

- Expecting market to slow for the remainder of Q3 2022.
- MCU supply is becoming stable.
- Demand is still strong for the Automotive and Industrial control market.

#### **MEMORY**

| Manufacturer | Part / Series                    | Pricing                     | Lead Time               | Notes                                     |
|--------------|----------------------------------|-----------------------------|-------------------------|---|
|              | DDR3, MT41 series                | Decreasing                  | 16-26 weeks or<br>above | Lead times are improving                  |
| Micron       | DDR4, MT40 series                | Decreasing                  | 14-26 weeks or<br>above | Lead times have improved                  |
| meron        | NOR Flash, MT25<br>series        | High                        | 26-40 weeks or<br>above | Specific parts have increasing lead times |
|              | NOR Flash, MT28<br>series        | High                        | 28-40 weeks or<br>above | Specific parts have increasing lead times |
|              | DRAM, IS4 series                 | Stable                      | 20-32 weeks or<br>above | Specific parts have increasing lead times |
| ISSI         | NOR Flash, IS25 series           | Stable 30-40 weeks of above |                         | Specific parts have increasing lead times |
|              | SRAM, IS6 series                 | Stable                      | 16-28 weeks or<br>above | Specific parts have increasing lead times |
| Cypress      | FRAM, FM24xxx/<br>FM25xxx series | Decreasing                  | 20-40 weeks or<br>above | Stock released to the market              |
| Winbond      | NOR Flash, W25 series            | Increasing                  | 14-24 weeks or<br>above |   |
| Manager      | NOR Flash - MX25<br>series       | Stable                      | 14-20 weeks or<br>above |   |
| Macronix     | NAND Flash - MX29<br>series      | Increasing                  | 14-20 weeks or<br>above |   |

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### DISCRETES

| Manufacturer | Part/Series                              | Pricing    | Lead Time               | Notes  |
|--------------|--|------------|-------------------------|--|
|              | PMIC, NCVxxx series                      | Increasing | 30-65 weeks<br>or above | Certain parts have more than a 90<br>week lead time. Market is shortage<br>on this series. |
|              | PMICs, NCPxxx series                     | Increasing | 35-70 weeks<br>or above | Certain parts have more than a 90<br>week lead time. Market is shortage<br>on this series. |
|              | Rectifiers, BASxxx,<br>MMBxxx series     | Stable     | 34-60 weeks<br>or above | Lead times are improving   |
| onsemi       | MOSFET, BSSxxx series                    | Decreasing | 30-70 weeks<br>or above | Lead times are improving   |
|              | MOSFET, NTDxxx series                    | Decreasing | 35-40 weeks<br>or above | Lead times are improving   |
|              | MOSFET, FDxxx series                     | Decreasing | 26-54 weeks<br>or above | Lead times are improving   |
|              | MOSFET, 2Nxxx series                     | Decreasing | 40-60 weeks<br>or above | Lead times are improving   |
|              | MOSFET, BSSxxx/<br>BSCxxx/ BSZxxx series | Increasing | 52-65 weeks<br>or above | Stock availability subjected to allocation, lead time has improved                         |
|              | MOSFET, IRFxxx series                    | Unstable   | 30-52 weeks<br>or above |  |
|              | IGBT, IKxxx series                       | Increasing | 60 weeks or<br>above    | Lead time is unstable. Some parts have lead times over 80 weeks.                           |
| Infineon     | MOSFET, IPWxxx series                    | Increasing | 52-65 weeks<br>or above |  |
|              | PMIC, BSP series                         | Increasing | 43-52 weeks<br>or above | Lead time improving  |
|              | PMIC, BTSxxx/BTTxxx<br>series            | Stable     | 52 weeks or<br>above    | Lead time improving  |
|              | TVS, PESDxxx series                      | Stable     | 29-52 weeks<br>or above | Lead time for certain parts are over 80 weeks.   |
|              | MOSFET, BUKxxx/<br>PMPBxxx series        | Stable     | 30-60 weeks<br>or above |  |
| Nexperia     | MOSFET, PSMNxxx<br>series                | Stable     | 52 weeks or<br>above    | Lead time for certain parts are over 80 weeks.   |
|              | Zener Diode, BZXxxx/<br>PDZxxx series    | Stable     | 27-52 weeks<br>or above |  |
|              | Rectifier, BASxxx series                 | Stable     | 27-52 weeks<br>or above |  |



