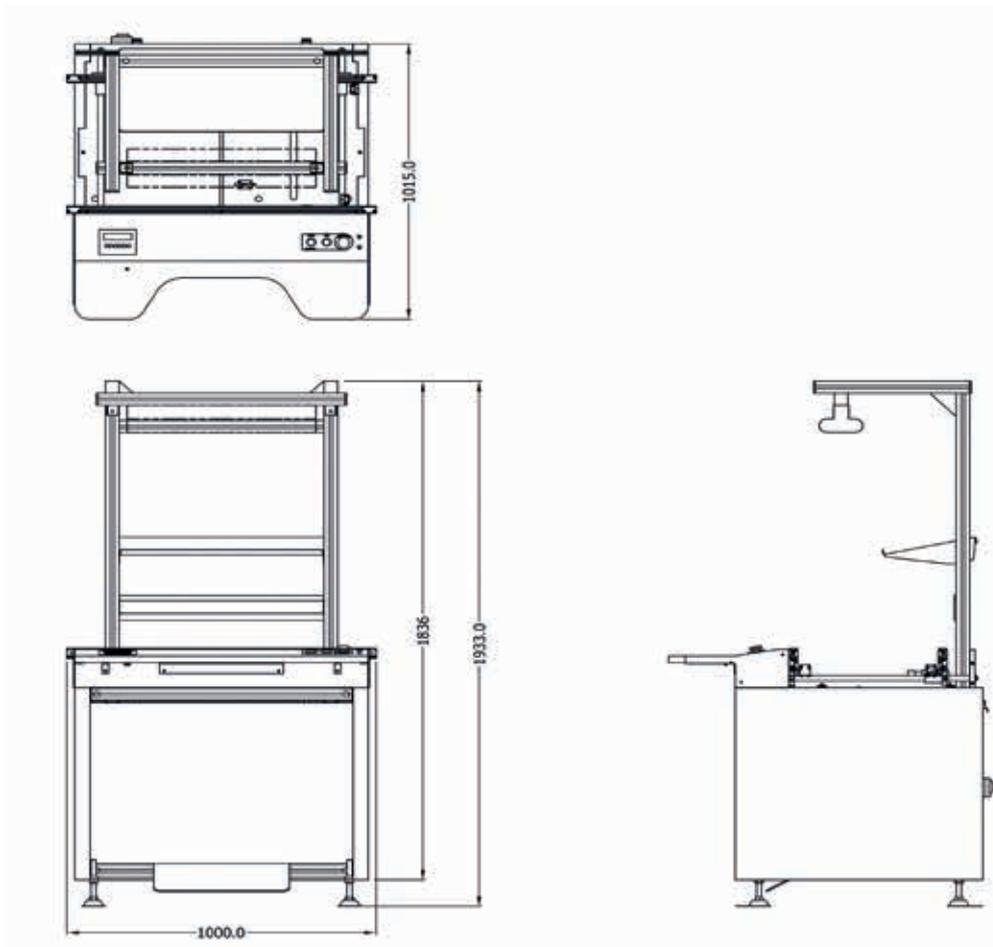
Length	1000 mm
Height	1933 mm
Width	1015 mm
Colour	RAL 9016

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized
Cycle time	Approx. 10 sec
Conveyor speed	Max. 15 m/min adjustable



GENIUS 1-RJ



Reject conveyor three tier

The GENIUS 1-RJ Reject conveyor three tier is used as failed board buffer. The unit receives a good/no good communication signal from the SPI or AOI system. If fail signal is received, the finger lift assembly raises the board for operator inspection without line interruption.

STANDARD FEATURES

- Motorized width adjust system
- Antistatic work surface
- Operator inspect feature
- SMEMA interface
- Buffer 3 boards

GENIUS 1-RJ

Module specification

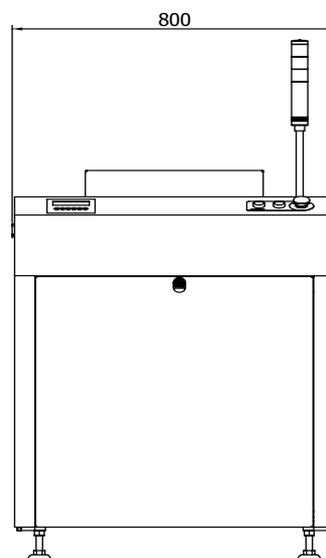
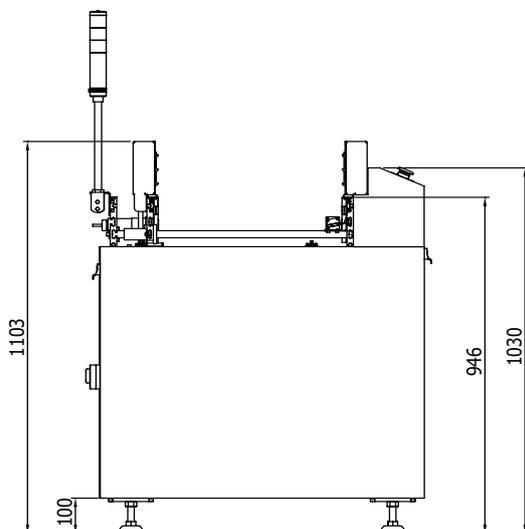
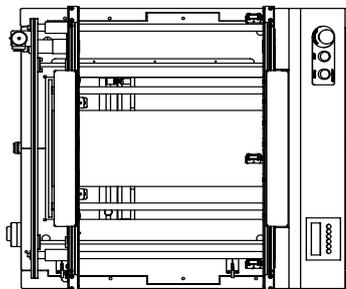
Length	800 mm
Height	1103 mm
Width	800 mm
Colour	RAL 9016

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized
Buffer capacity	3 boards buffer
Cycle time	Approx. 10 sec
Conveyor speed	Max. 15 m/min adjustable



GENIUS 1-LB



LIFO buffer

The GENIUS 1-LB LIFO buffer is designed to help balance the flow of your production line by temporarily storing work in process. Storing products in “last in, first out” mode, the LIFO buffer is able to hold 25 PC boards (signal pitch) ranging in size from 2”x3” up to 18”x20”. The LIFO buffer receives the PCB’s from the incoming conveyor and stores them utilizing a vertically aligned toothed chain. On demand from the following unit, the PCB’s can be lowered back down onto the conveyor and transferred down to downstream machine.

STANDARD FEATURES

- User friendly touch screen for function and alarms
- Motorized width adjust
- Adjustable conveyor speed
- Large capacity up to 25 PCBs
- SMEMA interface
- Configurable pitch selection
- ESD transport windows

Optional

Cooling fan

GENIUS 1-LB

Module specification

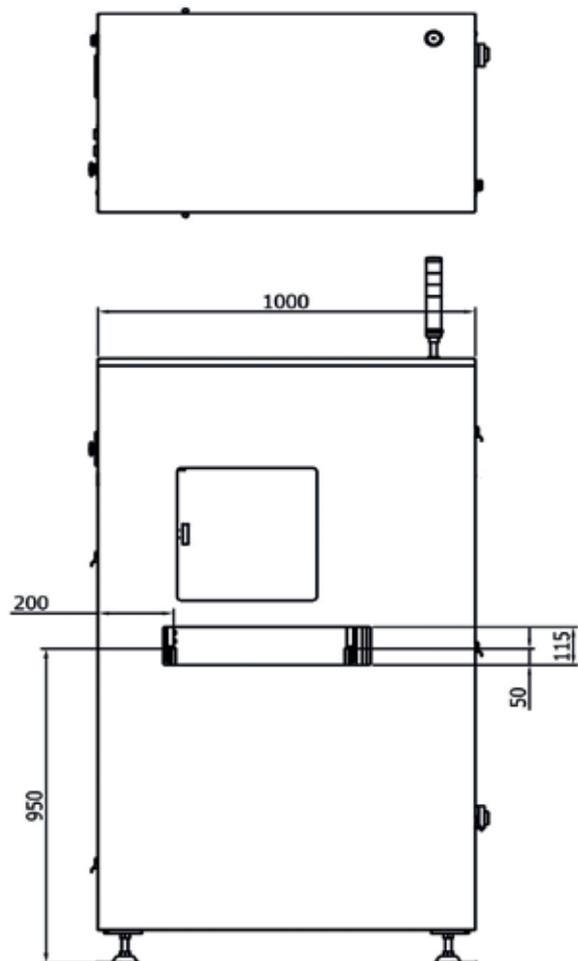
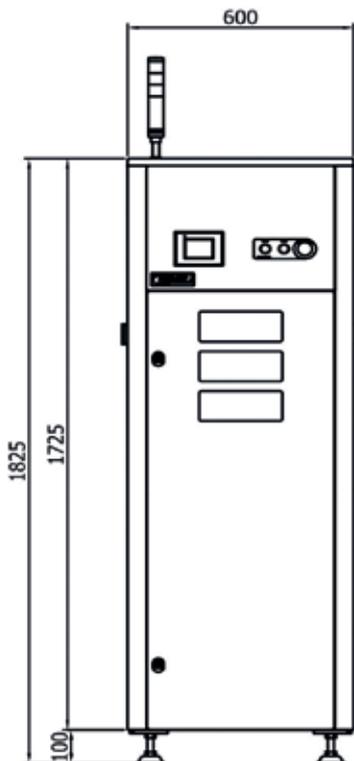
Length	600 mm
Height	1825 mm
Width	1000 mm
Colour	RAL 9016
Air pressure	5 bar (72.5 psi)

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Buffer transport system	Vertically aligned toothed chain
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized
Cycle time	Approx. 15 sec
Conveyor speed	Max. 15 m/min adjustable
Max. PCB thickness	8 mm at edge contact area



GENIUS 1-FB



FIFO/LIFO buffer slot style

The GENIUS 1-FB FIFO buffer slot style utilizes a high speed servo control system, which accurately positions the carriage for precise transfers. The FIFO/LIFO buffer uses a revolutionary transport system that simplifies the storage of 25 PC boards. This new system totally eliminates the need for belts, pushers and pullers.

STANDARD FEATURES

- No magazine required
- Antistatic safe transfer roller design
- Motorized width adjust system
- Servo controlled lift motion
- Buffer 25 boards at a pitch of 26 mm (1.02")
- FIFO/LIFO/reject buffer/pass-through mode
- LED indicator beacon with alarm
- Upline SMEMA inhibit signal
- Touch screen interface
- ESD transparent windows
- Cooling fan
- Configurable pitch setting

GENIUS 1-FB

Module specification

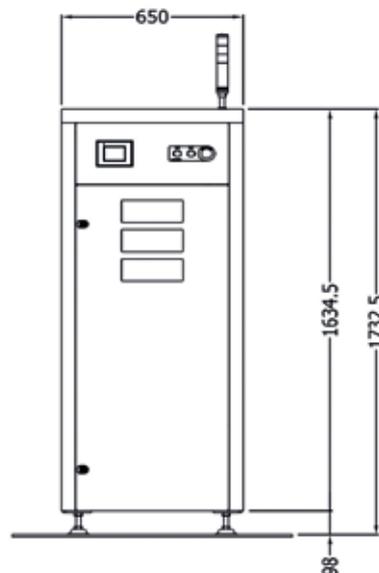
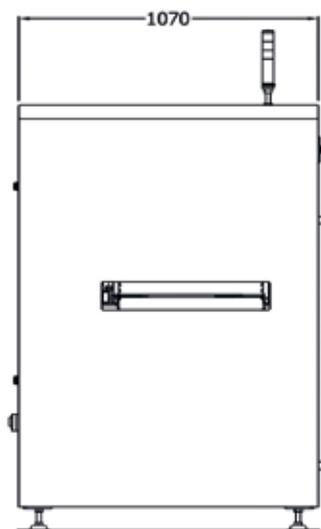
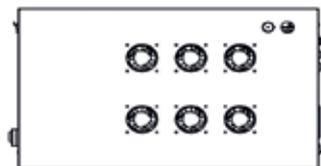
Length	850 mm
Height	1732 mm
Width	1070 mm
Colour	RAL 9016

PCB Dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Metal roller including Antistatic orings
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized with adjust system
Buffer capacity	25 PCBs
Conveyor speed	Max. 12m/min adjustable



GENIUS 1-FD



FIFO/LIFO buffer belt style

The GENIUS 1-FD FIFO buffer belt style utilizes a high speed servo control system, which accurately positions the carriage for precise transfers. The FIFO buffer uses a revolutionary transport system that simplifies the storage of 25 PC boards. This new system totally eliminates the need for pushers and pullers.

