

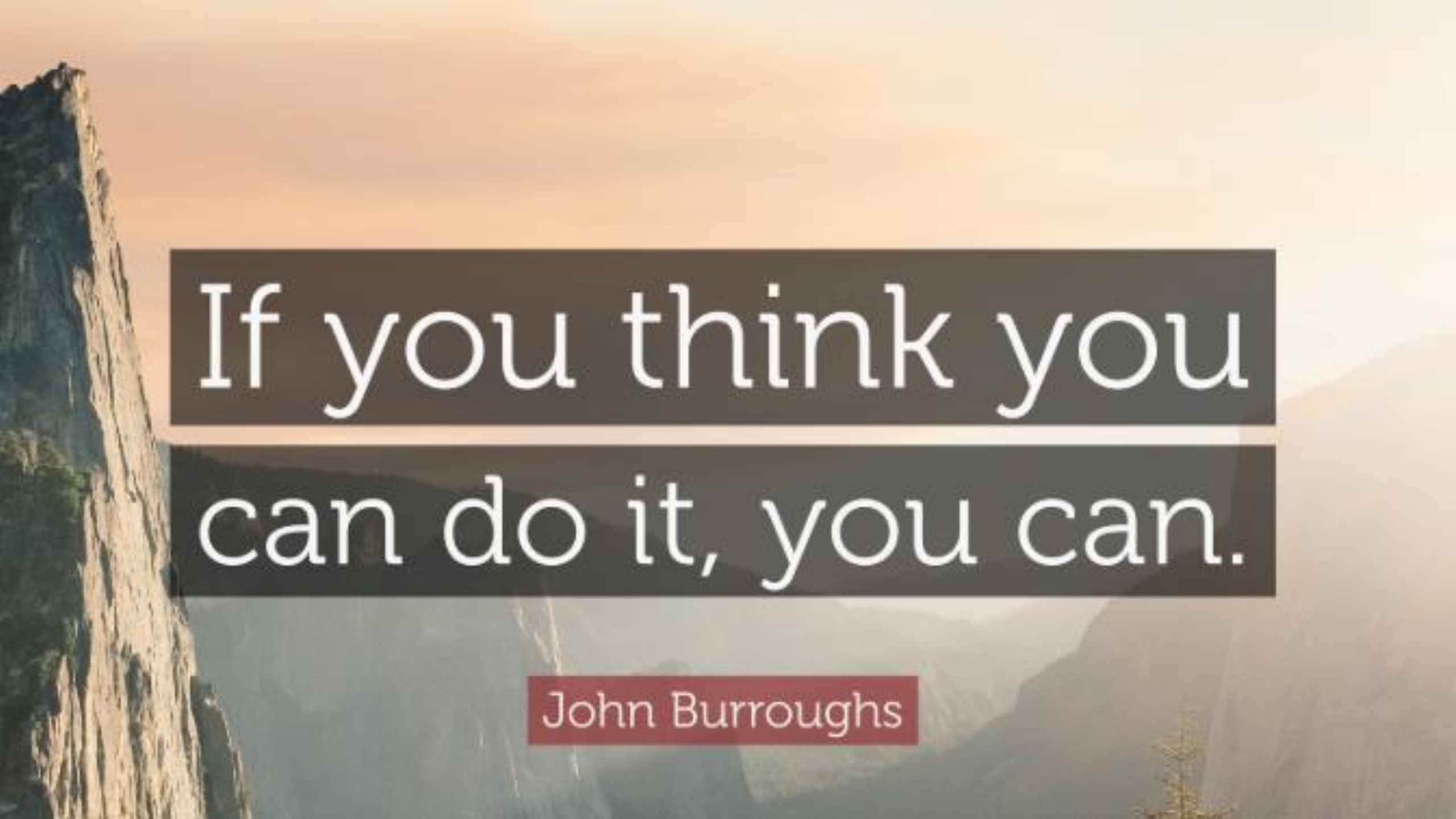


## **NCDDBA Women's Innovation and Leadership Forum**

Presenter: Aparna M. Sproelich  
Aurora Group

Topic: My journey from engineering to highly  
collaborative consultancy

April 1, 2019



If you think you  
can do it, you can.

