

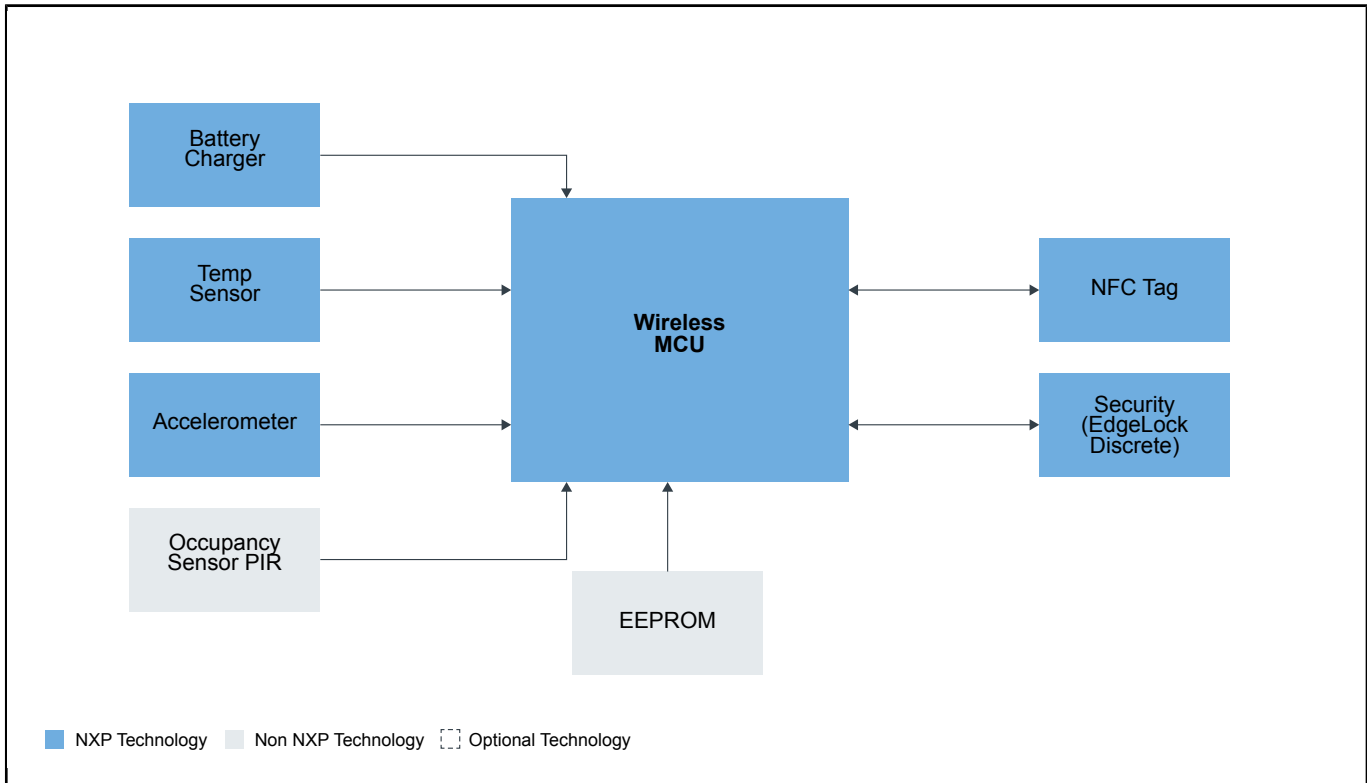


Building Security and Surveillance

Last Updated: Dec 19, 2024

NXP's wide portfolio offers a number of options for buildings security solutions. Our wireless MCUs are the choice when a battery-powered, occupancy sensor or a surveillance low-power system is required. The cost-effective crossover i.MX RT MCUs offer a great solution for video processing and data management for wireless IP video cameras. NXP's WIFI 6 modules ensure low latency and high-quality connection for IP cameras solutions.