STANDARD FEATURES

- No magazine required
- Each slot has driven belt conveyor for sensitive and warped PCBs
- Motorized width adjust system
- Servo controller lift motion
- Buffer 25 boards at a pitch of 26 mm (1.02")
- FIFO/LIFO/reject buffer/pass-through mode
- LED indicator beacon with user friendly touch screen for function and alarm
- Up line SMEMA inhibits signal
- Touchscreen interface
- ESD transparent windows
- Cooling fan
- Configurable pitch setting

GENIUS 1-FD

Module specification

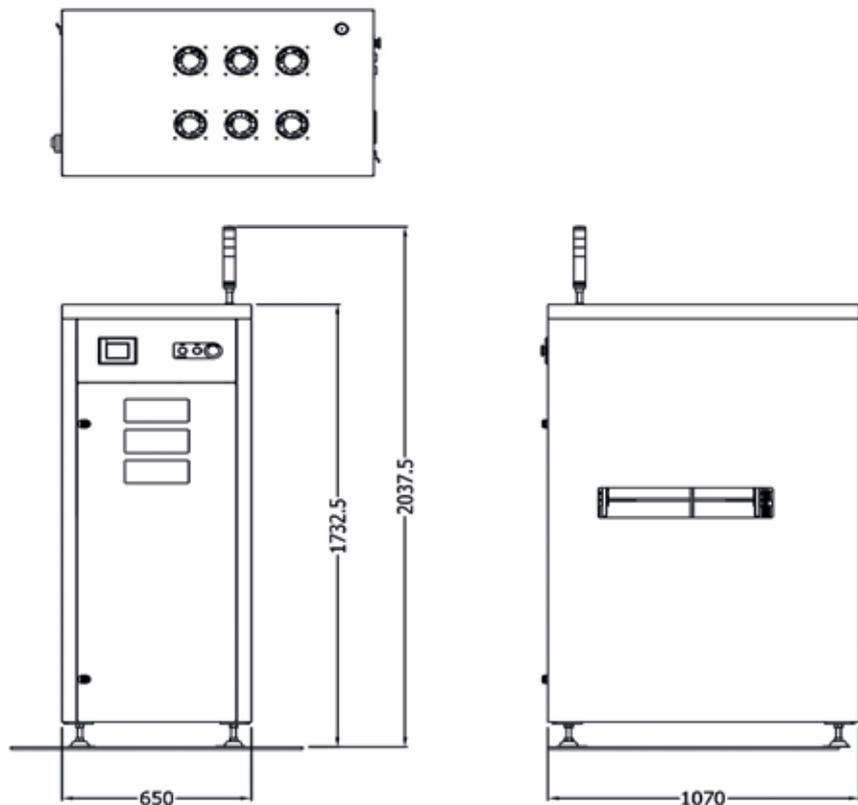
Length	650 mm
Height	1732 mm
Width	1070 mm
Colour	RAL 9016
Air pressure	5 bar (72.5 psi)

PCB Dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized width adjust system
Conveyor speed	Max. 15 m/min adjustable



GENIUS 1-CB



Single magazine combo buffer pass-through

The GENIUS 1-CB Single magazine buffer module is used to facilitate the buffering of PC boards into a magazine inline with the production line process. This unit is capable of handling one magazine that can easily be accessed from the front of the machine.

STANDARD FEATURES

- Electrical pusher for automatic PCBs insertion into magazine and into the line
- User friendly touchscreen display for function and alarm
- Adjustable conveyor speed
- Programmable pitch control
- Antistatic edge belts
- Tower light display for machine status
- SMEMA interface
- Motorized conveyor width adjustment
- ESD transparent windows
- ESD hinged cover with safety interlock

GENIUS 1-CB

Module specification

Length	1545 mm
Height	1700 mm
Width	1000 mm
Colour	RAL 9016
Air pressure	Not required

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	75 - 460 mm (3" - 18")
Board thickness	0.6 - 6 mm

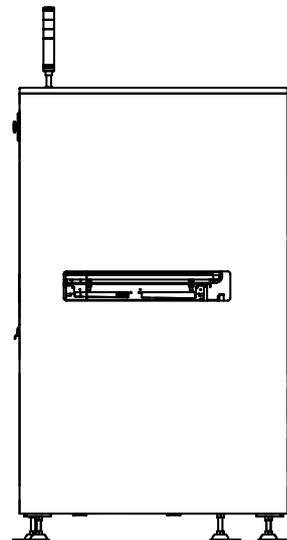
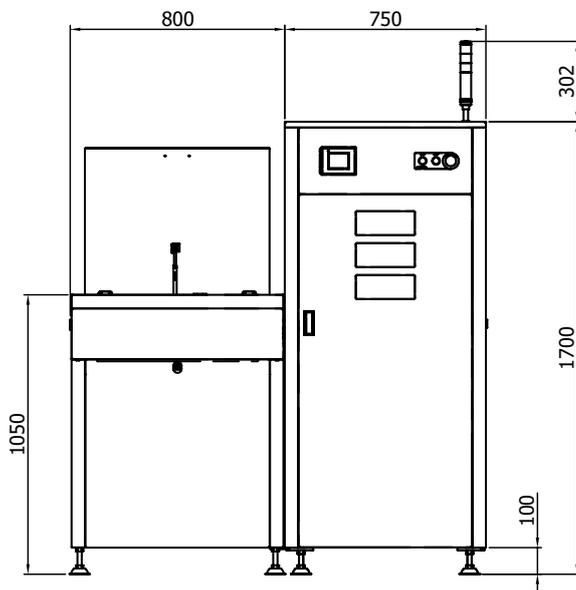
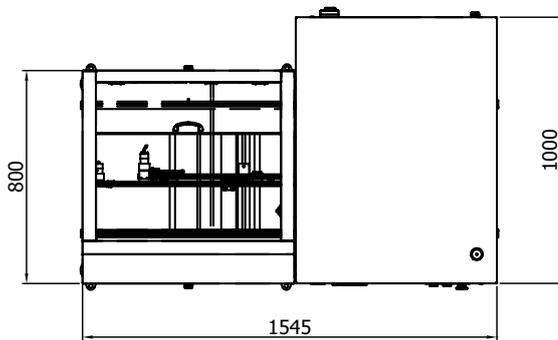
PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized
Buffer capacity	50 PCBs (pitch 10 mm) in each magazine
PCB loading time	Approx. 7 sec
Magazine changeover time	Approx. 20 sec
Conveyor speed	Max. 15 m/min adjustable

Magazine handling

Buffer capacity	1 magazine
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G

Other sizes and types available upon request.



GENIUS 1-MB



Multi magazine combo buffer pass-through

The GENIUS 1-MB Multi magazine buffer module is used to facilitate the buffering of PCB boards into a magazine inline with the production line process. This unit is capable of handling five magazines that can easily be accessed from the front of the machine.

STANDARD FEATURES

- 5 magazine capacity for standard machine
- Electrical pusher for automatic PCBs insertion into magazine and into the line.
- User friendly touchscreen display for function and alarm
- Adjustable conveyor speed
- Programmable pitch control
- Motorized conveyor width adjustment
- Antistatic edge belts
- Tower light display for machine status
- SMEMA interface
- ESD hinged cover with safety interlock

GENIUS 1-MB

Module specification

Length	1550 mm
Height	1700 mm
Width	2276 mm
Colour	RAL 9016
Air pressure	5 bar (72.5 psi)

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	75 - 460 mm (3" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized
Buffer capacity	50 PCBs (pitch 10 mm) in each magazine
PCB loading time	Approx. 7 sec
Magazine changeover time	Approx. 20 sec
Conveyor speed	Max. 15 m/min adjustable

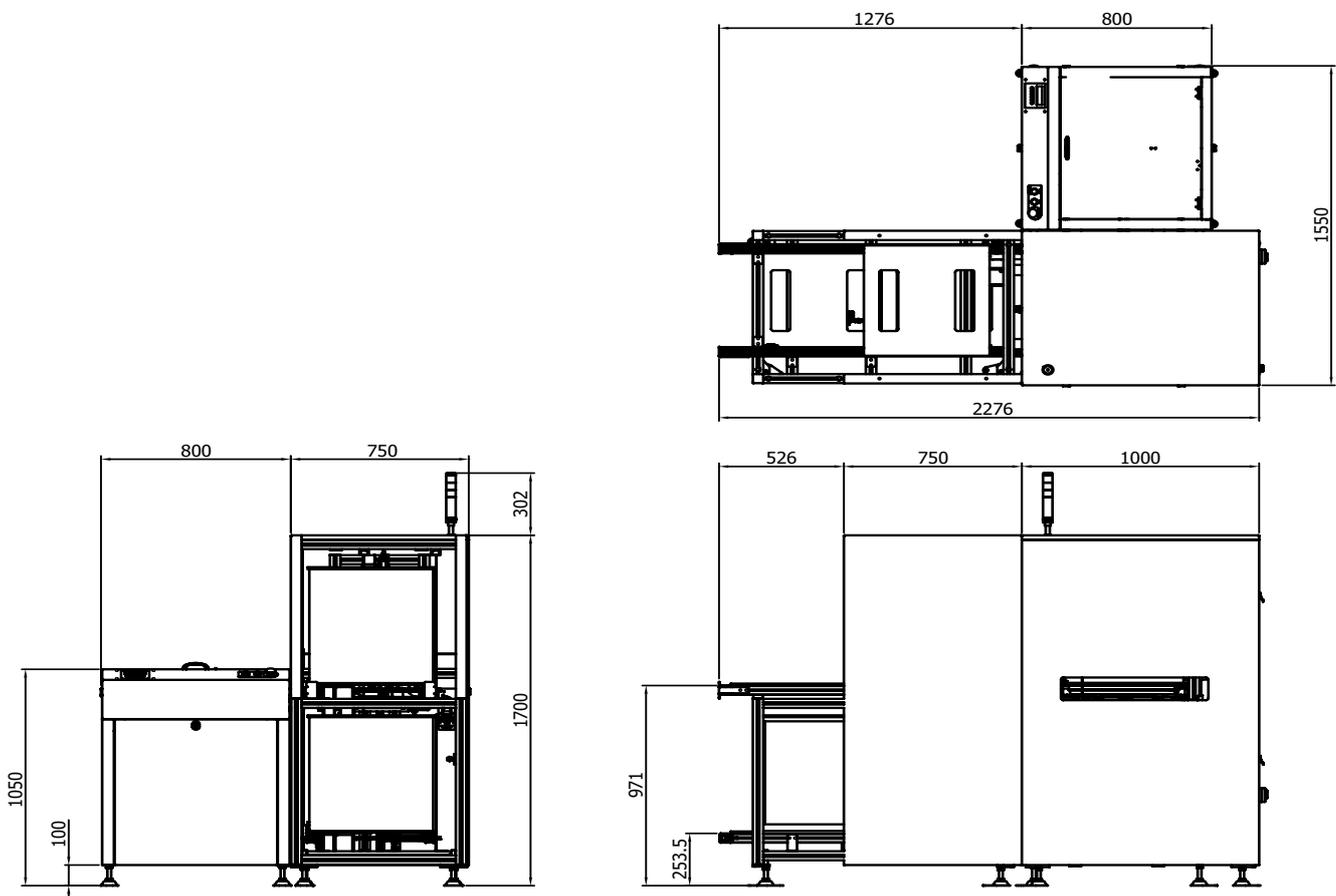
Magazine handling

Buffer capacity	5 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G

Other sizes and types available upon request.