John Burroughs

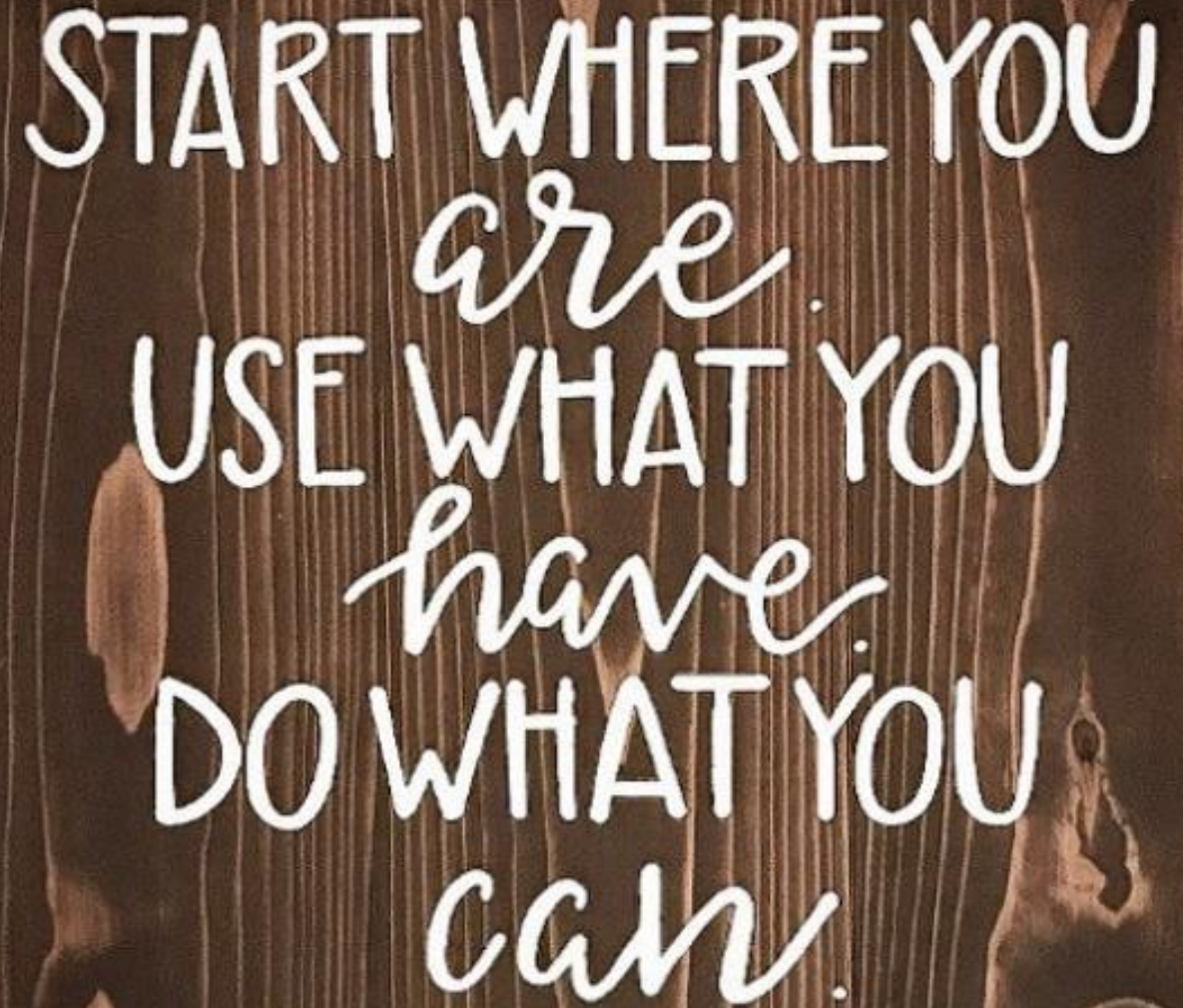
Want it.

'Get it. (understand it)

Capability to do it.

Don't go alone.

