

Headquarters

115 East Centre Street  
Nutley, NJ 07110

East Coast

**SAM SANGANI**

Managing Director

Phone: **1-973-284-1600**

Email: [info@pnconline.com](mailto:info@pnconline.com)

West Coast

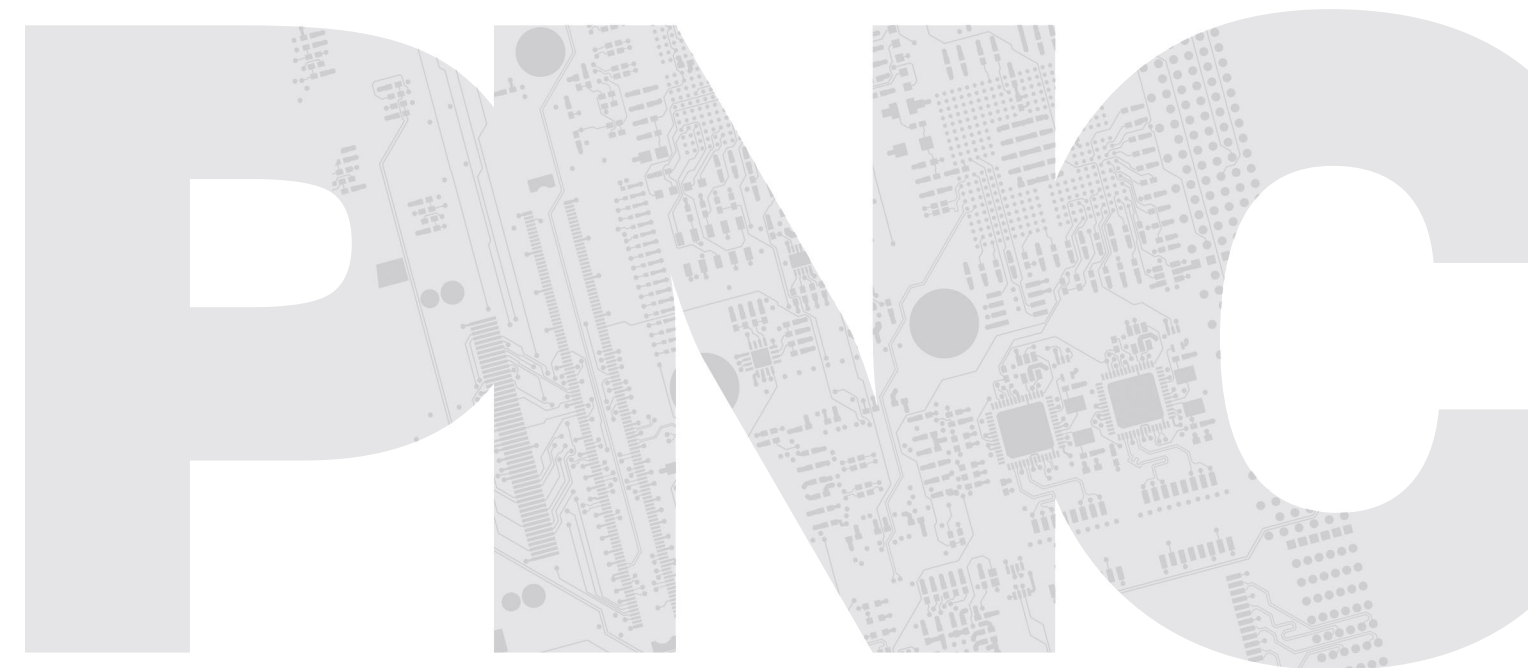
**DEBRA TALUCCI**

VP, Sales & Marketing