### **DISCRETES - Continued**

| Manufacturer      | Part/Series                                | Pricing    | Lead Time               | Notes  |
|-------------------|--|------------|-------------------------|--|
|                   | MOSFET, BSSxxx/<br>DMCxxx/ DMGxxx series   | Increasing | 54-70 weeks<br>or above | Lead times are unstable. Some<br>parts have lead times over 80<br>weeks.       |
| Diodes Inc.       | TVS Diodes, SMxxx<br>series                | Increasing | 29-58 weeks<br>or above |  |
| Diodes inc.       | Rectifier, BATxxx/<br>SBRxxx series        | Increasing | 33-54 weeks<br>or above | Lead times are unstable. Some<br>parts have lead times over 80<br>weeks.       |
|                   | Bipolar Transistors - BJT,<br>MMxxx series | Increasing | 42-70 weeks<br>or above | Lead times are unstable.   |
|                   | Low Voltage MOSFET,<br>SIR/SIRA series     | Increasing | 74-85 weeks<br>or above | No improvement on lead times   |
| Vieley            | Opto-couplers, SFHxxx series               | Increasing | 50-80 weeks<br>or above | No improvement on lead times   |
| Vishay            | MOSFET, SUDxxx series                      | Increasing | 59-80 weeks<br>or above | No improvement on lead times   |
|                   | MOSFET, SIxxx series                       | Increasing | 60-85 weeks<br>or above | No improvement on lead times   |
| STMicroelectonics | MOSFET, STB/ STD/<br>STF series, etc       | Stable     | 50-70 weeks<br>or above | Price increasing for 100V and<br>above, as well as 100A or above on<br>MOSFETs |

### PASSIVES

| Manufacturer      | Part/Series               | Pricing    | Lead Time               | Notes                                  |
|-------------------|---------------------------|------------|-------------------------|--|
|                   | Standard MLCC             | Stable     | 14-26 weeks             | Specific parts have longer lead times. |
| Murata            | Inductor and thermistor   | Stable     | 20-30 weeks<br>or above |  |
| murata            | Ferrite Beads, BLM series | Increasing | 23-30 weeks<br>or above |  |
|                   | Automotive MLCC           | Increasing | 20 weeks or<br>above    | Specific parts have longer lead times. |
| Samsung           | Normal MLCC               | Stable     | 22-24 weeks             | Stock is available in the open market  |
| Electro-mechanics | Automotive MLCC           | Stable     | 22-28 weeks<br>or above | Delivery schedule is improving         |
|                   | Chip Resistor             | Increasing | 30-50 weeks<br>or above |  |
| Vishay            | Potentiometers            | Increasing | 30-50 weeks<br>or above |  |



### **ELECTROMECHANICAL / CONNECTORS**

| Manufacturer    | Part/Series       | Pricing    | Lead Time               | Notes  |
|-----------------|-------------------|------------|-------------------------|--|
| TE Connectivity | General Connector | Increasing | 20-38 weeks             | Raw material shortage and backend cost increase. |
| Molex           | General           | Stable     | 20-52 weeks<br>or above | Raw material shortage and order delinquent.      |

### **PROGRAMMABLE LOGIC**

| Manufacturer | Part/Series                                | Pricing     | Lead Time               | Notes   |
|--------------|--|-------------|-------------------------|---|
|              | Spartan 3, XC3S<br>series, FPGA            | Decreasing  | 30-52 weeks<br>or above |   |
|              | Spartan 6, XC6S<br>series, FPGA            | Decreasing  | 52 weeks or<br>above    |   |
| Xilinx       | Spartan 7, XC7S<br>series, FPGA            | High/Stable | 52 weeks or<br>above    | Demand remains high but slightly adjust.  |
|              | Artix 7, XC7A series,<br>FPGA              | High/Stable | 52 weeks or<br>above    | The series is still on shortage as issue with their wafer fab.  |
|              | Kintex 7, XC7K<br>series, FPGA             | High/Stable | 52 weeks or<br>above    |   |
|              | Cyclone III, EP3C<br>series, FPGA          | Stable      | 46-52 weeks<br>or above | Still on allocation. Market price is becoming<br>stable due to more stock released to<br>market. No improvement on lead time. |
|              | Cyclone IV, EP4C<br>series, FPGA           | Stable      | 45-52 weeks<br>or above | More inventory released to open market.   |
| Altera       | MAX II, EPM1/<br>EMP2/ EPM5 series<br>CPLD | Stable      | 45-52 weeks<br>or above | Still on allocation. Market price is becoming<br>stable due to more stock released to<br>market. No improvement on lead time. |
|              | Max 10, 10Mxxx<br>series, CPLD             | Stable      | 36-45 weeks<br>or above | Market price is becoming stable. Lead time is improving.  |

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#### **MICROCONTROLLERS & PROCESSORS**

