

CAPXON

# THE COMPANY

## BUSINESS AND PRODUCTS






## RELIABLE AND SUSTAINABLE

WORLDWIDE



# CAPXON

## The Company

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    	 <p>Capacitor Production Shenzhen</p>	

# CAPACITORS *Our Passion*



# MORE THAN 40 YEARS

## Our Story

1980



CapXon was founded in Taiwan, manufactured aluminum electrolytic capacitors, and constantly expanded its business as well as its customer base.

1985

Purchase of a new factory building in Xizhi/Taiwan and high investments in the automatic production of electrolytic capacitors.



Given the global supply chain has been expanded to Mainland China, CapXon built its capacitor factory at Shenzhen in 1992.

1992



Certification according to **ISO 9001** to demonstrate the ability to consistently provide products and services to meet customer and regulatory requirements and continuous improvement.

1999



First aluminum foil factory was built at Yichang to ensure the vertical integration and high quality of our core material.

2001



CapXon was formally made public at Hong Kong Exchanges and Clearing Limited (stock code: 00469).

2007

Second aluminum foil factory was built at Baotou which operates with multiple high voltage forming production lines.



2006

2010



Established aluminum foil factory in Xining City Qinghai China.



The monthly production capacity of conductive polymer solid capacitors exceeded 100 million pieces.

2013

Laboratory accredited according to ISO / IEC 17025 that defines the requirements of laboratories in which reliability tests or calibrations are carried out.



2018

2019

Start with the development of multilayer polymer capacitors (MLPC) with ultra-low ESR.



Certification according to **TS 16949** as an international standard for quality management in the automotive industry.

2015



2020



New CapXon logo to underline the future external appearance and the development of future technologies for high-capacity storage and filter capacitors.

Our material  
open doors



## NO COMPROMISES

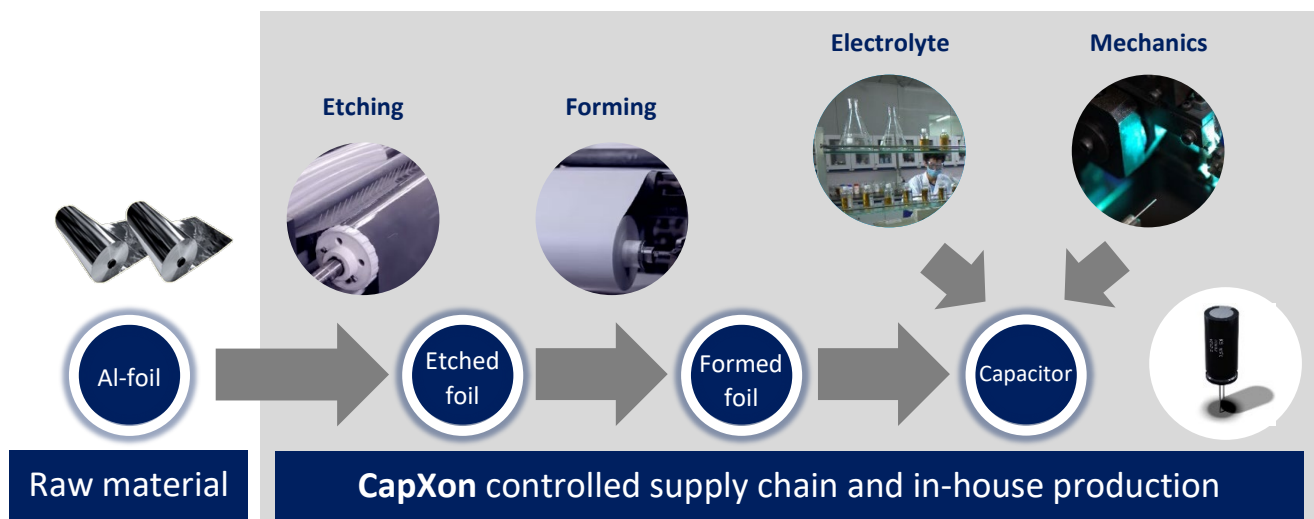
The key component of a high reliable and durable electrolytic capacitor is the anode foil material.