Wireless Occupancy Sensor Block Diagram

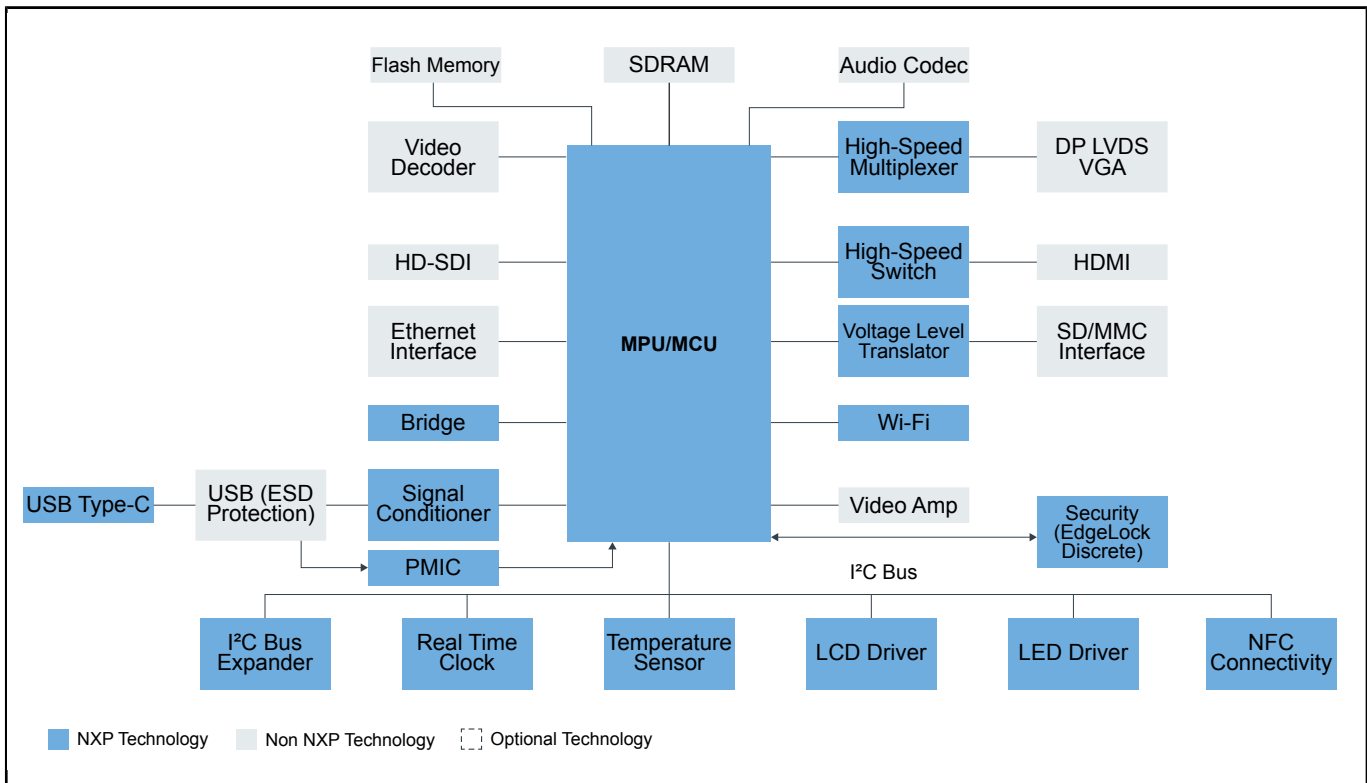


Recommended Products for Wireless Occupancy Sensor

Wireless MCU	<ul style="list-style-type: none"> • MCX A13x, 14x, 15x MCUs with Arm® Cortex® M33, Scalable Device Options, Low Power and Intelligent Peripherals • MCX-N94X-N54X: MCX N94x/54x Highly Integrated Multicore MCUs with On-Chip Accelerators, Intelligent Peripherals and Advanced Security • JN5189_88_T: JN5189/88 (T): High-Performance and Ultra-Low-Power MCUs for Zigbee® and Thread with Built-In NFC Option • QN9090-30: QN9090/30: Bluetooth Low-Energy MCU with Arm®Cortex®-M4 CPU, Energy Efficiency, Analog and Digital Peripherals and NFC Tag Option • RW610: Wireless MCU with Integrated Radio: 1x1 Wi-Fi® 6 + Bluetooth® Low Energy 5.4 Radios • RW612: Wireless MCU with Integrated Tri-radio: 1x1 Wi-Fi® 6 + Bluetooth® Low Energy 5.4 / 802.15.4
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Battery Charger	<ul style="list-style-type: none"> • BC3770: 2 A Switch-Mode Li-ion/Li-polymer Battery Charger
