TRENDnet®

IP Camera, VortexIP Camera Software, Fiber and PoE Switch Solutions

"TRENDnet was the only brand that offered a complete end-to-end solution to meet our security needs. Products involved in this complex project included Fiber products for building-to-building networking, Power over Ethernet switches, IP cameras and server-based camera management software. TRENDnet was chosen for their high product quality, competitive pricing and broad product portfolio."

Vishvas Chitale
Director of Chitale Dairy

Challenge
To provide comprehensive video security surveillance of facilities and manufacturing processes for Chitale Dairy's 50 acre factory campus.

Solution
The deployment of TRENDnet Fiber switches to network over a dozen buildings to a central monitoring station. Within each building, TRENDnet PoE switches were networked to PoE Splitters, that were in turn connected to SecurView Day/Night Pan/Tilt Internet Cameras. The cameras were managed and monitored with TRENDnet VortexIP Pro 64 Surveillance Software along with a 20 unit expansion module to manage up to 84 cameras.

SecurView Day/Night Pan/Tilt Internet Camera
TV-IP422

TRENDnet VortexIP Pro 64 Surveillance Software
VIP-P64

End-to-End TRENDnet Security Monitoring Solution Secures 50 Acre Chitale Dairy Factory

The Challenge
Established in 1939, Chitale Dairy processes approximately 400,000 liters of milk per day to manufacture products such as cream, butter and yogurt. Chitale Dairy is based in the state of Maharashtra, located in southwestern India, and maintains a workforce in excess of 1,000 employees. Manufacturing is centralized on a 50 acre factory campus that accommodates over a dozen buildings for processing, storage and distribution of dairy products.

The 50 Acre complex had rudimentary security posts at primary entry points. "We had a need for video surveillance of not only key campus access points, but also of each building within the campus, select manufacturing lines and sensitive work areas," stated Vishvas Chitale, Director of Chitale Dairy.

"We identified the need for 82 surveillance cameras for a phase 1 installation, with the option of installing up to 64 additional cameras for a potential phase 2 installation."

Chitale Dairy weighed the options between traditional Closed Circuit Television (CCTV) and newer Internet Protocol (IP) Camera installations. As the name suggests, CCTV solutions are stand alone installations. Video from a CCTV installation cannot be accessed from the Internet and is usually stored in a cumbersome DVD format. IP camera solutions build from an existing networking backbone to provide real-time access, management and control of streaming video from any Internet connection. Other key features not offered by CCTV solutions include motion detection recording, advanced recording schedules, advanced storage and remote camera controls.

Chitale Dairy noted the clear advantages offered by IP Cameras and proceeded to secure project bids from several brands. The project's scope involved much more than the installation of IP cameras—additional networking hardware products and a robust server-based software solution were required to complete the 50 acre build-out.
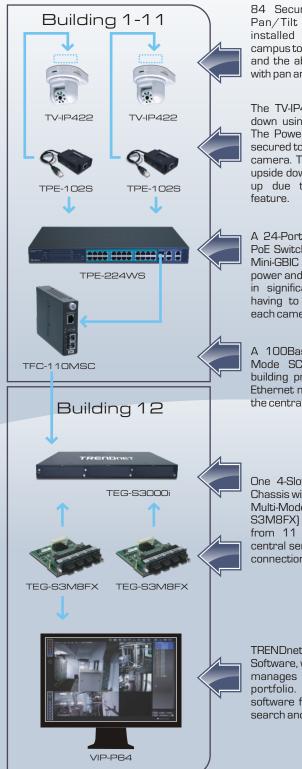
The Solution
Chitale Dairy received bids from several brands and performed detailed product hardware testing for each submission. "Our hardware testing revealed that spec-to-spec, TRENDnet products were as good or better than competing solutions. To our surprise, TRENDnet was the only manufacturer that could build out this project exclusively from their product portfolio," stated Vishvas Chitale, Director of Chitale Dairy. "Having a single source for all products and a total bid price 25% below competing offers made our decision to go with TRENDnet an easy one."

IP Camera, VortexIP Camera Software, Fiber and PoE Switch Solutions

Building 1-11

TV-IP422

TV-IP422

TPE-102S

TPE-102S

TPE-224WS

TFC-110MSC

Building 12

TEG-S3000i

TEG-S3M8FX

TEG-S3M8FX

VIP-P64

84 SecurView Wireless Day/Night Pan/Tilt Internet Cameras were installed throughout the 50 acre campus to provide day and night security and the ability to monitor a large area with pan and tilt functionality.

The TV-IP422s were mounted upside down using the included mounting kit. The Power over Ethernet Splitter was secured to the flat bottom-surface of the camera. The streaming video from the upside down cameras appear right side up due to the camera's flip-image feature.

A 24-Port 10/100Mbps Web Smart PoE Switch with 4 Gigabit Ports and 2 Mini-GBIC Slots in each building delivers power and data to IP cameras, resulting in significant cost savings from not having to extend electrical outlets to each camera installation site.

A 100Base-TX to 100Base-FX Multi Mode SC Fiber Converter in each building provides a highly secure Fast Ethernet networked connection back to the central server.

One 4-Slot Gigabit Layer 2 Managed Chassis with two 8-Port 100Base-FX SC Multi-Mode Fiber Modules (model TEG-S3M8FX) networked camera feeds from 11 buildings to Chitale Dairy's central server, using highly secure fiber connections.

TRENDnet VortexIP Pro 64 Surveillance Software, with a 20 unit expansion pack, manages the facilities entire camera portfolio. This robust server-based software features advanced recording, search and motion detection features.

TRENDnet's 4-Slot Gigabit Layer 2 Managed Chassis (model TEG-S3000i) with two 8-Port 100Base-FX SC Multi-Mode Fiber Modules (model TEG-S3M8FX) was installed on Chitale Dairy's central server rack. Fiber cables were then installed from this chassis out to a 100Base-TX to 100Base-FX Multi Mode SC Fiber Converters (model TFC-110MSC) in each respective building. Depending on the number of cameras required for each building, the TFC-110MSC was networked to either a 8-Port Gigabit Web Smart PoE Switch (model TPE-80WS) or a 24-Port 10/100Mbps Web Smart PoE Switch (model TPE-224WS). The PoE switch supplied both power and data through Cat 5 cables that ran to the desired IP Camera locations. At each IP Camera location, TRENDnet's Power over Ethernet Splitter (model TPE-102S) split the power and data and connected to a SecurView Wireless Day/Night Pan/Tilt Internet Camera (model TV-IP422W). Server-based TRENDnet VortexIP Pro 64 software, with a 20 unit expansion pack, was installed on the central server and used to manage, monitor and control the 82 installed cameras.

The Result

"TRENDnet's complete security monitoring solution has proved invaluable to Chitale Dairy operations. Evidence from IP Camera recordings have contributed to the resolution of two incidences within the first month of the installation alone," stated Vishvas Chitale, Director of Chitale Dairy. "The motion detection recording feature is particularly useful and we are pleased with the decision to install all Pan/Tilt Day/Night cameras. We can control the pan/tilt functionality of each camera from the central security post in real time and night vision from all cameras provides a tremendous security boost for us at night."