

A general overview of the market situation as well as lead times and prices



Analog

High-End: Pricing remains largely unchanged, supported by stable demand and consistent supplier performance - no significant shifts are anticipated in the near term. Lead times are slowly increasing. **Commodities:** Prices remain stable while lead times are showing a slight upward trend. Market conditions remain balanced, and no major disruptions are currently expected.



| | Lead Time (wk) | Price |
|-----------------------|----------------|-------------------|
| Switched Voltage Regs | ↔ 10-28 | \leftrightarrow |



| | Lead Time (wk) | Price |
|-----------------------|------------------------|-------------------|
| Data Converters | ↑ 6-35 | \leftrightarrow |
| Interface | ↑ 6-20 | \leftrightarrow |
| Op Amps High End | \leftrightarrow 6-22 | \leftrightarrow |
| Switched Voltage Regs | ↑ 8-28 | \leftrightarrow |

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| | Lead | d Time (wk) | Price |
|-----------------------|-------------------|-------------|-------------------|
| Op Amps Commodities | \leftrightarrow | 12-16 | \leftrightarrow |
| Op Amps High End | \leftrightarrow | 12-16 | \leftrightarrow |
| Switched Voltage Regs | \leftrightarrow | 8-16 | \leftrightarrow |
| Voltage Regulators | \leftrightarrow | 8-16 | \leftrightarrow |



| | Lead | Lead Time (wk) | |
|------------------|-------------------|----------------|-------------------|
| Interface | \leftrightarrow | 13-26 | \leftrightarrow |
| Op Amps High End | \leftrightarrow | 16-28 | \leftrightarrow |

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| | Lead Time (wk) | Price |
|-----------------------|----------------|-------------------|
| Interface | ↔ 10-28 | \leftrightarrow |
| Op Amps Commodities | ↔ 10-20 | \leftrightarrow |
| Op Amps High End | ↔ 14-26 | \leftrightarrow |
| Switched Voltage Regs | ↑ 12-40 | \leftrightarrow |
| Voltage Regulators | ↔ 10-32 | \leftrightarrow |

Power integrations

| | Lead Time (wk) | Price |
|-----------------------|----------------|-------------------|
| Switched Voltage Regs | ↔ 8-24 | \leftrightarrow |



| | Lead Time (wk) | Price |
|-----------------------|----------------|-------------------|
| Data Converters | ↔ 12-16 | \leftrightarrow |
| Op Amps Commodities | ↔ 12-16 | \leftrightarrow |
| Switched Voltage Regs | ↔ 12-16 | \leftrightarrow |
| Voltage Regulators | ↔ 12-16 | \leftrightarrow |



| | Lead Time (wk) | Price |
|-----------------------|----------------|-------------------|
| Data Converters | ↔ 16-24 | \leftrightarrow |
| Interface | ↔ 14-26 | \leftrightarrow |
| Op Amps Commodities | ↑ 12-22 | \leftrightarrow |
| Op Amps High End | ↑ 14-32 | \leftrightarrow |
| Switched Voltage Regs | ↑ 12-38 | \leftrightarrow |
| Voltage Regulators | ↔ 14-28 | \leftrightarrow |



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Discretes

Prices remain stable but lead times are increasing. It is recommended to place long-term orders as the production time (cycle time) is higher than the lead times indicate.

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| | Lead Ti | ime (wk) | Price |
|---------|----------|----------|-------------------|
| Sensors | ↑ | 18-32 | \leftrightarrow |

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| | Lead Time (wk) | Price |
|------------|----------------|-------------------|
| RF Devices | ↑ 16-22 | \leftrightarrow |



| | Lead Time (wk) | Price |
|----------------|----------------|-------------------|
| Bi-polar Power | ↑ 812 | \leftrightarrow |
| IGBT | ↑ 15-46 | \leftrightarrow |
| Power MOSFETs | ↑ 15-40 | \leftrightarrow |
| Rectifiers | ↑ 19-32 | \leftrightarrow |
| RF Devices | ↑ 13-24 | \leftrightarrow |
| Sensors | ↑ 14-35 | \leftrightarrow |
| Small Signal | ↑ 12-21 | \leftrightarrow |
| Thyristors | ↑ 20-36 | \leftrightarrow |

