

## Bionic Barista

Emulating the artistry of elite baristas



## ABOUT US

### COMPANY PROFILE

Caye Technology was founded in 2022 and is the first domestic technology enterprise in China to provide professional fully automatic coffee equipment powered by its independently developed core technologies such as the efficient brewing system. The company integrates R&D, production and sales. Caye Technology has received multiple rounds of investment from leading venture capital institutions such as Hillhouse, Renzhi, DLH Capital, and the Suzhou Industrial Park Leader Venture Capital.

Members of the core R&D team come from renowned companies in the coffee industry, boasting more than a decade of experience in industry research and supply chain management. The product and marketing team members have expertise in essential domains such as products, brands, and marketing, gained from their tenure at billion-dollar technology companies.

### CORPORATE CULTURE



#### Vision

Use technology to create better coffee times.



#### Mission

Facilitating client success and propelling industry progress.



#### Values

Prioritizing the customer, empowering the strivers, inclining towards the contributors, and forever positive and open attitude.

### ENTERPRISE ADVANTAGE

#### 01 Technical excellence

The company has applied for nearly a hundred patents. The first commercial-grade fully automatic coffee machine has been mass-produced in the first half of 2024, debuting in China and then expanding to overseas markets. The product outperforms high-end competitors abroad in core parameters such as efficiency and coffee quality, making it suitable for diverse scenarios, including new retail takeaway coffee, branded chain cafes, independent boutique cafes, and convenience store coffee stations.

#### 02 Efficient production

Caye Technology established its own factory in the Suzhou Industrial Park at the end of 2023, and the first production line will be put into operation in the second half of 2024, with an annual capacity of over 10,000 units. It has an external cooperative factory in Kunshan with a reserved capacity of up to 100,000 units.

#### 03 Reliable quality

Caye Technology pays great attention to product quality management and safety compliance throughout the entire production process. Its manufacturing factory has secured certifications for management systems including ISO9001, IATF16949, ISO14001, and ISO45001. The leaders of the production and quality team who have extensive experience in production quality management within the automotive industry. Furthermore, the company has partnered with the well-known European company TÜV Sud for its overseas product electrical safety certification.

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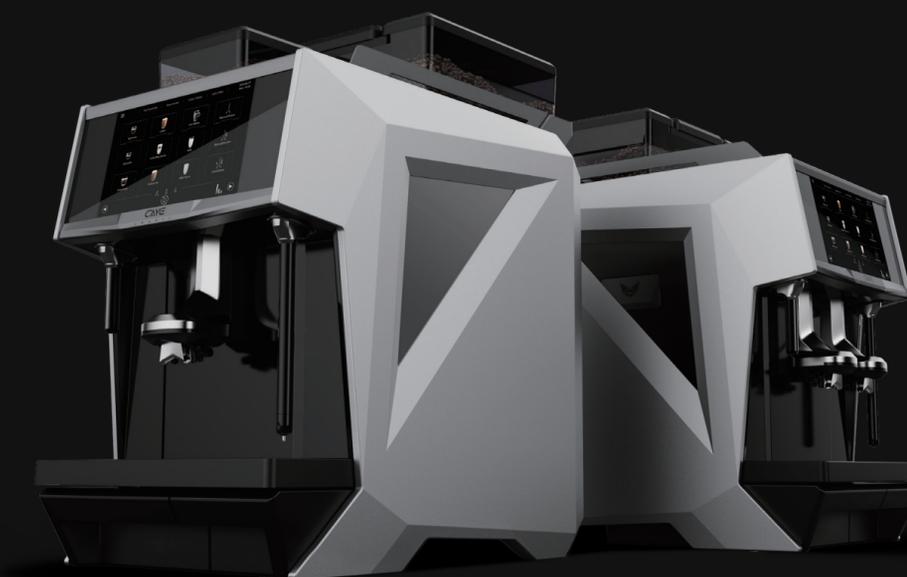
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# SMART X SERIES



The Smart X series commercial fully automatic coffee machine emulates the artistry of elite baristas with its Bionic Barista system. It meticulously orchestrates each phase of coffee preparation — grinding, weighing, tamping, and extraction — to seamlessly deliver an exceptional and individualized coffee experience to your patrons.



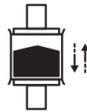
### Grinding & Weighing

The precision-engineered **Constant Particle Size (CPS)** ceramic burr grinder, powered by a robust yet silent BLDC motor, ensures thermal consistency for long-running processes and delivers coffee grounds with particle size variations below 40 μm.

The **AccuPowderWeigh** high-precision ground coffee weight control system consistently controls the coffee dose within a ±0.2g margin, establishing a solid basis for exacting brew ratio control.

The coffee powder loaded in the powder cup is put into the brewing chamber at one time, making the coffee bed more even.

Our cutting-edge **Vertical Vibrating Distribution (VVD)** system parallels the barista's technique of tapping the portafilter, utilizing vertical vibrations to level the coffee bed again, thus prevent channeling and guaranteeing stable extraction quality.



### Distribution & Tamping



### Brewing

The reverse gravity extraction and vertical infusion system employed during the espresso brewing phase, maximizes extraction efficiency while ensuring the quality of the coffee remains stable. The **AccuLiquidWeigh** liquid weighing system<sup>1</sup> surpasses traditional flow-based models, providing more precise assessments of liquid weight and extraction duration.

