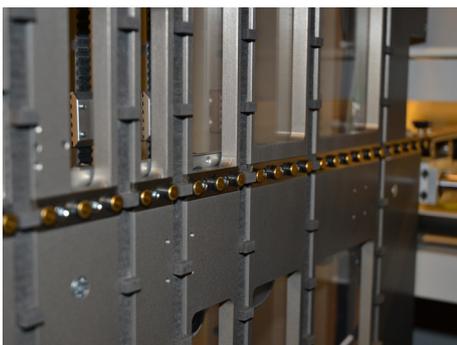
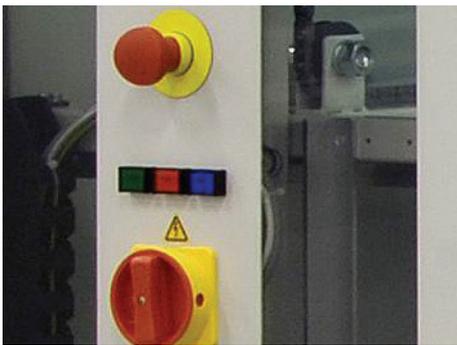


CONVEYING



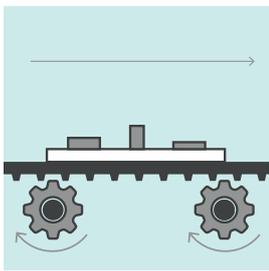
CONVEYING
DEPANELING
FEEDING
MARKING
MOUNTING
SCANNING
SOLDERING
VISION
WELDING
CLEANROOM



Conveying - EasyLine

IPTE's Easyline PCB handling systems provide the market with a high technology solution which is economical in footprint and cost and embrace all the latest concepts in lean design.

Each welded steel framed unit is fully equipped with its own control and diagnostics via a user friendly interface accessed through a LCD touch screen. Each unit is fully compatible with other units and other standard equipment in electronics manufacturing lines to ensure a truly 'plug and play' assembly line strategy.



BBL - BareBoard Loader



- Configurable loading unit for bare boards
- Top unloading mechanism
- Mechanical PCB separator
- 500 gr max PCB weight
- 300 mm Stack height
- 8 sec Destack one board

BBU - BareBoard Unloader



- Configurable unloading unit for bare boards
- Top loading mechanism
- 500 gr max PCB weight
- 300 mm Stack height
- 8 sec Stack one board

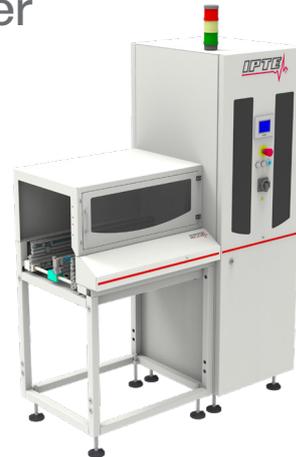
Loaders & Unloaders

MLL I - Single magazine line loader



- Compact, reliable PCB line loader
- Ideal for fast running lines
- Silent operation
- 10 mm Programmable pitch
- 8 sec PCB exchange time

MLU I - Single magazine line unloader



- Reliable PCB line unloader
- Ideal for fast running lines
- Silent operation
- 10 mm Programmable pitch
- 9 sec PCB exchange time

MLL VI - Multi magazine line loader



- Compact PCB line loader with magazine changer
- Silent operation
- Back or side loading
- 10 mm Programmable pitch
- 12 sec PCB exchange time
- 26 sec Magazine exchange time

MLU VI - Multi magazine line unloader



- Compact PCB line unloader with magazine changer
- Silent operation
- Back or side unloading
- 10 mm Programmable pitch
- 12 sec PCB exchange time
- 26 sec Magazine exchange time

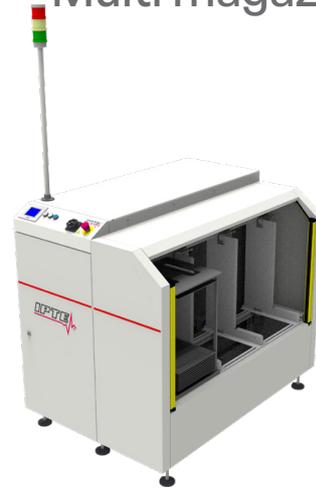
Loaders & Unloaders

MLL xP - Multi magazine line loader



- Compact reliable PCB line Loader
- Loading upto 10 magazines
- Silent operation
- Lean design - optimized footprint

MLU xP - Multi magazine line loader



- Compact reliable PCB line unloader
- Suitable as Pass/Fail Sorter
- Unloading upto 10 magazines
- Silent operation
- Lean design - optimized footprint

MLL xP AIV 0 Multi magazine line loader (AIV prepared)



- Compact reliable PCB line Loader
- Loading upto 10 magazines
- Silent operation
- Lean design - optimized footprint
- AGV/AIV Prepared

MLU xP AIV 0 Multi magazine line unloader (AIV prepared)



- Compact reliable PCB line unloader
- Suitable as Pass/Fail Sorter
- Unloading upto 10 magazines
- Silent operation
- Lean design - optimized footprint
- AGV/AIV Prepared

