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The Navigator for Enterprise Solutions

MANUFACTURING TECHNOLOGY
EDITION

ROBUST COMPUTER ENGINEERING.

FLEXIBLE
SPEED TO MARKET.

UNLIMITED
MANUFACTURING
TRANSPARENCY

premio

Crystal Tsao,
President & CEO

C O V E R   S T O R Y

premio

ROBUST PRODUCT ENGINEERING.
FLEXIBLE SPEED TO MARKET.
UNLIMITED MANUFACTURING TRANSPARENCY

By Justin Smith

n 2013, the enterprise technology realm witnessed Cisco's landmark acquisition of Sourcefire—a network security hardware and software provider—for a whopping 2.7 billion dollars. Sourcefire's staggering valuation in the market didn't come easily. Working behind the scenes was Premio, whose association helped Sourcefire establish a global market presence, diversify its range of products, bring them to market with a competitive time-advantage, and handle services and support on time. "Our flexible capabilities in compute engineering and manufacturing transparency proved to be extremely valuable for Sourcefire's massive global scale finally to its acquisition," says Crystal Tsao, President and CEO of Premio. She further adds, "This success story is a great example of how Premio and its resources are often leveraged as strategic extensions for many

leading technology enterprises looking to accelerate its time to market with its products." Sourcefire is one among many partners over the past 30 years that Premio has helped climb the ladder of success.

Premio's expertise lies in providing electronics manufacturing services (EMS) for manufacturing robust edge-to-cloud level computing components for remote or mobile locations. Over the last three decades, Premio has set up a global-spanning, end-to-end ecosystem that facilitates the development and manufacturing of x89 based computing hardware. The company's range of its own portfolio of industrial embedded computers and dense storage servers power the network infrastructures of automated manufacturing floors, underground mining systems, vehicles, medical devices, KIOSKS, and data centers to name a few. Premio also builds rugged industrial HMI panel PCs and interactive displays that can work in

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In addition to its elaborate intercontinental supply chain trail, Premio has nurtured long-lasting relations with key vendors in the space

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Crystal Tsao,
President & CEO

harsh and challenging industrial environments. These specific product designs provide the necessary building blocks for many industry 4.0 deployments for many applications that require mission critical reliability in its network of compute infrastructure.
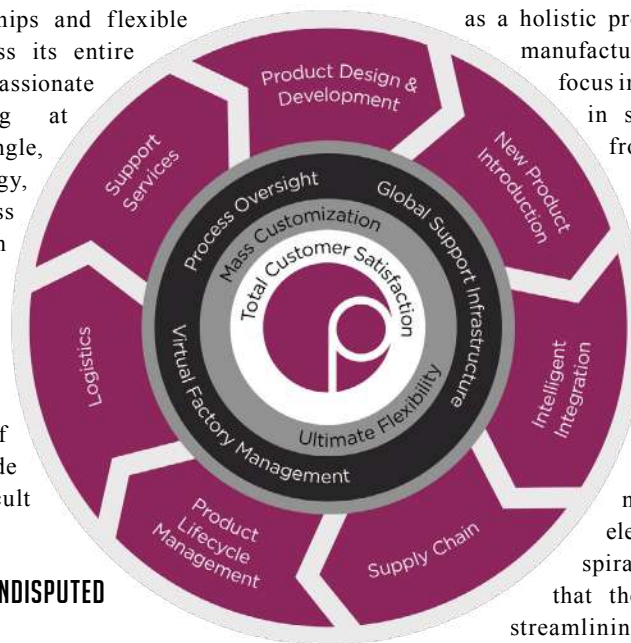
Today, Premio designs and builds world-class computing Embedded IoT Computers, Human Machine Interface Displays, and High Performance Compute Storage Servers for businesses with highly specialized needs, some of them among the world's top technology companies. Premio's core value lies within how it aligns strategic partnerships and flexible business principles across its entire organization; as passionate problem-solvers looking at challenges from every angle, not just compute technology, but also for business models, operations, design practices, manufacturing processes, and supply chains on a global scale. These key fundamental capabilities help to improvise a better way of doing business and provide the right solutions to difficult challenges.