---

A quote by Arthur Ashe is displayed on a dark brown, vertically-grained wooden background. The text is written in white, with a mix of uppercase and lowercase letters. The words "are", "have", and "can" are written in a cursive script, while the other words are in a bold, sans-serif font. The quote is centered and reads: "START WHERE YOU are. USE WHAT YOU have. DO WHAT YOU can." The wood grain is prominent, with some knots and natural imperfections visible.

START WHERE YOU  
*are.*  
USE WHAT YOU  
*have.*  
DO WHAT YOU  
*can.*

Arthur Ashe

# Engineer to Entrepreneur

---





# AUORA

## GROUP

MANUFACTURERS' REPRESENTATIVES

The Aurora Group represents selected manufacturers of electro-mechanical components and products. The Aurora Group firm has over 30 years of experience providing exceptional service and support to engineers, and OEMs.

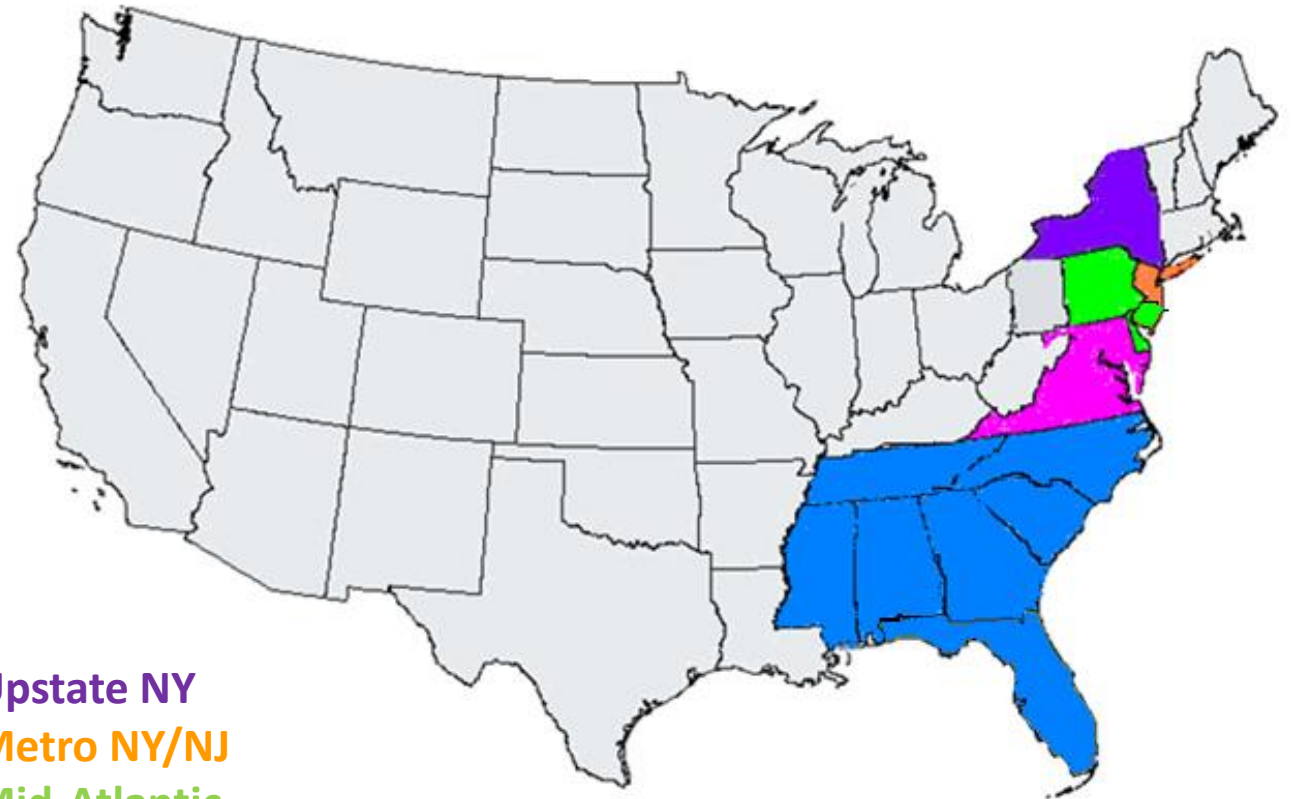
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The Aurora Group team members solve customers' technical challenges by effectively offering custom, new and existing product solutions.



