





# **FOCUSED INDUSTRIES**

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# **AEROSPACE & DEFENSE**

Passive Components: Venkel and Vishay are maintaining stable pricing for their Chip Resistors. Lead times for Venkel's Chip Resistors range from 10 to 23 weeks, while Vishay's Chip Resistors have lead times of 16 to 20 weeks. These components are essential for various aerospace and defense applications, and their stability in pricing and lead times ensures consistent supply to meet industry demands and uphold mission-critical operations.

#### **MEMORY: DRAM, FLASH MEMORIES**

| Manufacturer | Product      | Pricing    | Lead Time           |
|--------------|--------------|------------|---------------------|
| Micron       | Flash Memory | Stable     | 12-20 weeks or more |
| MICIOII      | DRAM         | Increasing | 12-22 weeks or more |

#### INTERFACE: DRIVER, RECEIVER AND TRANSCEIVER INTERFACES, SPECIALIZED INTERFACES

| Manufacturer | Product                | Pricing    | Lead Time           |
|--------------|------------------------|------------|---------------------|
| Renesas      | Specialized Interfaces | Increasing | 18-36 weeks or more |

#### PASSIVE: CHIP RESISTORS, FIXED INDUCTORS, CERAMIC CAPACITORS

| Manufacturer | Product        | Pricing | Lead Time           |
|--------------|----------------|---------|---------------------|
| Venkel       | Chip Resistors | Stable  | 10-23 weeks or more |
| Vishay       | Chip Resistors | Stable  | 16-20 weeks or more |

#### FPGAS/CPLDS

| Manufacturer | Product                 | Pricing | Lead Time           |
|--------------|-------------------------|---------|---------------------|
| Intel/Altera | MAX 10, 10Mxxx series   | Stable  | 20-24 weeks or more |
|              | Cyclone V, 5Cxxx series | Stable  | 20-24 weeks of more |

## **AUTOMOTIVE**

**Supply Disruption in Passive Components:** Following the January earthquake at Murata's production sites in Japan, the industry is seeing significant delays, as lead times for Murata's Fixed Inductors have extended between 20 and 46 weeks. Pricing for these components is on an upward trend. Production is expected to recover by the middle of May 2024. This situation reinforces the critical need for robust contingency planning and diversification of supply sources to ensure continuity in the automotive manufacturing sector.

# POWER MANAGEMENT: DC/DC SWITCHING REGULATORS, LINEAR VOLTAGE REGULATORS, DC/DC CONVERTERS

| Manufacturer      | Product                    | Pricing           | Lead Time           |
|-------------------|----------------------------|-------------------|---------------------|
| Texas Instruments | DC/DC Switching Regulators | Stable/Decreasing | 12-26 weeks or more |

#### PASSIVE: CHIP RESISTORS, FIXED INDUCTORS, CERAMIC CAPACITORS

| Manufacturer | Product         | Pricing    | Lead Time           |
|--------------|-----------------|------------|---------------------|
| Murata       | Fixed Inductors | Increasing | 20-46 weeks or more |

# **AUTOMATION SOLUTIONS**

Microcontroller Market Trends: Renesas microcontrollers are maintaining stable pricing across the board. The 8-bit MCU HD64x series is experiencing an uptick in demand, with lead times ranging from 12 to 20 weeks. The 16-bit R5F series, while also stable in price, has seen some part types reach lead times up to 52 weeks, indicating a significant increase in demand and/or production constraints. Similarly, the 32-bit R7F series shows extended lead times of up to 52 weeks for certain part types. This extended lead time highlights the need for careful inventory management and long-term planning for those integrating Renesas MCUs into their automation solutions.

### MICROCONTROLLERS (MCU) / MICROPROCESSORS (MPU)

| Manufacturer | Product     | Pricing | Lead Time           |
|--------------|-------------|---------|---------------------|
|              | MCU, 8-bit  |         | 12-20 weeks or more |
| Renesas      | MCU, 16-bit | Stable  | 18 weeks or more    |
|              | MCU, 32-bit |         | 18-26 weeks or more |

#### ANALOG: OP AMPS, ADCS, LOGIC GATES & INVERTERS

| Manufacturer      | Product                          | Pricing           | Lead Time          |
|-------------------|----------------------------------|-------------------|--------------------|
| Texas Instruments | Operational Amplifiers (OP AMPs) | Stable/Decreasing | 6-26 weeks or more |