Optional

Buffer capacity	3 magazine buffer unit
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GENIUS 1-LG



Lift gate conveyor

The GENIUS 1-LG Lift gate is a cost effective solution for providing an opening in a production line. The operator can manually open the gate to gain access. The lifting action is assisted by a counterbalanced weight system with a dual gas strut assembly.

STANDARD FEATURES

- Manual opening for operator pass-through
- Motorized conveyor width adjust
- Adjustable conveyor speed
- Counter balanced lift with gas strut
- Locking system when board on conveyor
- SMEMA interface

Optional

ESD sliding cover with safety interlock

GENIUS 1-LG

Module specification

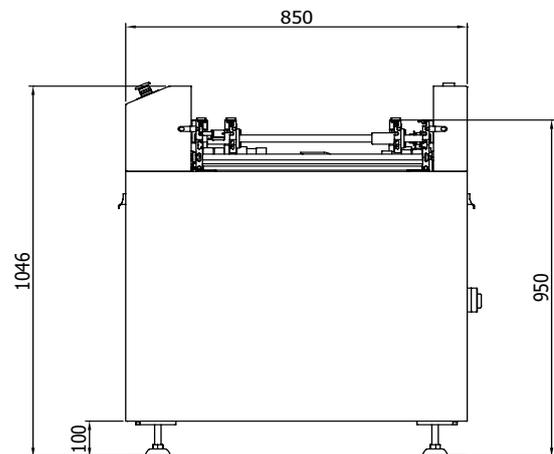
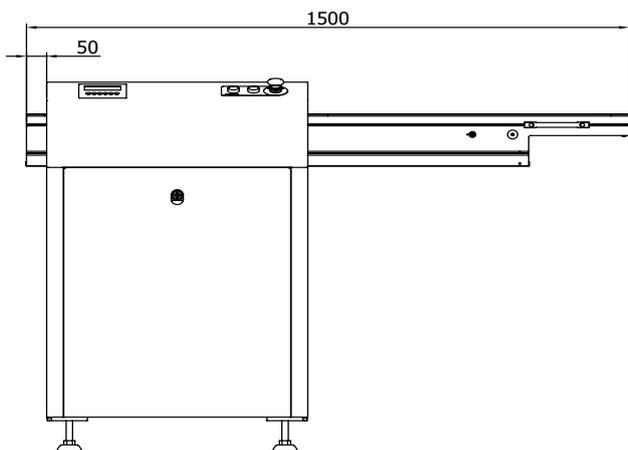
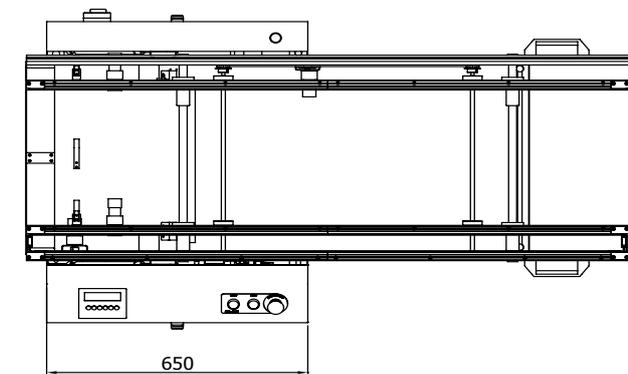
Length	1500 mm
Height	1046 mm
Width	850 mm
Colour	RAL 9016
Air pressure	5 bar (72.5 psi)

PCB Dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic sdge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized with adjust system
Conveyor speed	Max. 15 m/min adjustable



GENIUS 1-SG



Shuttle gate

The GENIUS 1-SG Shuttle gate is used to form an aisle in a production line. The motorized controlled shuttle gate receives boards from the upstream process and extend to deliver boards to the downstream process. The units is equipped with a fail-safe safety system that continuously monitors the aisle traffic.

STANDARD FEATURES

- Normally closed (retracted position)
- Motorized driven movement for smooth extension
- Aisle detection sensors to guarantee safety
- Motorized conveyor width adjustment
- Adjustable conveyor speed
- Antistatic belt
- Programmable extension stroke
- SMEMA interface
- ESD sliding covers with safety interlock
- Touch screen interface

GENIUS 1-SG

Module specification

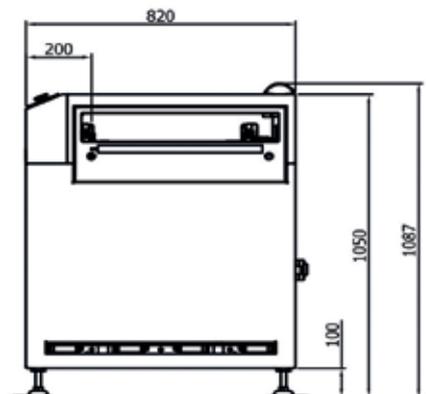
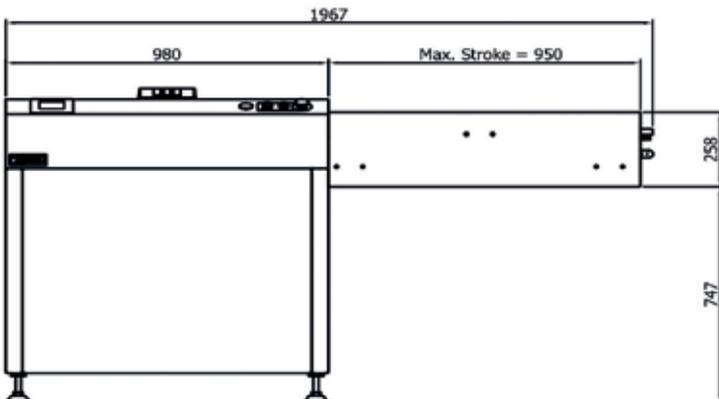
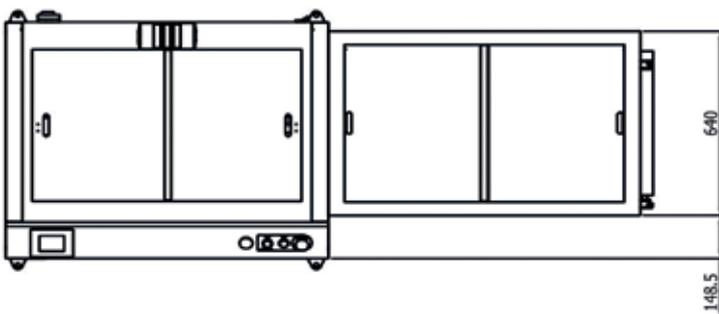
Length	1017 mm (max. 1967 mm extended)
Height	1050 mm
Width	820 mm
Colour	RAL 9016

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (Reverse flow as option)
Width adjustment	Motorized width adjust system
Cycle time	Approx. 15 sec
Conveyor speed	Max. 15 m/min adjustable



GENIUS 1-TG



Telescopic gate

The GENIUS 1-TG Telescopic gate is used to form an aisle in a production line. The motorized controlled shuttle will retract upon receiving open request. The units is equipped with a fail-safe safety system that continuously monitors the aisle traffic when in retract position.

STANDARD FEATURES

- Normally extended (closed position)
- Motorized driven movement for smooth extension
- Aisle detection sensors to guarantee safety
- Motorized conveyor width adjustment
- Adjustable conveyor speed
- Antistatic belt
- SMEMA interface
- ESD sliding covers with safety interlock
- Touch screen interface

GENIUS 1-TG

Module specification

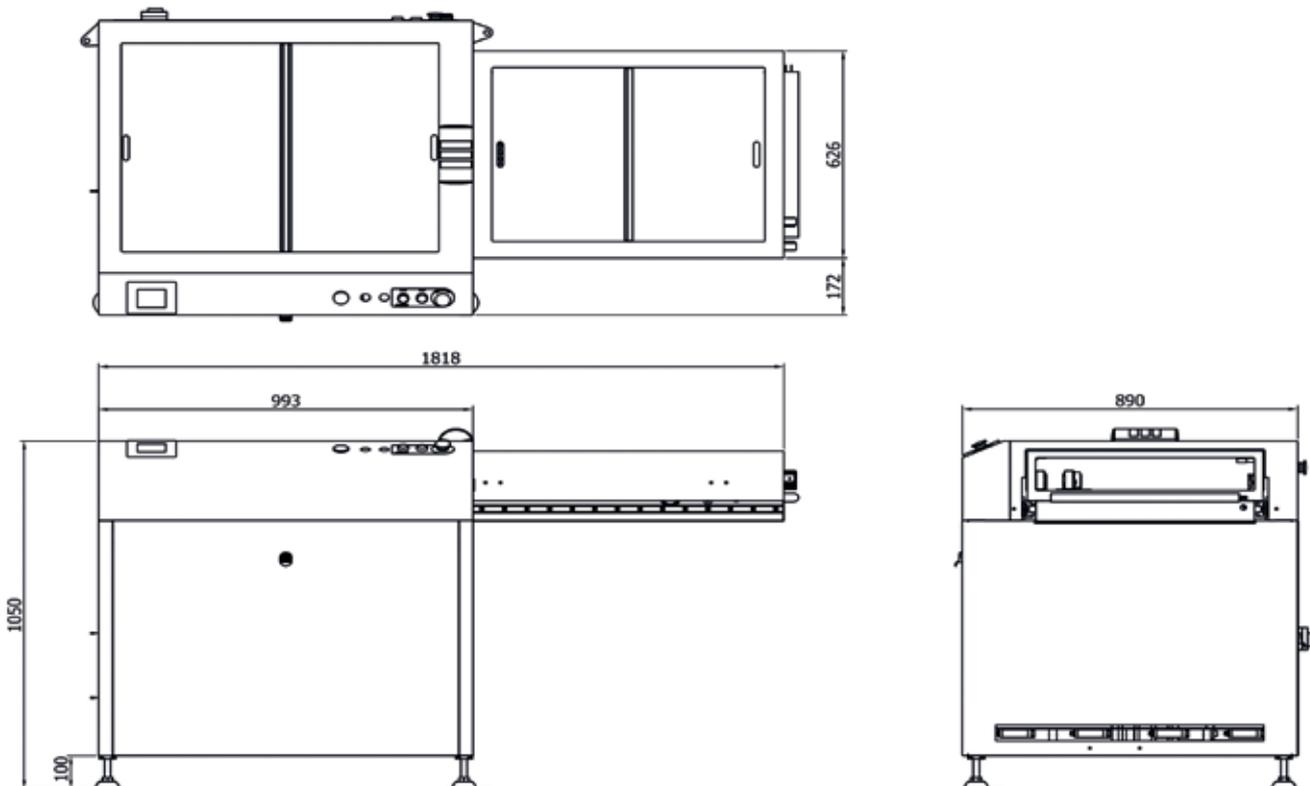
Length	995 mm (max. 1820 mm extended)
Height	1050 mm
Width	890 mm
Colour	RAL 9016

PCB Dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (Reverse flow as option)
Width adjustment	Motorized width adjust system
Cycle time	Approx. 15 sec
Conveyor speed	Max. 15 m/min adjustable



GENIUS 1-SH



Side shuttle

The GENIUS 1-SH Side shuttle is used to connect production lines that are offset from one another. The unit buffers one PC board and can deliver it to a multitude of downstream positions. The unit is servo controlled for high repeatability.