CapXon does not make any compromises here and relies exclusively on decades of experience in handling highly roughened foils.

# THE MATERIAL *Is the key to Success !*

## ALL CORE TECHNOLOGIES IN-HOUSE

Our 2,500 employees focus on research, development and manufacturing of Liquid, Solid Conductive Polymer and Hybrid Polymer capacitors, SMD, Radial, Snap-In and Screw Type, and etching and forming of the core material, the aluminum foil.



High vertical integration combined with deep knowledge of materials and processes make CapXon independent and extremely flexible. Our strict production process and quality system throughout the supply chain and process assure the reliability of our products.

Where it says *CapXon*,  
there is also *CapXon inside !*



# INDEPENDENCY *Is our Flexibility !*

## INDEPENDENT • OUR FOIL PRODUCTION

Our own production facilities in Baotou, Xining and Yichang are market leaders in the roughening and formation of aluminum foils and their mass production.



### Foil Production



Low voltage and high voltage foil



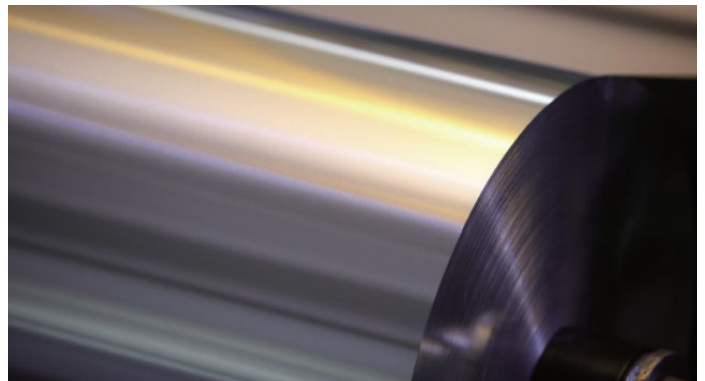
55 employees



14 engineers in production and testing

### *Benefits for our customers*

- Highest flexibility
- Deep understanding in foil development
- Consistently high quality
- Independency from foil suppliers



### Foil Production



R&D center for foil



105 employees



43 engineers in R&D, production quality and testing

### Foil Production



Low voltage and high voltage foil



65 employees



16 engineers in production and testing



### Capacitor Production



R&D center for capacitors



2200 employees



360 engineers in R&D,  
quality and testing



## CONCENTRATED Know-How!

### CONCENTRATED KNOW-HOW IN ONE PLACE • OUR CAPACITOR PRODUCTION

Our Screw type, Snap-In type, SMD type and radial type electrolytic capacitors, as well as our radial and SMD-type conductive polymer and hybrid polymer capacitors all feature high performance and high stability. All capacitor products are developed and manufactured in our Shenzhen factory.

For every						Application
<p>AEC-Q200</p>	<p>Bi-Polar</p>	<p>High Ripple Current</p>	<p>High Temperature</p>	<p>High Voltage</p>	<p>Long Life</p>	

The right	Solution					
	<p>Low Leakage</p>	<p>Low Impedance</p>	<p>Miniaturized</p>	<p>Photo Flash</p>	<p>Slim Type</p>	<p>Surge Voltage Protection</p>