HUMBLE BEGINNINGS TO UNDISPUTED POSITIONING

Premio began its journey in 1989, as a white box computer provider for school districts across North America. Establishing the infrastructure needed to support large volumes of production, Premio soon became one among the top three leaders in the market. As the computer market became largely commoditized, Crystal repurposed Premio's business model to deliver OEM contract manufacturing with a primary focus on EMS for embedded computers and data center storage server. It was at this juncture where Premio built its integrated manufacturing service capabilities that could handle the material sourcing and supply chain side of things on behalf of its partners. The company also grew its global distribution network across APAC and EMEA regions to help partners accelerate and scale their launch and go-to-market efforts globally.

Premio achieved all this without compromising its capability to deliver prompt support services. After all, being able to provide timely support was a crucial

requirement for partners to ensure end-user satisfaction. In effect, Premio became a robust partner whom their partners could rely on for growth. "Premio's brand slogan and motto 'Your Success, Our Commitment' is a direct translation from how we view our long term partnerships with our partners" Tsao also said. "This motto is truly a fantastic representation of how Premio engages in business, providing the utmost flexibly and attention for our partners across our organization." To effectuate this to the fullest, Premio's next (3rd) iteration in evolution focused on rendering the company as a holistic provider of not only reliable manufacturing services but a strategic focus in the design and engineering in specific compute products from the edge to the cloud.

PREMIO 3.0 FOR INDUSTRY 4.0 – PURPOSE BUILT PRODUCTS FROM THE EDGE TO THE CLOUD

With ongoing innovations in IoT, edge computing, and high-speed wireless connectivity, the possibilities for newer, purpose-built electronics products have spiraled today. It's a no brainer that the expertise in collecting, streamlining, and analyzing data will play a crucial role in realizing this industry 4.0 notion. There is an imperative need for network components that can go beyond aggregating data and perform real-time computing. Of course, there's also the need for embedded computers to be rugged, robust, and compliant in remote and mobile environments. In this market, the competitive advantage for B2B companies relies heavily on design expertise and quicker time to market with products that maintain reliability. These companies need to augment their product design knowledge with engineering and manufacturing expertise that caters to a exploding market hungry for faster and better decision making. This is where Premio, as an one-stop-shop, places its unique value proposition.

Premio's knowledgeable workforce of over 300 employees—60 percent of which stems from engineering and design backgrounds—provides partners with all the necessary resources to design and prototype products in

can deliver it all. This approach substantially reduces the engineering, design, and production validation testing times, which ultimately accelerates the product launch time but also can offer a different total cost of ownership for technology enterprises looking to scale through strategic partnership.

Meanwhile, after the design and engineering phase, companies often face challenges associated with kick-starting the manufacturing process. To achieve the intended rate of scalable global production, they have to first get inventory and stocks and then coordinate with the entire supply chain to meet sales demand. For facilitating this, Premio—in addition to its elaborate global supply chain trail-has nurtured long-lasting relations with key technology vendors in the space— be it with Intel or AMD for semiconductor computing chips, Kingston for memory, or Seagate and Samsung for storage. Rest assured, Premio's partners can rely on the souring capabilities and supply chain management of components and its final products. Also, Premio's largely automated manufacturing line that stretches more than 150,000 sq. feet comes with a quality management system that is built on real-time transparency. Through the company's shop floor management system, partners can get detailed snapshots about their products' stage in the manufacturing cycle, a valuable resource for global operations. Moreover, Premio's manufacturing line is 13485 medical ISO certified, which has made the company a "most sought after one" among the medical device makers in the United States

Premio guarantees to test and validate its product designs to fit requirements such as operability in wide temperature range, or the ability to withstand high voltage, shock, and vibration. Additionally, owing to its global presence and operational experience, the company is well aware of all the stringent manufacturing compliance and regulatory mandates. Premio can pre-certify their manufactured products in line with these mandates, which would save partners a lot of time in introducing these products to market. For instance, according to Crystal, Premio's partners need not worry about the ongoing trade tensions between the U.S. and China and the corresponding sanctions. The company's robust infrastructure in the U.S. allows the customers to keep a check on the total cost of ownership, without being affected by the spikes in tariffs.

Evidently, for over 30 years Premio continues to be a one-stop-shop for its partners to realize a quick and guaranteed turnaround time for their embedded computing devices that can leverage product development, manufacturing, distribution, and support.

