

## Surveillance and the CORE System

**TLDR:** *In typical installations the CORE system should be treated by legislation as a CCTV system. The video resolution is low, so can't be used for ANPR or facial recognition etc. The system has robust security, all data is encrypted, and the cameras do not have any wireless capability. Although remote access to camera live views and recorded footage is very useful, it is possible to turn off all video feeds without affecting the fire detection capability, and doing so would mean that it is no longer a CCTV system.*

### CCTV or not CCTV?

The CORE system is a video fire detection system, and as such it uses live video feeds to recognise and detect fire. Depending on the way the system is set up, this means that it may need to be treated as a CCTV system for the purposes of UK legislation and could fall within the definition of video surveillance in most jurisdictions.

Advice regarding the EU General Data Protection Regulation, its UK implementation (The Data Protection Act 2018), and how these apply to CCTV systems, should be sought from the Information Commissioner's Office (ICO); please visit [ico.org.uk](http://ico.org.uk) for more information.

By default, each CORE camera provides a live video stream in RTSP format which is accessible from within the internal Ciqurix network. We strongly recommend that these live video feeds are made available remotely and are recorded using a suitable Network Video Recorder (NVR); this is the default set-up for the CORE system. Live video feeds are extremely useful during a fire event, they can be used to help distinguish any unwanted detections, and the recordings can be used for fire investigation as well as in rectification of any unwanted alarms.

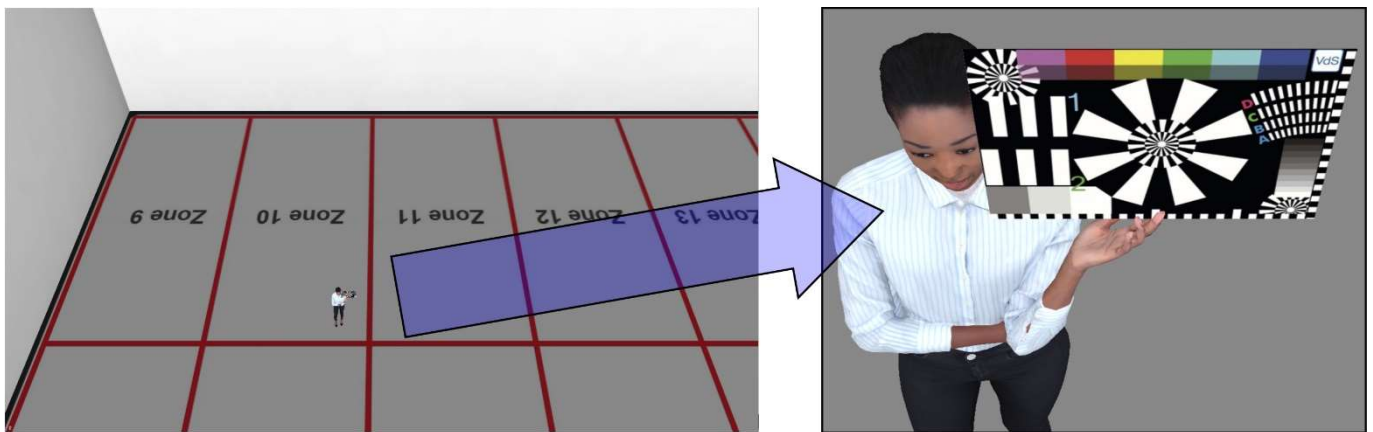
If the surveillance aspect of the system is a concern, three options are available:

1. **Disable recording.** It is perfectly possible to install a CORE system without recording capability. Fire detection would be unaffected, although subsequent investigation of any fires or unwanted detections would be made much harder.
2. **Disable live streams.** Because all video analytics are contained within the camera it is not necessary (for fire detection purposes) to transmit a video stream outside the camera itself. Once system commissioning is complete, a command can be sent to each camera to disable (or subsequently re-enable) the video feed. Fire detection by the CORE system would be unaffected, although it would deprive the end user of one of the significant benefits of using video fire detection.
3. **Permanently disable remote access.** If required, once a camera's video feed has been disabled it is possible to permanently delete remote access to the camera, meaning that the video feed cannot ever be turned back on without direct physical access to the inside of each camera. Fire events would still be sent to the Control Hub, and basic sensitivity changes would still be possible, but nothing else.