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| | Lead Time (wk) | Price |
|----------------|----------------|-------------------|
| Bi-polar Power | ↑ 12-18 | \leftrightarrow |
| Power MOSFETs | ↑ 14-23 | \leftrightarrow |
| Rectifiers | ↑ 11-22 | \leftrightarrow |
| Small Signal | ↑ 11-22 | \leftrightarrow |
| TVS/Protection | ↑ 11-18 | \leftrightarrow |
| Zener Diodes | ↑ 11-24 | \leftrightarrow |



| | Lead Time (wk) | Price |
|------------|----------------|-------------------|
| RF Devices | ↑ 15-24 | \leftrightarrow |
| Sensors | ↑ 22-46 | \leftrightarrow |

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| | Lead Time (wk) | | Price |
|----------------|----------------|-------|-------------------|
| Bi-polar Power | ↑ | 14-23 | \leftrightarrow |
| IGBT | ↑ | 16-32 | \leftrightarrow |
| Power MOSFETs | ↑ | 15-30 | \leftrightarrow |
| Rectifiers | 1 | 14-27 | \leftrightarrow |
| Small Signal | 1 | 13-24 | \leftrightarrow |
| TVS/Protection | 1 | 14-20 | \leftrightarrow |
| Zener Diodes | 1 | 12-24 | \leftrightarrow |



| | Lead Time (wk) | Price |
|----------------|----------------|-------------------|
| Bi-polar Power | ↑ 16-20 | \leftrightarrow |
| IGBT | ↑ 18-36 | \leftrightarrow |
| Power MOSFETs | ↑ 16-30 | \leftrightarrow |
| Rectifiers | ↑ 18-32 | \leftrightarrow |
| Small Signal | ↑ 18-25 | \leftrightarrow |
| Thyristors | ↑ 18-28 | \leftrightarrow |
| TVS/Protection | ↑ 16-28 | \leftrightarrow |



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Discretes

Prices remain stable but lead times are increasing. It is recommended to place long-term orders as the production time (cycle time) is higher than the lead times indicate.



| | Lead Time (wk) | Price |
|----------------|----------------|-------------------|
| Power MOSFETs | ↑ 18-27 | \leftrightarrow |
| Rectifiers | ↑ 13-28 | \leftrightarrow |
| Small Signal | ↑ 16-24 | \leftrightarrow |
| TVS/Protection | ↑ 14-20 | \leftrightarrow |
| Zener Diodes | ↑ 15-24 | \leftrightarrow |

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| | Lead Time (wk) | Price |
|---------------|----------------|-------------------|
| Power MOSFETs | ↑ 20-28 | \leftrightarrow |



| | Lead Time (wk) | Price |
|----------------|----------------|-------------------|
| Power MOSFETs | ↑ 14-34 | \leftrightarrow |
| Rectifiers | ↑ 12-26 | \leftrightarrow |
| Small Signal | ↑ 12-21 | \leftrightarrow |
| Thyristors | ↑ 14-21 | \leftrightarrow |
| TVS/Protection | ↑ 11-18 | \leftrightarrow |
| Zener Diodes | ↑ 11-26 | \leftrightarrow |



A general overview of the market situation as well as lead times and prices



Memory

ALL PRICE TENDENCIES ARE INDICATED IN USD

Please provide long-term demand on all technologies. Forecast/Order backlog is key for planning demand properly.

General situation: Price and lead time levels highly depend on supplier and product technology. Increasing price levels and lead times on latest technologies. Samsung DDR3, DDR4 module and low capacity eMMC pullout impact supply and availability.

DRAM: Pricing and lead times increasing - highly impacted LPDDR4/DDR4 and newer technologies like DDR5/LPDDR5. Unplanned upsides on newer technologies difficult to supply.

NAND Flash: Availability dependent on supplier. Increasing prices and lead times, especially on latest tech (SSDs) and low-capacity eMMCs. Unplanned upsides difficult to supply. Please review customer demand on eMMCs - backlog needed to secure supply.

NOR Flash: Increasing lead times expected.

