ANALOG DEVICES

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# Elevate Surveillance

## *with Cameras that See, Sense and Think*

Public safety and infrastructure security is fuelling the adoption of intelligent IP cameras with embedded AI that can analyze and detect events or behaviors and send real time alerts to first responders. IP cameras also deliver critical insights to optimize traffic congestion, improve people flow at major events and provide business insights and automation to retailers. In industrial and commercial environments, heightened surveillance enhances worker safety, adds quality control, and controls access to critical assets. As a co-creation partner of choice, ADI brings the core technology and execution expertise to enable cameras to see, sense and think at the intelligent edge.

### ENABLING THE INTELLIGENT EDGE

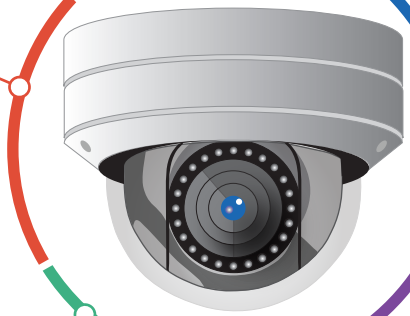
*Actionable insights with real-time edge analytics*

- **MAX78000 / MAX78002**
  *AI MCU with CNN Accelerator*

### FLEXIBLE CONNECTIVITY

*Diverse use cases require varied connectivity solutions*

- **ADIN1300 / LT4321 + LT4293**
  *Industrial Ethernet / PoE++ PD*
- **ADIN1100 / LTC9111**
  *10BASE-T1L / SPoE PD*
- **MAX96705A + MAX96706**
  *GMSL (Gigabit Multimedia Serial Link)*



### SECURING THE EDGE

*Prevent Tampering & Safeguard Data*

- **DS28S60**
  *Cryptographic Coprocessor*
- **MAXQ1065**
  *Cryptographic Controller*

### INTELLIGENT MOTION

*Rapid Targeting, Precision Tracking*

- **TMC5072**
  *Dual Axis Integrated Motor Driver*
- **TMC4671 + TMC6100**
  *Field Oriented Control with Predriver*
- **ADMT4000**
  *Multiturn Position Sensor*

### AUGMENTING VISION

*Overcome Harsh Weather & Complex Environments*

- **ADF5901 + ADF5904 + ADF4159**
  *24 GHz Multichannel Radar*

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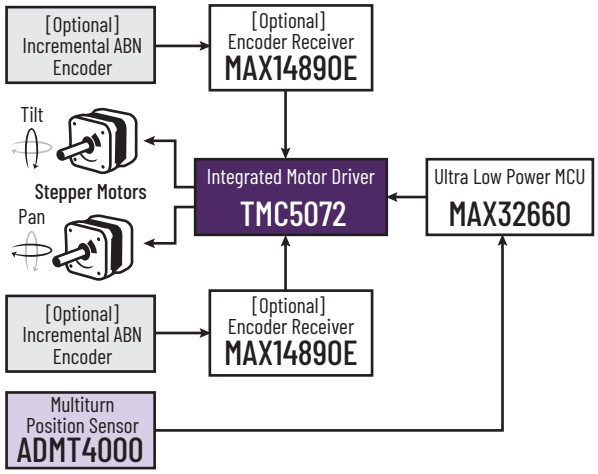
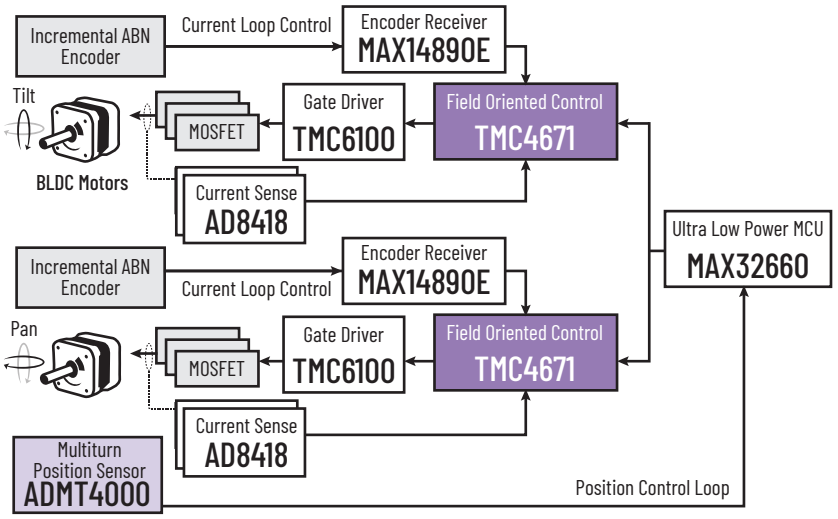
## Empowering Intelligent Motion

