# Market Conditions

By
Product Marketing

February 2010

# Analog

## Market Conditions
February 2010

| Product Type | 2010 Market Forecast | Market Driver | Future's Primary Suppliers | Lead times Q1 2010 vs Q4 2009 | Pricing Trends |
|---|---|---|---|---|---|
| Analog Proprietary Power<br>Classes 42, 46, 5D, 5E | + 15-20% | LED Lighting<br>DC/DC | • National<br>• ST<br>• Micrel<br>• Microchip | 10-14 wks<br>10-14 wks typical some 16 wks + | No significant price increases but suppliers getting more critical of customer consumption. Some billbacks.<br>Micrel has hinted @ some extended LT's. |
| Analog Signal Chain – Sensors<br>Class 5B | + 15% | MEMS | • Bosch<br>• ST<br>• Freescale<br>• Melexis | 14-16 wks<br>was 14-16 wks | Bosch, ST & Freescale down<br>Melexis Up |
| Analog Signal Chain – Clocks<br>Class 25 | + 10-12% | Crystal Replacements | • Cypress | 8-10 wks<br>was 8–10 wks | Stable |
| Analog Signal Chain – Signal Conditioning<br>Class 5C | + 15% | Netbooks<br>GPS<br>HDTV | • National<br>• ST<br>• Microchip | 12 wks<br>was 10-12 wks | Stable |
| Analog Signal Chain – Data Converters<br>Class 5C | + 15-20% | High Speed | • National<br>• Microchip<br>• NXP | 10-12 wks<br>NSC: 14-16 wks<br>was 10-12 wks<br>NSC: 14-16 wks | Stable to down<br>Up on Legacy Tech |
| Analog Signal Chain – Amps & Comparators<br>Class 5C | + 10-14% | Consumer Products | • National<br>• Microchip<br>• ST | 12-14 wks<br>was 12-14 wks | Increasing – Led by NSC & STM |
| Standard Analog & Logic<br>Classes 5, 8, 61, 09, 16 | + 15-18% | Consumer electronics primarily China | • Fairchild<br>• NXP<br>• ST<br>• ON Semi | 18 wks + (allocation)<br>was 18 wks + | Up. Allocation in ST, NXP, ON Semi in standard Analog. Extended lead times in FSC Logic. FSC is increasing their logic pricing Q1. TI seems to have caught up on some deliveries. We anticipate LT's may come down a little. |
| Analog Wireless & Connectivity<br>Class 2R | + 20% | Smart metering<br>HAN<br>Solar, lighting | • Freescale<br>• NXP<br>• Cyan<br>• Synapse<br>• CEL | 8-16 wks<br>was 10 wks | Some price decline.<br>Extended LT's on interface product in NXP. |

FUTURE ELECTRONICS

# Discretes



| Product Type | 2010 Market Forecast | Market Driver | Future's Primary Suppliers | Lead times Q1 2010 vs Q4 2009 | Pricing Trends |
|---|---|---|---|---|---|
| Discretes – Mosfets Classes 4Y, 26 | + 15–20% | Medical, Industrial Automotive | • IR<br>• FSC<br>• Vishay | 14-18 wks (SIX on allocation)<br>was14-18 wks | Stable overall pricing. Imminent price increases in HV Fets from FSC. IR pricing stable. Vishay has increased their mosfet pricing to the marketplace. |
| Discretes – Over Voltage Protection Classes IV, 11 | + 12-17% | Consumer, industrial | • Semtech,<br>• LF<br>• Vishay | 8-10 wks<br>was 8-10 wks | We are anticipating some minimal price increases in some time Q1. |
| Discretes – Thyristors Class 10 | + 12-17% | White Goods, Telecom, Networking | • LF<br>• STM | 8-18 wks LF on low side & STM on high side<br>was12-16 wks | Stable pricing for LF STM increasing pricing |
| Discretes – IGBT's Class 4Z | +20-25% | White Goods Motor Control | • IR<br>• FSC<br>• Ixys | 14-16 wks<br>was 14-16 wks | Stable |
| Discretes – Standard Diodes Classes 01, 4X, 04 | +12-15% | All applications | • NXP<br>• ON<br>• FSC | 12-14 wks<br>was 12-14 wks | NXP & FSC have increased their pricing. ON Semi stable. |
| Discretes – Standard Transistors Classes 02, 04, 44 | + 12-15% | All applications | • NXP<br>• ON<br>• FSC | 12-14 wks<br>was 12-14 wks | NXP & FSC have increased their pricing. ON Semi stable. |
| Discretes – Rectifiers Classes 7, 29, 4V | + 15-20% | All applications | • Vishay<br>• DIO<br>• ON<br>• STM | 12-14 wks (ON Semi allocation)<br>was 10-14 wks (ON Semi allocation) | ON Semi has increased their pricing. DIO & Vishay continue to drive incremental share due to On Semi's LT's. |
| Discretes – Over Current Protection Fuses Class 14 | + 12–15% | Industrial | • LF<br>• BUS<br>• RYC | 10-12 wks<br>was 10-12 wks | Stable |