Phone: **1-650-599-9048**

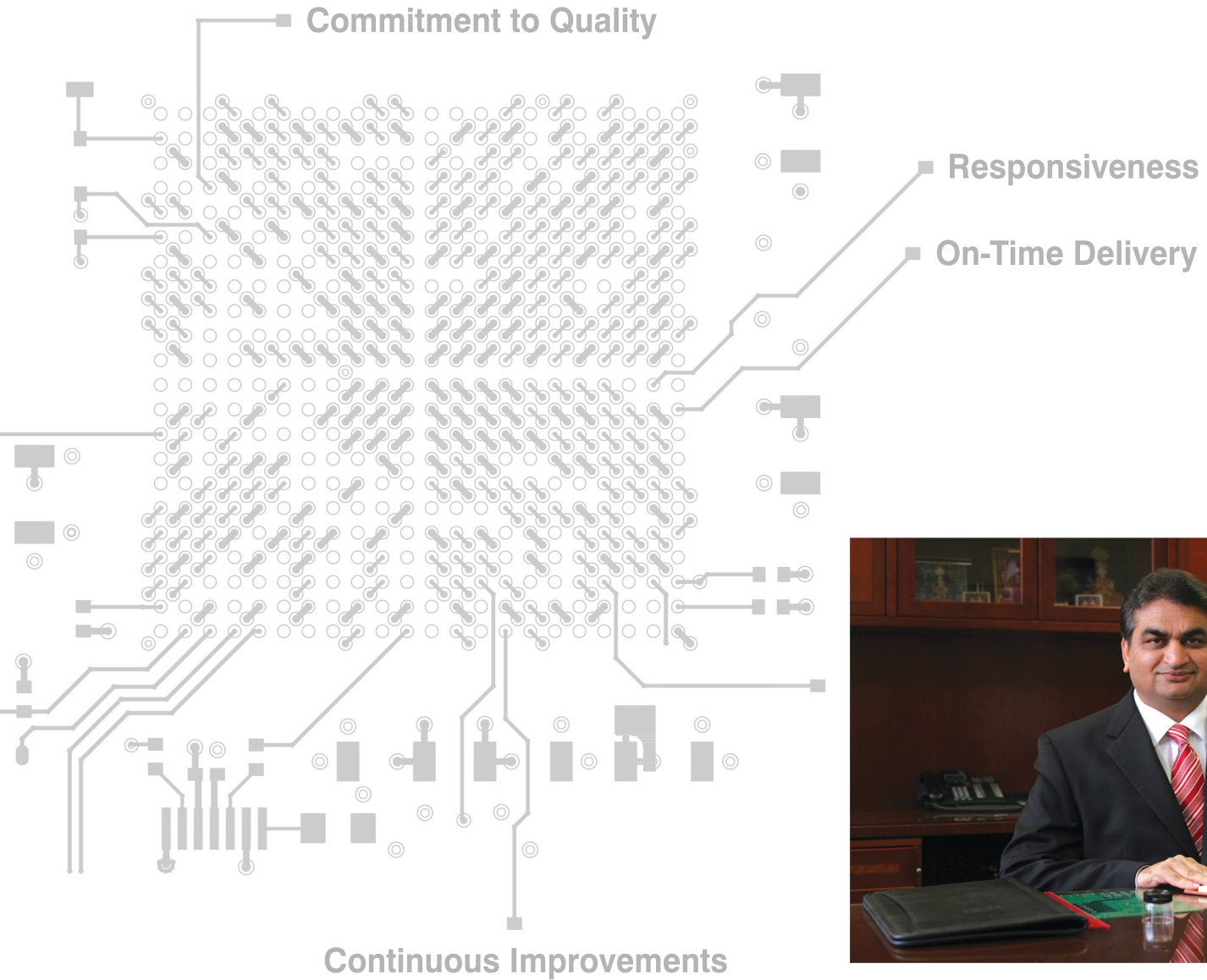
Email: [debra@pnconline.com](mailto:debra@pnconline.com)

[www.pnconline.com](http://www.pnconline.com)



**RIGID, FLEX & RIGI-FLEX PRINTED CIRCUIT BOARDS (PCBs)**

# OUR MISSION STATEMENT



Welcome to PNC Inc.