## Electrolyte development

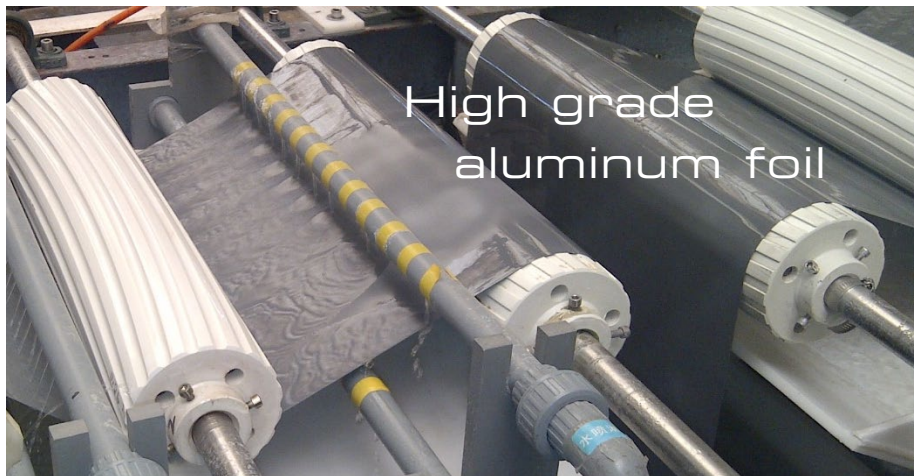
### KNOW HOW IN THE BASICS

One key factor in the development and production of reliable electrolytic capacitors is the understanding of the interaction of foil and electrolyte.

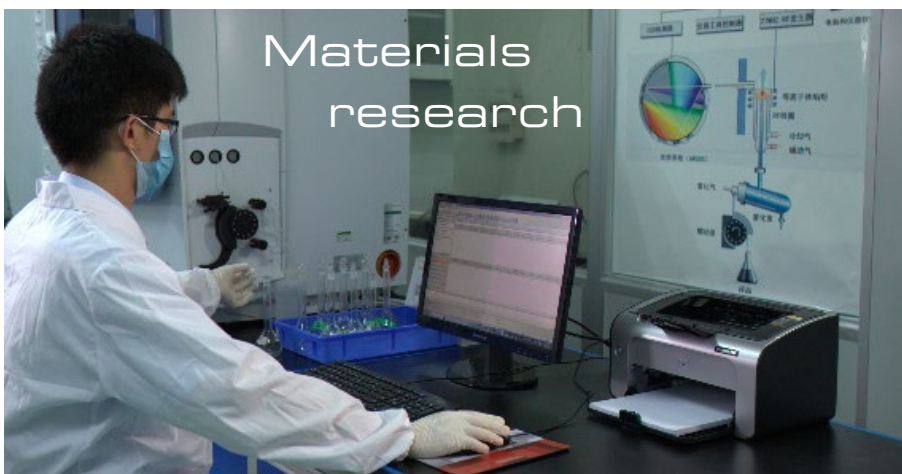
# INNOVATION Through Research and Development

### INVESTMENT

Every year, CapXon invests in the development of high-grade etched and formed aluminum foil, and high-performance electrolyte. That is why we can provide smaller sizes and higher performance.



## High grade aluminum foil



## Materials research

### SUPPORT

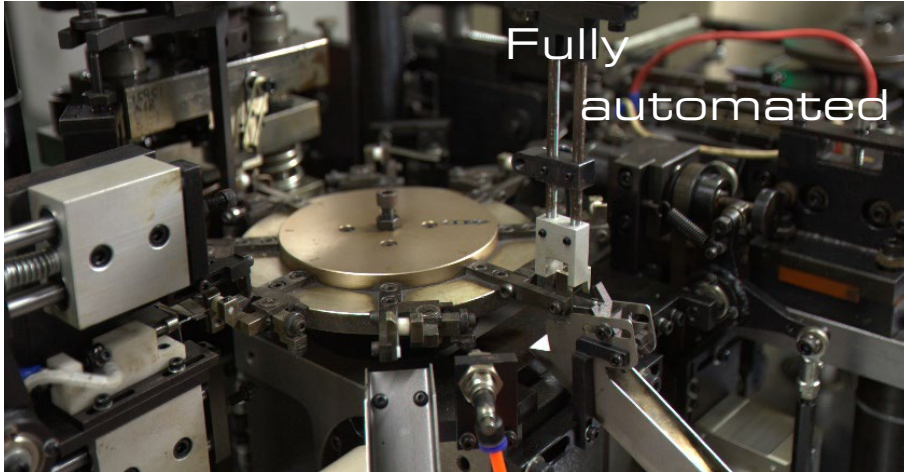
Our research and testing ensure you get the right product, exactly matching your needs.