STANDARD FEATURES

- Servo driven movement for smooth and accurate positioning
- Motorized conveyor width adjustment
- Adjustable conveyor speed
- Antistatic edge belts
- Programmable shuttle stroke
- SMEMA interface
- Touch screen interface
- ESD hinged cover with safety interlock

GENIUS 1-SH

Module specification

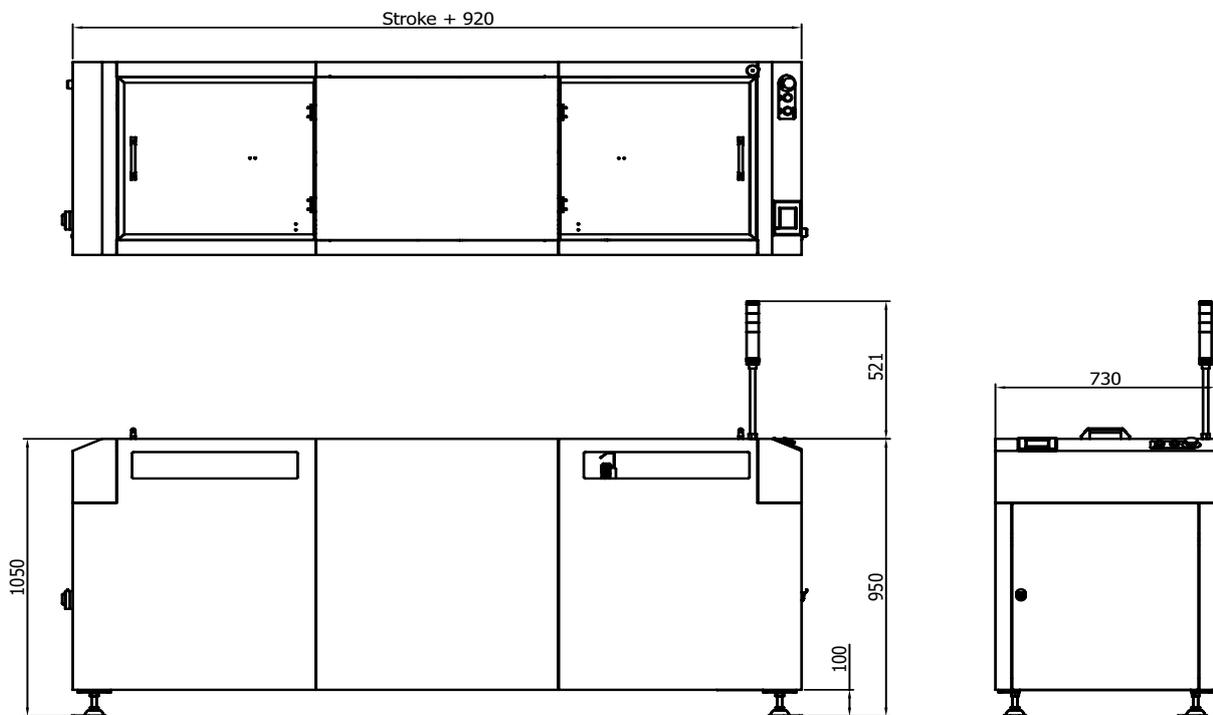
Length	Stroke + 920 mm (depend on stroke length) Min. stroke length 600 mm Max. stroke length 4 meters
Height	1050 mm
Width	730 mm
Colour	RAL 9016

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized with adjust system
Cycle time	Approx. 7 sec
Conveyor speed	Max. 15 m/min adjustable

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm



GENIUS 1-TN



Turn unit

The GENIUS 1-TN Turn unit is used when a production line requires PC boards to be routed in a different direction than the standard line flow. The unit uses a servo controlled high speed rotate mechanism to re-route PC boards within stringent tolerances. The module is able to achieve cycle times in less than 15 seconds per board. The unit incorporates a user friendly touch screen display.

STANDARD FEATURES

- Clockwise and anticlockwise rotation from 0° to 90° and 270°
- Adjustable turn speed
- Several layouts available
- Adjustable conveyor speed
- Antistatic belt
- SMEMA interface
- 1 in 1 out (OR)
- 2 in 1 out (OR)
- 1 in 2 out Configuration
- Bad board sorting
- Programmable configuration
- ESD hinged cover with safety interlock

GENIUS 1-TN

Module specification

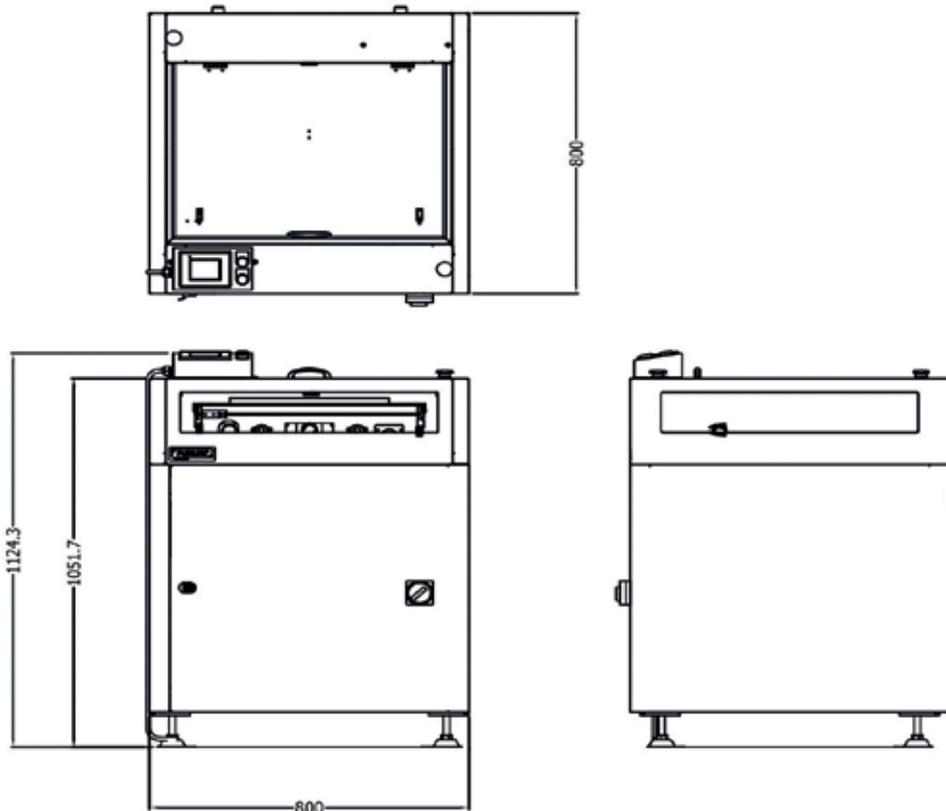
Length	800 mm
Height	1125 mm
Width	800 mm

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized width adjust system
Cycle time	Approx. 7 sec
Conveyor speed	Max. 15 m/min adjustable



GENIUS 1-IN



Inverter

The GENIUS 1-IN Inverter is used to invert a PC board when required in top-side/bottom-side manufacturing. The unit uses a servo controlled high-speed rotate mechanism to invert the board with pinpoint accuracy. It is able to cradle the board during its rotate cycle by using a two-sided belt support system. The module is able to achieve cycle times of less than 15 seconds per board by utilizing its “flip-flip” software functions.

STANDARD FEATURES

- Active selector/pass-through
- Adjustable conveyor speed
- Smooth rotation without abrupt shocks
- SMEMA interface
- Antistatic edge belts
- Touch screen interface
- ESD hinged and sliding cover with interlock

GENIUS 1-IN

Module specification

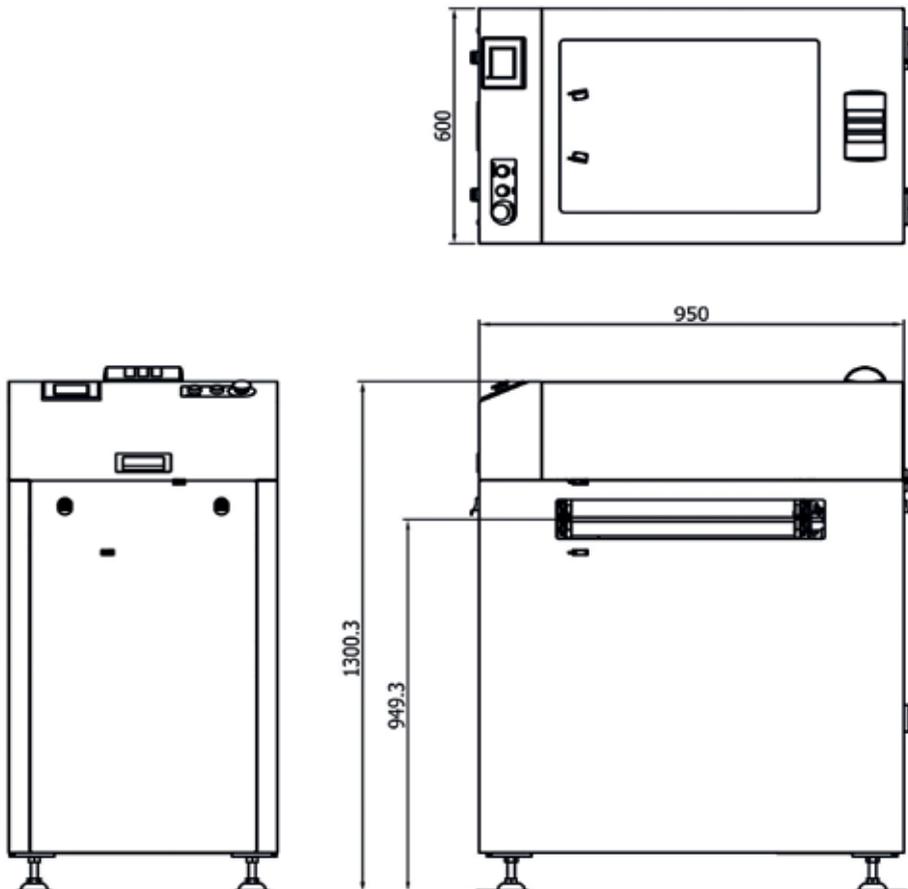
Length	600 mm
Height	1300 mm
Width	950 mm
Colour	RAL 9016
Air Pressure	5 bar (72.5 psi)

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized width adjust system
Cycle time	Approx. 15 sec
Conveyor speed	Max. 15 m/min adjustable



GENIUS 1-RK



Restacker

The GENIUS 1-RK Restacker is used when unpopulated PC boards need to be stacked on top of one another at the end of a production line. The module can hold up to a 200 mm (7.8") stack of unpopulated PC boards at a weight of 15 kg (33 lbs). By utilizing a technically advanced stacking mechanism, this unit is able to achieve cycle times of less than 6 seconds per board.