| Manufacturer       | Part/Series  | Pricing             | Lead Time               | Notes  |
|--------------------|--|---------------------|-------------------------|--|
|                    | S32K1XX family,<br>FS32K142/144/146<br>series  | Stable/High         | 52-90 weeks<br>or above | Still in high demand. Lead times for certain parts are over 100 weeks.   |
|                    | MCU, MCS9/S9<br>series   | Stable              | 52 weeks or<br>above    | Still seeing shortage for the S912VC12 / S912VC96 series   |
| NXP / Freescale    | MCU Kinetis - KL,<br>MKxxx series  | Increasing          | 52 weeks or<br>above    | No improvement on lead times due to<br>lack of wafer. Limited stock available in<br>the market. MK22 / MK64 is seeing a<br>price increase.         |
|                    | MPU, i.MX 6 series   | Increase<br>10%-15% | 52-60 weeks<br>or above | Delivery is unstable.  |
|                    | MCU, LPC4xxx<br>series   | Increasing          |                         | LPC series' price is dropping.   |
|                    | 8-bit MCU, STM8<br>series  | Decreasing          | 52 weeks or<br>above    | On allocation. Market spot buy price drop<br>due to lower demand for most of the<br>items.   |
| STMicroelectronics | 32-bit MCU, STM32<br>series  | Stable              | 45-54 weeks<br>or above | Market spot buy price drop due to lower<br>demand for most of the items. STM32F4<br>/ STM32M4 series' is still in shortage and<br>pricing is high. |
| Microchip          | ex-Atmel MCU,<br>ATMEGA series,<br>e.g. ATMEGA1280-<br>16AU,<br>ATMEGA644PA-AU,<br>ATMEGA88PA-MU,<br>ATMEGA328P-MU | Stable              | 52 weeks or<br>above    | Tight production capacity. Market price remains high.  |
|                    | ex-Atmel MCU,<br>AT91xxx series  | Stable              | 42-52 weeks<br>or above | Tight production capacity. Market price remains high.  |
|                    | MCU, PIC16xxx/<br>PIC18xxx series  | Stable              | 52-62 weeks<br>or above | Tight production capacity. Market price remains high.  |



### ANALOG & COMPLEX ICs

| Manufacturer      | Part/Series                               | Pricing     | Lead Time                  | Notes  |
|-------------------|---|-------------|----------------------------|--|
|                   | Logic IC, SN74 series                     | Decreasing  | 26-35<br>weeks or<br>above | Demand is strong   |
|                   | DSP, TMSxxx series                        | Stable      | 35 weeks or<br>above       |  |
| Texas Instruments | PMIC, LMxxx series                        | Stable      | 50-52<br>weeks or<br>above | Certain parts have an 80 week lead time.   |
|                   | Power Management<br>ICs, TPS series       | Decreasing  | 35 weeks or<br>above       | TPS7B series with SOP package is seeing price increase.  |
|                   | OpAmp, OPA series                         | Increasing  | 35-52<br>weeks or<br>above | Market shortage for OPA2320A   |
|                   | General                                   | Stable      | 52 weeks or<br>above       | Spot buy price decreased due to more<br>inventory available in the market. Certain<br>parts have their lead times extended to 80-<br>90 weeks. |
|                   | OpAmp, OPxxx series                       | Stable/High | 50 weeks or<br>above       | Lead times might are up to 70 weeks or above.  |
|                   | OpAmp, AD62xxx<br>series                  | Stable      | 26-50<br>weeks or<br>above |  |
| Analog Devices    | OpAmp, AD86xxx<br>series                  | Stable      | 30-50<br>weeks or<br>above | Certain parts have their lead times at 70 weeks.   |
|                   | Interface, ADMxxx<br>series               | Stable/High | 39-54<br>weeks or<br>above | Certain parts have their lead times at 90 weeks.   |
|                   | Digital Isolators,<br>ADUMxxx series      | Stable/High | 34-50<br>weeks or<br>above | Certain parts have their lead times at 90 weeks.   |
|                   | ex-Linear Tech series,<br>LTxxx series    | Stable      | 52 weeks or<br>above       | LT68/LT69 series' price remians high.<br>Automotive and high-end chips remain out<br>of stock.   |
| Microchip         | ex-SMSC series, e.g.<br>LANxxx, USBxxx    | Decreasing  | 52 weeks or<br>above       | Pricing and lead times are improving   |
|                   | ex-Micrel series, e.g.<br>KSZxxxx, MICxxx | Decreasing  | 52 weeks or<br>above       | Pricing and lead times are improving   |

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#### **ANALOG & COMPLEX ICs - Continued**

| Manufacturer     | Part/Series   | Pricing    | Lead Time                  | Notes  |
|------------------|---|------------|----------------------------|--|
|                  | Interface, TJAxxx<br>series   | Decreasing | 48-52<br>weeks or<br>above | Certain parts still have long lead times   |
| NXP / Freescale  | Interface, UJAxxx<br>series   | Stable     | 52 weeks or<br>above       | Certain parts still have long lead times   |
|                  | Interface, PCA series   | Decreasing | 52 weeks or<br>above       | Certain parts still have long lead times   |
|                  | General   | Decreasing | 30-50<br>weeks             | Delivery unstable. More stock is available<br>from open market. Shortage parts lead<br>times are up to 70-80 weeks |
| Maxim Integrated | Real Time Clock, e.g.<br>DS1302, DS1304,<br>DS3231, etc.              | Decreasing | 40-60<br>weeks or<br>above | Delivery unstable. Shortage items are up to<br>70-80 weeks lead times.   |
|                  | Interface IC,<br>e.g. DS2490B+,<br>MAX13085, MAX232,<br>MAX3232, etc. | Decreasing | 26-48<br>weeks or<br>above | Delivery unstable. Shortage items are up to 70-80 weeks lead times.  |
| Nexperia         | Logic, 74xxx series   | Stable     | 53-80<br>weeks or<br>above | Lead times are unstable.   |
| onsemi           | Logic, 74xxx series   | Stable     | 30-52<br>weeks or<br>above | Lead times have improved.  |



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