# Office Locations

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Upstate NY

Metro NY/NJ

Mid-Atlantic

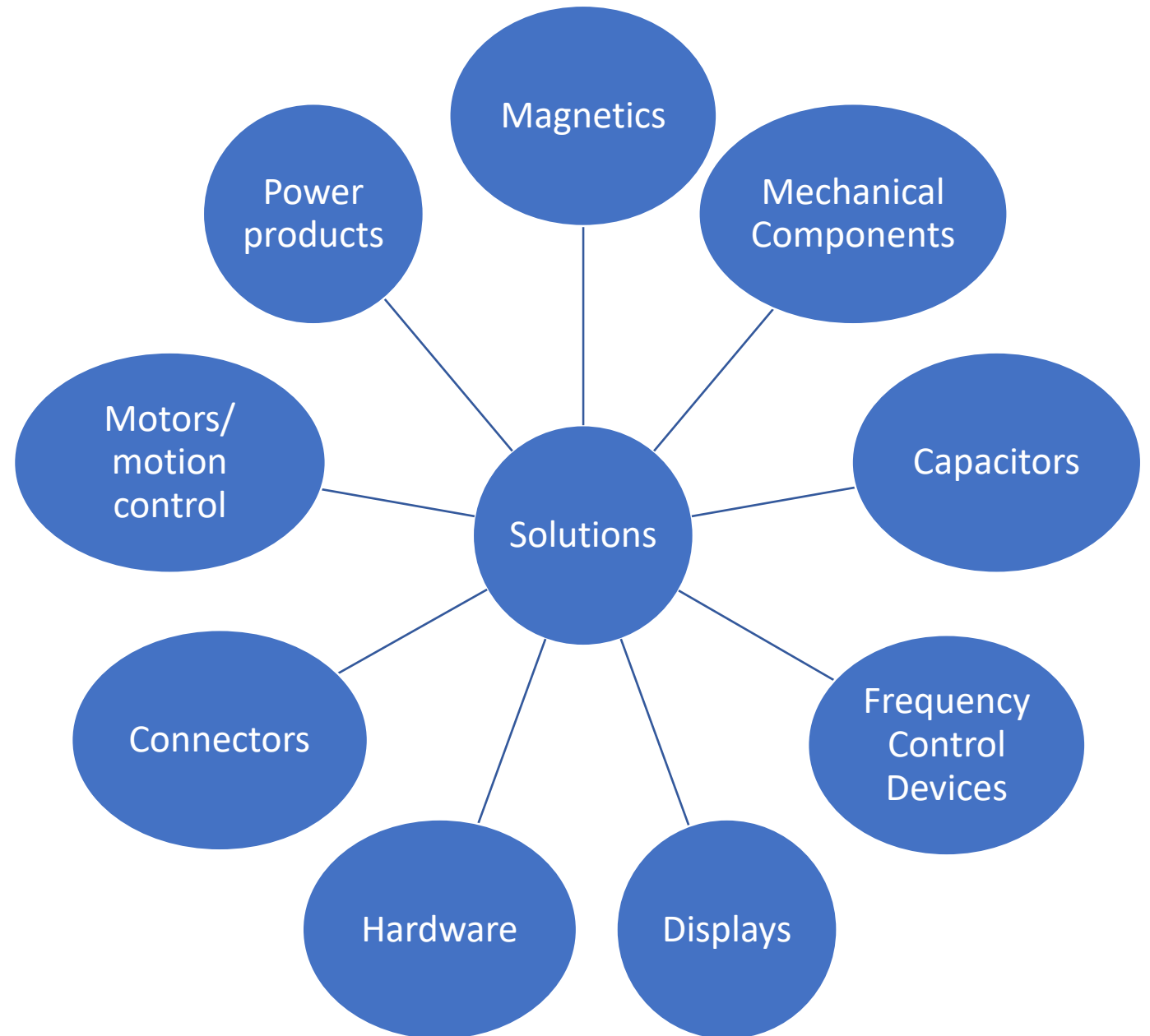
Chesapeake

Southeast US – RALEIGH

Florida

# Technical Solutions

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# AUORA

## GROUP

MANUFACTURERS' REPRESENTATIVES



**ULTRALIFE®**



**Power Dynamics, Inc.**



*Noritake itron*



**ULTRALIFE®**



# Electrical

ABB Power semiconductors, Gate Drivers, ICAR Power Capacitors, Danotherm Power Resistors