> **Premio's knowledgeable workforce of over 300 employees provides partners with all the necessary assistance to design and prototype products in tune to the stringent industry-level specifications and functional requirements**

tune to the stringent industry-level specifications and functional requirements. Be it taking care of the product design from a compute power/configuration side, or from BIOS coding, or necessary electro - mechanics, Premio

premio

PREMIO FANLESS EMBEDDED IOT AND EDGE COMPUTERS
PRODUCT PORTFOLIO

In-Vehicle Fanless Computers
ACO series

IP65 / IP67 Waterproof Computers
WCO series

Fanless Mini Computer and Gateway
BCO series

Machine Vision Computers
VCO series

Industrial Fanless Computers
RCO series

More Industrial Computing at
https://premioinc.com/

TRUE INDUSTRIAL AND RUGGED DESIGNS

SHOCK & VIBRATION
RCO & ACO Series comply with MIL-STD 810G on shock & vibration in order to sustain in environment like industrial automation, transportation, military, etc.

FANLESS DESIGN
- Prevent failure/repair/replacement caused by fan part
- Venting holes no longer needed
- Extended MTBF
- No noise

ONE-PIECE DESIGN
- Robust structure
- Less joint parts and screws for higher shock & vibration tolerance
- Easy assembly, disassembly, maintenance
- Sealed housing to prevent dust

EXPANDABLE & MODULARIZATION
The modular design approach helps with the ease of installation to achieve rapid deployment, and provide wide variety of configurable options to achieve scalability.

POWER PROTECTION
- Over voltage protection
- Over current protection
- Reverse protection

EXTENDED OPERATING TEMPERATURE RANGE
Fanless embedded systems support extended temperature to allow applications to function in difficult and harsh environment.

THERMAL PERFORMANCE
Utilize metal material (copper and aluminum) to accomplish fanless Fast heat dissipation by integrated heat pipe on heat block and heat sink Unique thermal design that allows desktop CPU (up to 35W) to operate without fan in extended temperature range

INDUSTRIAL GRADE COMPONENT
Strict component selection adopting industrial grade parts like capacitor, power choke, etc.Better electrical performance and more stable system performance Product longevity supported Less RMA + Longer product lifecycle= Lower TCO (total cost of ownership)

team and the passion she's had in facilitating long-term partnerships that continue to foster into long-time relationships. After all, Crystal has spent a considerable amount of time nurturing her workforce as much as she has spent in building long-lasting client and vendor relations. "More than 50 percent of our employees have been with us for over 15 years, a testament to the way Premio values relationships and tenure for its employees" Crystal said. "It's relatively simple, I treat our employees like family and this translates into the same interactions with our partners who appreciate the open and honest relationship, it is one of the reasons for our success for the last 30 years," Crystal also said. Premio is also recognized as both a women and minority owned company under Los Angeles Business Journal's "2019 Minority-Owned Businesses List."

PORTFOLIO OF PURPOSE-BUILT PRODUCTS

The company's product line for embedded and industrial edge computers include rugged fanless embedded systems—that comes as three different models powered by Intel chipsets—for most industrial applications. They feature multiple expansion capability(thanks to modular build that support different chassis and interchangeable expansion modules), cable-less design, and high I/O flexibility enabled by their unique modular design. They are constructed by extruded aluminum and heavy duty metals.
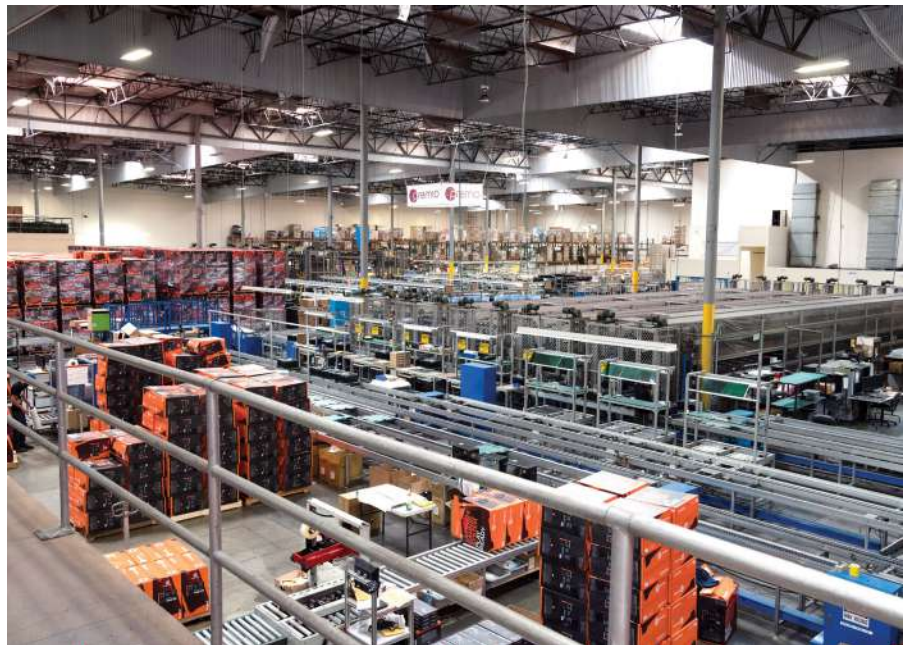
On the industrial touch displays and panel PC front, Premio sports patented touch display systems that are designed specifically for HMI automation, information and communication applications. It goes without saying that the offerings are rugged- and robust-tested, and can withstand a wide range of extreme industrial environments. The company's patented Multi-Mode Display (MDM) module, facilitates a broad range of configurations that can be used for any industrial application.