For over 45 years, PNC Inc. has been a leading manufacturer of superior rigid printed circuit boards (PCBs). Located in Nutley, NJ, we are the largest manufacturer in the Northeast. Innovation, Quality and Service are of prime importance to us.

PNC Inc. specializes in working side-by-side with visionary engineers in the RF, Microwave, Aerospace, Defense, and Satellite industries (among others) to create solutions for ever-advancing concepts and designs. We venture to take on demanding and challenging technologies, as well as continuing to expertly employ the most well-established PCB manufacturing practices.

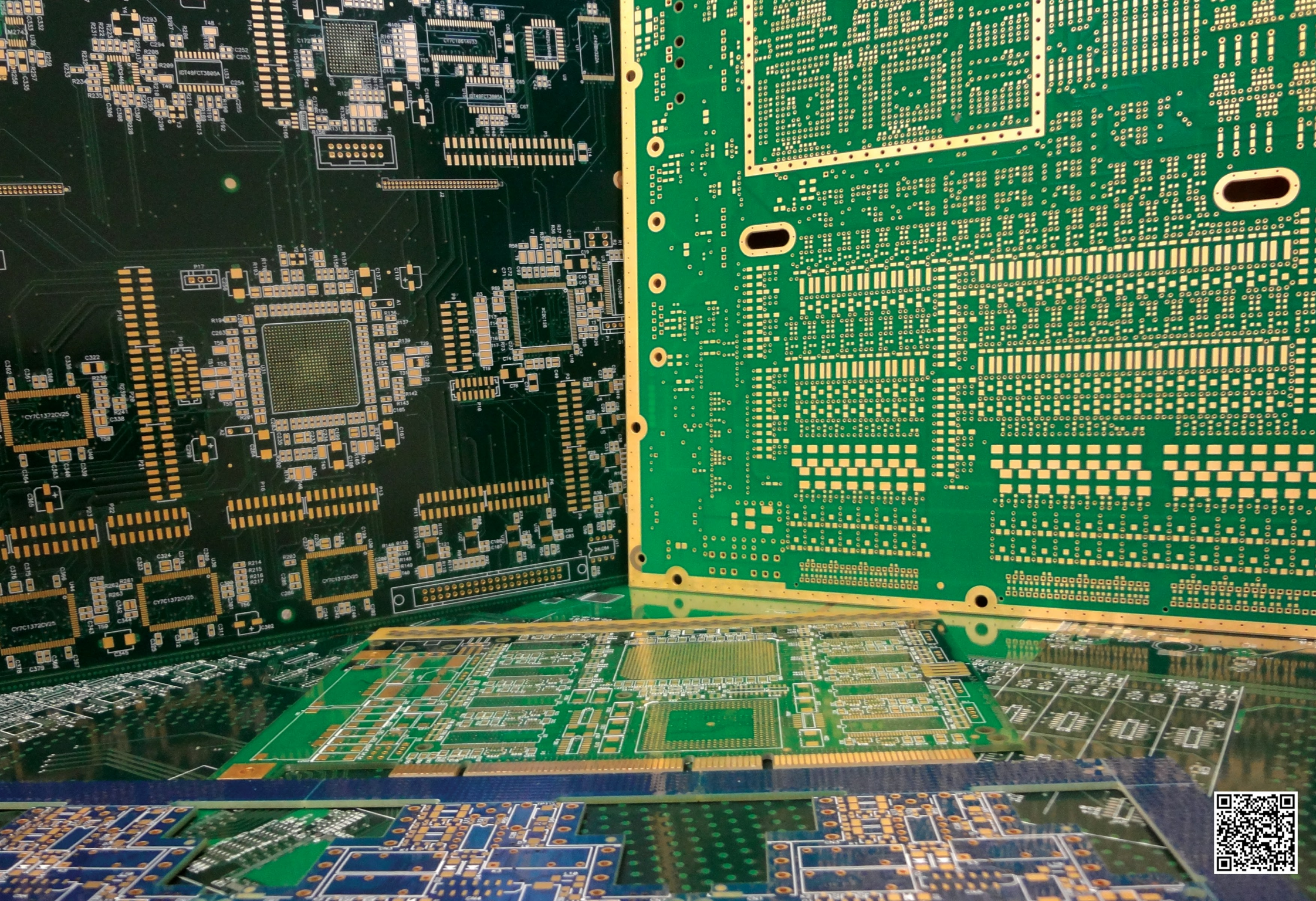
PNC's service and technological staff are second to none. Our tightly managed processes are all handled "in-house," allowing for unmatched product excellence - always at a fair price.