STANDARD FEATURES

- Large stack capacity
- Stack full sensor
- Uninterrupted loading
- Motorized width adjust
- Adjustable conveyor speed
- Antistatic edge belts
- SMEMA interface

GENIUS 1-RK

Module specification

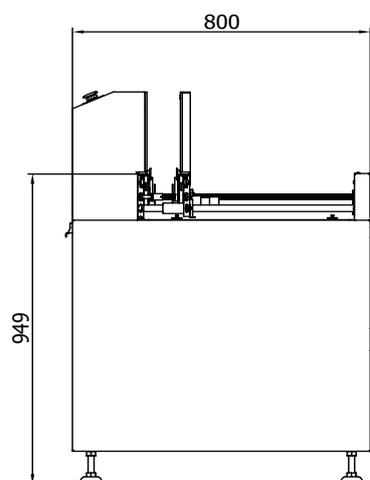
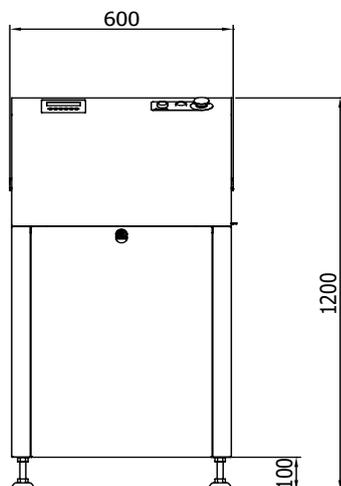
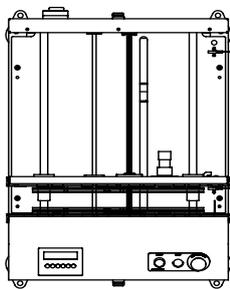
Length	600 mm
Height	1200 mm
Width	800 mm
Colour	RAL 9016
Air pressure	5 bar (72.5 psi)

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized
Cycle time	Approx. 10 sec
Conveyor speed	Max. 15 m/min adjustable



GENIUS 1-SU



Single magazine line unloader

The GENIUS 1-SU Single magazine line unloader is used to facilitate the buffering of PC boards into a magazine at the end of a production line. This unit is capable of handling one magazine that can easily be accessed through the rear of the machine. The unloader is a small, compact, price competitive module that is used in low volume production environment.

STANDARD FEATURES

- User friendly touch screen for function and alarm
- Magazine locking by upper and lower manual clamps
- Programmable pitch setting
- Motorized conveyor width adjust
- Electrical pusher for automatic PCB insertion
- Adjustable conveyor speed
- Antistatic edge belts
- Tower light display for machine status
- SMEMA interface
- ESD transparent windows
- ESD hinged cover with safety interlock

GENIUS 1-SU

Module specification

Length	1345 mm
Height	1700 mm
Width	1000 mm
Colour	RAL 9016
Air pressure	Not required

PCB dimensions

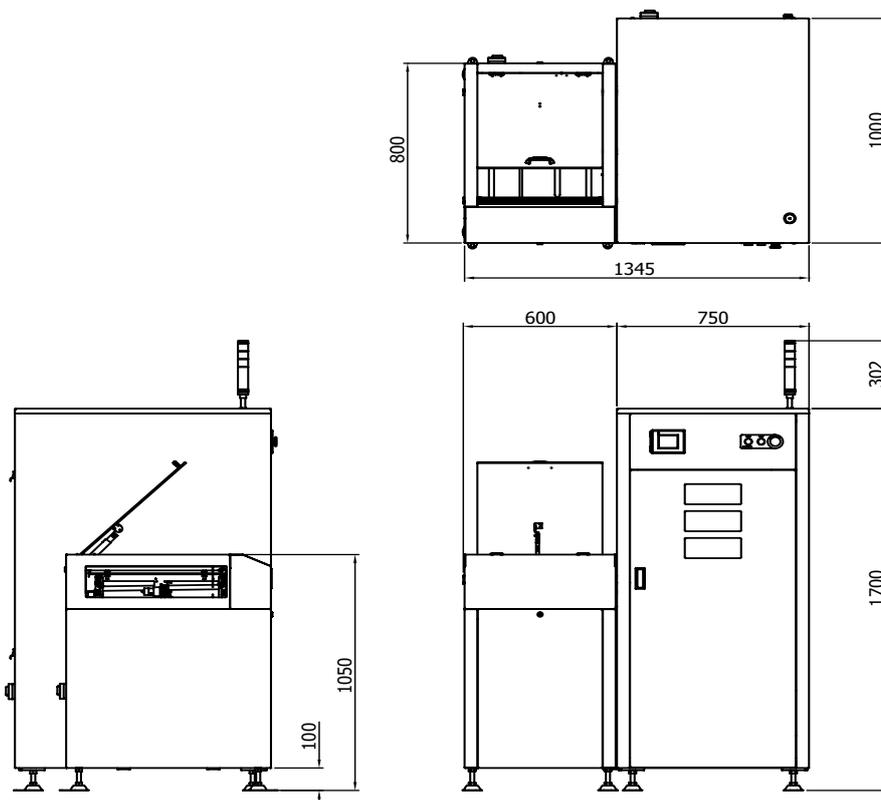
Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belt
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized
Buffer capacity	50 PCBs (pitch 10 mm) in each magazine
PCB loading time	Approx. 7 sec
Conveyor speed	Max. 15 m/min. adjustable

Magazine handling

Buffer capacity	1 magazine
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G
Other sizes and types available upon request.	



GENIUS 1-DU



Dual magazine line unloader

The GENIUS 1-DU Dual magazine line unloader is used when PCBs need to be buffered into magazines at the end of a production line. This unit is capable of handling two magazines that can easily be accessed from the side of the machine. The module is a cost effective way of handling low to medium high-volume applications that require increased capacity storage. This unit can also support good/no good reject software used on SPI or AOI application. All failed PCB's would transfer to a no good magazine.

STANDARD FEATURES

- Motorized width adjustment
- User friendly touch screen display for function and alarms
- ESD hinged cover with safety interlock
- Good/bad board sorting
- Configurable pitch selection
- Tower light and alarm

GENIUS 1-DU

Module specification

Length	1643 mm
Height	1205 mm
Width	1290 mm
Colour	RAL 9016

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

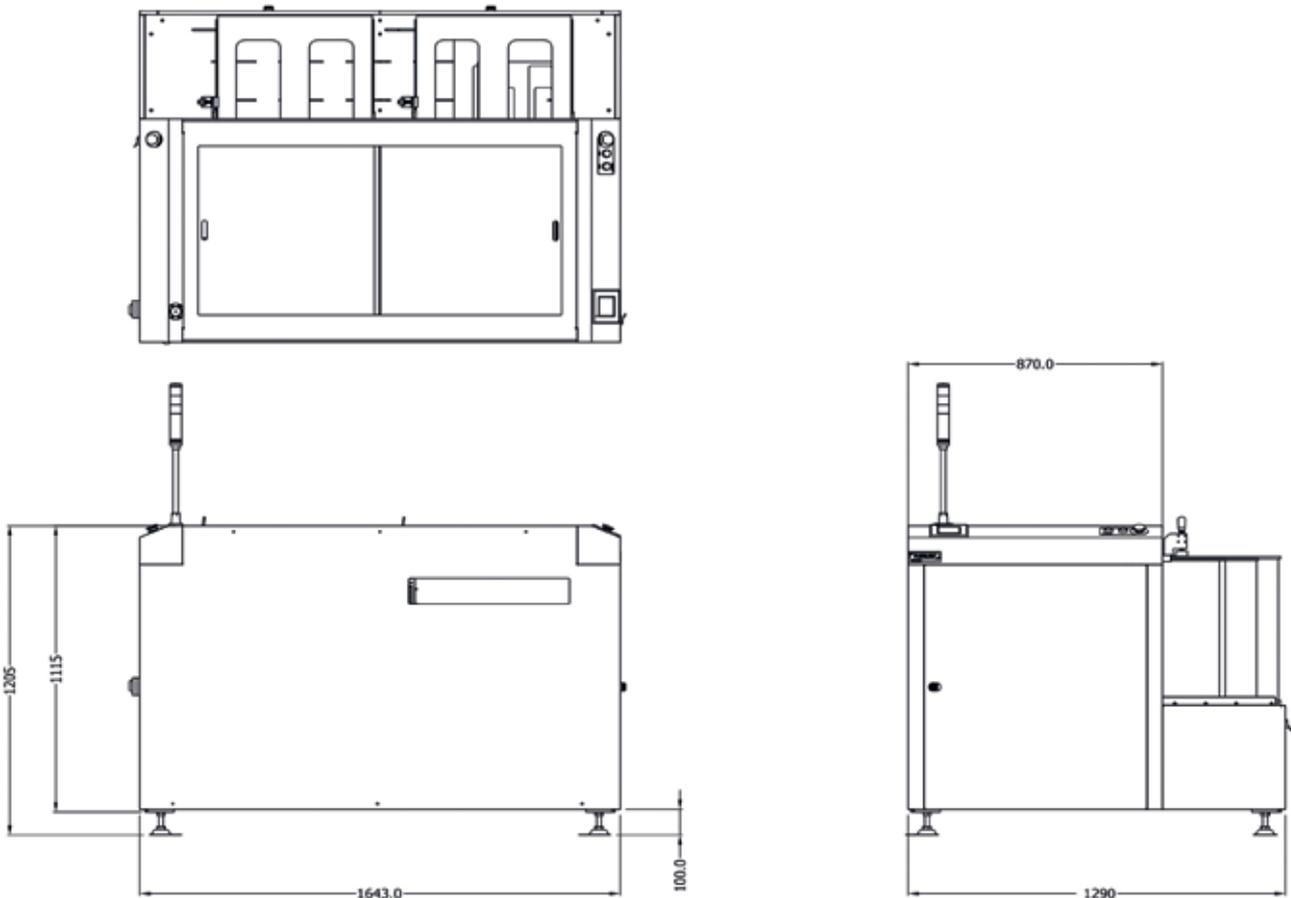
Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized width adjust
Buffer capacity	84 boards at 10 mm pitch, 42 boards per magazine, 2 magazine
Conveyor speed	Max 15 m/min adjustable

Magazine handling

Buffer capacity	2 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G
Other sizes and types available upon request.	

Optional

Separate lift platform for bad board sorting



GENIUS 1-MU



Multi magazine line unloader

The GENIUS 1MU Multi magazine line unloader is used to facilitate the buffering of PC boards into a magazine at the end of a production line. The unit is capable of handling five magazine that can easily be accessed from the side of the machine. The module is a cost effective way of handling high volume applications that require increased capacity storage.