Last but not the least, is Premio's offering pertaining to storage servers. The company offers general purpose servers, rugged flash storage servers, high availability servers, and high density servers. The company also offers HPC Servers,—that houses a unique GPU server designed for application workloads in deep learning, complex modeling, and artificial intelligence—and expansion storage modules.

VISIONARY LEADERSHIP INSPIRING THE WORKFLOWS

As the founder and visionary leader who has steered Premio to its continued success, Crystal Tsao is an inspiration for the women in tech. While 2019 marks Premio's 30th anniversary, Crystal attributes the company's successful streaks to her

By having established the resources, relations, and dedicated workforce to help its partners stay competitive in their respective markets, Premio will continue to align itself with the rapidly evolving computing technology and wireless connectivity space. The company views 5G as a game-changer in the industrial automation and embedded computing technology and will further work on developing product lines that support cutting-edge automated 5G-backed ecosystems. CR

PREMIO INDUSTRIAL TOUCH DISPLAYS
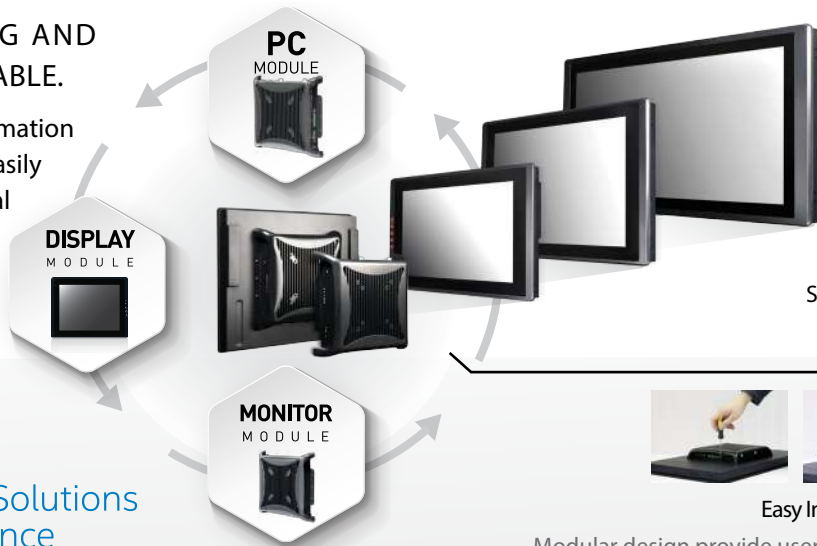
PRODUCT PORTFOLIO

System
Module

IP66
Panel PC

Panel PC

Display
Module

Touch
Monitor

More Industrial Computing
at
https://premioinc.com/

INDUSTRIAL TOUCH DISPLAYS

MODULAR. PLUG AND PLAY. CUSTOMIZABLE.