CapXon's Application Support Engineers will help you to decide on the right products.



# RELIABILITY

## *Our Mission*



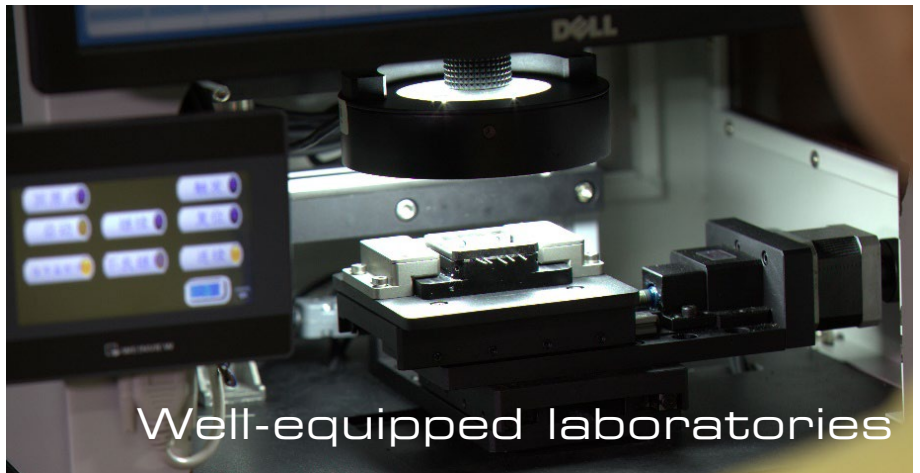
Fully  
automated

### PRODUCT QUALITY

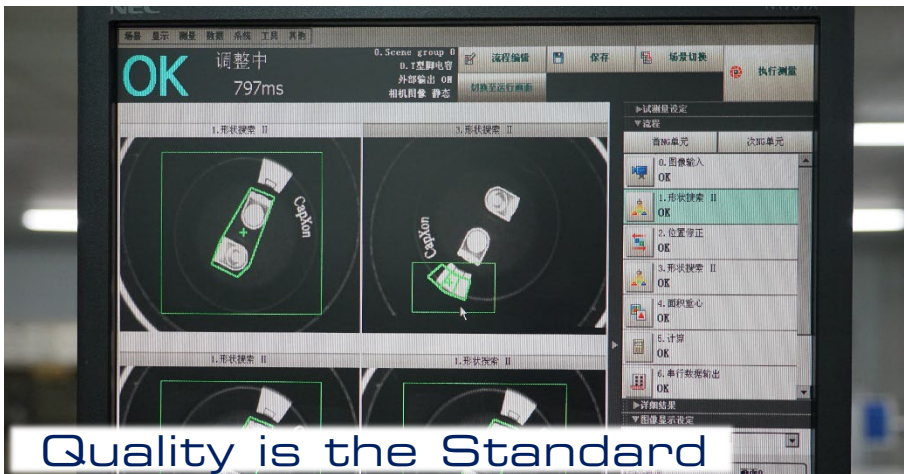
We ensure product quality with a structured and fully automated production process, advanced production equipment, as well as motivated and well-trained people.

### INSPECTION

We are equipped with the newest instruments for inspection during production. That is why CapXon capacitors meet high stability and performance requirements in accordance with the most stringent quality certification standards, including medical and automotive applications.