STANDARD FEATURES

- 5 magazine capacity for standard machine
- Electrical pusher to slide PCBs automatically out of the magazine
- Rack locking by upper and lower pneumatic clamps
- Programmable pitch setting
- User friendly touch screen display for function and alarm
- Tower light display for machine status
- SMEMA interface
- ESD transparent windows
- Motorized jog width adjust
- ESD hinged cover with interlock

GENIUS 1-MU

Module specification

Length	2526 mm
Height	1700 mm
Width	1000 mm
Colour	RAL 9016
Air pressure	5 bar (72,5 psi)

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized
Buffer capacity	50 PCBs (pitch 10 mm) in each magazine
PCB loading time	Approx. 7 sec
Magazine changeover time	Approx. 20 sec
Conveyor speed	Max. 15 m/min adjustable

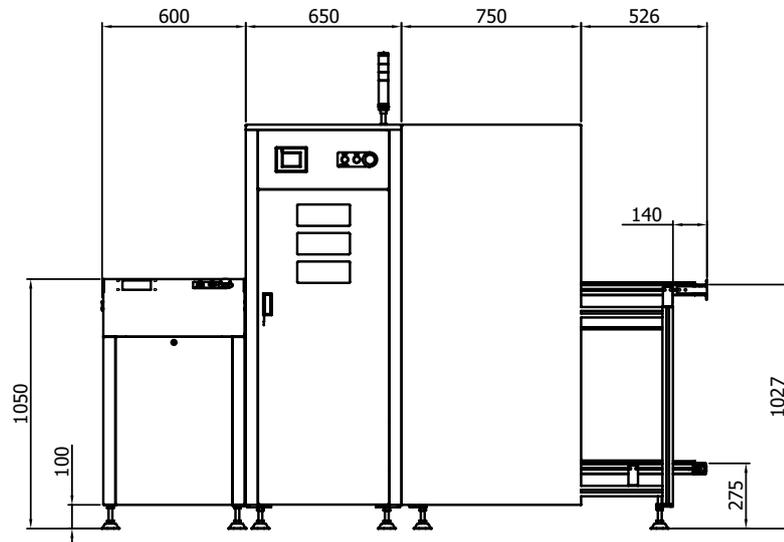
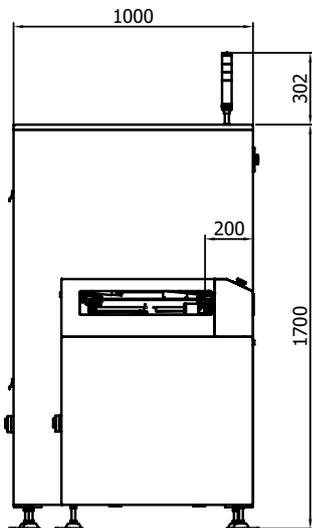
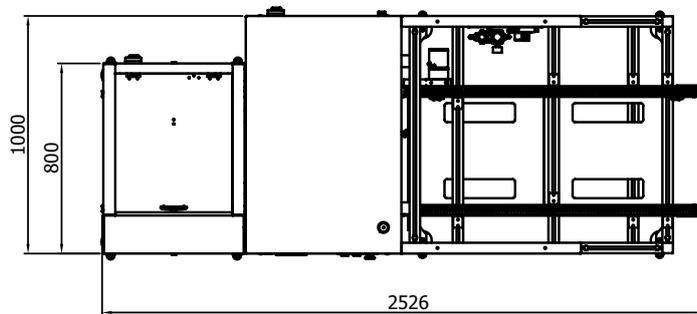
Magazine handling

Buffer capacity	5 magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G

Other sizes and types available upon request.

Optional

Buffer capacity	3 magazine buffer unit
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GENIUS 1-TU



Triple magazine line unloader

The GENIUS 1-TL Triple magazine line unloader is used when PCB boards from the production line are required to be loaded into magazines. This unit is capable of handling three magazines that can easily be accessed from the side of the machine. The module is a cost effective way of handling high-volume applications that require increased capacity storage. This unit can also support good/no good reject software used on SPI or AOI applications. All failed PCBs would transfer to a no good magazine.

STANDARD FEATURES

- Motorized width adjustment
- Pass/fail sorting after test systems
- User friendly touch screen display for function and alarms
- Dual servo drive for PCB positioning into magazine slot
- SMEMA interface
- Good/bad board sorting
- ESD hinged cover with safety interlock
- Configurable pitch selection
- Tower light and alarm

GENIUS 1-TU

Module specification

Length	1290 mm
Height	1208 mm
Width	2323 mm
Colour	RAL 9016

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized
Conveyor speed	Max. 15 m/min adjustable
Buffer capacity	150 boards of 10 mm pitch, 50 boards per magazine, 3 magazine

PCB Dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

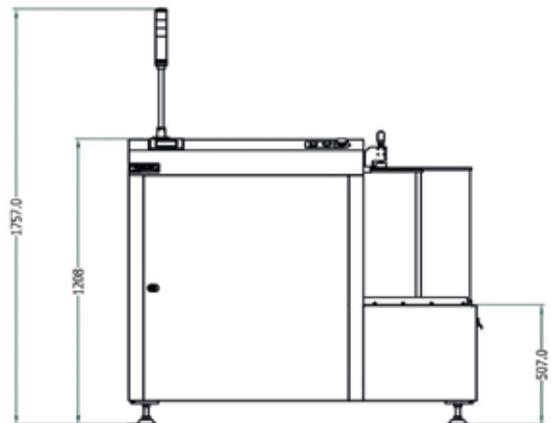
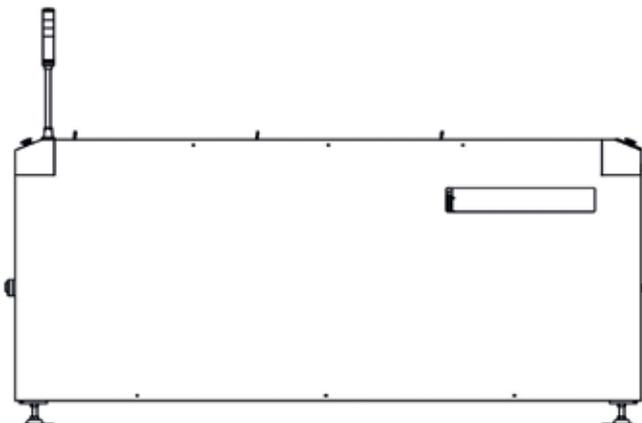
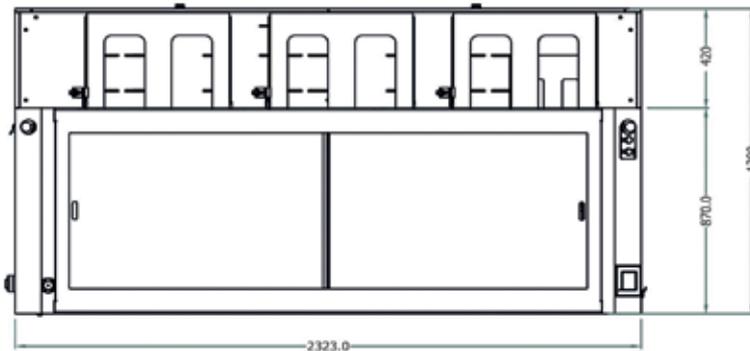
Magazine handling

Buffer capacity	3 Magazines
Min magazine size	CAB 701 / NIKKO NKAJ-0218R-G
Max magazine size	CAB 707 / NIKKO NKAJ-0546R-G

Other sizes and types available upon request.

Optional

Separate lift platform for bad board sorting.



GENIUS 1-EL



Elevator

The GENIUS 1-EL Elevator is used when an elevation or transfer angle change is required in a production line. The unit is typically used before and after a wave solder machine. The elevator uses a servo motor actuated guided slide assembly to accurately change elevations or transfer angles.

STANDARD FEATURES

- Motorized controlled lift motion
- In/out position can be selected at time of order (min 300 mm to 950 mm)
- Motorized conveyor width adjust system
- Receive down line SMEMA inhibit signal
- SMEMA compatible
- ESD hinged cover with safety interlock

GENIUS 1-EL

Module specification

Length	600 mm
Height	Depending on stroke height
Width	1000 mm
Colour	RAL 9016
Air pressure	5 bar (72.5 psi)

PCB Dimensions

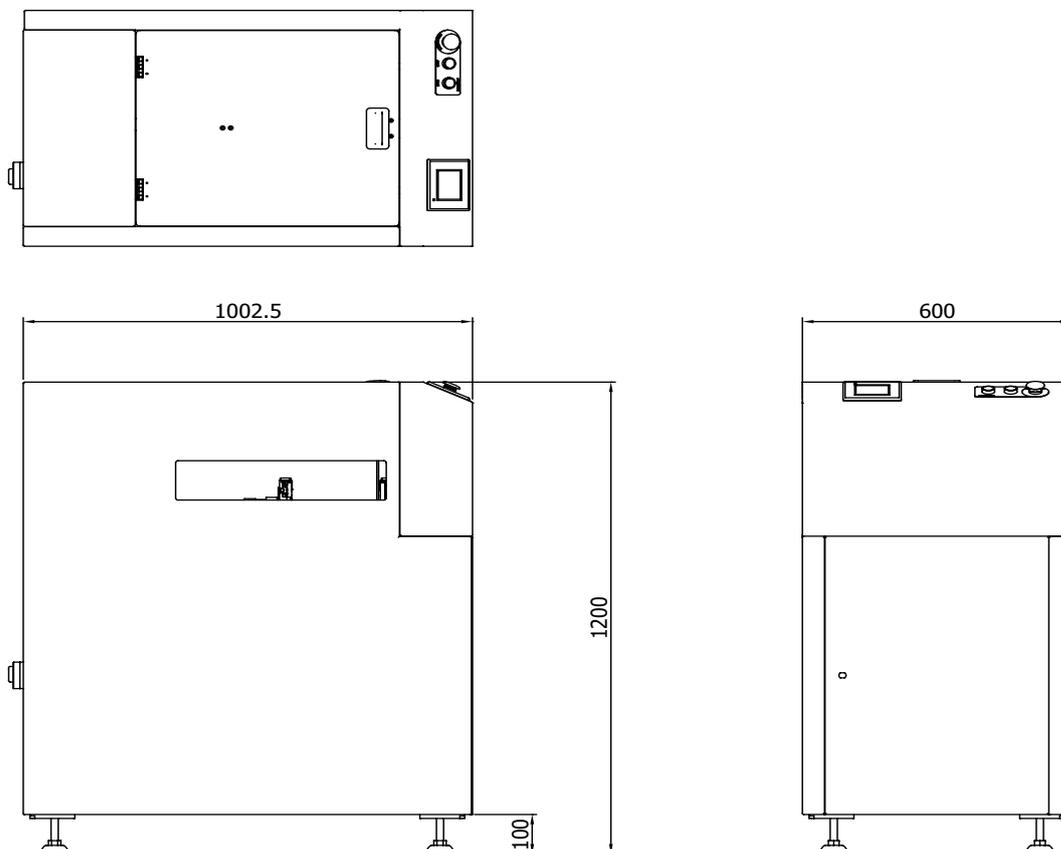
Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized with adjust system
Conveyor speed	Max 15 m/min adjustable

Optional

Wave exit platform



GENIUS 1-CC



Chain conveyor

1-CC Roller Chain Conveyor is a modular transport solution that can be configured to meet specific customer requirements. The system utilizes a free spinning ESD safe roller design that reduces back pressure while products are being queued. The Roller Chain Conveyor is a cost effective solution for buffering multiple products over extended length areas. The Roller Chain Conveyor can transport both PCB boards and pallets. The module can also be fitted with a full array of workstation options, which allow the module to function as an ergonomic workstation.