# Emech/PT&E

**Market Conditions**
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| Product Type | 2010 Market Forecast | Market Driver | Future's Primary Suppliers | Lead times Q1 2010 vs Q4 2009 | Pricing Trends |
|---|---|---|---|---|---|
| E-Mech / PTE (Thermal Management)<br>Fans & Heatsinks<br>Class 77 | + 7% | PC's and Notebooks<br>Power Supplies | • Sunon<br>• Aavid Thermalloy<br>• Delta | 14 wks<br>was 12 wks | Stable in Fans. Heat sink pricing starting to climb in line with base metal prices. |
| E-Mech / PTE (Batteries)<br>Classes 64, 84, 94 | + 8% | Portable<br>Consumer<br>Metering | • Tadiran<br>• Varta<br>• Renata | 10 wks<br>was 8-10 wks | Pricing is trending up due to increasing chemical costs. |
| E-Mech / PTE (Timing Devices)<br>Crystals, Oscillators & Resonators<br>Class 68 | + 10% | Hand Sets<br>Watches<br>GPS<br>White goods | • Fox<br>• Abracon<br>• Citizen | 16-24 wks<br>was 12-18 wks | Pricing is stable in legacy products but increasing demand for smaller ceramic packages is causing pricing increases.<br>Citizen lead-times are extended, call marketing. |
| E-Mech / PTE (Test & Measurement)<br>Class 38 | + 10% | R & D<br>IC Market<br>Government | • Agilent | 8-10 wks<br>was 4 wks | Prices are trending up due to increasing component costs. |
| E-Mech / PTE (Production Products)<br>Hardware<br>Class 38 | + 10% | Semiconductor market | • Keystone<br>• Kester<br>• Bivar | 8 wks<br>was 6-8 wks | Stable. |
| E-Mech / PTE (Power Supplies)<br>Class 55 | + 5% | Signage and Lighting<br>Telecom | • Power One<br>• SL Power<br>• Mean Well | 12-14 wks<br>was 12-14 wks | Stable. |
| E-Mech / PTE (Switches)<br>Class 22 | + 10% | Handheld market<br>Consumer Electronics | • C&K<br>• NKK<br>• Grayhill | 8-10 wks<br>was 6-8 wks | Stable |
| E-Mech PTE (Relays)<br>Class 63 | + 12% | Test Equipment<br>HVAC<br>Medical | • Panasonic<br>• Tyco<br>• Clare | 14-20 wks<br>was 10-12 wks | 10-15 % increase in relay prices due to base metal increases and currency fluctuations. |

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# High End

## Market Conditions

February 2010

| Product Type | 2010 Market Forecast | Market Driver | Future's Primary Suppliers | Lead times Q1 2010 vs Q4 2009 | Pricing Trends |
|---|---|---|---|---|---|
| 8 Bit MCU<br>Classes 12, 1C, 41, 1M 1P, 1A | Flat–10% | Appliance<br>HVAC<br>Metering<br>Energy<br>Touch Sensing | • Microchip<br>• Freescale<br>• Zilog<br>• Cypress<br>• ST<br>• NXP<br>• NEC | 12-14 wks<br>FSL 16-20 wks<br>MCP 8-10 wks<br>―<br>12-14 wks recovery for most suppliers.<br>FSL remains 16 wks til end of Q1 2010 | Stable. |
| 16 Bit MCU<br>Classes 1F, 3C, 1P | Flat at best | Automotive<br>Motor Control | • Freescale<br>• Microchip | FSL 16-24 wks<br>MCP 8-10 wks<br>―<br>14-16 wks<br>Tightening at Freescale remains 14-16 wks | Stable |
| 32 Bit MCU<br>Classes 1H, 3C, 1P, 1C | + 5-10% | High End Medical<br>Smart Cards/Readers<br>Sensor based appls | • ST<br>• NXP<br>• Freescale<br>• Microchip<br>• NEC | 20-26 wks<br>ST 9 16-26wks allocations<br>NXP 14 wks<br>FSL 16-20 wks<br>―<br>14-16 wks Slipping with FSL, NXP and ST on some product families they are 20 wks | Higher end I.MX remain steady |
| FPGA<br>Classes 3A, 3H, 3L | + 5% | Telecom/Wireless<br>Networking<br>Computing/Storage<br>Industrial | • Actel | Stretching<br>10 -12 wks<br>―<br>was Stable<br>4 – 6 wks | Stable/Decline |
| Micro-Processors<br>Class 24 | Flat -10% | Computing<br>Networking<br>Telecom/Wireless<br>Multimedia<br>Industrial Automation | • Freescale | Stretching<br>16-22 wks<br>―<br>was Stable<br>8 – 10 wks | Computing -10 -15% per quarter<br>Industrial Stable/Decline |
| Display Solutions – TDT<br>Class 6L | + 10-12% | Industrial<br>Medical<br>Military | • NEC<br>• Sharp | 16-18 wks<br>NEC LT's stretching<br>―<br>14 wks | Stable to decreasing in certain cases. |

