

## Installation case study:

Upgrade existing 13-camera PTZ CCTV analogue public space CCTV to Full HD IP, SilverNet & Siklu Wireless transmission and Videcom Luxriot powered VNR recording.

## Customer:

Scarborough Borough Council: Whitby Town Centre Digital CCTV Upgrade 2018, installation on-site phase 4 days, minimizing disruption in busy seaside town.

## Introduction:

Scarborough Borough Council engaged Videcom Security Ltd with the task to deliver proposals for an improved modern solution for the ageing & expensive to maintain analogue CCTV system installed within the picturesque Whitby town centre, a customer Videcom Security have successfully maintained for many years.

The existing CCTV solution consisted of 13 analogue shoebox cameras connected over traditional BT RS1000 fibre network within the town before being forwarded to the Scarborough CCTV control room over an additional BT multichannel link.

Videcom's task was to design a solution fit for purpose, to work and integrate with the new digital systems at Scarborough, reduce transmission costs and deliver savings on energy consumption.

The accepted solution design included a SilverNet 5.8 GHz wireless network combined with a Siklu high capacity 60GHz link as the main backhaul, this then enabled the installation of a mix of Dahua high definition PTZ domes & static cameras utilising existing camera mounts and columns.

Reusing CCTV camera columns and brackets helped manage project costs and with the installation of high definition 1080P and four MPixel cameras, we were able to vastly improve not only the image quality but also the fields of view from each location. By installing a mix of PTZ & static image varifocal cameras at each location we were able to more than double the "parked" fields of view and at deliver video at much higher resolutions. .

The planning process began by working with the customer to discuss the operational requirements and system delivery at each camera location, and during this negotiation phase, the camera specifications and models were agreed, along with the new transmission network.

## Equipment choice:

Videcom recommended tried and tested product partners.

- Dahua: Cameras HD PTZ and Static varifocal bullet.
- SilverNet: 5.8 GHz transmission
- Siklu: E-Band 60 GHz transmission
- Luxriot: Videcom VNR recording and Video Management

All the chosen products along with Videcom's own VNR platform are tried and tested robust solutions that deliver exceptional results in urban environments. From SilverNet resilience to RF interference in the congested 5GHz band, Siklu's small footprint 60GHz radio sets and Dahua image quality and built in infrared for lower light applications.

### System installation preparation & pre-planning:

**Camera sites:** All camera sites and wireless locations along with the main collection point were subject to pre-installation surveys and planning, including spectrum analysis and frequency allocation a few weeks before the start of installation works.

This enabled pre-planning each location, assigning frequencies, bandwidth and channel width along with IP ranges, security features and camera settings.

Property owners, who allow their buildings for camera installations, were included within the pre-planning and included in the upgrade journey. Through agreement and proper traffic planning, road closures, parking bay suspensions were all pre-planned helping reduce the impact of the works on local residents and the bustling tourist industry, a very important part of the local Whitby economy.

**The system:** Was pre-assembled at our workshops in Scunthorpe, with tests carried out on camera control and video streaming conformity through the wireless hardware and network switches. All this information documented to create OEM manuals and site support manuals.

### Installation:

**First Fix:** We attended the site late May for some pre-installation work at the wireless collection point along with installation of the 60 GHz Siklu back-haul link.

**The Installation:** The main system installation began mid-June with the system fully working, tested and commissioned by lunch on the fourth day. The works included installation of the local server and local system-viewing client within Whitby along with an additional video display PC installed within Scarborough control room for the viewing of the remote site.

**Installation Summary:** 22 new fixed HD CCTV Cameras, 9 HD PTZ Cameras connected over a new SilverNet UK manufactured 5 Ghz wireless and Siklu Backhaul, terminating onto a new unlimited channel Videcom VNR recording server in Whitby and remote viewing capability utilising 100 Mb broadband connection and VNR flexible video streaming technology.

The project gained council support as a "spend to save" initiative and the Videcom solution submitted enabled the CCTV team Scarborough Borough Council to demonstrate significant annual revenue savings, with the cost of the upgrade including revenue recovered within three years.