Please contact us today and experience for yourself that PNC Inc. is your best all-around PCB source for QUALITY AND VALUE!

We look forward to hearing from you,

*Sam Sangani*  
**SAM SANGANI**  
Managing Director

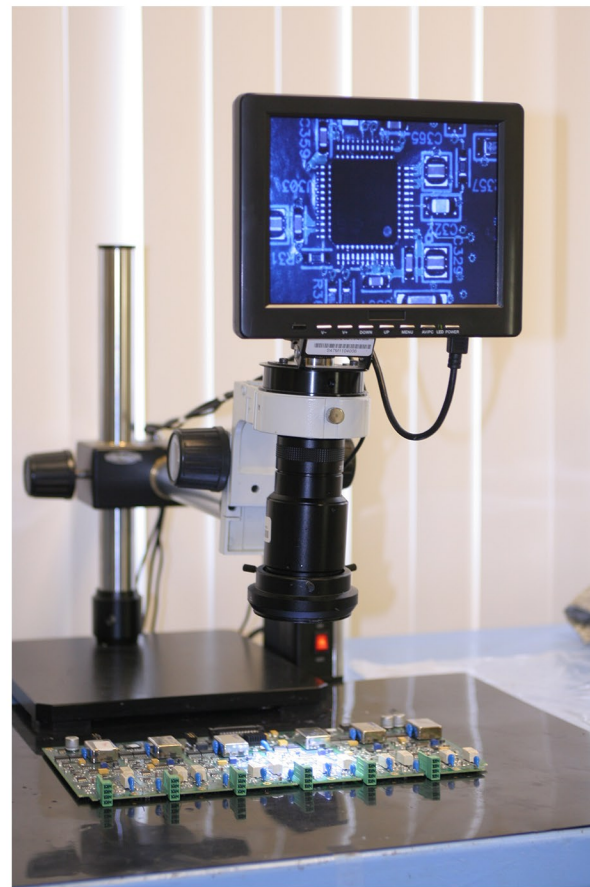
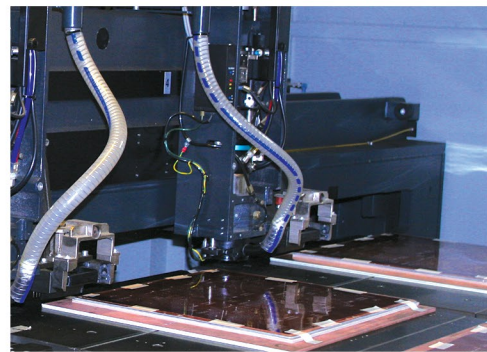
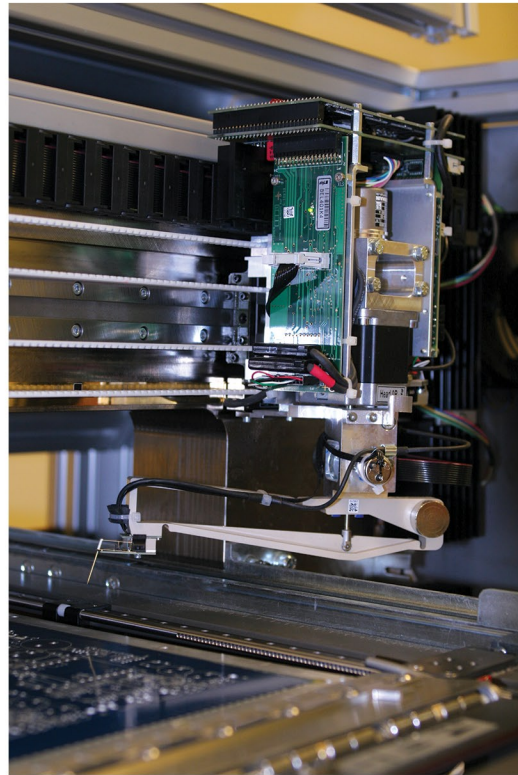