**5S Components:** Power semiconductors, Gate drivers, Power Resistors/Capacitors, Sensors



## POWER SEMI-CONDUCTORS

[LEARN MORE »](#)



## POWER CAPACITORS

[LEARN MORE »](#)



## SENSORS

[LEARN MORE »](#)



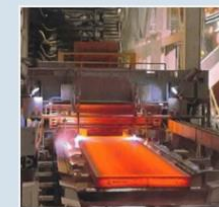
## POWER RESISTORS

[LEARN MORE »](#)



## GATE DRIVERS

[LEARN MORE »](#)



## ABB SPARE PARTS

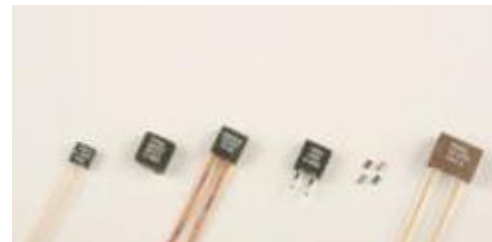
[LEARN MORE »](#)



# Electrical

Circuit protection and fuses

**AEM Component:** Circuit protection, EMI signal filtering, Multilayer Monolithic Fuses, resettable fuses, Varistors



High Reliability Solid Body Fuse



High Reliability Ferrite Chip

# Electrical

Circuit protection and fuses

**Signal Transformer:** Linear Magnetics SMD Inductors, HF Magnetics, Transformers (50/60 Hz; 1VA-50KVA)

## LINEAR MAGNETICS



Power Transformer

Isolation Transformer

Auto Transformer

Class 2

Step Up/Step Down

Choke/Rectifiers

## SMD INDUCTORS



Shielded

Unshielded

Low Profile

High Current

Low Current

## HIGH FREQUENCY MAGNETICS



High Current Toroidal Inductor (HCTI Series)

Common Mode Choke (custom design)

Switchmode Transformer (custom design)

Flyback Transformer (custom design)

Power Core Toroid (custom design)

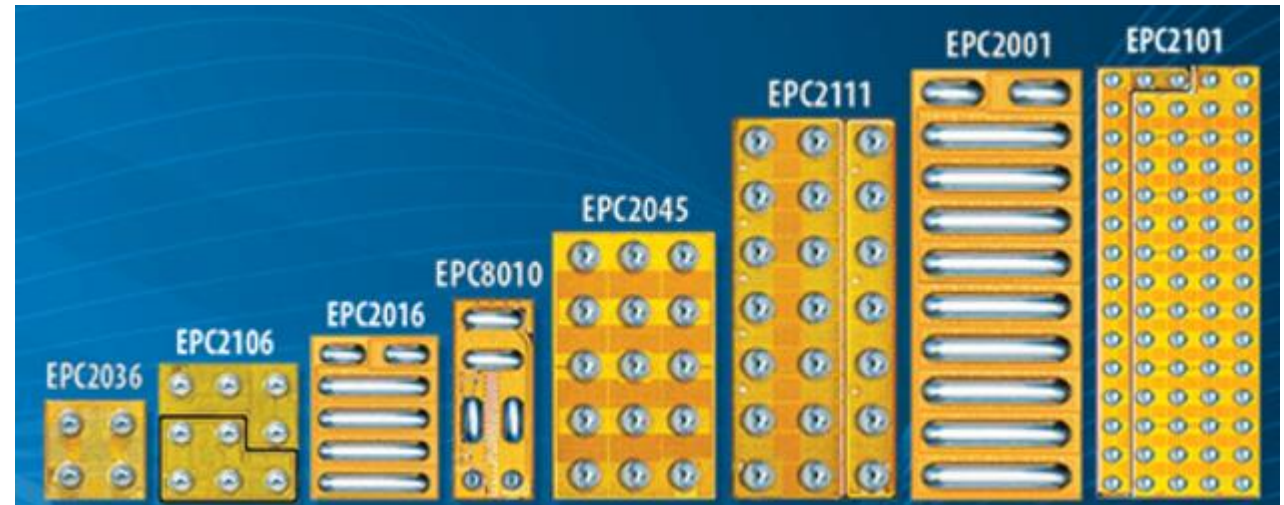
Surface Mount Inductors (custom design)