Buffers

MBU I - Single magazine buffer



- In-line LIFO or FIFO PCB buffer with magazine
- Suitable as FAIL PCB stacker unit
- 10 mm Programmable pitch
- 12 sec PCB exchange time
- Optional Pass-Through on belt conveyor

MBU VI - Multi magazine buffer



- In-line LIFO PCB buffer with magazine changer
- Suitable as FAIL PCB stacker unit
- 10 mm Programmable pitch
- 12 sec PCB exchange time
- 30 sec Magazine exchange time
- Optional Pass-Through on belt conveyor

SBU - LIFO buffer unit



- In-line buffer with stock capacity of max 40 PCBs
- Suitable as LIFO or FAIL PCB stacker unit
- Configurable pitch of 20 mm
- 10 sec Cycle time
- 800 mm Stack height

FBU - FIFO buffer unit



- In-line buffer with stock capacity of max 25 PCBs
- Suitable as FIFO or FAIL PCB stacker unit
- Configurable pitch \geq 20 mm (steps of 10 mm)
- 500 mm Stack height
- Optional cool down fans

Traffic controllers

TRV - Traverser unit



- Electrically operated PCB transfer unit
- Programmable stroke for import and export positions
- Cycle time depends on stroke
- Multiple entries and/or exits

TUU - Turn unit



- $\pm 90^\circ$ or 180° Configurable
- Smooth PCB turning
- 8 sec Cycle time

FLU - Flip unit



- Smooth PCB flipping
- Flip-on program
- Pneumatically stopper
- 8 sec Cycle time

LFU - Lift unit



- Electrically operated PCB lift unit
- Programmable lift positions
- Cycle time depends on stroke
- Lift up or lift down

Conveyors

BTR - Belt transport unit



- Fast, reliable PCB conveyor
- Useable as transport or inspection conveyor
- Multi segments available (1 to 4)
- Typical cycle time: 3 sec
- Single lane (optional multi lane)
- Optional high or low top cover

MWS- Manual workstation



- Modular concept
- Edge conveyor or flat belt
- Single or dual belt work platform
- Upgradeable to suit increasing production needs
- Typical cycle time: 3 sec per segment

MGU - Manual gate unit



- Easy and reliable passage
- Manual opening and closing of the segment
- 800 mm Passage width
- Typical cycle time: 8 sec

TGU - Telescopic gate unit



- Easy and reliable passage
- Option normal open/normal closed selection
- 750 mm Passage width
- Automatic opening and closing of the segment
- Typical cycle time: 10 sec

EasyLine specification

PCB Specification

PCB Thickness minimum:	0,8 - 4,0 mm
PCB Ratio:	0,8 (Length \geq 0,8 x Width)
PCB Top clearance:	100 mm (25 mm for S-line)
PCB Bottom clearance:	25 mm
PCB Weight:	2,5 kg

Technical specification

Standard magazine type:	Adaptable to common magazines
Transport height:	780/870 - 1.100 mm (SMEMA)
PCB Exchange time:	typical 3 sec between segments
PCB Edge support:	2,0 - 4,5 mm adjustable
Transport speed:	100 - 800 mm/sec
Transport direction:	L->R, R->L (to be specified at order)
Color frame / plating:	RAL 7035 ESD
Standards:	CE, SMEMA
Energy requirements:	230 V \pm 10%, 50 Hz - 110 V \pm 10%, 60Hz
Compressed air:	5 - 7 bar, 40 l/min according to DIN ISO 8573 3.4.5
Control unit:	OMRON with color touch screen operator interface

Options

Automatic width adjustment
 RS232/RS485, ethernet bus system
 Siemens, SMPI, Fuji, Panasonic, Sanyo SMEMA

	M-Size (L x D x H)	M-Size Weight
BBL	500 x 760 x 1.320 mm	144 kg
BBU	500 x 760 x 1.320 mm	144 kg
MLL I	1.300 x 690 x 1.840 mm	225 kg
MLU I	1.300 x 690 x 1.840 mm	240 kg
MLL VI	2.205 x 705 x 1.840 mm	325 kg
MLU VI	2.955 x 690 x 1.840 mm	390 kg
MBU I	1.300 x 790 x 1.840 mm	240 kg
MBU VI	1.300 x 2.360 x 1.840 mm	390 kg
SBU	500 x 760 x 1.840 mm	105 kg
FBU	500 x 800 x 1.910 mm	195 kg
TRV-1500	500 x 1.500 x 1.300 mm	115 kg
TUU	860 x 860 x 1.450 mm	240 kg
FLU	500 x 760 x 1.300 mm	126 kg
LFU	500 x 760 x 1.300 mm	126 kg
BTR	500 x 720 x 980 mm	60 kg
MGU	1.500 x 760 x 1.300 mm	160 kg
TGU	1.500 x 760 x 1.300 mm	180 kg
MWS	1.500 x 870 x 970 mm	240 kg
MLL-xP / MLU-xP	1.000 x 1.450-2.450 x 1.300 mm	175 kg

S-Size & L-Size on request

PCB Dimensions