SRAM: Good availability - minor constraints on specific technologies.



| | Lead Time (wk) | Price |
|------------------|----------------|-------------------|
| Serial NOR Flash | ↔ 24-36 | \leftrightarrow |



| | Lead Time (wk) | Price |
|--------------------|----------------------|-------------------|
| FRAM | ↔ 8-10 | \leftrightarrow |
| nvSRAM | \leftrightarrow 10 | \leftrightarrow |
| Parallel NOR Flash | ↔ 8-10 | \leftrightarrow |
| Serial NOR Flash | ↔ 8-14 | \leftrightarrow |
| SRAM Asynch. | ↔ 8-10 | \leftrightarrow |
| SRAM Synch. | ↔ 10-12 | \leftrightarrow |

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| | Lead T | ime (wk) | Price |
|--------------------------|----------|----------|-------------------|
| Managed NAND (eMMC, UFS) | 1 | 20-48 | ↑ |
| NAND (SLC,MLC,TLC,3D) | 11 | 24 | ↑ |
| SSD | 1 | 8-12 | \leftrightarrow |



| | Lead Ti | Price | |
|--------------------------|-------------------|-------|-------------------|
| DDR/mobile DDR | \leftrightarrow | 8-12 | \leftrightarrow |
| DDR2/LPDDR2 | \leftrightarrow | 8-12 | \leftrightarrow |
| DDR3/DDR3L | \leftrightarrow | 8-12 | \leftrightarrow |
| DDR4/LPDDR4 | \leftrightarrow | 6-16 | \leftrightarrow |
| Managed NAND (eMMC, UFS) | \leftrightarrow | 10-12 | \leftrightarrow |
| NAND (SLC,MLC,TLC,3D) | \leftrightarrow | 10-20 | \leftrightarrow |
| Parallel NOR Flash | \leftrightarrow | 12-16 | \leftrightarrow |
| SDRAM/mobile SDRAM | \leftrightarrow | 6-8 | \leftrightarrow |
| Serial NOR Flash | \leftrightarrow | 12-14 | \leftrightarrow |
| SRAM Asynch. | \leftrightarrow | 8-12 | \leftrightarrow |
| SRAM Synch. | \leftrightarrow | 8-12 | \leftrightarrow |



| | Lead Time (wk) | Price |
|------------------|----------------|-------------------|
| EEprom | ↔ 5-52 | \leftrightarrow |
| Eprom | ↔ 5-52 | \leftrightarrow |
| Serial NOR Flash | ↔ 24-28 | \leftrightarrow |



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NOR Flash: Increasing lead times expected.

SRAM: Good availability - minor constraints on specific technologies.

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| | Lead | Time (wk) | Price |
|--------------------------|----------|-----------|----------|
| DDR/mobile DDR | 1 | 12 | ↑ |
| DDR2/LPDDR2 | 1 | 12 | ↑ |
| DDR3/DDR3L | 1 | 12 | ↑ |
| DDR4/LPDDR4 | 1 | 20 | ↑ |
| DDR5/LPDDR5 | 1 | 20 | ↑ |
| Managed NAND (eMMC, UFS) | 1 | 20 | ↑ |
| microSD | 1 | 20 | ↑ |
| NAND (SLC,MLC,TLC,3D) | 1 | 12 | ↑ |
| Parallel NOR Flash | 1 | 12 | ↑ |
| SDRAM/mobile SDRAM | 1 | 12 | ↑ |
| Serial NOR Flash | 1 | 12 | ↑ |
| SSD | 1 | 20 | 1 |

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| | Lead Time (wk | Price |
|------------------|---------------|-------------------|
| EEprom | ↔ 7-21 | \leftrightarrow |
| Serial NOR Flash | ↔ 16-20 | \leftrightarrow |

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| | Lead Time (wk) | Price |
|----------------|-------------------------|-------------------|
| EEprom | ↔ 8-12 | \leftrightarrow |
| FIFO | ↔ 16-20 | \leftrightarrow |
| SRAM Asynch. | \leftrightarrow 20-24 | \leftrightarrow |
| SRAM Multiport | ↔ 16-20 | \leftrightarrow |
| SRAM Synch. | ↔ 20-24 | \leftrightarrow |