Well-equipped laboratories

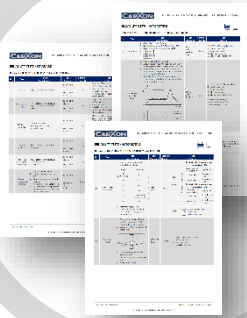


Quality is the Standard

### TRACEABILITY

Of course, we guarantee 100% traceability because we

- track every production lot
- monitor and record all production steps
- store production data
- keep samples



### Reliability Tests



Regardless of whether it is service life, safety, soldering, mechanical (vibration) or environmental tests, we cover the entire spectrum of reliability tests.

## STANDARDS

# Implemented Perfectly



Temperature cycling test

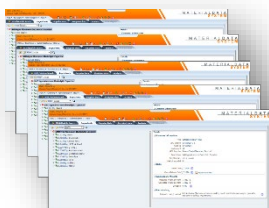
### PRODUCT RELIABILITY

We provide tests according, international standards e.g., AEC-Q200, GB/T55993, JIS C 5101, different industries, or customer requests. Our experienced quality engineers and our test laboratories leave nothing to be desired. **Do not hesitate to speak to us.**

### PPAP



The **Production Part Approval Process (PPAP)** is a documented and standardized sampling procedure for series products in the automotive sector. On request, we can provide our customers with PPAP's.



### IMDS



For all our AEC-Q200 components and in case of an automotive use case, we provide **IMDS – International Material Database System** entries on request.



### IATF 16949

### Automotive Standard



As an international standard for quality management in the automotive industry, IATF 16949 forms the basis for delivering electronic components to automobile manufacturers or their producers.

## CERTIFICATIONS

# Our Daily Added Value



### ISO / IEC 17025

### Accredited Laboratory



ISO/IEC 17025 specifies the requirements of laboratories in which reliability tests or calibrations are carried out. The focus is on the reliability and quality of test methods and the evidence that tests are consistently reliable and trustworthy.







State of the art  
equipment

### HIGHLY EFFICIENT

Smart production and ERP systems with automated production processes, advanced machines and measurement equipment guarantee continuous quality and high efficiency.

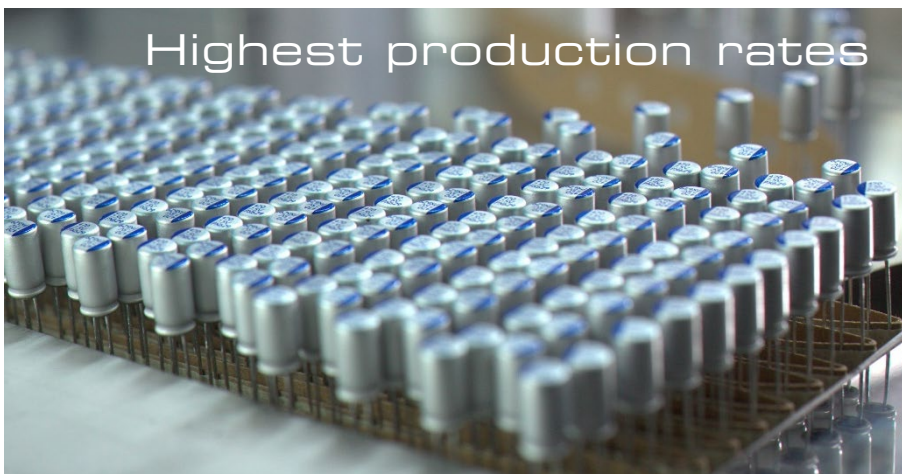
### PROCESS INTEGRATION

From cutting, stitching, and winding, to impregnation, assembly, cleaning, sleeving, aging, testing, and packaging, we feature comprehensive process integration and strict operation procedures to create outstanding products.



Cost-effectively  
manufacturing

## EFFICIENCY *Our Perfection*



Highest production rates

### COMPETITIVENESS

With the highest production rates, highly efficient production lines and our zero-error policy, we keep proving our international competitiveness every day.