Surveillance cameras must rapidly target an event or intruder then smoothly track and record movement. For stepper motors, the **TMC5072** cDriver™ dual axis integrated motor driver embeds hardware accelerators that improve efficiency and precision, while simplifying system design. Alternatively, the **TMC4671** provides field oriented control for BLDC motors, significantly reducing the burden on the system MCU, while the **TMC6100** provides the required drive for external MOSFETs. The **ADMT4000** multiturn position sensor can track multiple rotations of the motor shaft without shaft contact and even when power is lost, eliminating the need for additional angle sensors – this greatly simplifies camera design, reducing size, weight and solution cost.



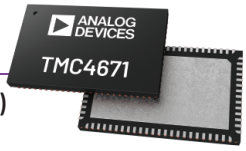




### TMC5072


**Dual Integrated Controller & Driver**

- Flexible ramp generator
- Integrated motor driver power stage
- StealthChop™ for smooth, noise-free movement

### TMC4671




**Field Oriented Control (FOC)**

- Dual encoder interface
- High speed 100 kHz loop
- Hardware FOC minimizes MCU requirements

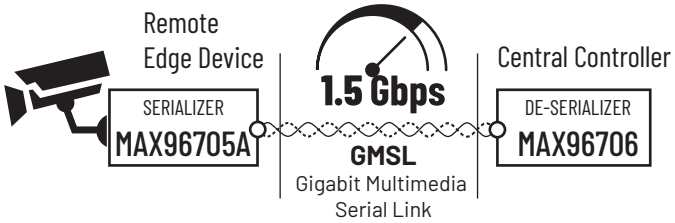
### ADMT4000


**Multiturn position sensor**

- 0.25 degree accuracy
- Absolute measurement range 0 - 16,560°
- Tracks shaft positions even without power

## Flexible Connectivity

The **ADIN1300** provides scalable edge-to-enterprise industrial Ethernet. Add device power with the **LT4321** bridge controller and **LT4293** PoE++ PD interface controller. 10BASE-T1L (**ADIN1100**) extends connectivity over a twisted pair cable for remote camera installations, with **LTC9111** SPoE for device power. Where small discrete fixed zoom cameras are required, ADI's high speed serial data-link GMSL (**MAX96705A/MAX96706**) supports the transmission of uncompressed HD and audio over coax or twisted pair cable.



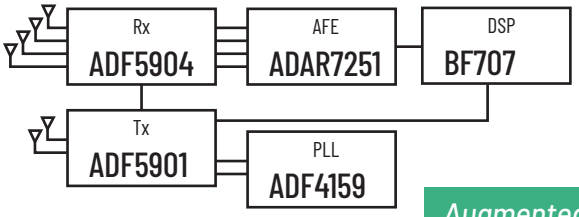

## Embedding AI and Security at the Edge

The **MAX78000/MAX78002** MCUs with embedded neural network accelerators enable edge-based AI for object and event detection, particularly in power sensitive applications.

Security is fundamental to the integrity of a surveillance network. The **DS28S60** cryptographic coprocessor and **MAXQ1065** cryptographic controller can solve edge node security challenges around data security, IP protection, secure connectivity and device authentication.

## Enhancing Traditional Vision Systems

When monitoring large, exposed areas in all weather and light conditions radar complements traditional surveillance cameras, minimizing false alarms and enabling fast intruder detection. ADI's 24 GHz radar products (**ADF5901/ADF5904/ADF4159**) and TinyRad evaluation system can help expand your surveillance capabilities.




*24 GHz 2-Tx, 4-Rx Channel Solution*

## Key Technologies

*Connectivity*
ADIN1100
ADIN1300
LT4321
LT4293
LTC9111
MAX96705A
MAX96706

*Motion*
TMC5072
TMC4671
TMC6100
ADMT4000
MAX32660
AD8418
MAX14890E

*Augmented Vision*
ADF5904
ADF5901
ADF4159
TinyRad

*Security*
DS28S60
MAXQ1065

*Intelligent Edge*
MAX78000
MAX78002

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CLICK ON THE PART NUMBERS / EVALUATION SYSTEM FOR MORE DETAILED ONLINE DOCUMENTATION

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