SAMSUNG

| | Lead | Time (wk) | Price |
|--------------------------|------------|-----------|------------|
| DDR3/DDR3L | 1 1 | n/a | 1 1 |
| DDR4/LPDDR4 | † † | n/a | 1 |
| DDR5/LPDDR5 | † † | n/a | † |
| Managed NAND (eMMC, UFS) | 1 | n/a | † |
| SSD | 1 1 | n/a | 1 |



| | Lead Time (wk) | Price |
|--------|----------------|-------------------|
| EEprom | ↔ 8-14 | \leftrightarrow |
| NVRAM | ↔ 8-16 | \leftrightarrow |



A general overview of the market situation as well as lead times and prices



Opto

LEDs: Overall good supply situation. **Coupler:** Overall good supply situation.

Vishay: Lead time 4-16 weeks for majority of the Optocoupler portfolio.

Samsung: Official announcement of LED-business exit.

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| | Lead Ti | me (wk) | Price |
|--|-------------------|---------|-------------------|
| LEDs High Power | \leftrightarrow | 8-14 | \leftrightarrow |
| LEDs High Power General Lighting | \leftrightarrow | 8-14 | \leftrightarrow |
| LEDs Infrared | \leftrightarrow | 8-14 | \leftrightarrow |
| LEDs Low/Mid Power | \leftrightarrow | 10-18 | \leftrightarrow |
| LEDs Low/Mid Power General Lighting | \leftrightarrow | 10-12 | \leftrightarrow |
| LEDs Ultraviolet | \leftrightarrow | 8-10 | \leftrightarrow |



| | Lead Time | (wk) Price | |
|--|---------------------|--------------|--|
| LED Driver | \leftrightarrow 1 | 0-12 ↔ | |
| LEDs High Power General Lighting | \leftrightarrow 4 | l-6 ↔ | |
| LEDs Low/Mid Power General Lighting | \leftrightarrow 6 | 6-8 ↔ | |

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| | Lead Tir | ne (wk) | Price |
|--------------------|-------------------|---------|-------------------|
| Coupler | \leftrightarrow | 8-36 | \leftrightarrow |
| LEDs High Power | \leftrightarrow | 12-14 | \leftrightarrow |
| LEDs Low/Mid Power | \leftrightarrow | 12-14 | \leftrightarrow |

EVERLIGHT

| | Lead Time (wk) | Price |
|--------------------|-------------------------|-------------------|
| Coupler | \leftrightarrow 12-30 | \leftrightarrow |
| LEDs High Power | \leftrightarrow 12-14 | \leftrightarrow |
| LEDs Infrared | ↔ 6-24 | \leftrightarrow |
| LEDs Low/Mid Power | ↔ 12-14 | \leftrightarrow |
| LEDs Ultraviolet | ↔ 6-20 | \leftrightarrow |

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| | Lead Time (wk) | Price |
|------------|----------------|-------------------|
| LED Driver | ↔ 12-14 | \leftrightarrow |
| LED Module | ↔ 12-14 | \leftrightarrow |

LEDil®

| | Lead Time (wk) | Price |
|-----------|----------------|-------------------|
| LED Optic | ↔ 6-8 | \leftrightarrow |

ELUMINUS

| | Lead Time (wk) | Price |
|--|------------------------|-------------------|
| LEDs High Power | ↔ 6-10 | \leftrightarrow |
| LEDs High Power General Lighting | ↔ 6-8 | \leftrightarrow |
| LEDs Infrared | \leftrightarrow 6-12 | \leftrightarrow |
| LEDs Low/Mid Power General Lighting | ↔ 6-8 | \leftrightarrow |
| LEDs Ultraviolet | ↔ 6-8 | \leftrightarrow |



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| | Lead Time (wk) | Price |
|---------|----------------|-------------------|
| Coupler | ↔ 6-26 | \leftrightarrow |

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| | Lead Time (wk) | Price |
|---------|----------------|-------------------|
| Coupler | ↔ 18-20 | \leftrightarrow |

