

# GETECH

*“Performance, Value, Integrity”*

## GBR1200 TOTAL SOLUTION FOR PCB ROUTING OPERATIONS

**As a world leader in PCB Depaneling systems, GETECH presents GBR1200.**

An in-line fixtureless machine design for routing of Large PCB panels (600mm x 400mm). With flexible offload options and no product specific fixtures.



### FEATURES

- Fixtureless Bottom Router
- High Accuracy, High Quality Cuts
- In-Line Solution L to R or R to L flow
- Programmable Servo Gripper with Auto Finger Exchange
- Auto Tool Change and Diameter Validation
- Auto Product Change, Auto Width Adjust
- Powerful Dust Extraction System
- Post Cutting Ionized Secondary Cleaning Station
- Post Cutting Dimension Check
- Tray, Pallet and Conveyor Offload Options
- Flexible or High Volume Configuration



201 Woodlands Ave 9, #05-50,  
Spectrum 2, Singapore 738955



+65 6756 9722



sales@getecha.com



www.getecha.com

**The GBR machine is designed to route (depanelize) PCBA panels with sizes up to 600mm x 400mm into individual PCBs.**

The panels enter the machine by conveyor, are barcode verified, fiducially corrected and clamped. Using a top robot and a servo gripper the individual PCB are gripped and routing is executed from beneath the PCB. The routed PCBs are moved to the machines offload location by a high speed linear motor drive system, still held by the servo gripper.

The offload location can be configured as flat belt conveyor, bridge axis, pallet/ tray conveyor or customer specific solutions. Using a high-resolution CCD camera and user-friendly Windows-based software allows users to program the routing paths in minutes. There are no limitations in the number of programs stored. GBR uses heavy welded steel structure to ensure rigidity, stiffness and high performance. Good/Bad PCB sorting is an integral function of the machine with an internal Reject station for bad boards.



Servo Gripper



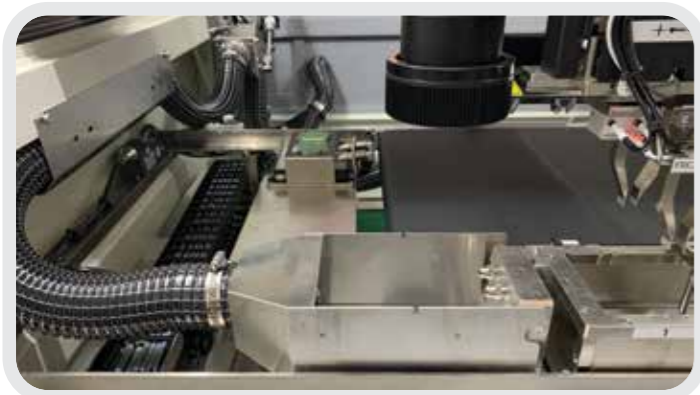
Internal Vacuum System



Vision Station



Dual Bridge Axis – Example Offload Configuration



Post Routing Ionized Secondary Cleaning



Servo Gripper and Auto Finger Change

## MASS CAPABILITY, MINIMUM BUDGET

The GBR machine is an in-line automated bottom routing system that does not require the addition of PCB-specific fixture systems.



Our success is based on unrivalled commitment to our partners. We work to excel in everything we do.



Full MES and CFX Compliance



Internal Vacuum and Filtration



Outfeed Options: Conveyor, Pallet, Tray or Test Fixture



500W Spindle with Fully Automated Bit Changer.



Waste Disposal Either to the Right or the Back



Fiducial Alignment and Teaching Camera



Vision Check Post Routing

# GBR1200 SPECIFICATIONS

<b>Routing Capability</b>	Non-Routing Speed	: 1000 mm/sec
	Routing Speed	: 100 mm/sec max (depending on material, cutting quality & tool diameter)
	Repeatability	: ±0.05 mm straight lines, curves, and interpolated profiles
<b>Manipulators</b>	Configuration	: 9 axis
	Manipulator Motors	: AC brushless servo motors
	Manipulator Repeatability	: ±0.02 mm
	Resolution	: ±0.01 mm
<b>Workstation</b>	Design	: Fixtureless - Bottom Routing, In-line
	Panel Positioning	: Conveyor rail clamping (Top and Side) and Board gripping
	Panel Size	: L600 x W400 single station conveyor: L400 x W400 w 2 stage conveyor
	Panel Thickness	: 0.8mm to 6mm
	Panel Max Weight	: 5kg. Individual PCB 2.5kg
	Component Height	: Top Max. 70 mm : Bottom components within 25mm radius of routing, Max. 12 mm : Outside of 25mm radius of routing, Max. 30 mm
<b>Spindle System</b>	Spindle Motor	: 0.5 kW spindle with ESD / Ceramic bearings
	Tool Change	: Automatic tool change
	Cooling	: Ambient cooled
	Router bit	: Shank size 3.175 mm (1/8")
<b>Flexible Gripper</b>	1 PCB at a time	Servo - Auto width adjust and Finger change
<b>Dust Filtration System</b>	Power	: 2 x 2.55 kW rotary vane vacuum blower
	Filtration	: 3 stage filtrations with disposable filter bag (10 microns)
	Vacuum Location	: Bottom vacuum on spindle
	Extraction Hose (x2)	: ID51mm(2"),L=4M
	Noise Level	: <78 dB
<b>Vision System</b>	Video camera	: High resolution CCD video camera : Fiducial mark verification/confirmation, Bad mark recognition
<b>Programming</b>	System Platform	: Windows® based Industrial PC (Win 10)
	Product Setup	: Vision assisted point to point manual teaching; : Vision assisted editing function; Test-run
	Variable Functions	: Barcode support (1D or 2D), Autoloading of last product. : Other options are available.
<b>Operation Monitor</b>	Router Bit	: Tool life tracking, Tool breakage detection, Routed board count, : Tool diameter check
	Vacuum Machine	: Vacuum filter change alarm : Machine error history
<b>Conveyor System</b>	Incoming Conveyor (Lane 1)	: Belt type edge conveyor (Left to Right)
	Conveyor Width Adjustment	: Automatic (Front rail - Fixed, Back rail - Auto adjust)
	Conveyor Height	: 940mm to 965mm (37" ~ 38")
	Outgoing Conveyor (Lane 2)	: Flat Belt - exposed length of 640mm (default, options available)
	Lane 2 Options	: Bridge axis, Customized pallet/tray conveyor, PCB dust cleaning, : PCB flipping, Reject tray/conveyor, and other options according : to customer demand
	Communication	: SMEMA
<b>Safety Features</b>	E-stops, Spindle stop, Spindle motor overheat & Servo overload detection, Enclosed work area with safety doors	
<b>Dimensions &amp; Utilities</b>	Machine Size (W x D x H)	: 1350mm x 2100mm x 1850mm
	Vacuum Tank Size (Ø x H)	: 2 x 400 mm x 800 mm
	Weight	: Approx. 2000 kgs w/o tanks
	Power Supply	: 3+N+E, 380~415V, 50 Hz or 3+E, 208~240V, 60 Hz; 10kW
	Air Supply	: 6 bars, consumption 50 NI/min