STANDARD FEATURES

- ESD safe free spinning chains roller
- PLC controlled
- SMEMA compatible
- Precision hand crank width adjust system
- Durable ball-bearing end idlers
- Fully captured chain returns

GENIUS 1-CC

Module specification

Machine dimensions (L×W×H):

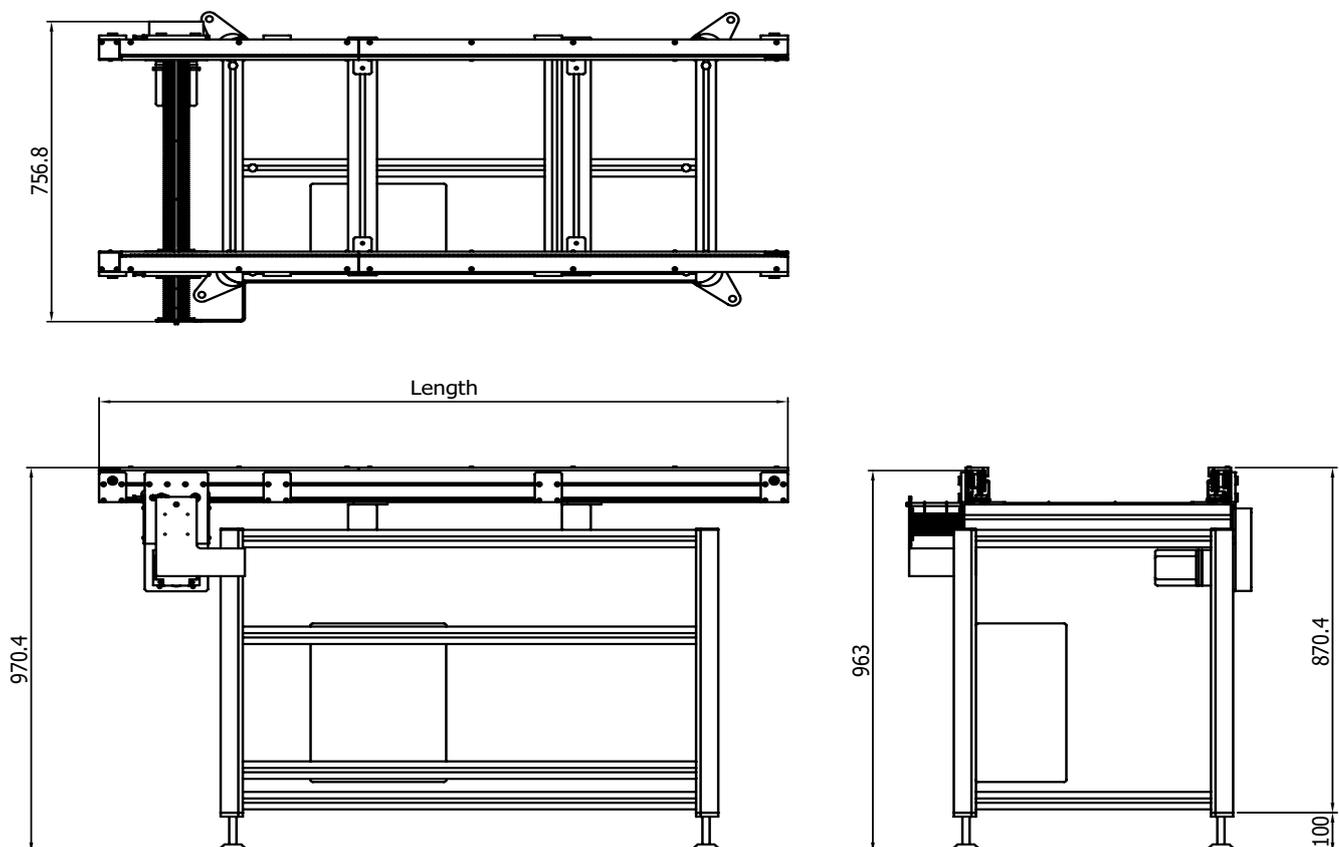
L mm × 585 mm × 940 mm

Average cycle time: dependent on length
and speed

Conveyor speed: 25–150 mm/s

Optional

- Tooled width adjust
- Slide width adjust system
- Protective safety covers, both ESD and non ESD
- LED signal tower with alarm
- Non PLC version, speed control only
- Pneumatic actuated board stopper and singulator
- Available module lengths from 600 mm up to 5000 mm
- Consult factory for available chain options
- Consult factory for additional options not listed



GENIUS 1-FC



Flat belt conveyor

The GENIUS 1-FC Flat Belt Conveyor is a modular transport solution that can be configured to meet specific customer requirements. The system utilizes an ESD safe belt that can transport both PCB boards and pallets. This module can be used to incline or decline products to and from Wave Solder systems. The module can also be fitted with a full array of workstation options, which allows the module to function as an ergonomic workstation.

STANDARD FEATURES

- ESD safe belt design, 80 °C (176 °F)
- PLC controlled
- SMEMA compatible
- Durable ball-bearing end idlers
- Adjustable belt tension feature compensates for wear and ambient conditions

GENIUS 1-FC

Module specification

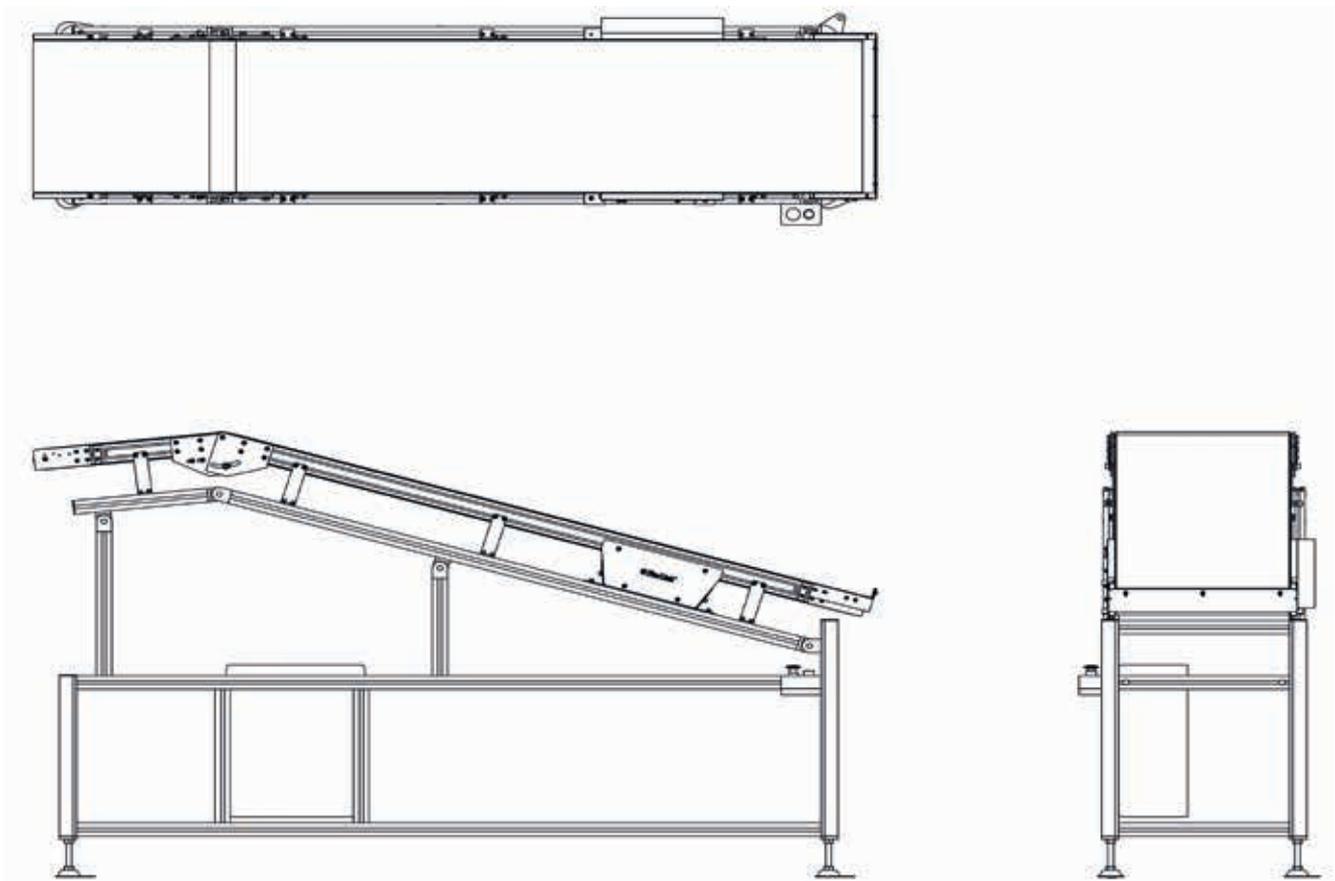
Machine dimensions (L×W×H):
L mm × W mm × H mm (L" × W" × H")
Dimension base on application

PCB handling

Transport system	ESD belts
Transport height	953 ±50 mm
Transport direction	Left to right
Cycle time	dependent on length and speed
Conveyor speed	25–150 mm/s (1–6"/s)

Optional

- Incline/decline sections
- Cooling fans
- LED signal tower with alarm
- Non PLC version, speed control only
- Available module lengths from 600 mm up to 4000 mm
- Available belt widths: 300 mm, 400 mm, 500 mm, 600 mm
- Consult factory for non-standard belt widths
- High temperature ESD belts up to 120 °C (250 °F)
- Consult factory for additional options not listed



GENIUS 1-LX



Laser marker

The GENIUS 1-LX Laser marker is used in applications where products need an identification mark for tracking or recognition. The laser cell can mark on all types of non-metallic surfaces including plastic and FR4 PC board. The key feature for laser marking is that the mark is permanent and consumable costs are low.