SAMSUNG

| | Lead Time (wk) | Price |
|--|-------------------------|-------------------|
| LED Module | \leftrightarrow 12-16 | \leftrightarrow |
| LEDs High Power | \leftrightarrow 8-10 | \leftrightarrow |
| LEDs High Power General Lighting | ↔ 8-10 | \leftrightarrow |
| LEDs Low/Mid Power | ↔ 8-10 | \leftrightarrow |
| LEDs Low/Mid Power General Lighting | ↔ 8-10 | \leftrightarrow |

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| | Lead Time (wk) | Price |
|---------|----------------|-------------------|
| Coupler | ↔ 12-40 | \leftrightarrow |



| | Lead Time (wk) | Price |
|--------------------|----------------|-------------------|
| Coupler | ↔ 4-46 | \leftrightarrow |
| LEDs High Power | ↔ 12-14 | \leftrightarrow |
| LEDs Infrared | ↔ 6-24 | \leftrightarrow |
| LEDs Low/Mid Power | ↔ 12-14 | \leftrightarrow |
| LEDs Ultraviolet | ↔ 6-20 | \leftrightarrow |



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MCU & DSP

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| | Lead Time (wk) | Price |
|--------|----------------|-------------------|
| 32 Bit | ↔ 8-12 | \leftrightarrow |



| | Lead Time (wk) | Price |
|--------|----------------|-------------------|
| 8 Bit | ↔ 16-26 | \leftrightarrow |
| 16 Bit | ↔ 16-26 | \leftrightarrow |
| 32 Bit | ↔ 16-20 | \leftrightarrow |

intel.

| | Lead Time (wk) | Price |
|---------|----------------|-------------------|
| 32 Bit | ↔ 4-5 | \leftrightarrow |
| 64 Bit | ↔ 4-5 | \leftrightarrow |
| x86 DSP | ↔ 4-5 | \leftrightarrow |



| _ | | |
|-----------|----------------|-------------------|
| | Lead Time (wk) | Price |
| 8 Bit AVR | ↔ 4-10 | \leftrightarrow |
| 8 Bit PIC | ↔ 4-8 | \leftrightarrow |
| 16 Bit | ↑ 2-12 | \leftrightarrow |
| 32 Bit | ↑ 4-16 | \leftrightarrow |



| | Lead Time (wk) | Price |
|--------|----------------|-------------------|
| 8 Bit | ↑ 16-20 | \leftrightarrow |
| 16 Bit | ↑ 16-20 | \leftrightarrow |
| 32 Bit | ↑ 16-20 | \leftrightarrow |
| i.MX | ↑ 16-20 | \leftrightarrow |
| DSP | ↑ 16-20 | \leftrightarrow |

RENESAS

| | Lead Time (wk) | Price |
|-------------|----------------|-------------------|
| MCUs 8 Bit | ↑ 16-20 | \leftrightarrow |
| MCUs 16 Bit | ↑ 16-20 | \leftrightarrow |
| MCUs 32 Bit | ↑ 16-20 | \leftrightarrow |
| MCUs 64 Bit | ↑ 16-20 | \leftrightarrow |



| | Lead Time (wk) | Price |
|--------|----------------|-------------------|
| 8 Bit | ↑ 12-16 | \leftrightarrow |
| 16 Bit | ↑ 12-16 | \leftrightarrow |
| 32 Bit | ↑ 12-18 | \leftrightarrow |

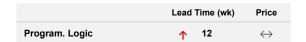


as well as lead times and prices



Program. Logic







| | Lead Time (wk) | Price |
|----------------|----------------|-------------------|
| Program. Logic | ↔ 6-15 | \leftrightarrow |



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Logic

Prices remain stable with no expectations for an increase. Lead times are slowly increasing.

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| | Lead Time (wk) | Price |
|----------------|----------------|-------------------|
| Standard Logic | ↑ 8-20 | \leftrightarrow |

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| | Lead Time (wk) | Price |
|----------------|----------------|-------------------|
| Standard Logic | ↑ 8-20 | \leftrightarrow |

SGMICRO

| | Lead Time (v | /k) Price |
|----------------|--------------|-------------------|
| Standard Logic | ↔ 14-16 | \leftrightarrow |

TOSHIBA

| | Lead Time (wk) | Price |
|----------------|----------------|-------------------|
| Standard Logic | ↑ 16-20 | \leftrightarrow |