NFC Tag	<ul style="list-style-type: none"> • NTAG5-LINK: NTAG® 5 Link: NFC Forum-Compliant I²C Bridge for IoT on Demand
Temperature Sensor	<ul style="list-style-type: none"> • P3T1035xUK: I3C, I²C-Bus, ±0.5 °C Accuracy, Digital Temperature Sensor • P3T2030xUK: I3C, I²C-Bus, 2.0 °C Accuracy, Digital Temperature Sensor • PCT2202UK: Ultra-Low-Power, 1.8 V, 1 Deg. C Accuracy, Digital Temperature Sensor with I²C-Bus Interface • LM75B: Digital Temperature Sensor and Thermal Watchdog
Security (EdgeLock Discrete)	<ul style="list-style-type: none"> • SE050: EdgeLock® SE050: Plug and Trust Secure Element Family – Enhanced IoT Security with High Flexibility • SE051: EdgeLock® SE051: Proven, Easy-to-Use IoT Security Solution with Support for Updatability and Custom Applets
Accelerometer	<ul style="list-style-type: none"> • FXLS8971CF: ±2g/±4g/±8g/±16g, Low Power 12-Bit Digital Accelerometer • FXLS8974CF: ±2g/±4g/±8g/±16g, Low-Power 12-Bit Digital IoT Accelerometer