Our Shenzhen factory delivers more  
than 1 billion capacitors to customers *every month!*





### SMD

Aluminum Electrolytic Capacitors

Capacitance: max. 6800 $\mu$ F

Voltage: max. 450V



### Radial

Aluminum Electrolytic Capacitors

Capacitance: max. 33000 $\mu$ F

Voltage: max. 550V



### Snap-In

Aluminum Electrolytic Capacitors

Capacitance: max. 0.1F

Voltage: max. 630V



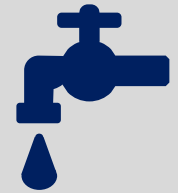
### Screw

Aluminum Electrolytic Capacitors

Capacitance: max. 1F

Voltage: max. 650V

## Liquid Electrolyte



Whether a classic electrolytic capacitor with the widest voltage range, automotive qualified on request and a package variation that leaves nothing to be desired.

## Solid Conductive Polymer

Via solid conductive polymer capacitors with their ultra-low ESR values, the highest ripple currents, extreme long-term stability, and a variety of casing which leaves nothing to be desired.



### MLPC

Solid Conductive Polymer Capacitors

Capacitance: max. 470 $\mu$ F

Voltage: max. 25V



### SMD

Solid Conductive Polymer Capacitors

Capacitance: max. 3300 $\mu$ F

Voltage: max. 100V



### Radial

Solid Conductive Polymer Capacitors

Capacitance: max. 3900 $\mu$ F

Voltage: max. 100V

# ONE-STOP SHOP SERVICE

## Our Solutions



### SMD

Hybrid Conductive Polymer Capacitors

Capacitance: max. 1500 $\mu$ F

Voltage: max. 200V



### Radial

Hybrid Conductive Polymer Capacitors

Capacitance: max. 1500 $\mu$ F

Voltage: max. 400V



## Hybrid Conductive Polymer

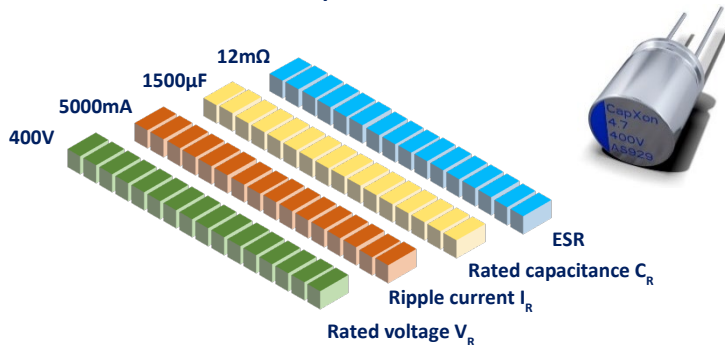
Up to the mix of the two technologies, the hybrid polymer capacitors, which offers the best performance of high-capacity storage components.

CapXon offers the **world's largest portfolio** in SMD and radial case over the temperature range from 105°C to 150°C. **State of the Art** performance and technological leadership paired with competitiveness and mass production.

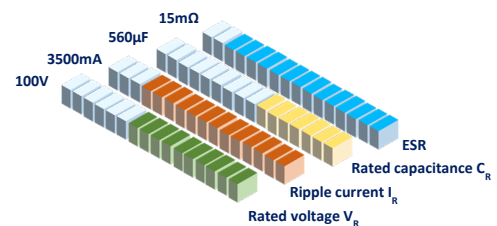
# OUR HYBRID TECHNOLOGY Make the Difference!

The sophisticated **HYBRID POLYMER TECHNOLOGY** of CapXon open new possibilities for users to implement high-performance electronics in harsh environment conditions.

