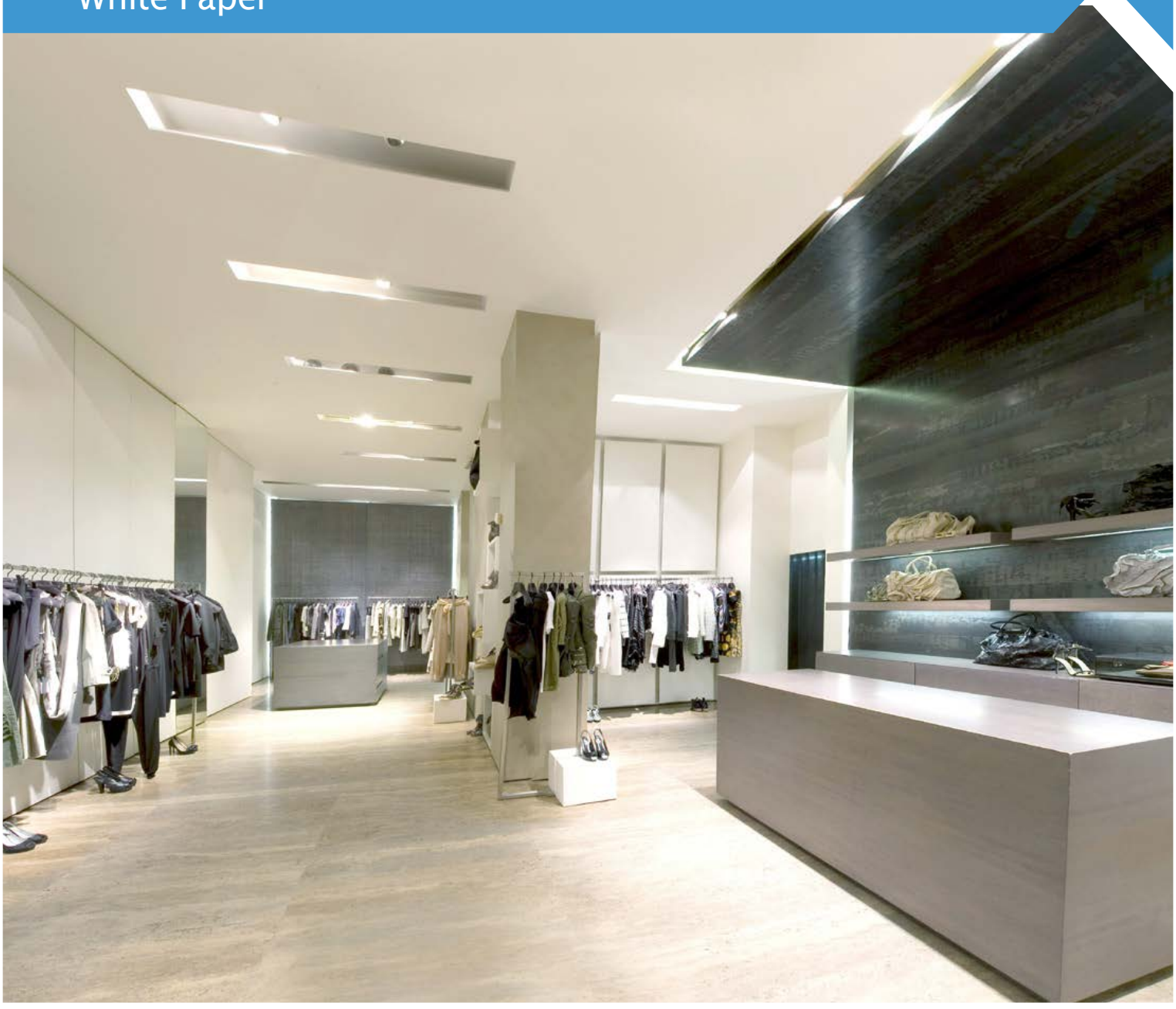
Split Core/Camera Front-end Surveillance Solutions

