FAQ: SMARTCAST® API

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Cree SmartCast® PoE-enabled luminaires do more than just light your spaces. They can learn and sense things. They can interact with people and places. They can gather and share data. However, putting these capabilities to work requires seamless integration with the software programs (or "apps") that bring them to life. Unlike many other intelligent lighting platforms on the market, our open SmartCast® API provides developers across the globe the tools they need to build these thoughtful integrations, thereby adding continual innovation and endless future value to your Cree SmartCast® installation.

What is an API?
The acronym API stands for Application Programming Interface. An API is a standardized language or set of protocols that allow two software programs to communicate and interact with each other to accomplish a task, usually by retrieving, modifying and pushing data to each other. As consumers, we take advantage of APIs nearly everywhere: when our GPS map works with a retailer's website to deliver on-the-spot coupons; when we use our social media account to automatically log on to our pharmacy or bank accounts — just to name a few.

What is SmartCast® API?
SmartCast® API is a way for developers to build software applications that work seamlessly with Cree SmartCast® luminaires, thereby extending their features and value to end users. With this, third-party developed apps are able to easily talk to the SmartCast® API over the Internet using a secure standards-based web service utilizing a ReST (Representation State Transfer) API to extract data and control SmartCast® luminaires.

Why use a ReST API?
Unlike many other intelligent lighting platforms on the market, SmartCast® API utilizes ReST to ensure easy integration. ReST is a specialized software integration protocol specifically designed to ensure maximum flexibility and interoperability.

What can be done with SmartCast® API?
With the SmartCast® API, third-party apps can access data and set controls on SmartCast® luminaires in the following ways:

SMARTCAST CAPABILITIES		EXAMPLE APPLICATIONS
LIGHT CONTROL	• Turn lights on and off. • Continuous dimming up and down. • Change color temperature for fixtures that support color adjustment.	• Automated light control, scene and mood setting based on timing or conditions. • Control lights remotely from mobile phone. • Enable color temperature adjustment to align with circadian rhythm.
ENVIRONMENTAL AWARENESS	• Sense and record occupancy and patterns of motion such as timing. • Sense and record patterns of surrounding ambient light from both daylight and other artificial sources.	• Real estate, space and conference room utilization. • Automated daylight harvesting and task tuning to save more energy while improving experience. • Real-time traffic heat maps. • Trend employee or consumer habits over time and space to optimize workplace or retail experiences. • Physical and electronic security.
CONFIGURATION AND DIAGNOSTICS	• Detect and record power consumption, down to the individual luminaire. • Monitor real-time system health and detect performance levels, down to the individual luminaire. • Maintain software releases.	• Advanced power usage, energy savings, and lighting performance visualizations and reporting. • Trend power consumption over time and footprint to optimize power loads in real-time and participate in utility Demand Response programs. • Anticipate lifetimes for preventative maintenance. • Import and Export configuration profiles.
PLATFORM INTEGRATION	• Share data with third-party apps and platforms such as Building Automation Systems (BAS).	• Real-time conference room schedulers based on occupancy data. • Security system alerts based on unusual motion. • Activate related building systems based on occupancy: HVAC, security cameras, water features, elevators/escalators, automatic doors, electronic blinds, and more. • Email, message or post to social media on lighting or occupancy event.

Is SmartCast® API secure?

While the SmartCast® API was designed for open collaboration, that doesn't mean your business data isn't secure. On the contrary, we take security and privacy very seriously. We utilize encryption to ensure business and energy data flow securely and reliably across the SmartCast network and your enterprise network. In addition, all our third-party API integrations utilize DTLS, which means communications between the SmartCast® API and network-based third-party apps are always encrypted (private and secure).

Who can access the SmartCast® API?

Software providers and developers who want to integrate SmartCast® luminaires into their value-added platform or application and join our developer program. Every company we work with is required to follow guidelines that limit how it can use the data our end users have opted in to share. We take these rules seriously to ensure a reliable quality experience for end users. End users are always in control (by way of opt-in) to determine what apps to use and information to share.

I'm an interested developer, how do I get started?

For more information, please email **smartcastdev@cree.com.**

Visit **lighting.cree.com/smartcast** or contact a Cree lighting representative to learn more.

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