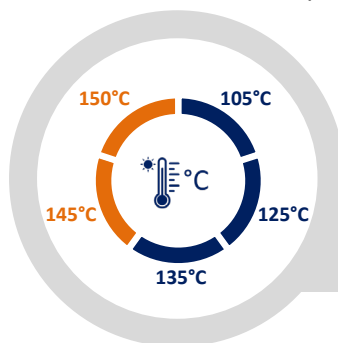
## PERFORMANCE CapXon AS SERIES 105°C • Radial



## MAIN COMPETITORS



Standing still means going backwards. Continuous further development and perfecting what has already been achieved, that is what CapXon stands for. *Try and make your own experience.*

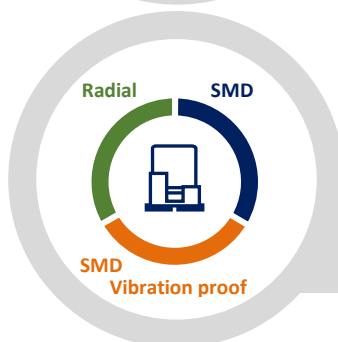
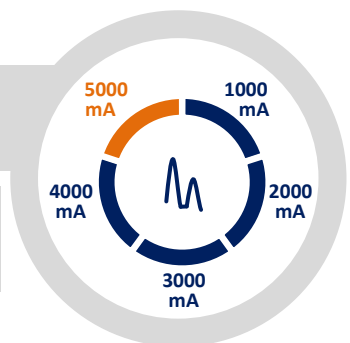


### Rated ripple current • $I_R$

Highest currents in minimum dimensions.

### Upper category temperature • $T_{O\_Max}$

The largest product range of all manufactures.

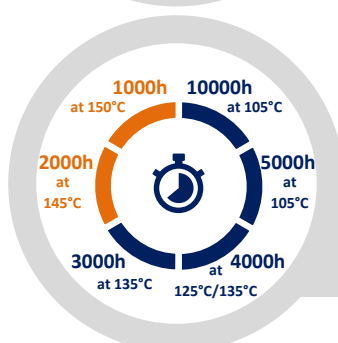
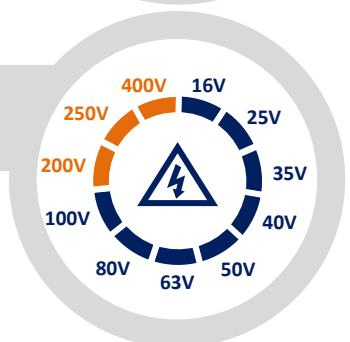


### Rated voltage • $V_R$

High-voltage types  $\geq 200V$  are unique in the market.

### Available case styles

For normal and highest vibration loads.

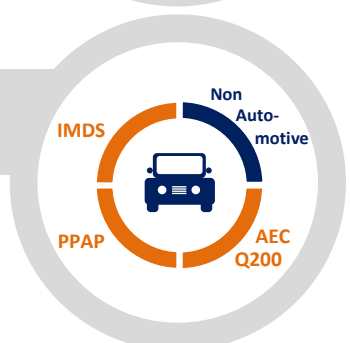


### Performance

From standard to AEC-Q200 to PPAP.

### Lifetime

Maximum lifetime over the entire temperature range.



*Learn more about the advantages, our portfolio, and possible solutions!*

# MORE *than Capacitors!*

The aluminum electrolytic capacitor is the most important high-capacity storage or filter capacitor in electronic devices, and there is no technology in terms of costs and installation space to replace them. Detailed knowledge of these components is essential for every electronics developer. Look which tools we offer.



## *Lifetime Estimation*

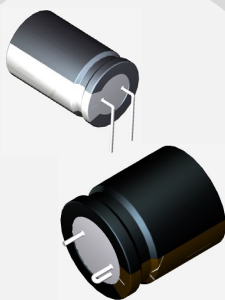
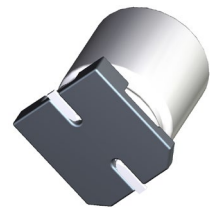


Do you need help with estimating the capacitor life in your application? CapXon has the appropriate know-how and tools. Our application team is at your disposal. **Try it.**

## *3D-Models*



For all, of our capacitors, regardless of whether they are MLPC, SMD, Radial, Snap-In or Screw, the 3D-models are available for download on our website at [www.capxongroup.com](http://www.capxongroup.com).



