



# Matric

Electronics and *People* you can count on.



## ENGINEERING SERVICES

Matric provides electronic design services to turn your product concept into a reality. The experience and skill of the Matric Engineering Team is apparent from initial discussions through final product validation. Three of our Matric designers are IPC certified in Printed Circuit Board (PCB) design.

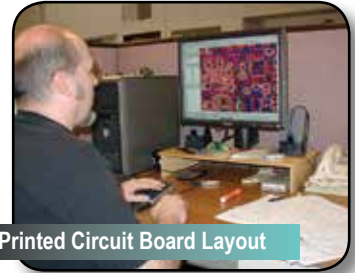
Matric design services cover the entire spectrum of capabilities required to produce a complete product. Custom housings are routinely developed in conjunction with PCB form factors to produce a product that is built well and looks good. Matric can develop the enclosure that best suits your product using stainless steel, aluminum or injection molded plastics.

### Capabilities:

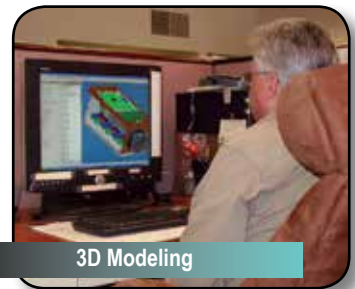
- Analog and digital circuit design
- Schematic capture and PCB layout
- RF design and site assessment
- Intrinsically safe power, barriers and systems
- Enclosure design and 3D modeling
- Power switching circuits and drives
- Breadboarding, prototypes and simulation
- DFX and DFM analysis
- DeviceNet network analysis
- Lifecycle extension and re-engineering
- Application engineering
- Software/firmware design

### Example Projects:

- Underground mining machinery controls
- Wireless operator control systems
- Automotive assembly line equipment
- Musical instrument components
- Wireless networking devices
- Portable traffic control system
- Medical devices & lab electronics
- Servo motor controls
- Paintball marker control electronics
- Electrical service load limiter
- Wild game feeder



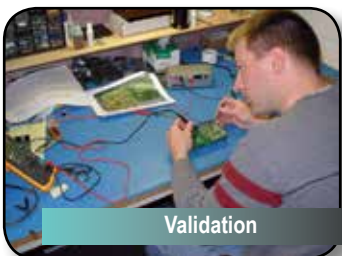
Printed Circuit Board Layout



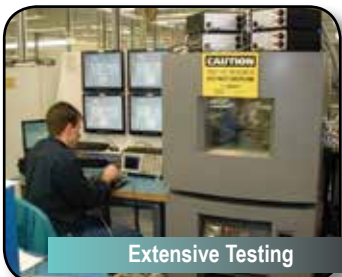
3D Modeling



Prototyping



Validation



Extensive Testing

Matric specializes in supporting original equipment manufacturers with product development using our ISO 9001, ISO 13485 and AS 9100 registered design process. In addition, products are validated through recognized industry standards.

### Validation Capabilities:

- Environmental compliance
- Electromagnetic immunity and emissions compliance
- CE precertification assessment
- DFMEA (Design Failure Modes and Effects Analysis)
- Custom test fixtures and procedures
- HALT (Highly Accelerated Life Testing)

For more information, please contact Matric at 800.462.8742 to speak with a sales representative or log on to our website at [www.matric.com](http://www.matric.com).

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ISO 9001  
AS 9100  
BUREAU VERITAS  
Certification