White Paper



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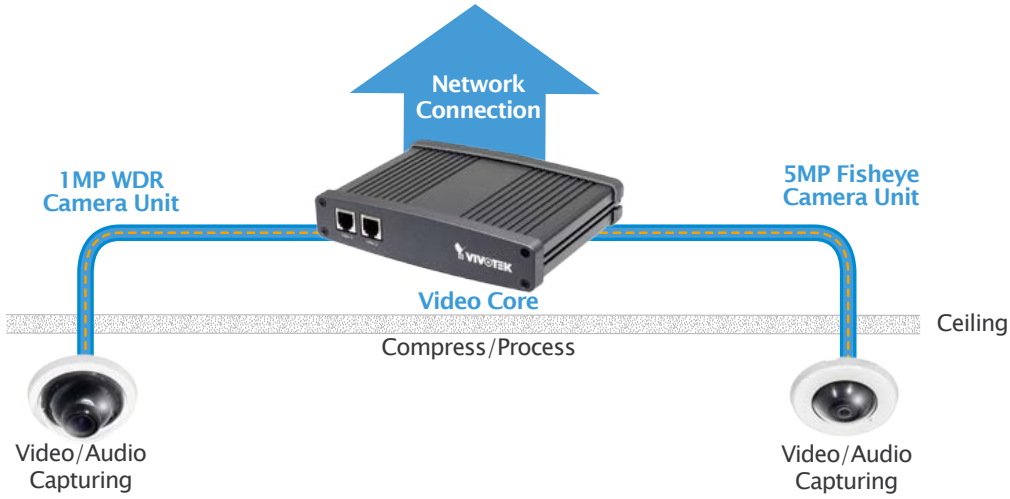
Overview

The groundbreaking VC8201 system exemplifies an innovative approach to surveillance front-end solutions that separates the video processing core and camera units. The physically independent core unit handles video processing tasks such as storage, compression, and interfacing with the network, and can connect to either one or, more interestingly, two independent camera units.

This split core/camera approach provides a number of advantages over conventional designs, including the ability to support multiple camera types in a single installation, more discreet camera appearance, simpler installation, greater implementation flexibility, easy camera replacement or upgrades, and lower total cost of ownership. Together, these advantages enable a superior solution for established and emerging security applications.



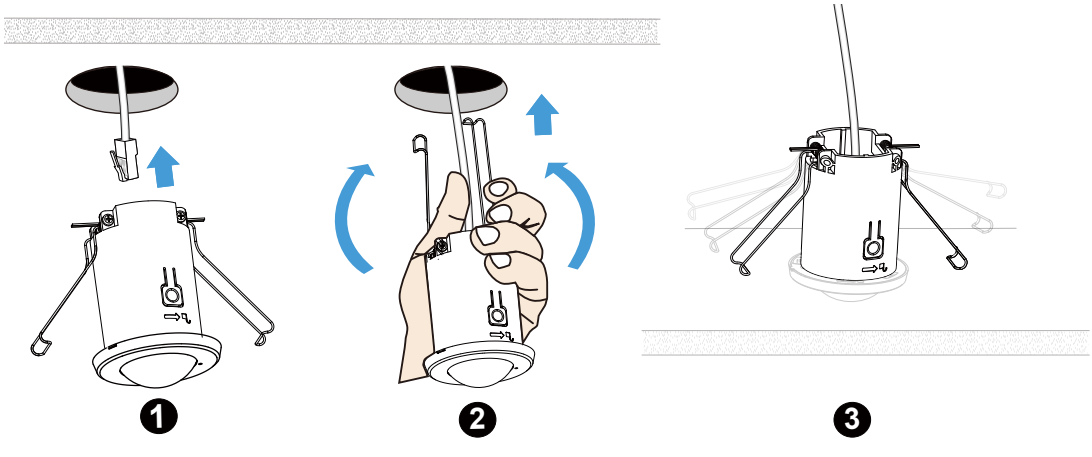
Benefits

• Flexible Configuration

The VC8201 supports up to two cameras, which can be of the same or different types, providing unprecedented flexibility. Two cameras can be used to monitor physically partitioned spaces such as adjoining rooms, a single large space, or to provide different types of views simultaneously, among other possible usage scenarios.

• Simplified Installation

The support for two cameras with a single network-connected video core that would require two separate network-connected devices in a more conventional design reduces installation time and costs. In addition, the CU8131 and CU8171 cameras currently available for use with the VC8201 system offer a special self-locking mechanism that secures them into place without the need for screws.



• Less Cabling

Each camera unit is connected to the core unit via a single cable that supplies power, and transmits both video data and audio from built-in microphones on the CU8131 and CU8171.

• Greater Coverage

Each of the two camera units that can be connected to the core unit can be positioned up to 8 meters away. The 8-meter cable length allows a larger area to be monitored with a single installation, in addition to the greater coverage that two camera units can of course provide.

• More Compact Cameras

By separating out processing tasks to the core unit, the camera units themselves can adopt a more compact, lighter design. This feature makes them ideal for locations such as structurally weak ceilings or in vehicles, where bulkier cameras present installation challenges.

• More Discreet Appearance

The smaller camera form factor enabled by the split core/camera design also allows a less obtrusive appearance where there are aesthetic concerns or to reduce the risk of opportunistic tampering or vandalism.