## PRODUCTS & SERVICES

- PCB Design
- PCB Manufacturing
- PCB Assembly
- Flexible PCBs
- SMT Stencil  
with Re-usable Accuframe
- Membrane Switches  
and Graphic Overlays
- Precision Machining  
& Sheet Metal Fab
- Plastic Injection Molding
- Cable and Wire Harness / Assembly





## MANUFACTURING CAPACITY

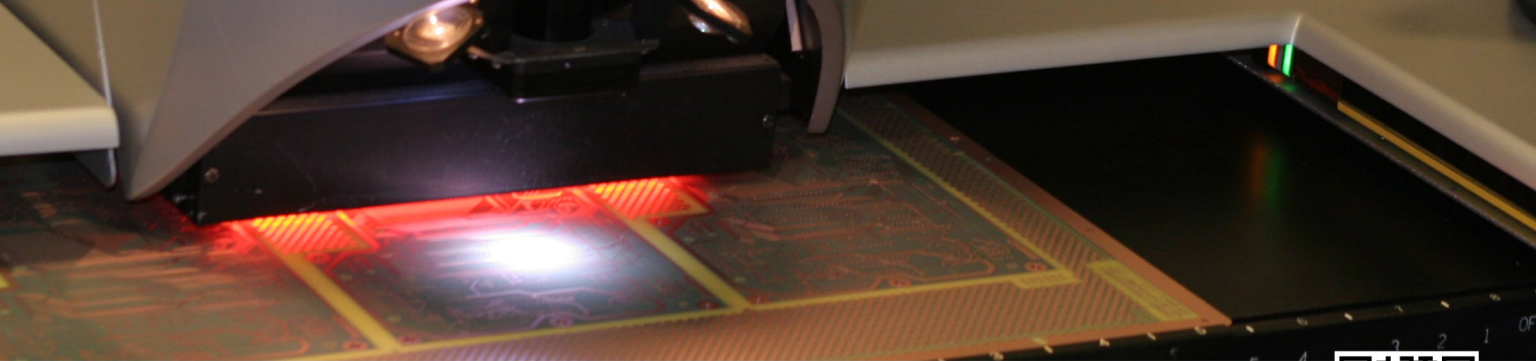
Prototypes from 24 hour turnaround to high volume production from USA and/or China.

Our Modern 38,000 sq. ft. manufacturing plant with multi-million dollar capital equipment investments with the latest equipment and technology is capable of producing over 600 panels or 2000 sq. ft per day.