IP Camera Surveillance Block Diagram

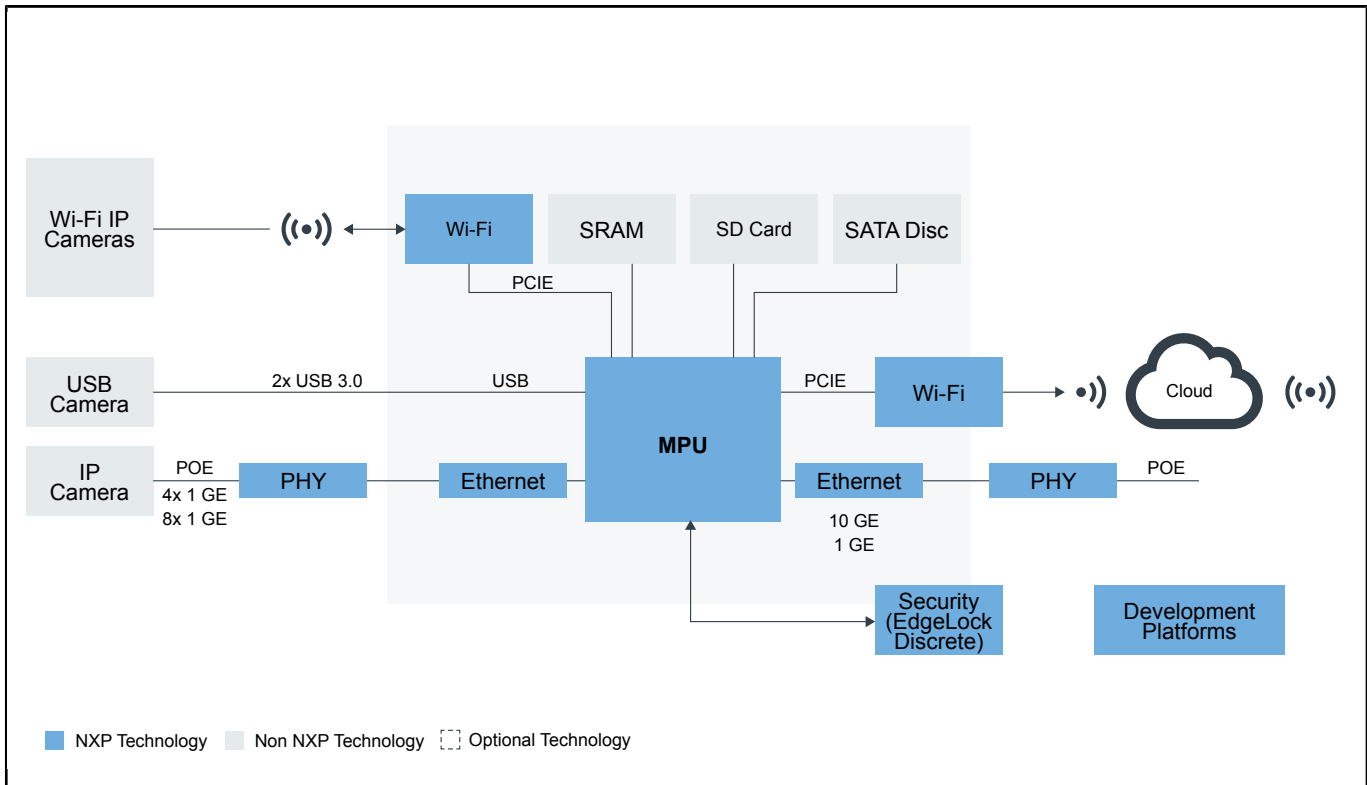


Recommended Products for IP Camera Surveillance

MPU/MCU	<ul style="list-style-type: none"> • MCX A13x, 14x, 15x MCUs with Arm® Cortex® M33, Scalable Device Options, Low Power and Intelligent Peripherals • MCX-N94X-N54X: MCX N94x/54x Highly Integrated Multicore MCUs with On-Chip Accelerators, Intelligent Peripherals and Advanced Security • i.MX 8 Applications Processors: i.MX 8 Series Applications Processors Multicore Arm® Cortex® Processors • i.MX7ULP: i.MX 7ULP Family, Ultra-Low-Power with Graphics • i.MX-RT1060: i.MX RT1060: Crossover MCU with Arm® Cortex®-M7
NFC Connectivity	<ul style="list-style-type: none"> • NTAG5-LINK: NTAG® 5 Link: NFC Forum-Compliant I²C Bridge for IoT on Demand • NTAG5-BOOST: NTAG® 5 Boost: NFC Forum-Compliant I²C Bridge for Tiny Devices