#### INTERFACE: DRIVER, RECEIVER AND TRANSCEIVER INTERFACES

| Manufacturer           | Product                                     | Pricing | Lead Time           |
|------------------------|---|---------|---------------------|
| Texas Instruments      | Driver, Receiver and Transceiver Interfaces | Stable  | 26-35 weeks or more |
| Analog Devices / Maxim | Driver, Receiver and Transceiver Interfaces | Stable  | 20-26 weeks or more |

#### PASSIVE: CHIP RESISTORS, FIXED INDUCTORS, CERAMIC CAPACITORS

| Manufacturer | Product            | Pricing    | Lead Time           |
|--------------|--------------------|------------|---------------------|
| Murata       | Fixed Inductors    | Increasing | 20-46 weeks or more |
|              | Ceramic Capacitors | Stable     | 20-24 weeks or more |
| Vishay       | Ceramic Capacitors | Stable     | 16-20 weeks or more |

#### DISCRETE: MOSFETS, RECTIFIERS, TVS DIODES, IGBT, OPTO-COUPLERS

| Manufacturer | Product    | Pricing | Lead Time           |
|--------------|------------|---------|---------------------|
| Onsemi       | Rectifiers | Stable  | 14-50 weeks or more |
| Vishay       | Rectifiers | Stable  | 14-18 weeks or more |

# **CONSUMER DEVICES**

**Power Management Components Stability:** Both Analog Devices and Texas Instruments hold stable pricing in board-mounted DC/DC Converters. However, lead times vary significantly; Analog Devices' offerings range from 16 to 40 weeks, while Texas Instruments maintains a shorter window of 12 to 20 weeks. These timeframes reflect the ongoing demand for power management solutions and the importance of strategic sourcing to navigate the extended lead times, especially in the case of Analog Devices' components.

#### ANALOG: OP AMPS, ADCS, LOGIC GATES & INVERTERS

| Manufacturer      | Product                          | Pricing           | Lead Time          |
|-------------------|----------------------------------|-------------------|--------------------|
| Texas Instruments | Operational Amplifiers (OP AMPs) | Stable/Decreasing | 6-26 weeks or more |

### FPGAS/CPLDS

| Manufacturer | Product                   | Pricing | Lead Time           |
|--------------|---------------------------|---------|---------------------|
| AMD / Xilinx | Spartan 3, XC3Sxxx series | Stable  | 12-16 weeks or more |
|              | Spartan 6, XC6Sxxx series |         |                     |
|              | Artix 7, XC7Axxx series   |         | 16 weeks or more    |

### DISCRETE: MOSFETS, RECTIFIERS, TVS DIODES, IGBT

| Manufacturer | Product | Pricing | Lead Time           |
|--------------|---------|---------|---------------------|
| Onsemi       | MOSFETs | Stable  | 14-40 weeks or more |
| ROHM         | MOSFETs | Stable  |                     |

#### PASSIVE: CHIP RESISTORS, FIXED INDUCTORS, CERAMIC CAPACITORS

| Manufacturer | Product            | Pricing    | Lead Time           |
|--------------|--------------------|------------|---------------------|
| Murata       | Fixed Inductors    | Increasing | 20-46 weeks or more |
|              | Common Mode Chokes |            |                     |

#### **MEMORY: DRAM, FLASH MEMORIES**

| Manufacturer | Product | Pricing    | Lead Time           |
|--------------|---------|------------|---------------------|
| Micron       | DRAM    | Increasing | 12-22 weeks or more |

# POWER MANAGEMENT: DC/DC SWITCHING REGULATORS, LINEAR VOLTAGE REGULATORS, POWER DISTRIBUTION SWITCHES

| Manufacturer      | Product                        | Pricing | Lead Time           |
|-------------------|--------------------------------|---------|---------------------|
| Analog Devices    | DC/DC Converters (Board Mount) | Stable  | 16-40 weeks or more |
| Texas Instruments | DC/DC Converters (Board Mount) | Stable  | 12-20 weeks or more |



### **HEALTH CARE**

Analog Component Market Trends: Texas Instruments' offerings in Operational Amplifiers (OP AMPs) and Logic Gates and Inverters are experiencing stable pricing trends, with some products even slightly dropping. However, lead times are ranging from 6 to 26 weeks or more. This variability underscores the importance of strategic inventory management and supplier relationships to ensure a steady supply of essential analog components for critical healthcare applications.