# Electrical

GaN Ultra-low  $R_{DS(ON)}$ ,  
FETs and (ICs)

**Efficient Power Conversion (EPC-Co):** GaN Ultra-low  $R_{DS(ON)}$ ,  
FETs and (ICs)

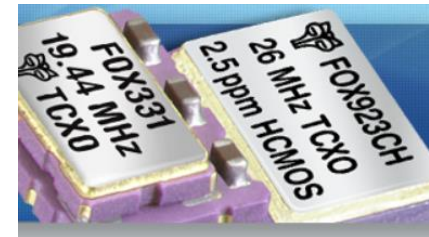
EPC brings enhancement mode to GaN, disrupting the power conversion market and enabling new applications. Compared to the aging silicon MOSFET, GaN FETs have higher switching speeds in a much smaller footprint. Optimized gate drive ICs and controllers help to extract the full advantage from this new, game-changing technology



# Electrical

Frequency control devices,  
Crystals TCXO, OCXO and VCXO  
Oscillators

**Fox Electronics:** Frequency control devices, Crystals TCXO, OCXO and VCXO Oscillators





# Electrical

Electrolytic, Film, Multilayer and  
Ceramic Capacitors

**United Chemi-Con:** Electrolytic, Film, Multilayer and Ceramic  
Capacitors

Aluminum Electrolytic Capacitors  
Conductive Polymer Aluminum Solid Capacitors  
Conductive Polymer Hybrid Aluminum Electrolytic Capacitors



Multilayer Ceramic Capacitors



Film Capacitors



Metal Oxide Varistors **TNR™**



Nanocrystalline/Amorphous/Dust Choke Coils



# Electro- Mechanical

Board to Board connectors and  
vibration resistant connectors

**IRISO Connectors:** Board to Board to Connectors, FFC/FFC, Sockets, Pin headers, vibration resistant



Board to Board  
Connectors



FFC/FPC  
Connectors



Compression  
Connectors



Pin Header  
Connectors



Socket  
Connectors



Interface  
Connectors



ESD / Card  
Connectors



Input / Output  
Connectors

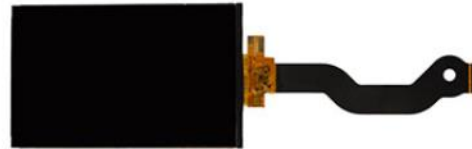


# Electro- Mechanical

Display Screens

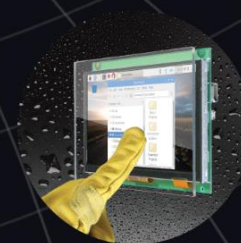
**Noritake:** VFD and 7" and 4.3" TFT Displays with Capacitive Touch Panels

**Lincoln Technology Solutions:** LCD & OLED Displays, TFT PCAP Displays from 4.3" to 22"

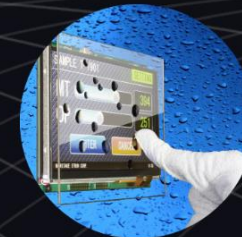


## GT Products

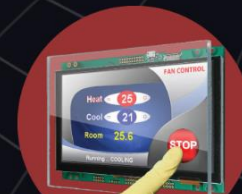
LCD Touch Screen Modules



GT-1P Series  
DVI & TOUCH VIA USB



GT-CP Series  
COMMAND CONTROLLED



GT-EP Series  
IDEV HOST SYSTEM

# Electro-Mechanical

Fractional-Horsepower Motors  
and motion control

**ElectroCraft/Hansen Motors:** Fractional-Horsepower Motors  
and Motion Control Products AC, DC, Stepper Motors  
Panels