Utilizing the **SuperMix** frothing technology, the fusion of air and milk proteins is accelerated through a swirling motion, followed by steam infusion under high pressure. This meticulous process results in the creation of a luxuriously dense, high-quality frothed milk, expertly showcasing the artistry of milk frothing, reminiscent of a skilled barista.



### Milk Frothing



### Creating

The first invented **CLS (Closed-Loop System)** technology, building upon the complete closed-loop that encompasses both ground coffee and coffee liquid weight, automatically adjusts the grinding particle size in real-time by monitoring the extraction duration to ensure the continuous and stable taste and flavor of each cup of coffee.

The **DualShift** Brewing mode<sup>2</sup> supported by the dual brewing chamber design, greatly increases coffee production efficiency.

## CLS (Closed-Loop System)

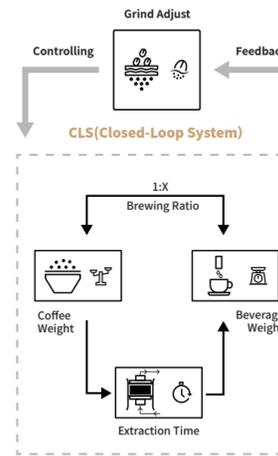
Caye's groundbreaking<sup>3</sup>CLS(Closed-Loop System) represented a milestone as the first genuine quality control mechanism for coffee extraction, utilizing a complete closed-loop that encompasses both coffee dose and liquid weight.

Unlike traditional open-loop systems that approximate based on grind timing or semi-open-loop systems that estimate using coffee volume, the CLS meticulously direct controls the ground coffee weight, achieving precise closed-loop regulation of coffee dose, grind size, liquid volume, and extraction duration.

Once parameters for coffee dose, brew ratio, and extraction duration are set, the CLS automatically fine-tunes the grind size after each cycle, ensuring each cup's flavor and aroma remain consistent.

The machine features a straightforward one-button calibration function that allows for rapid recalibration at the start of the day or after changing coffee beans, streamlining daily operations.

The CLS system enables customers to effortlessly maintain a uniform standard of production. This ensures that a consistently high-quality taste and flavor are delivered across multiple outlets without the need for numerous highly skilled baristas.



## Modular Design

The Smart X series features durable all-metal components in critical areas and a modular design comprising 9 large and 6 small modules that allows for swift disassembly and replacement by technicians with minimal training, typically within just 3 minutes, reducing downtime and enhancing customer satisfaction.



## IoT System

The product's API provides detailed component metadata, enabling IoT platform customization for business applications, and facilitates integration with ERP systems. Also, it supplies real-time device status and monitoring crucial operational information, including production data and other key metrics.

Device operation monitoring helps in scheduling maintenance and managing spare part inventory proactively, identifying potential issues to minimize maintenance costs and operational downtime.

With the device's remote control features, customers can easily manage tasks such as downloading beverage recipes, updating user interfaces, and performing OTA firmware software updates.



## Technical Datasheet



Product Line		Smart X			Smart X Master	
Basic Model		B2CS	B2CM	B2CMSY	B2C	B2CSY
Product Category		Coffee & Steam	Milk Coffee	Full Function	Coffee	Full Function
Output Capacity	Cups per hour*	156 espresso per hour 151 cappuccino per hour			310 espresso per hour 310 cappuccino per hour	
	Bean hoppers	2 x 1.2 kg, support the 3rd hopper (0.7 kg)			2 x 1.2kg	
Key Specifications	Coffee outlet	1			2	
	Burrs size and type	64mm CPS ceramic burrs				
	Brew chamber	24 / 30g				
	Hot water boiler size	1.6L				
	Steam boiler size	1.6L			-	1.6L
	Coffee outlet height	90~190 mm				
	Grounds drawer	4L (540g empty reminder), support undercounter grounds disposal				
	Coffee scale module	Standard				
	Liquid scale module	Optional				
	CLS quality control	Standard, optional upgrade to CLS for Studio (w/ liquid scale)				
User Interface	Display	10.1" true-color touch screen				
	Networking	Wired connection (RJ45)				
	Digital serice (IoT)	Remote monitoring, beverage recipe update & sync, firmware update, machine self-diagnosis and more				
Maintenance	Auto-cleaning	Coffee system: auto dosing & auto cleaning Milk system: manual dosing & auto cleaning				
	Milk and Steam	CayeSteam Auto Steam Wand	✓	+	✓	-
AutoMilk		-	✓	✓	-	-
CayeFoam+		-	+	✓	-	✓
Hot / cold milk foam		-	✓	✓	-	✓
Two types of milk		-	+	+	-	+
Hot Water (Tea)	Separate hot water outlet	+	+	-	+	-

BnC - Black coffee, "n" means the number of bean hoppers/grinders  
S - Steam wand M - Milk coffee (hot and cold milk foam) Y - Separate milk foam dispenser T - Separate hot water outlet

✓ Standard + Optional - Not supported

<sup>1</sup> Liquid weighing system is optional.

<sup>2</sup> Dual brewing chambers are only available on Smart X Master.

<sup>3</sup> Caye Technology is the first to implement closed-loop control for the quality assurance of coffee extraction in the commercial fully automatic coffee machine field.

\* The product images and on-screen content featured in this brochure are purely illustrative. Actual product outcomes, including but not limited to appearance, printing, color, and size, may exhibit slight variations. Similarly, screen display content, inclusive of background, UI, illustrations, etc., may also vary. For accurate information, please refer to the tangible product.

Product specifications are subject to change based on different configurations and updates. For precise details, refer to the specific delivery parameters and the actual product.