## Camera resolution

The CORE camera live video sensor is designed to provide the internal camera analytics with enough information to reliably detect fire. In comparison to a typical CCTV camera, which has been designed to capture video, the Ciqurix cameras are of relatively low resolution. As such they are unlikely to be able to legibly capture information from display screens, and are not suitable to be used for ANPR (vehicle number plate) or facial recognition purposes. Details of the live feed resolution for each camera and placement are available on request as part of the system design process. The below simulation shows the picture quality achieved at 20m from a typical CORE camera. In most cases the cameras are used at greater range than this, so the achieved resolution of the live feed would be even lower.

Figure 1: Example achieved resolution at 20m:



EN62676-4:2015 Test chart placed at 20m from camera



**Achieved resolution (enlarged)**  
**52 pixels per metre**

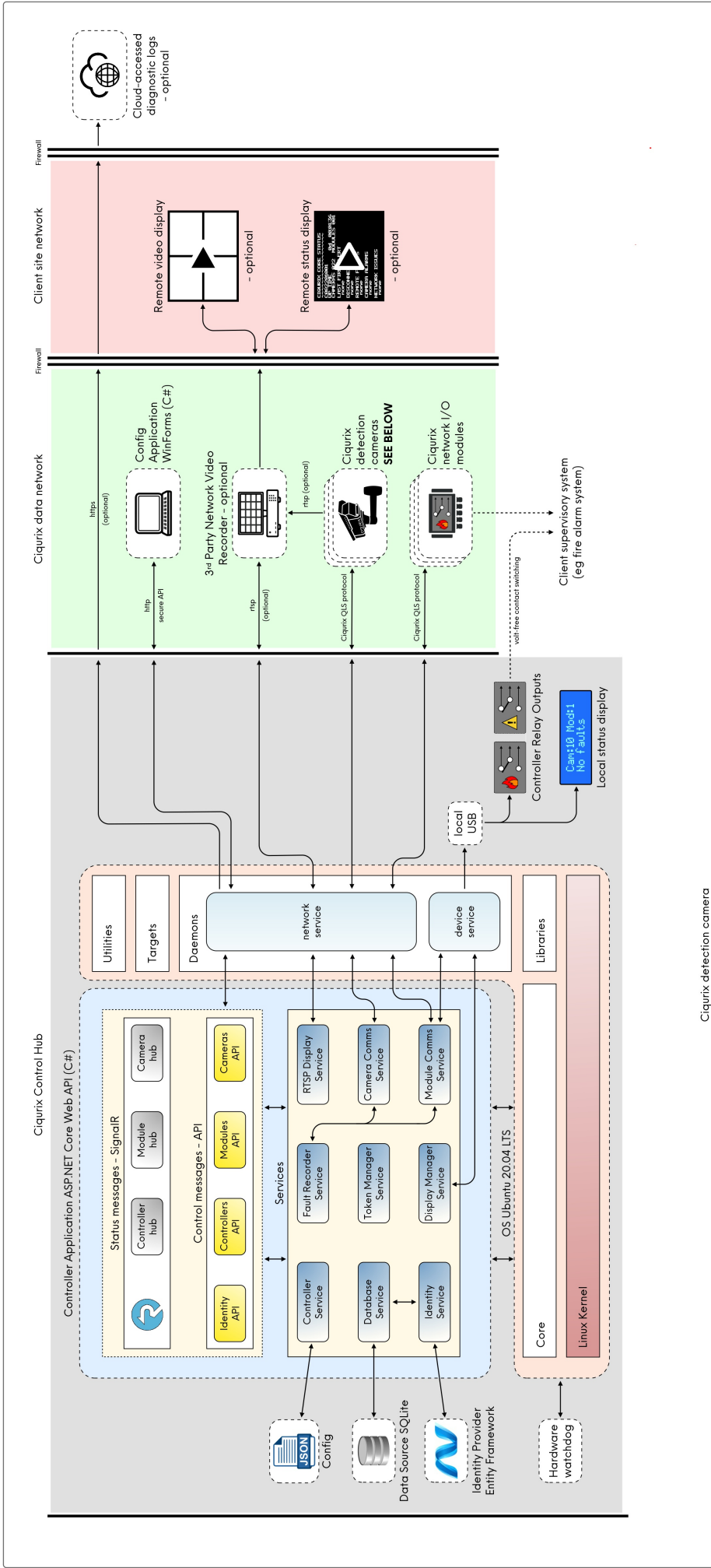
## Data Security

All parts of the CORE system communicate using a proprietary Ciqurix protocol which is protected and encrypted, and data security is robustly implemented. Each field device (e.g. CORE