• Easier Maintenance and Upgrades

The modular design of the VC8201 makes removing individual camera units for maintenance or replacement extremely easy. Moreover, upgrades can also be easily accomplished, since they need only involve swapping out of a camera unit and not replacement of the entire system.

• Lower Total Cost of Ownership

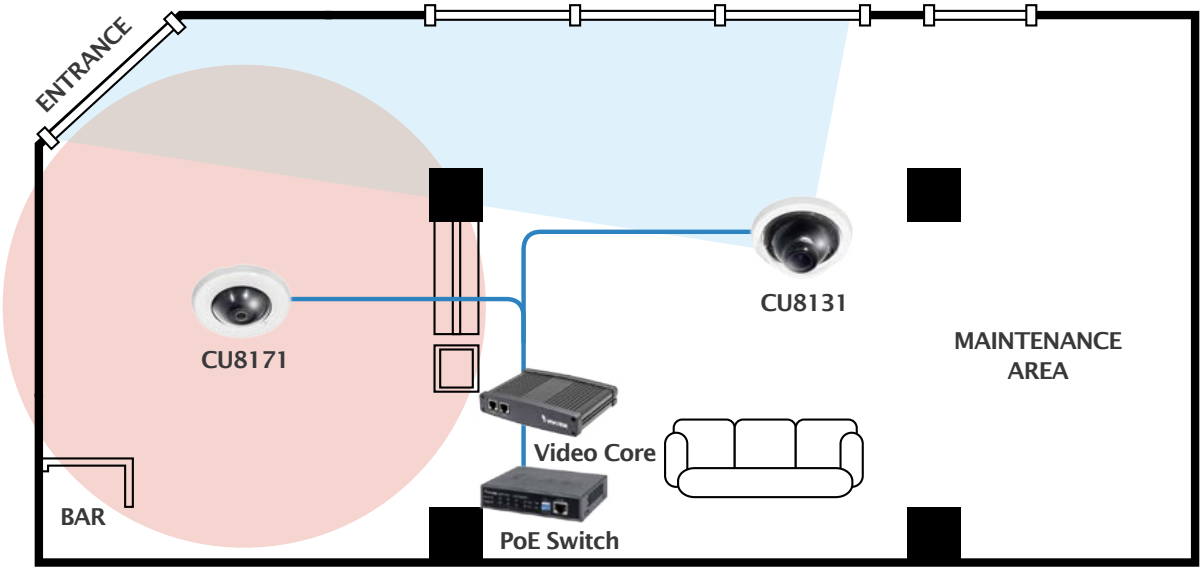
The VC8201's support for the functionality of two cameras in a single system makes it more cost-effective. The VC8201's use of a single IP address and Ethernet port can also mean lower license fees for some third-party video management software. Together with reduced costs in areas such as cabling, installation, and maintenance, these features mean the VC8201 can offer a lower total cost of ownership.

Usage Scenarios

The following examples use a motorcycle shop that combines a retail space with a work area where repairs are performed to illustrate how the flexibility of the VC8201's split core/camera design can leveraged to suit different application requirements.

• Scenario #1: Combining a WDR Camera and a Fisheye Camera

With a single installation of the VC8201, the shop can monitor its retail area using a fisheye camera unit, while the main entrance could be monitored with a wide dynamic range camera unit so that image quality is not affected by the high-contrast lighting conditions.