## *Lead Treatment*

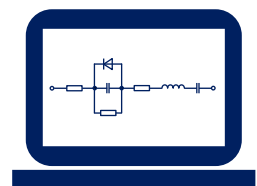


Whether shortened, bent, or customized specialties ... CapXon has a huge selection of wire shapes and connection terminals. **We are also open to your wishes.**

## *Spice -Models*



Do you need the corresponding models of our electrolytic capacitors for your circuit simulation with SPICE? Our application engineers will be happy to help you at [www.capxongroup.com](http://www.capxongroup.com).



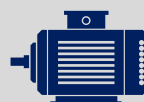
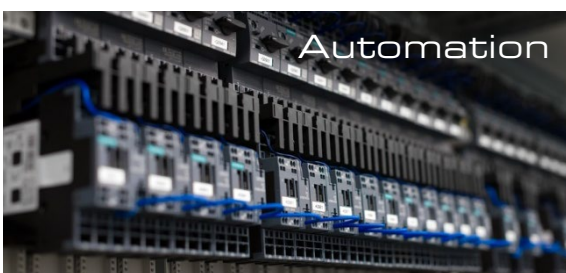
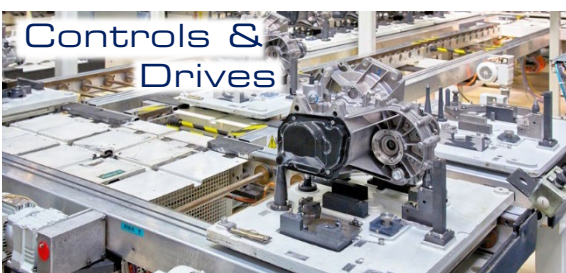


### EVERYWHERE

Our products are used in all kind of electronic industries. Look where we play a key role in shaping the markets.



## DESIGNED for your Applications



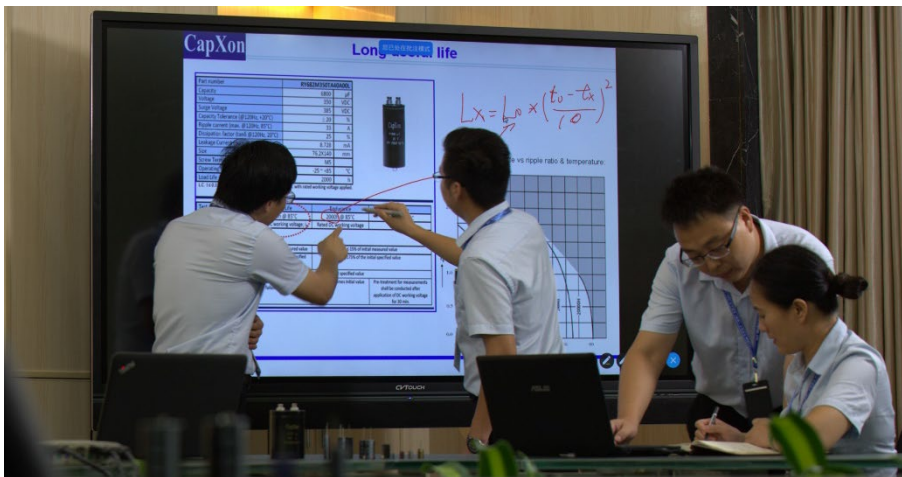
Wherever you need us

*we are there !*





## THE FOCUS *is on our Customers!*



### KNOWLEDGE

With our support teams in China (Shenzhen, Suzhou, Taiwan) and many other service locations and branch of-office in the United States, Europe, South Korea, and Singapore, we can follow your location and provide support for your application development and production site.

Around the world, we provide high-level products and services

*Fast and flexible*

Creating more value for you

*Products and services tailored to your expectations*



**IATF 16949**

**AEC-Q200**

**ISO 9001**

**ISO 14001**

**QC 080000**



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

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