## PRODUCTION CAPABILITIES

- Layers count: 1 to 40
- Min Line width/spacing(mil): 3/3 mil
- Min PAD Size for test 3 mil
- Aspect Ratio: 14:1
- Board thickness: 0.020" - 0.250"
- Min. Core Thickness:0.005"
- Max Panel size: 18"x24" Multi-layers, 22"x26" 2L
- Material: FR-4,High Tg FR-4, Polyimide, Halogen free, High Frequency (Rogers, Arlon, Taconic, Nelco), Metal Core PCBs(Al substrate)
- Surface Treatment: HASL, ENIG, ENEPIG, Immersion Silver, Immersion Tin, Flash Gold, Gold-Finger, OSP, Lead free HASL etc.
- Smallest Drill Size: Mechanical-0.006", Laser-0.003"
- Minimum Smallest Finished hole Size: 0.008"
- Impedance Tolerance: 5%
- Solder Mask Dam between SMT Pads: 2.5 mils
- Differential Impedance
- Blind and buried vias, Filled Vias, Via in PADS
- Plated Edges, Plated Edge Holes, Milling
- High Copper weight
- Solder Mask Registration
- V Score, Jump Score, Counter-sink, Counter-bore, Bevel, Milling
- 0.4 mm pitch BGA
- Expert technical assistance available
- Online live order tracking via our Website
- UL approved for High Tg





## ELECTRONIC CIRCUIT & PCB DESIGN

### CIRCUIT DESIGN

#### CAPABILITIES & TOOLS

- Analog & Digital Circuit
- Sensor signal conditioning, A/D
- 8-bit to 32-bit Microcontrollers, SDRAM, DDR
- PCIe, USB, Wi-Fi, Bluetooth, RS-232, LCD, Audio, Video
- Embedded OS and Device Drivers

#### DESIGN TOOLS

- OrCAD Capture & pSpice
- PADS Hyperlynx & MATLAB

#### DELIVERABLES

- Schematic, Simulation
- Optimized BOM, software
- User manuals

### PCB BOARD DESIGN

#### CAPABILITIES & TOOLS

- Double Sided & Multilayer Designs
- Radial Layouts and Non-standard Geometries
- Digital, Analog, RF, Power, Mixed Technologies
- High Speed/High Density/Fine Pitch
- High Power PCB & Flex Circuits

#### DESIGN TOOLS

- Cadence Allegro v16
- OrCAD Capture v16.3 & OrCAD PCB Designer v16.3
- PADS v9

#### DELIVERABLES

- Gerber, drill files & PCB File
- Assembly and fabrication files
- Formal drawings on customer format

## SMT STENCILS

### ACCUFRAME®

PNC Inc. also manufacturers high quality LASER CUT Solder Paste Stencils. To make laser cut stencils affordable, PNC Inc. has developed a unique "Re-Usable" Frame called "ACCUFRAME®" (Trademark # 2426024, Patent # 5983790).

#### FRAME SIZES

- 12x17, 20x20, 29x29, Custom Sizes upon Request

### TRADITIONAL MESH MOUNT STENCILS

PNC Inc. offers an array of Traditional SMT Stencils from Tubular to Cast Aluminum frames.

#### FRAME SIZES

- 10x10, 12x12, 15x15, 12x17, 20x20, 29x29

### SMT STENCIL DESIGN

PNC Inc. uses multiple CAM Stations to edit your Gerbers per your specifications.

#### DESIGN EDITS

- |                            |                   |                  |
|----------------------------|-------------------|------------------|
| ■ Pad reductions/increases | ■ Glue Dot Design | ■ Cross Hatching |
| ■ Home Plate Design        | ■ Melf Design     | ■ Pad Trimming   |
| ■ Panelization/Array       | ■ DEK offsets     |                  |