Reduce factory automation
downtime with an easily
upgradable Industrial
Panel PC or Touch
Monitor

MDM
MULTI-MODE
DISPLAY MODULE

(intel) **IoT Solutions Alliance**

PC MODULE

DISPLAY MODULE

MONITOR MODULE

Different Frame Options

Flexibility in Touch Screen

Scalability in Panel Sizes
10.4"~ 21.5" / 4:3 or 16:9

Easy Installation & Maintenance
Modular design provide users with plug and play ease
for industrial HMI automation applications

20 Most Promising Manufacturing Technology Solution Providers 2019

Industry 4.0 is taking the manufacturing industry by a storm, providing manufacturers with the opportunity to utilize advanced manufacturing capabilities and IT in their product lifecycle. For manufacturers to stay ahead of their peers in the industry and have a steady hold in the market, they need to embrace the latest technological advancements and state-of-the-art products offered by the best manufacturing solution providers. By doing so, manufacturers can reap a host of benefits such as increased visibility into operations, substantial cost savings, increasing speeds in production times and the means to provide quality customer support. Spanning Industry 4.0, manufacturing technology solution providers are leveraging a combination of leading-edge technologies like big data, predictive maintenance, AR, VR and IoT, and digitalized equipment to roll out products for hassle free production of goods and reducing the time to market.

Organizations are increasingly implementing cloud computing software in manufacturing plants that spread across various geographical locations to share information amongst the facilities for better quality control, faster production and lowering the production costs. Decision makers are also willing to invest in visibility technology to spur growth. Implementation of real-time location systems (RTLS) and RFID will come into play, providing much-needed transparency across their operations.

Displaying great technological prowess and with several success stories to their credit, these manufacturing technology solution providers are consistently proving their worth in the field of manufacturing. We are glad to feature companies like Emerson Electric, Mega Fluid Systems and Tutelar Technologies who have been that deliver better flexibility and efficiency to clients in their daily operations.

We present to you CIOReview's, "20 Most Promising Manufacturing Technology Solution Providers - 2019."

Premio

recognized by **CIOReview** *magazine as*

20 MOST PROMISING
MANUFACTURING
TECHNOLOGY
SOLUTION PROVIDERS - 2019

The annual listing of 20 companies that are at the forefront of providing Manufacturing Technology solutions and transforming businesses

Company:
Premio

Key Person:
Crystal Tsao,
President & CEO

Description:
Premio is a premier global ODM/OEM provider in computing technology from the edge to the cloud

Website:
premioinc.com

WCO Series IP65 / IP67
Waterproof System

Ideal for use in harsh, wet & dusty environments

💧 IP65 Protection

Full system IP65 level dustproof & waterproof

Refined Craft Design

The design provides seamless integration, toughness, longevity and reliability

Lockable M12 I/O Connectors

To against vibration and shock, the M12 connector offers a reliable performance for high-quality data acquisition or transmission.

up to 1 m of submersion

💧 IP67 Protection

Full system IP67 level dustproof & waterproof

DC IN 9V ~ 50V   VGA   HDMI   ⟵•⟶   COM   LAN 1   LAN 2

Outdoor digital signage

Smart City

Agriculture

Food and beverage manufacturing

New Experience & Unparalleled Performance

Premio GPU Computing System

Image processing

Medical imaging

Machine vision

GTX 1050

NVIDIA GEFORCE GTX

Key Industrial Features

· Kaby Lake & Skylake-S - LGA 1151 socket for 6th/7th Gen. Intel® Core™ i7/i5/i3 or Pentium® / Celeron® Desktop Processor
· NVIDIA GeForce® GTX 1050 Ti Graphics engine based on NVIDIA Pascal™ GPU architecture
· Wide Operating Temperature (-25°C to 70°C)

Reduce network traffic and cloud lock-in

Accelerate time to action and control

Cost efficiency

Versatile Industrial I/O Interfaces & Diverse Expandability

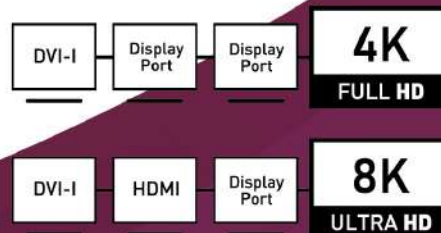Robust system design enabling GPU computing in harsh environment

Support up to 8K Resolution & 6 Independent Displays

Autonomous driving

Machine learning

| DVI-I | Display Port | Display Port | 4K FULL HD |

| DVI-I | HDMI | Display Port | 8K ULTRA HD |

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