## DC Products



Brushless DC  
Motors



Drives



Gearmotors /  
Mobility



Integrated  
Motor Drives



Linear  
Actuators



PMDC Brush  
Motors



Stepper  
Motors

## AC Products



C-Frame AC  
Motors



Housed AC  
Motors

## Other Products



Rapid  
Delivery  
Program



Hansen  
Products



Cable /  
Harness  
Solutions



AC  
Synchronous  
Motors



Stepper  
Motors



Actuators



DC Brush  
Motors



Brushless DC  
Motors



Slip Rings



Clock  
Movement /  
Timing  
Devices



Chart Drives

# Electro- Mechanical

Microphones, Speakers, Buzzers,  
MEMS

**PUI Audio:** Alerts, Speakers, Transducers, Microphones,  
Buzzers, Piezo, MEMS





# Electro- Mechanical

Power supplies

**Protek Power/Power Partners:** Custom Power Solutions, Open Frame, Wall mount, Desktop, U Channel



**PROTEK POWER  
NORTH AMERICA**





# Electro- Mechanical

Lithium Chemistry Batteries and  
Battery Packs

**House of Batteries:** Custom & Standard Battery Packs, Standard Cells and Battery Chargers

**UltraLife Batteries:** Lithium Chemistry Batteries

- Battery and Energy
  - Rechargeable
  - Non-Rechargeable
  - Power Systems
  - Chargers & Power Supplies
  - Cables & Accessories
  - Automobile Telematics
- Communication Systems
  - Power Supplies
  - Amplifiers
  - Antennas, Adapters & Accessories
  - Vehicle Communication
  - Portable Systems
  - Satellite Communications
  - Cables & Connectors



**ULTRALIFE®**



# Electro- Mechanical

EMI/RFI Filters, IEC Inlets, Filters,  
NEMA Receptacles, Rugged  
Harsh Environment Connectors

## **Power Dynamics, Inc.**

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

Harsh Environment Connectors:



IEC 60320, NEMA Connectors:



EMI/RFI Filters:



# Mechanical

- Fluid detection
- Float Sensor
- Flow Sensor
- Pressure Sensor

**Cynergy3 Components:** Flow Switches, Float switches, Reed Relays, and Pressure Sensors



# Mechanical

Gears, pulleys, timing belts, shafts, and Fairlock shaft lock

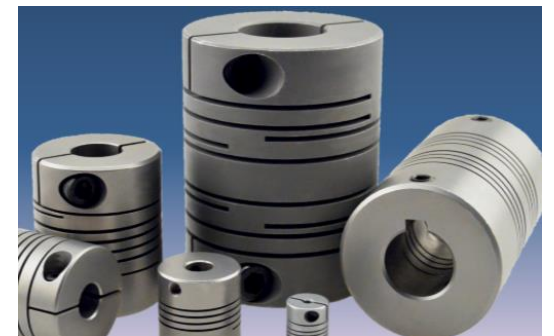
**Stock Drive Products/Sterling Instrument:** Mechanical parts, Gears, Pulleys, Timing Belts, Shafts, Bearings



# Mechanical

Coupling, machined springs and  
u-joints

**Helical Products:** Machined Springs, couplings and U-joints,  
springs





# Mechanical

Thermal solutions and electronic packaging

**Wakefield-Vette:** Thermal Solutions, heat sinks, cold plates, integrated heat pipes, heat exchangers

## Three New Families of Standard Liquid Cold Plates





# Test Services

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Testing services for all types of wireless transmitters

**Wireless Research Center of North Carolina:** Testing services for all types of wireless transmitters



ISO 17025 accredited facility and a certified CTIA Test Lab for over-the-air (OTA) testing of cellular devices as well as a Verizon approved 3rd party test lab.

Engineering and business services to support the commercialization of wireless products from initial concept through high-volume production.

# Services

Medium volume mechanical  
fabrication and assembly for  
medical and technology OEMs

**MPE-Inc**: ISO certified product development and manufacturing partner specializing in medium volume production for medical and technology companies. ISO 9001, ISO 13485, FDA registered. MPE specializes in medium volume fabrication and assembly for medical and technology OEMs.



## **MPE TECHNOLOGIES AND CAPABILITIES**

CNC Cutting  
CNC Press Brakes  
Hardware Insertion  
Welding  
Metal Finishing  
Powder Coating and Silk Scree