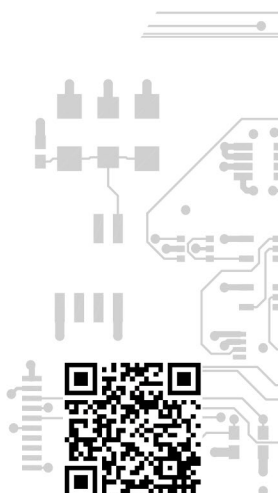
### FOIL THICKNESSES AND MATERIAL

#### FOIL THICKNESSES

- .003, .004, .005, .006, .007, .008, .010

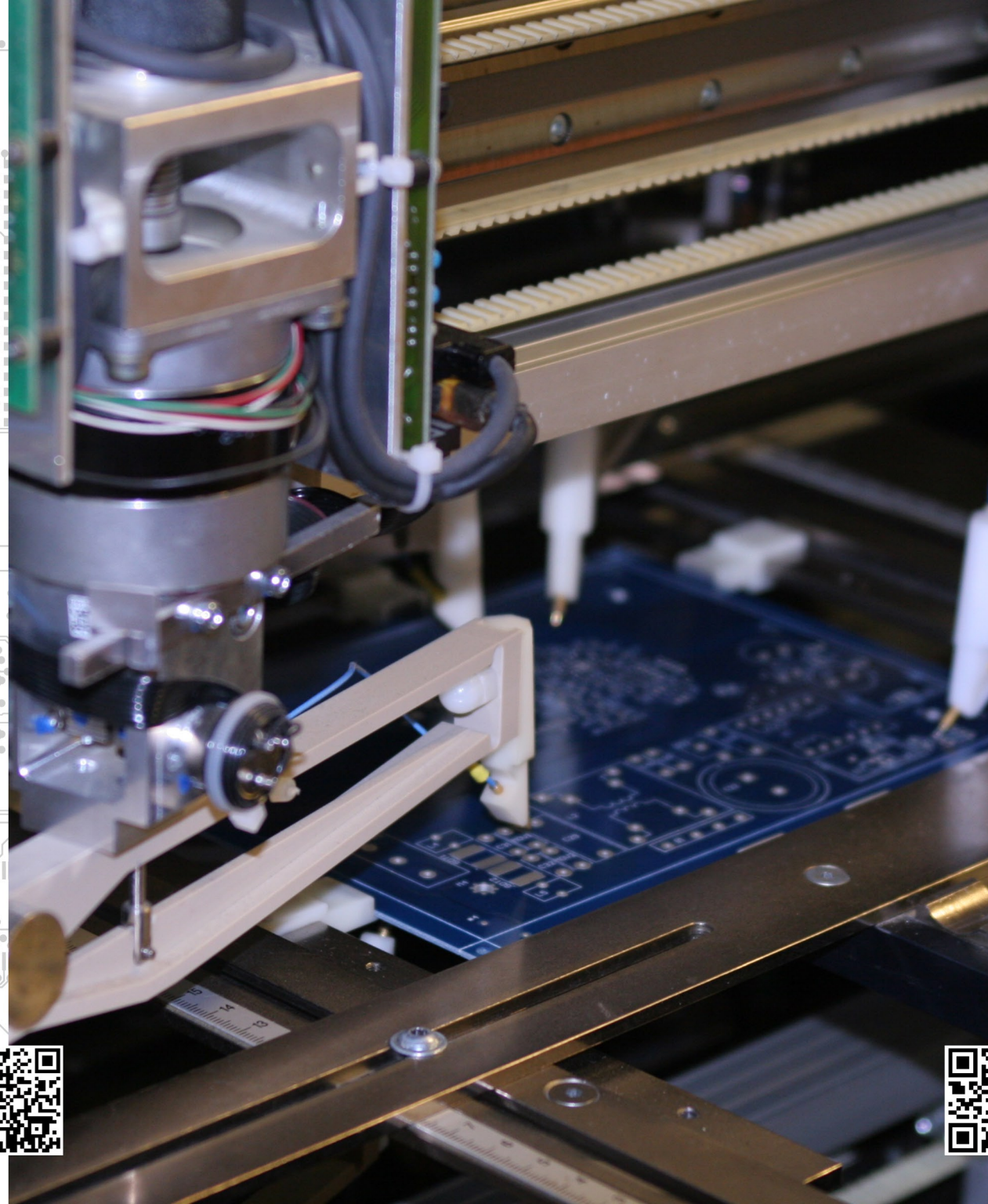
#### FOIL MATERIAL

- 304SS, PHD, Invar



## MEMBRANE SWITCHES & GRAPHIC OVERLAYS

- Material: Polycarbonate, Mylar, Vinyl, PVC
- Thickness: 0.005" to 0.020" Standard (special thickness upon request)
- Die Cutting: Any Shape- Any Size
- Circuitry Layers: Single & Multi-Layer
- Embossing: Pillow-Perimeter, LED lens & Custom Embossing
- Window: Clear, Semi-Transparent, Filter, Dead Front, Selective texture
- Tactile and non-tactile switch closures
- Tactile Feedback Domes: Stainless Steel, Nickel, Gold Plated or Poly with 150 to 750 grams trip force
- LEDs: Surface or embedded LEDs
- Tail Connectors: Ziff, Berg or AMP
- Single and multiple tail circuits termination
- Printed circuit board integration
- ESD, EMI, and RFI shielding including ITO
- Changeable graphics windows
- Custom Color Match
- Support Panel: Plastic, Aluminum, Steel
- Design help to customers



## OUR PCB ASSEMBLY CAPABILITIES

- Surface mount and mixed technology
- X-ray & AOI inspection
- Discrete 0201, Micro BGA placement
- BGA removal and replacement
- Full Functional Testing
- IC (Device) programming
- Water soluble and no-clean chemistries
- Conformal coating
- Potting services
- Cable and wire harness assembly
- RoHS as well as leaded assembly
- Burn-in, temperature & humidity cycling
- Pin insertion and press fit connectors
- Higher level assembly - box build and configuration of finished product
- Part Procurement: full turnkey, full consignment or partial consignment
- IPC-A-610 class II and III standards
- ESD compliant to ANSI/ESD S20.20-20
- Sheet metal and plastic enclosures



## CONTINUOUS INVESTMENT

Through the various economic cycles in the PCB industry, PNC has continuously grown and provided unparalleled quality, technology and service to our customer by following three overall philosophies:

### □ EQUIPMENT, PEOPLE AND PROCESSES

- In the last 3 years PNC has invested over \$2.5 million in new facilities and equipment