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# Interconnect

## Market Conditions
February 2010

| <u>Product</u> | <u>2010 Market Forecast</u> | <u>Market Drivers</u> | <u>Future Primary Suppliers</u> | Lead times Q1 2010 vs Q4 2009 | <u>Pricing Trends</u> |
|---|---|---|---|---|---|
| Sockets<br>Class 15,Y5 | Mature Product- Test Sockets declining 10-20% based on Technology in decline not market | Computer, Test equipment, Industrial controls, Instrumentation, Telecommunications, Power Supplies | • Tyco,<br>• Millmax<br>• Assmann<br>• Adam-Tech | 4-6 weeks,<br>Tyco 6-8 wks | Stable |
| Backpanel Connectors<br>Classes 20, Y7 | Mature Product | Telecom,Datacom,Computers,Industrial, Medical,Communication,Instrumentation | • Tyco<br>• AVX<br>• Harting<br>• Sullins | 6-8 weeks,<br>Tyco 10-12 wks | Stable |
| RF Connectors<br>Class 57 | Growth product- declining 20% due to Market conditions | Consumer, Automotive, Medical equipment, Portable Test Equipment | • Bomar | 10-12 wks | Stable |
| Terminal Blocks<br>Classes 65, Y1 | Mature product- Decline 20-25% based on Market conditions | Industrial Controls, Process Controls, Instrumentation, Security and Alarm Systems, HVAC | • Tyco<br>• Tyco<br>• Wago<br>• Weco<br>• Wielan<br>• Bussmann | 6-8 wks | Stable |
| Headers & Receptacles<br>Classes 5A, Y3 | Mature- Down 15% effected by Market conditions | Mass Market product- Industrial, Computing, Automotive, Telecommunications, etc. | • Tyco<br>• Hirose<br>• JST<br>• Adam Tech<br>• Sullins<br>• Major League | 8-10 wks,<br>JST 18 wks standard | Stable |
| FFC/FPC<br>Classes 53, Y8 | Growth-Mature | LCD Displays, Computers, Telecommunications, Industrial | • Tyco<br>• AVX<br>• JST<br>• Hirose<br>• Mill-Max | 8-10 wks,<br>JST 18 wks standard | Stable |
| Data & Telecom -- Jacks, Cables, D-Subs, Industrial (Circular/Han)<br>Classes 85, Y6, Y2 | Growth-Mature | Computer, Data Processing, Telecommunications | • Tyco<br>• Adam Tech<br>• Halo<br>• Harting<br>• | 8-10 wks,<br>TE 10-12 wks | Stable |
| Tyco Electromechanical Product (Relays, Switches, Heatshrink Tubing, Inductors, etc)<br>Class Y4 | Mature product- down20-30% due to market conditions | Energy, Solar, Wind - Energy Saving Applications | • Aromat | 10-12 wks | Stable |
| Military, Aerospace & Defense<br>Class Y9 | Flat | Military, Aerospace & Defense | • Tyco | 12-14 wks | stable |