Wireless MCU	<ul style="list-style-type: none"> • 88W9098: 2.4/5 GHz Dual-Band 2x2 Wi-Fi® 6 (802.11ax) + Bluetooth® 5.3 • IW611: 2.4/5GHz Dual-band 1x1 Wi-Fi® 6 (802.11ax) + Bluetooth® 5.4 Solution • IW612: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 6 (802.11ax) + Bluetooth® 5.4 + 802.15.4 Tri-Radio Solution • IW620: 2.4/5 GHz Dual-Band 2x2 Wi-Fi® 6 (802.11ax) + Bluetooth® 5.1 Solution • IW416: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 4 (802.11n) + Bluetooth® 5.2 Solution
Voltage Level Translator	<ul style="list-style-type: none"> • NTS0304E: 4-Bit Dual-Supply Translating Transceiver (Open-Drain, Auto-Direction Sensing) • GTL2014PW: 4-Bit LVTTTL-to-GTL Transceiver
High-speed Multiplexer	<ul style="list-style-type: none"> • CBTL04083A_CBTL04083B: 3.3 V, Four Differential Channel, 2-1 Multiplexer/Demultiplexer Switch for PCI Express Gen3 • CBTL06DP213EE: Third Generation High-Performance DisplayPort Multiplexer • CBTL08GP053EV: USB Type-C High-Performance Crossbar Switch IC
LED Driver	<ul style="list-style-type: none"> • PCA9624: 8-Bit Fm+ I²C-Bus 100 MA 40 V LED Driver
LCD Driver	
Real-time Clock	<ul style="list-style-type: none"> • PCA8565: Real-Time Clock/Calendar
Temperature Sensor	<ul style="list-style-type: none"> • P3T1035xUK: I3C, I²C-Bus, ±0.5 °C Accuracy, Digital Temperature Sensor • P3T2030xUK: I3C, I²C-Bus, 2.0 °C Accuracy, Digital Temperature Sensor • PCT2202UK: Ultra-Low-Power, 1.8 V, 1 Deg. C Accuracy, Digital Temperature Sensor with I²C-Bus Interface • LM75B: Digital Temperature Sensor and Thermal Watchdog
I2C Bus Expander	<ul style="list-style-type: none"> • General Purpose I/O (GPIO): General Purpose I/O (GPIO)
USB Type-C	<ul style="list-style-type: none"> • PTN5110: USB PD TCPC PHY IC • PTN5150: CC Logic for USB Type-C Applications
High-speed Switch	<ul style="list-style-type: none"> • CBTL08GP053EV: USB Type-C High-Performance Crossbar Switch IC • CBTL06DP213EE: Third Generation High-Performance DisplayPort Multiplexer • CBTL06GP213EE: Second Generation High-Performance General Purpose Switch
Signal Conditioner	<ul style="list-style-type: none"> • PTN36043x: USB Type-C SuperSpeed Active Switch • PTN36502: Type-C USB 3.1 Gen 1 and DisplayPort V1.2 Combo Redriver
Bridge	<ul style="list-style-type: none"> • Bridges: Bridge IC Solutions
Security (EdgeLock Discrete)	<ul style="list-style-type: none"> • SE050: EdgeLock® SE050: Plug and Trust Secure Element Family – Enhanced IoT Security with High Flexibility • SE051: EdgeLock® SE051: Proven, Easy-to-Use IoT Security Solution with Support for Updatability and Custom Applets • EDGELOCK-A5000: EdgeLock® A5000 Plug and Trust Secure Authenticator: Authentication Made Secure, Scalable and Easy
PMIC	<ul style="list-style-type: none"> • PCA9460: 13-Channel Power Management Integrated Circuit (PMIC) for Ultra Low Power Application

