



# Driving Operational Excellence and Efficiency in Smart FMCS Center

## Overview

The global leading electronics manufacturing services (EMS) company built an intelligent Factory Monitoring and Control System (FMCS) center to centrally monitor and manage the operational status of its entire facility. To support this initiative, the organization required a reliable solution that could clearly present critical operational information and enable instant access for timely and precise analysis within the monitoring center.

To meet these needs, Zyxel Networks provided a high-performance network backbone, partnering with Cypress Technology to deliver a comprehensive AV over IP solution. The integrated network ensures low-latency, high-quality audiovisual transmission, scalable expansion, and centralized management, enabling efficient, safe, and stable facility operations.

## Challenges

The FMCS center consolidated data and alerts from multiple subsystems, including power, air conditioning, water treatment, gas supply, and clean room environments, into a single automated control platform. With real-time monitoring, multi-system integration, data analytics, and anomaly alert capabilities, the goal was to achieve greater operational efficiency, reduced operating costs, and enhanced facility safety and stability.

As the FMCS monitoring center took shape, several technical challenges emerged. High-resolution audio and video transmission placed large demands on network bandwidth and stability, as even minor latency or packet loss could result in visual stuttering or degraded image quality. Besides, real-time applications required ultra-low latency to maintain precise audio and video synchronization for professional meetings and operational briefings. The system also needed to support future expansion without extensive rewiring or infrastructure changes. In addition, true 4K60 AVoIP visualization depended on a video wall that can support multiple layouts to adapt to diverse operational scenarios.

### Customer

Leading EMS Company

### Industry

Manufacturing

### Location

Taiwan

### Partner

Cypress Technology

## Customer Background

The leading electronics manufacturing services (EMS) company provides advanced electronic product design, manufacturing, and assembly across many industries, including computing, communications, consumer electronics, and electric vehicle components. To stay ahead of increasingly demanding quality and delivery expectations, the company keeps investing in emerging technologies, and strengthening smart manufacturing capabilities and green production across its global operations.