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# Memory

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| Product Type | 2010 Market Forecast | Market Driver | Future's Primary Suppliers | Lead times Q1 2010 vs Q4 2009 | Pricing Trends |
|---|---|---|---|---|---|
| Memory – DRAM<br>Class 48 | + 24% | Computers | • Micron<br>• Samsung (both through GSO) | 12-14 wks<br>was 8-10 wks | Upward |
| Memory – NAND<br>Class 4N | + 27% | i-Phone | • Samsung,<br>• Numonyx (both through GSO) | 12-14 wks<br>was 8-10 wks | Upward |
| Memory – SRAM<br>Class 4B | - 5% | Networking | • Cypress<br>• Alliance | 10-12 wks<br>was 8-10 wks 18 megs on allocation | Upward |
| Memory – FIFO & Dual Port<br>Class 4C | - 35% | Legacy Mmedical and Semicon Equipment | • Cypress | 4-6 wks<br>was 2-4 wks | Stable. Legacy product. |
| Memory – EPROM<br>Class 4E | - 33% | Legacy gaming | • ST Micro | 8-12 wks (some at 24wks)<br>was 2-4 wks | Upward. Legacy product. |
| Memory – NOR FLASH<br>Classes 4F, 4R | Flat | Cell phones<br>Metering | • Macronix<br>• SST<br>• Spansion (GSO)<br>• Numonyx (GSO) | 8-10 wks<br>was 6-8 wks | Flat |
| Memory – Serial FLASH<br>Class 4R | + 10% | Set top boxes<br>Toys | • Macronix<br>• SST<br>• Spansion (GSO)<br>• Numonyx (GSO) | 8-10 wks<br>was 6-8 wks | Flat |
| Memory - EEPROM<br>Class 4G | + 10% | Metering<br>Automotive<br>Memory modules<br>Alarm systems<br>Consumer goods | • Microchip<br>• ST Micro | 8-10 wks<br>was 6-8 wks | Falt |

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# Optoelectronics



| Product Type | 2010 Market Forecast | Market Driver | Future's Primary Suppliers | Lead times Q1 2010 vs Q4 2009 | Pricing Trends |
|---|---|---|---|---|---|
| Standard Opto – LEDs<br>Classes 6D, 6E | + 15-20% | ESS<br>Backlighting<br>EVL | • Avago<br>• Everlight<br>• Liteon | 10-12 wks<br>was8-10 wks | Indication LED pricing remains stable. High Power pricing continues to decline. Avago looking to increase pricing. |
| Standard Opto – Optocouplers<br>Class 6K | + 12-15% | Power Supplies<br>Motor Control<br>Smart Meters | • Fairchild<br>• Avago<br>• CEL<br>• Vishay | 10-12 wks<br>was10-12 wks | Stable as competitive pressure on Avago is driving costs down. |
| Standard Opto – Fiber Optics<br>Class 6F | +15% | Datacom<br>Netcom<br>Industrial | • Avago<br>• Source Photonics | 8-12 wks<br>was 6-8wks | Stable on legacy products while 10G XFP and SFP+ continues to decline |

# Passives

**Market Conditions**
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| Product Type | 2010 Market Forecast | Market Driver | Future's Primary Suppliers | Lead times Q1 2010 vs Q4 2009 | Pricing Trends |
|---|---|---|---|---|---|
| Capacitors – HiCV MLCC<br>Class 61 | + 23% | Widespread Usage (Tantalum Replacements) | • Samsung<br>• Murata<br>• AVX<br>• TDK | 14-16 wks<br>was 14-16 wks | Trending up. Capacity Utilization 95% plus for most major suppliers. |
| Capacitors – Commodity MLCC<br>Class 60 | + 18% | Widespread Usage | • AVX<br>• Murata<br>• Samsung<br>• Yageo | 12-14 wks<br>was 10-12 wks | Trending up. |
| Capacitors - Tantalums<br>Classes 2T, 34 | + 20% | Power supplies<br>Network Stations<br>Telcom Devices<br>Medical | • AVX<br>• Vishay Sprague | 18-20 wks<br>was 12-18 wks | Trending up across all case sizes, cost of Tantalum powder up. |
| Capacitors – Aluminum<br>Class 33 | + 10% | Smart Metering<br>Power Supplies<br>White Goods<br>High Cap/Power | • Nichicon<br>• NIC Comp<br>• United Chemicon<br>• Cornell Dubilier | 10-12 wks<br>was 10-12wks | Stable to slightly down but Japanese suppliers trending up due to strong Japanese Yen |
| Capacitors – Inductors<br>Class 92 | + 12% | Power Supplies<br>Medical<br>Base Stations<br>Renewable Energy | • Sumida<br>• Coiltronics<br>• Murata<br>• Vishay Dale | 10-12 wks<br>was 10-12wks | Stable to slightly down but Japanese suppliers trending up due to Japanese Yen |
| Capacitors – Resistors<br>Classes 72, 73, 74, 75, 47, 4A | + 15% | Widespread Usage | • Yageo<br>• SEI/Stackpole<br>• Vishay Dale | 10-12 wks<br>was 10-12 wks for Yageo 20-26 wks for Rohm & BCC | Mostly stable but we have seen some slight increases as LT increases (ie Rohm) |

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