- We have dedicated our team to Learn Management techniques which are providing a foundation for high-paced growth

### □ FOCUS ON FINANCIAL STABILITY

- We have never had an unprofitable year in our existence
- The past 5 years had a compounded growth of 15%
- Our growth for the next 5 years is projected to be at 25%

### □ UNWAVERING COMMITMENT TO OUR CUSTOMERS

- Our on-time delivery for the last 15 years has been nearly 99%
- Our quality performance is above 99%, internally and externally
- We continuously introduced new technologies and services
- We now offer free technical support to help our customers in the design stage

We fully intend to continue this effort to service you better in the coming decade.

PNC's Certifications:

- ISO9001:2008 Certified
- MIL-PRF-55110 & MIL-PRF-31032
- ITAR Registered
- UL approved
- Small Business
- RoHs compliant

## DIRECT OUTSOURCING FROM CHINA

**SEAMLESS TRANSITION:** Quick turn prototype/Mid volume from domestic shop, volume production from offshore.

**TECHNOLOGY:** PNC has collaborated with multiple PCB Shops in Southern China to handle a wide range of technologies.

**QUALIFICATION:** Formal qualification procedure and periodic re-certification processes are in place to ensure our China partners are adhering to quality standards you are accustomed to.

**SERVICE:** With local Offices in China and Hong Kong, our own personnel will oversee all PNC's work and delivery schedule. Our employee's will physically be on site during the manufacturing process.

**PRICE:** We offer most competitive prices.

**COMMUNICATIONS:** PNC's China and HK offices are open 24 hrs a day with English speaking employees.

**QUALITY & DELIVERY ASSURANCE:** All PCB orders coming from China will go through our USA plant first as we will perform qualification check prior to shipment.

**DELIVERY:** A majority of our China partners offer 3 week lead time for production runs. If for any reason, shipment may be delayed, PNC will manufacture your boards in house with no additional charges to meet your scheduled ship date





1968

1978

1989

1996

2000

2012