#### PASSIVE: CHIP RESISTORS, FIXED INDUCTORS, CERAMIC CAPACITORS

| Manufacturer | Product         | Pricing    | Lead Time           |
|--------------|-----------------|------------|---------------------|
| Murata       | Fixed Inductors | Increasing | 20-46 weeks or more |
| Panasonic    | Chip Resistors  | Stable     | 19-50 weeks or more |

#### ANALOG: OP AMPS, ADCS, LOGIC GATES & INVERTERS

| Manufacturer      | Product                          | Pricing           | Lead Time           |
|-------------------|----------------------------------|-------------------|---------------------|
| Texas Instruments | Operational Amplifiers (OP AMPs) | Stable/Decreasing | 6-26 weeks or more  |
|                   | Logic Gates and Inverters        |                   | 12-26 weeks or more |

#### INTERFACE: DRIVER, RECEIVER AND TRANSCEIVER INTERFACES

| Manufacturer      | Product                                     | Pricing | Lead Time           |
|-------------------|---|---------|---------------------|
| Texas Instruments | Driver, Receiver and Transceiver Interfaces | Stable  | 26-35 weeks or more |

# INDUSTRIAL MACHINERY

**Analog Component Stability:** Toshiba's offerings in Logic Gates and Inverters exhibit stable pricing trends, providing a consistent pricing environment for industrial machinery manufacturers. However, lead times are ranging from 16 to 32 weeks or more. This emphasizes the need for meticulous supply chain management to ensure uninterrupted production schedules and timely delivery of essential components for industrial machinery applications.

### MICROCONTROLLERS (MCU) / MICROPROCESSORS (MPU)

| Manufacturer | Product     | Pricing | Lead Time           |
|--------------|-------------|---------|---------------------|
| Renesas      | MCU, 8-bit  |         | 12-20 weeks or more |
|              | MCU, 16-bit | Stable  | 18 weeks or more    |
|              | MCU, 32-bit |         | 18-26 weeks or more |

#### ANALOG: OP AMPS, ADCS, LOGIC GATES & INVERTERS

| Manufacturer | Product                   | Pricing | Lead Time           |
|--------------|---------------------------|---------|---------------------|
| Toshiba      | Logic Gates and Inverters | Stable  | 16-32 weeks or more |

#### DISCRETE: MOSFET, RECTIFIER, TVS DIODES, IGBT, OPTO-COUPLERS

| Manufacturer | Product       | Pricing | Lead Time           |
|--------------|---------------|---------|---------------------|
| Toshiba      | Opto-Couplers | Stable  | 12-36 weeks or more |

## **MODULES**

Passive Component Stability: Yageo/Kemet's Film Capacitors maintain stable pricing, providing consistency in cost for module manufacturers. However, lead times are ranging from 14 to 24 weeks or more. This emphasizes the importance of strategic inventory management and supplier relationships to ensure a steady supply of essential passive components for module assembly and production.

### PASSIVE: CHIP RESISTORS, FIXED INDUCTORS, CERAMIC CAPACITORS

| Manufacturer | Product         | Pricing | Lead Time           |
|--------------|-----------------|---------|---------------------|
| Yageo/Kemet  | Film Capacitors | Stable  | 14-24 weeks or more |

#### **MEMORY: DRAM, FLASH MEMORIES**

| Manufacturer | Product | Pricing    | Lead Time           |
|--------------|---------|------------|---------------------|
| Micron       | DRAM    | Increasing | 12-22 weeks or more |

#### ANALOG: OP AMPS, ADCS, LOGIC GATES & INVERTERS

| Manufacturer      | Product                          | Pricing           | Lead Time          |
|-------------------|----------------------------------|-------------------|--------------------|
| Texas Instruments | Operational Amplifiers (OP AMPs) | Stable/Decreasing | 6-26 weeks or more |

#### FPGAS/CPLDS

| Manufacturer | Product                   | Pricing | Lead Time           |
|--------------|---------------------------|---------|---------------------|
| AMD/Xilinx   | Spartan 3, XC3Sxxx series |         | 12-16 weeks or more |
|              | Spartan 6, XC6Sxxx series | Stable  | 12-16 weeks or more |
|              | Artix 7. XC7Axxx series   |         | 16 weeks or more    |

### DISCRETE: MOSFET, RECTIFIER, TVS DIODES, IGBT, OPTO-COUPLERS

| Manufacturer | Product | Pricing | Lead Time           |
|--------------|---------|---------|---------------------|
| Onsemi       | MOSFETs | Stable  | 14-40 weeks or more |
| Toshiba      | MOSFETs | Stable  | 18-32 weeks or more |