STANDARD FEATURES

- Welded frame design with class 1 safety covers

Laser head

- 30 watt CO₂ laser marker
- Suitable for marking most PCB types
- Marking field of 460×508.1 mm
- Software adjustable Z-axis focus height of ±21 mm

Edge belt

- For board transport
- Antistatic edge belt with automatic width adjust system

Machine

- Pneumatically actuated board stop and locate system
- PC based control system
- 17" LCD monitor
- Programmable laser marking position
- Ready 100 mm connection to external vacuum system (not included)
- CE compliance

GENIUS 1-LX

Module specification

Length	800 mm
Height	1537 mm
Width	1110 mm
Colour	RAL 9016
Marking size	508.1×460 mm (20"×18")
Air pressure	5 bar (72.5 psi)

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized width adjust
Conveyor speed	Max 15 m/min adjustable

PCB dimensions

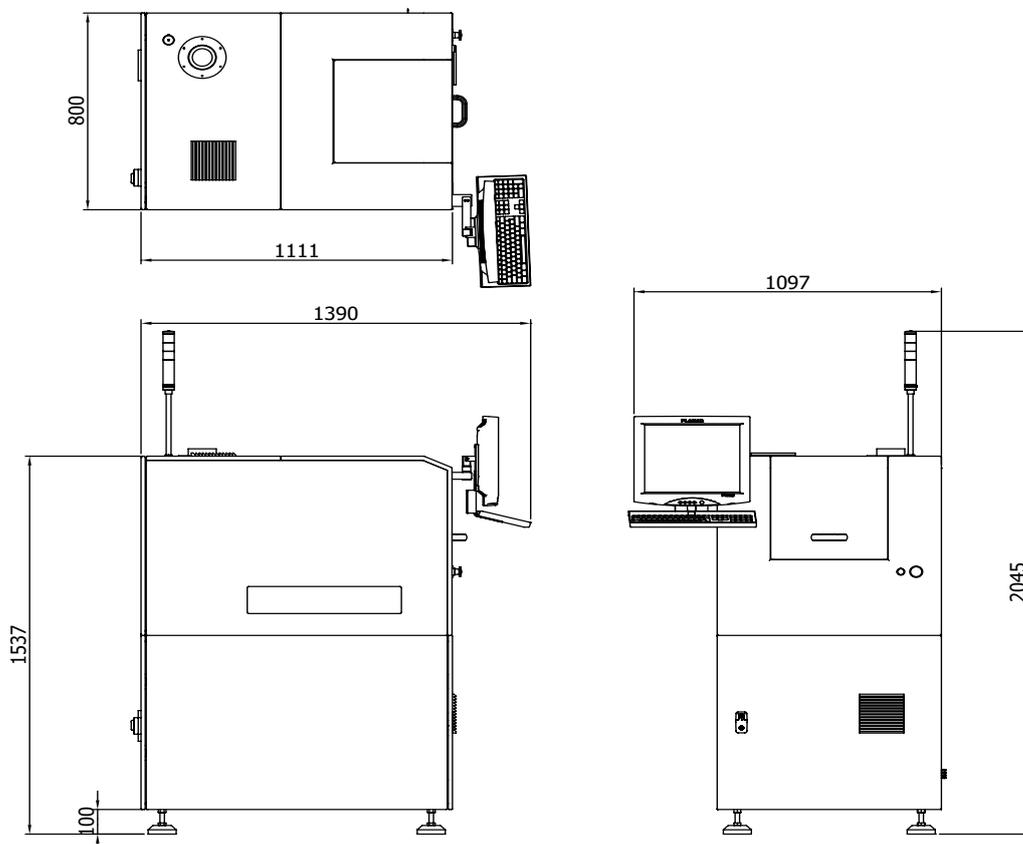
Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

Standard Camera

Resolution	0.3 Megapixel
Field of view (FOV)	35mm
Minimum 2D Cell size	0.22mm

High Resolution Camera

Resolution	2 Megapixel
Field of view (FOV)	35mm
Minimum 2D Cell size	0.11mm



GENIUS 1-LV



Laser marker inverter

The GENIUS 1-LV Laser marker is used in applications where PCB's need identification marks for tracking or recognition on both sides. The 1-LV include an inverter in order to flip the PCB from one side to the other. The laser cell can mark on all types of nonmetallic surfaces including plastic and FR4 PC board. The mark is permanent and consumable costs are low.

STANDARD FEATURES

- Welded frame design with Class 1 safety covers

Laser head

- 30 watt CO₂ laser marker
- Suitable for marking most PCB types
- Marking field of 120x120 mm
- Software adjustable Z-axis focus height of ± 21 mm

Edge belt

- For board transport
- ESD safe edge belts with automatic width adjust system

Machine

- Pneumatically actuated board stop and locate system
- PC based control system
- 17" LCD monitor
- Programmable laser marking position
- Ready 100 mm connection to external vacuum system (not included)
- CE compliance

GENIUS 1-LV

Module specification

Length	900 mm
Height	1706 mm
Width	1600 mm
Colour	RAL 9016
Marking size	500 x 500 mm
Air pressure	5 bar (72.5 psi)

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 508 mm (2" - 20")
Board thickness	0.6 - 6 mm

Standard Camera

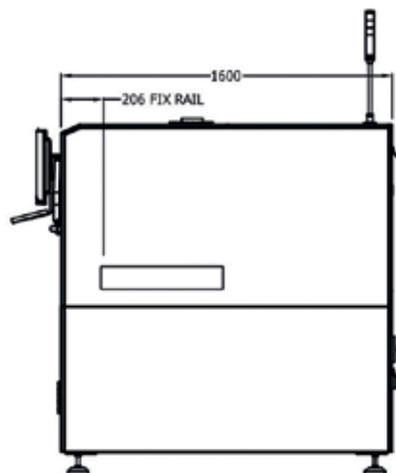
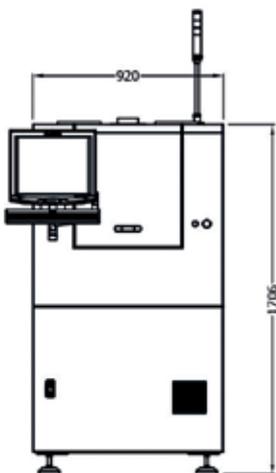
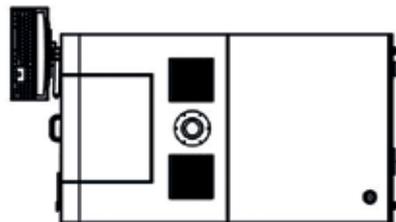
Resolution	0.3 Megapixel
Field of view (FOV)	22 mm
Minimum 2D Cell size	0.14 mm

High Resolution Camera

Resolution	2 Megapixel
Field of view (FOV)	35 mm
Minimum 2D Cell size	0.09 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized width adjust
Conveyor speed	Max 15 m/min adjustable



GENIUS 1-LD



Laser marker dual head

The new GENIUS 1-LD is a high-speed marker, incorporating both a dual laser head as well as multiple cameras for reduced cycle time. The board is positioned vertically inside the module allowing the two laser heads to mark both sides of a PCB simultaneously and minimize dust issues. This solution improves the quality of the mark and the process yield, which has substantial impact on the total cost. The laser cell can mark on all types of non-metallic surfaces including plastic and FR4 PC Board. The key feature for laser marking is that the mark is permanent and consumable costs are low.

STANDARD FEATURES

- 30 Watt CO2 Laser Marker suitable for most types of PCBs
- Class 4 Laser, 10.6 μ m wavelength
- Marking field of 120mm x 120mm (4.72in x 4.72in)
- Software adjustable Z-Axis focus height of ± 21 mm (± 0.83 in); TOC = 0mm (0in)
- Guide laser for setup of marking area – Class 2 Laser, 655nm, wavelength
- Laser marking position repeatability of ± 0.1 mm (± 0.004 in)
- Marking resolution of 2 μ m
- Laser scan speed capable of 12000mm per second max.
- Character size ranging from 0.2mm – 120mm (0.008in – 4.72in)
- Font: KEYENCE original font / User font / true type font
- Barcode: CODE39 / ITF / 2of15NW7 (COD-ABAR) / JAN / CODE128
- 2D-Matrix Code: QR Code / Micro QR Code / Data Matrix (ECC200)
- Logo Image: Custom font, logo, (CAD) data, BPM / JPEG / PNG / TIF
- Interface via RS-232C / RS-422A / USB2.0
- Cooling method: Forced air cooling
- Laser tube lifetime expectancy 8-10 years

GENIUS 1-LD

Camera Verification System

- Keyence barrel style camera
- Movement controlled by two servos for X and Y movement
- Fiducial recognition with board position correction
- Optical Character recognition verification
- 1D and 2D barcode verification

Edge belt rail set used for board transport

- ESD safe belts
- Programmable automatic width adjust
- Pneumatic actuated board stop and locate system

Laser Marker Machine

- PC based control system

- 21 Inch LCD monitor with keyboard and mouse on adjustable mount
- Programmable laser marker positions achieving total marking area of 457mm x 508mm
- Welded frame design with Class 1 safety covers
- 100mm connection available for connection to external vacuum/fume extraction system
 - o Not included in quotation
 - o 400cfm required for proper operation and longevity
- Cooling fans integrated into laser for air flow
- Interior camera for viewing the operation during marking

Module specification

Length	1100 mm
Height	1706 mm
Width	1750 mm
Colour	RAL 9016
Marking size	500 x 500 mm
Air pressure	5 bar (72.5 psi)
Voltage	230 V, 3 Phase
Amperage	30A

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction	Left to right (reverse flow as option)
Width adjustment	Motorized width adjust
Conveyor speed	Max 15 m/min adjustable

PCB dimensions

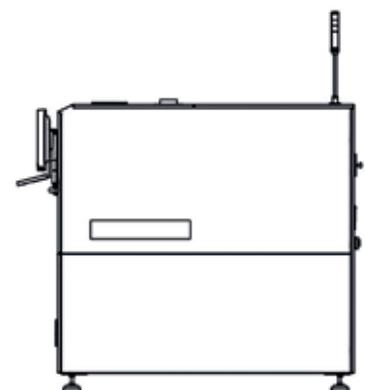
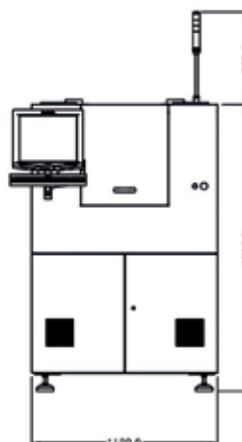
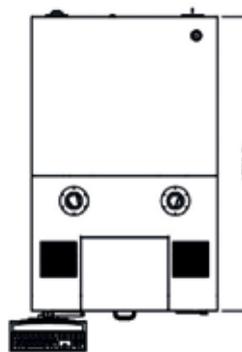
Board length	75 - 508 mm (3" - 20")
Board Width	50 - 508 mm (2" - 20")
Board thickness	0.6 - 6 mm

Standard Camera

Resolution	0.3 Megapixel
Field of view (FOV)	20 mm
Minimum 2D Cell size	0.13 mm

High Resolution Camera

Resolution	2 Megapixel
Field of view (FOV)	33 mm
Minimum 2D Cell size	0.083 mm



GENIUS 1-BC



Brush cleaner

The GENIUS 1-BC Brush Cleaner has been specifically designed to remove contamination from bare boards before solder paste, adhesive application and after laser marking. The machine use unique technology ensures high performance in the removal of foreign matter. 1-BC equipped with lateral oscillation and conductive brush provides customers with clean factories and production free from foreign matter problems by solving dust issues.

STANDARD FEATURES

- Standard cleaning width 460 mm
- Single sided cleaning mode for top side cleaning
- Include internal dust collector
- Motorized conveyor width adjustment
- Adjustable conveyor speed
- Antistatic belt
- SMEMA interface
- ESD covers with safety interlock
- Touch screen interface

GENIUS 1-BC

Module specification

Length	650 mm
Height	1500 mm
Width	1000 mm
Colour	RAL 9016

PCB dimensions

Board length	75 - 508 mm (3" - 20")
Board Width	50 - 460 mm (2" - 18")
Board thickness	0.6 - 6 mm

PCB handling

Transport system	Antistatic edge belts
Transport height	953 ±50 mm
Transport direction (Reverse flow as option)	Left to right
Width adjustment	Motorized width adjust system
Cycle time	Approx. 7 sec
Conveyor speed	Max. 15 m/min adjustable

Optional

- M size (Max PCB width 250 mm)
- Air ionizer
- Dual brush top and bottom side

