



Project Profile: HSBC

Customer: HSBC Rail (UK)
Project Type: Refurbishment
Operator: National Express
Franchisee: ONE
Train Owner: HSBC Rail (UK)
Train Mfg: Bombardier
Train Class: 315, 321, 322
Number of Trains: 61, 79, 5
Number of Cars: 4



System Overview

The CCTV system architecture is a common design for both the CI.322/321 and C.315 fleets.

TransitCam TC-100 is provided in an 8-input version with additional forward view input card, making it suitable for low-end rail, light-rail vehicle and bus applications. It is housed in a single compact enclosure equivalent to a 4U form factor. There are two TransitCam TC-100 units installed in each 4-car unit. Each DVR records the following cameras:

Fleet	Forward View Cameras	Saloon Cameras
CI. 315	2	4
CI. 321/322	2	5

Separate hard drives are provided in each unit for the recording of forward view and saloon camera footage. Cameras are provided in the following configuration:

Fleet	Forward View	Saloon Camera 1	Saloon Camera 2	Saloon Camera 3	Saloon Camera 4	Saloon Camera 5
CI.315	Bulkhead, 8mm	Dome, 8mm	Dome, 8mm	Dome, 8mm	Dome, 8mm	N/A
CI.322/321	Bulkhead, 8mm	Bulkhead, 4.3mm	Bulkhead, 8mm	Dome, 8mm	Dome, 8mm	Bulkhead, 8mm



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Project Features

- High quality, full color, digital hardware MPEG-4 image compression
- Capture rate of 12.5 frames per second per saloon camera
- Capture rate of 25 frames per second per forward view camera
- Resolution of 2CIF
- Dual Hard Disk Drives with Ethernet streaming of forward view cameras for redundant storage
- 168 hours of data storage per HDD
- Isolated RS-232 diagnostics and service port (PSU)
- Storage media operates in overwrite mode with older files being overwritten by current video records
- Local LCD text status display for diagnostics and service
- 12 Video inputs, 5 camera configuration
- Internal battery-backed clock calendar maintains time and date while power is off and where PIS signal or GPS is not available. Clock calendar is automatically synchronized when PIS signal or GPS is next available
- Integrated, 480 line color camera units, electrically isolated, incorporated housing



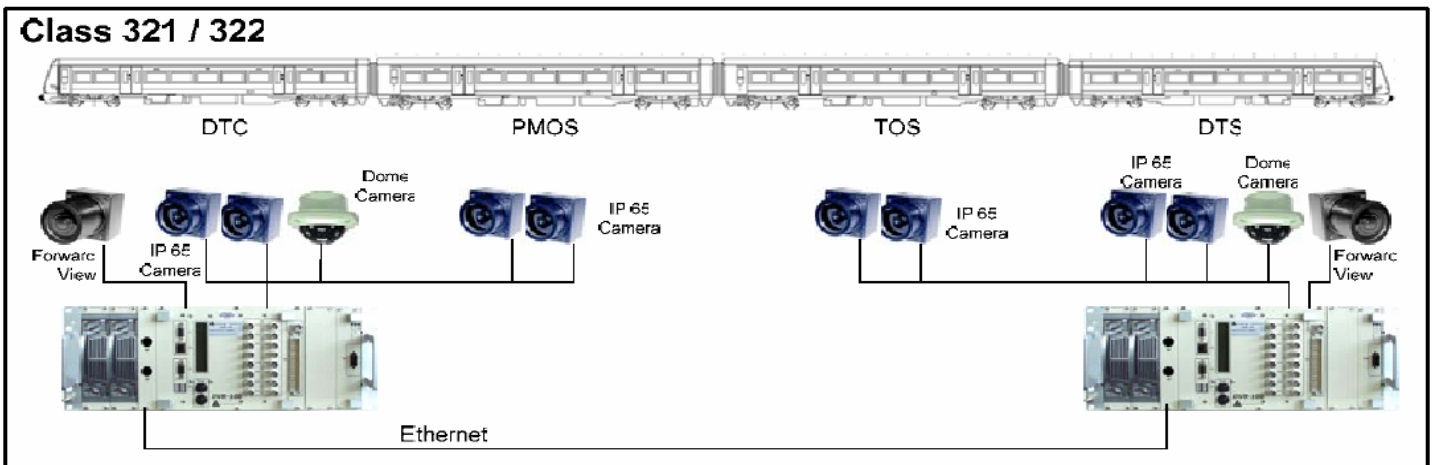
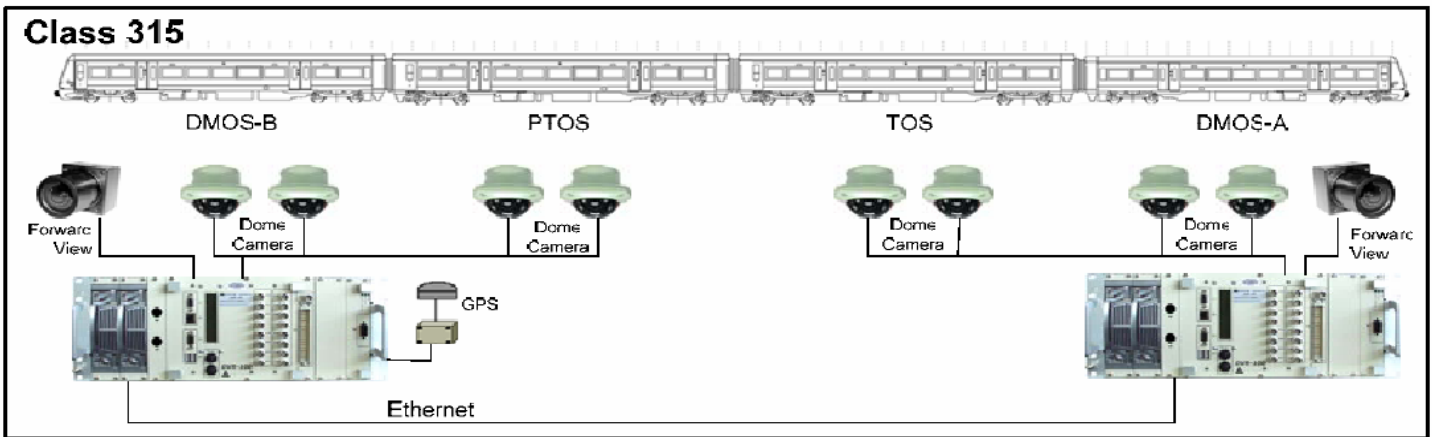
TransitCam TC-100



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System Architecture



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