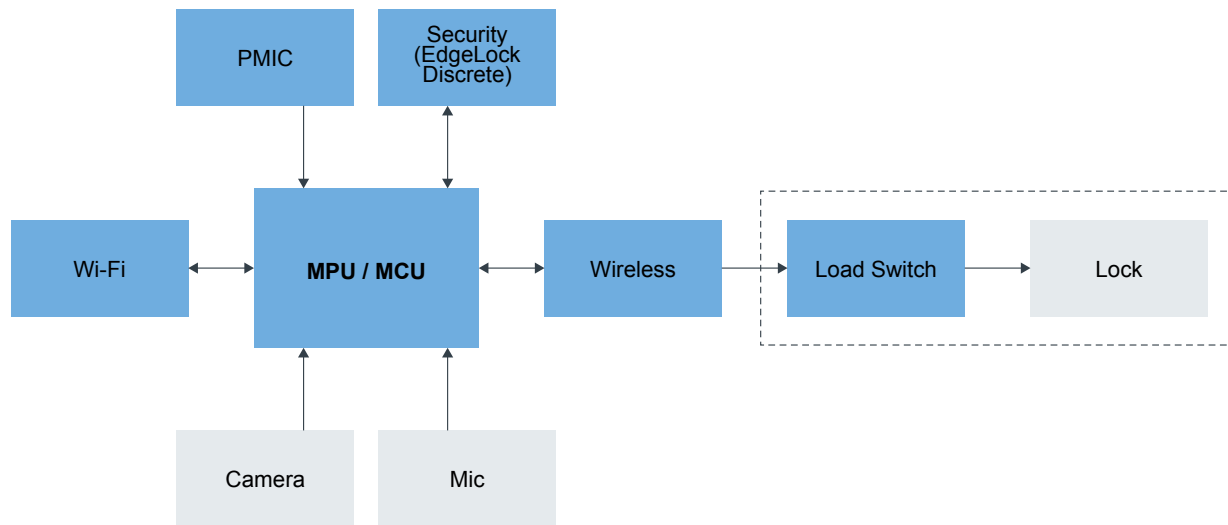
Surveillance System Block Diagram



Recommended Products for Surveillance System

Layerscape SoC	<ul style="list-style-type: none"> • LS1046A: Layerscape® 1046A and 1026A Processors • LX2160A: Layerscape® LX2160A, LX2120A, LX2080A Processors
Development Platforms	<ul style="list-style-type: none"> • eIQ ML Development Environment: eIQ® ML Software Development Environment
Ethernet PHY	<ul style="list-style-type: none"> • F104S8A: F104S8A Four-port Gigabit Ethernet Copper PHY
Security (EdgeLock Discrete)	<ul style="list-style-type: none"> • SE050: EdgeLock® SE050: Plug and Trust Secure Element Family – Enhanced IoT Security with High Flexibility • SE051: EdgeLock® SE051: Proven, Easy-to-Use IoT Security Solution with Support for Updatability and Custom Applets
Wi-Fi	<ul style="list-style-type: none"> • 88W9098: 2.4/5 GHz Dual-Band 2x2 Wi-Fi® 6 (802.11ax) + Bluetooth® 5.3 • IW611: 2.4/5GHz Dual-band 1x1 Wi-Fi® 6 (802.11ax) + Bluetooth® 5.4 Solution • IW612: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 6 (802.11ax) + Bluetooth® 5.4 + 802.15.4 Tri-Radio Solution • IW620: 2.4/5 GHz Dual-Band 2x2 Wi-Fi® 6 (802.11ax) + Bluetooth® 5.1 Solution
Ethernet PHY	<ul style="list-style-type: none"> • F104S8A: F104S8A Four-port Gigabit Ethernet Copper PHY

Video Doorbell Block Diagram



■ NXP Technology ■ Non NXP Technology □ Optional Technology

Recommended Products for Video Doorbell

MCU/MPU	<ul style="list-style-type: none"> • MCX A13x, 14x, 15x MCUs with Arm® Cortex® M33, Scalable Device Options, Low Power and Intelligent Peripherals • MCX-N94X-N54X: MCX N94x/54x Highly Integrated Multicore MCUs with On-Chip Accelerators, Intelligent Peripherals and Advanced Security • i.MX8MMINI: i.MX 8M Mini - Arm® Cortex®-A53, Cortex-M4, Audio, Voice, Video • i.MX-RT1170: 1 GHz Crossover MCU with Arm® Cortex® Cores
PMIC	<ul style="list-style-type: none"> • PCA9450: Power Management IC (PMIC) for i.MX 8M Mini/Nano/Plus • PF81-PF82: 12-Channel Power Management Integrated Circuit (PMIC) for High-Performance Processing Applications • PCA9460: 13-Channel Power Management Integrated Circuit (PMIC) for Ultra Low Power Application
Wi-Fi	<ul style="list-style-type: none"> • 88W8987: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.2 Solution • IW416: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 4 (802.11n) + Bluetooth® 5.2 Solution • RW610: Wireless MCU with Integrated Radio: 1x1 Wi-Fi® 6 + Bluetooth® Low Energy 5.4 Radios • RW612: Wireless MCU with Integrated Tri-radio: 1x1 Wi-Fi® 6 + Bluetooth® Low Energy 5.4 / 802.15.4 • IW612: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 6 (802.11ax) + Bluetooth® 5.4 + 802.15.4 Tri-Radio Solution • IW610: 2.4/5GHz Dual-Band 1x1 Wi-Fi® 6 + Bluetooth Low Energy 5.4 + 802.15.4 Tri-Radio Solution
Wireless	<ul style="list-style-type: none"> • 88W8987: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.2 Solution • QN9090-30: QN9090/30: Bluetooth Low-Energy MCU with Arm®Cortex®-M4 CPU, Energy Efficiency, Analog and Digital Peripherals and NFC Tag Option
Load Switch	<ul style="list-style-type: none"> • NX30P6093: High-Voltage I²C Controlled Overvoltage Protection Load Switch

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