When Spanish architect Javier de la Calzada set about designing a dynamic, modern residence on the outskirts of metropolitan Madrid, only he knew that he would also be creating a work of art in the process. It’s sometimes difficult to appreciate an architect’s vision without actually seeing the final concept, and while Calzada’s 800sq metre grand scheme looked impressive on paper, only a visit to the completed project pays full testament to his dream.

Working alongside home automation specialist Sergio Rojas, Calzada managed to create a home designed for living (luxurious living at that) that encapsulates the true essence of automation in every sense. Calzada and Rojas have produced a home that maximises the space available by cleverly combining both natural and artificial lighting to great effect.

Talking tech
In terms of technology, the nerve centre of the residence is a sophisticated lighting control system from Lutron – HomeWorks Interactive, which is called into action from the moment a visitor presses the door bell (a video image of the caller appears on a 21” LCD control panel, which also allows the residents to let the visitor in, if they choose to). Integrating and interfacing with a number of technological devices throughout the home, the Lutron system manages the lighting and controls the automated elements of the property and in the process, transforms bricks and mortar into something more of an experience. Using HomeWorks Interactive was always Rojas’ intention, as he explains, “I’ve used Lutron systems for countless installation projects – one of the main benefits is the flexibility and adaptability they offer – so using a HWI system here was a given. This installation captures everything that is beneficial about modern, intelligent living, and makes it very easy for residents and visitors to the home to access. It also accentuates the unique design features of the property, which undoubtedly make it what it is.”

Calzada, who was encouraged by the owners to completely strip the structure back to the bare bones and ‘start again’, applied as much creativity with technology as he did architectural design, and the end result showcases both facets. One of the most notable features of the property is a large central open plan area that includes dining, cooking, living and sleeping areas, all well-served by an array of technology. The architect, realising that this would be the most frequently area of the house successfully managed to incorporate everything required to make this the ‘town square’ of the development. Making use of skylights, a wide range of lighting fixtures and sources, and extended height windows, the whole space uses light to maximum benefit to create the impression of very spacious, open living.

The sleek kitchen is located below a stunning mezzanine level master bedroom, encased by glass walls, to create a ‘floating’ illusion, an effect that is as practical as it is captivating. The master bedroom’s luxurious bathroom features a ‘night sky’ style ceiling and a wall-mounted Bang & Olufsen sound system, both linked to preset lighting scenes to help invigorate
the senses. Various B&O equipment is used throughout the house, mainly because it ‘links’ easily together and to Lutron’s control system, but also because it happens to look pretty good too.

Room for manoeuvre
Three further bedrooms are located to the rear of the ‘living’ area, together with two bathrooms, while the basement houses a dedicated home theatre, home office facility and pool room (which hides a couple of breathtaking secrets) – work, rest or play at the bottom of a staircase.

The HomeWorks system’s time-clock controls functions and events throughout the day, such as preset lighting scenes, which can be recalled at the press of a button on a wallstation. The lighting scenes are programmed to complement natural light levels, depending on the time of day, and provide more specific lighting for events such as entertaining, dining, watching movies, or relaxing. The scenes work in tandem with other devices such as electric window blinds and climate control, so that changing the whole environment can be accomplished quickly and easily. When it came to the main living area, the design team, noting that the skylights and impressively vast windows would only be of use in daylight, made use of the Lutron system’s astronomical timeclock. The system is programmed to add artificial lighting from various sources as the natural light fades, and as night draws in, light levels from the wall sconces, high level light fittings and various lamps increase to compensate. The whole process is very gradual, meaning occupants don’t even notice the changes as they take place – even the silent-operation blinds and curtains close automatically. The system also has the flexibility of a full override function, allowing users to adjust lighting levels to suit a specific event.

Fingertip control
As well as the master control panel and the LCD mobile control units, ergonomic controls are installed all over the house, with two extra keypads capable of generating more than 30 different lighting scenes. All lighting can be manually dimmed to a level to suit the individual; this was in fact one request made by the owners, that anyone visiting the house would be able to control the lights without fear of getting tied up in technology. According to Rojas, “a guest completely ignorant of the system can handle it in an instinctive way by using the simple keypads. In the rooms where a maximum control is not required, a universal infrared remote control is enough to operate the audio-visual equipment and the Lutron system, creating different scenes at the touch of a button.”

Up to 16 processors can be used in a HomeWorks Interactive system, with each one capable of controlling 256 separate lighting zones. The total capacity of 4,096 zones makes HomeWorks Interactive the ideal system for large and highly automated properties. In this installation, more than 130 circuits and 52 entries (doors, sensors, etc.) can activate from a minimum 16 scenes to multiple combinations.
Let me entertain you
In warmer months, the outdoor pool is the perfect sanctuary with its incredible fibre optic lighting system surrounding the perimeter. The Lutron system controls a preset programme which sees the water resistant lighting change chameleon-like through a series of vibrant colours to create an oasis of calm at the touch of a button. If required, the weatherproof sound system can be called upon to add a little more atmosphere.

If water’s not really your thing, then the basement houses a full specification dedicated home cinema, complete with a choice of screen options, (Plasma, widescreen TV and drop-down ceiling mounted projector) and comprehensive surround sound. Pressing play on the LCD display activates the chosen screen, starts the DVD movie and gradually initiates the ‘movie’ lighting scene to drop viewers right into the heart of the action.

With so many features, securing the property was as important as loading it up with the latest gadgetry, and the design team went to great lengths to ensure that the multifaceted security system was as easy to control as the main lighting system. The HomeWorks system works with an intruder alarm that has every point of entry covered, and controls exterior lighting on the approaches so that as soon as someone draws close, friend or otherwise, lighting is activated. In addition, should an intruder ever make it into the house, the control system initiates an alert mode, which includes a high level audible alarm signal and flashing lights throughout the property that can only be deactivated when the system is reset. Not an ideal welcome for burglars. In ‘vacation’ mode the lighting control system recreates a lived-in look while occupants are away, and can even reproduce a number of scenes at different times throughout the day and night for total peace of mind. It is hard to determine whether it is the technology that highlights the design with this property or vice versa, but either way, it certainly offers stylish, automated living.