camera) is connected directly to a CORE Hub using a single cable without any in-field routing or switching. Each field device provides a unique ID to the CORE Control Hub and is individually identifiable.

None of the field devices, including cameras, have any wireless capability; it does not exist in their hardware. Hubs may be linked using wireless (WiFi) bridges if required; this is done using 3<sup>rd</sup>-party commercially available technology which meets all current security requirements. The Control Hub main processor board does have a theoretical WiFi capability but this is hardware disabled, does not have an antenna connected, and is located inside two separate screened enclosures. In tests even when the wireless chip was manually activated the signal was undetectable outside the Hub enclosure.

Where live video streams are used, the CORE system relies on 3<sup>rd</sup>-party video recording and transmission devices (eg NVR, VMS, Gateway etc) which have been selected by the installer or end-user. The security of these 3<sup>rd</sup>-party devices should be assessed by the installer or end-user as appropriate.

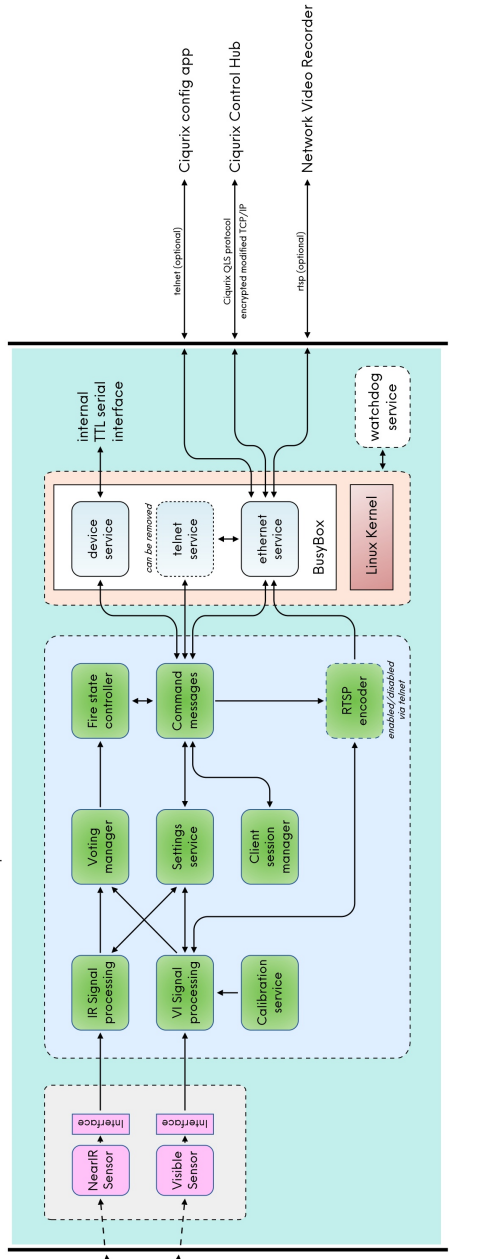
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