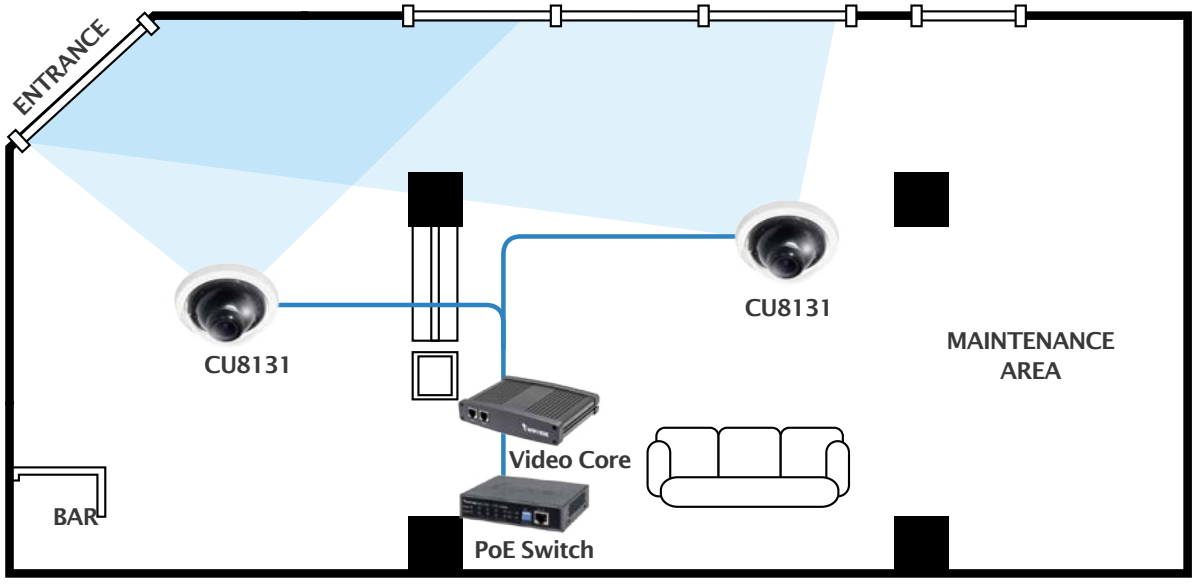
MOTORCYCLE SHOP

CU8171

CU8131

• Scenario #2: With Two WDR Cameras

Alternatively, two cameras with wide dynamic range capabilities, one for the main entrance and another for the side entrance, could be used if the focus of security is on points of access to the store.



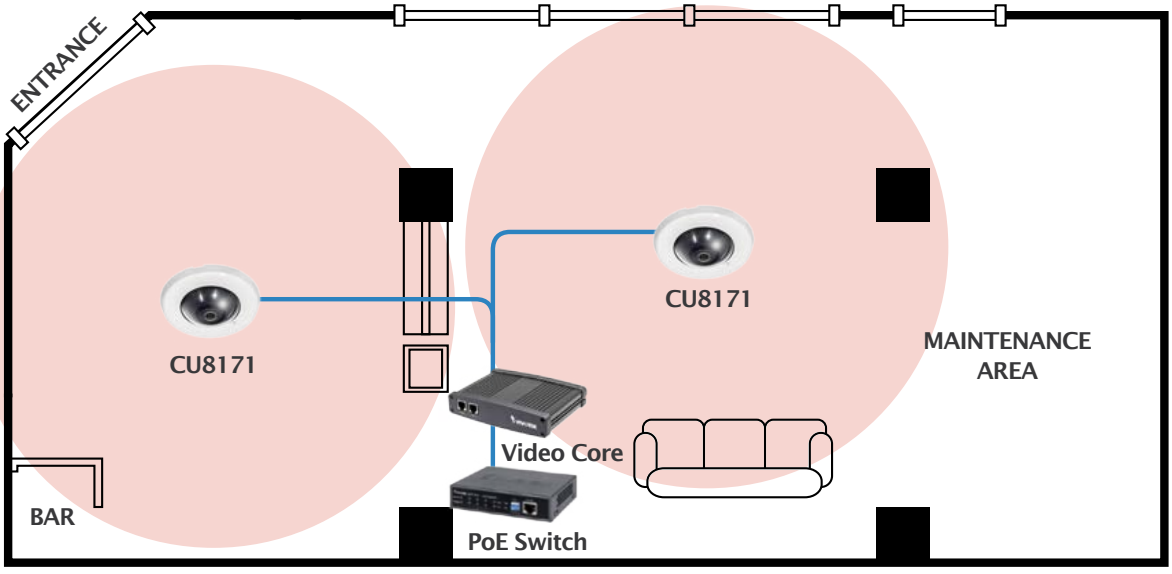
MOTORCYCLE SHOP

CU8131

CU8131

● Scenario #3: With Two Fisheye Cameras

To provide comprehensive monitoring of two physically partitioned spaces, the retail and the work areas, a pair of fisheye cameras provide views of the entirety of both without blind spots.



MOTORCYCLE SHOP

CU8171

CU8171

Conclusions

The VC8201, as VIVOTEK's implementation of the split core/camera design, evinces an effort to realize the full potential benefits of this approach. It currently supports not just one, but two camera units, and already offers two different camera types—a fisheye model and high-definition WDR model—for use with the core unit. Furthermore, VIVOTEK is continuing to develop additional camera units for use with VC8201 to accommodate even highly specific requirements of a full spectrum of security applications.

The VC8201 not only provides the obvious advantages of the split core/camera design—outlined above and including simplified installation, flexible configuration, and easier maintenance and upgrades—but was engineered to accentuate and make the most of these advantages, making it an ideal front-end surveillance solution for indoor locations such retail stores, offices, and exhibition spaces, as well for vehicles.

Vehicle

Retail

Gallery

Office

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