THE NEXT WAVE OF PRODUCT INNOVATION



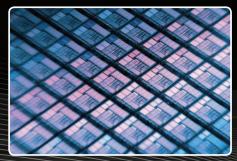
The Micrel Culture

Micrel's lifelong dedication to customer success is at the heart of the Company's culture. Internal processes have been developed with flexibility in mind, so entire organizations can quickly react to changing requirements. With multiple design locations in the U.S., Europe, China, and Taiwan, and numerous sales offices throughout the world, Micrel's outstanding sales, customer service, and technical support organizations make it easy to get questions answered and issues resolved. Motivated by a dedication to quality, Micrel first achieved ISO9001 registration on March 31, 1997 and has maintained that registration through surveillance audits. In December 2003, the Company attained ISO9001:2000 certification and then, in December 2004, achieved the International Environmental Management System Standard. The Company remains fully committed to delivering products and services that exceed customer expectations — error free, on schedule, and at a competitive solution cost. A culture of continuous improvement permeates all disciplines in the Company and includes the activities of its suppliers. Micrel is also fiercely protective of its innovation and holds hundreds of patents on semiconductor devices and methods, both domestic and foreign.











Micrel, Inc. Product Innovation

Semiconductors remain the driving technology behind the most important advances that make up today's dynamic, global market. In many ways, integrated circuits have shaped the world, making it what it is today. From tablets to smartphones, servers to laptops, today's devices rely on a vast array of semiconductors not only to function perfectly, but to do so faster, smarter, better, and longer.

Offering more than three thousand ICs aimed at the fastest growing markets for high-performance linear and power, timing and communications, and LAN solutions means Micrel has one of the largest and broadest product portfolios of any other company of its size in the industry. Micrel stands out as a company of value. Micrel's ICs are highly integrated, allowing busy designers to quickly and efficiently choose solutions that not only meet the highest technology standards, but enable faster time to market at low cost. In addition, Micrel has its own wafer fabrication facility located in the heart of the Silicon Valley, providing one of the largest ranges of process technologies offered in the industry, including CMOS, BCD, high-speed bipolar with SiGe, and MEMS.

HIGH-PERFORMANCE LINEAR AND POWER SOLUTIONS



Micrel has a reputation for being a high-quality and premiere supplier of LDO regulators in the worldwide market and is a major global supplier to

the mobile phone, computing, and industrial markets thanks to its largest and most prolific business group, High-Performance Linear and Power Solutions (LPS). This business group's major focus is to develop high-performance power management ICs that address our customers' needs, leveraging Micrel's differentiated proprietary MOSFET process technology and advanced packaging.

With one of the industry's broadest portfolios of mixed-signal products, Micrel enables customers to choose from hundreds of devices from each major product category, including DC/DC switching controllers and regulators that offer some of the widest input ranges (2.2V to 75V), highest efficiency (>90 percent), smallest solution size, and lowest standby power benchmarks in the industry.

The Micrel family of SuperSwitchers[™] offers superior design flexibility and leverages our proprietary integrated MOSFET technology. Micrel is also addressing the need for precise power monitoring and telemetry, as well as system diagnostics, by rolling out a family of intelligent devices with multiple frontend digital protocols such as I²C, MIPI, and PMBUS with analog or digital control.

Micrel's family of IntelliMOS[™] and micro modules (MCMs) power solutions offer some of the highest levels of integration for design simplicity so vital for today's busy designers. In addition, the products provide high power density along with the superior performance required for demanding applications such as cloud servers and smartphones.

As an undisputed leader in LDOs, Micrel has a broad range of output current and package offerings. The product line also has

an expansive input voltage line of solutions ranging from





1.8V all the way up to 120V. This family of products includes high-efficiency LDOs (HELDO) and the award-winning ultra-high supply frequency rejection line of LDOs (Ripple Blocker[™]).

Micrel's MOSFET drivers also offer one of the industry's widest operating voltage ranges: from 5.5V all the way up to 100V, high drive power capability and comprehensive fault protection. The Company's ubiquitous line of load switches are some

of the smallest on the market, 0.85mm x 0.85mm, and have some of the lowest voltage drops. Micrel's hot swap products are designed with robust bipolar technology and are extremely reliable. The line of current limit switches provides high current accuracy across one of the market's widest current ranges.

In the area of portable LED drivers, there are scores to choose from; the wide input and output range of $2.2V_{IN}$ to $45V_{OUT}$, combined with the smallest footprint, give customers options found nowhere else. The line of supervisor devices provides designers with low standby current in the tiny size of just 1.2mm x 1.2mm.

Micrel's line of op-amps and comparators offers a very wide input voltage range of 2V to 32V and low supply current. Micrel's digital temperature sensors are pin-to-pin compatible with industry-standard digital temperature sensors I²C, SMBus, and single-wire communication. Widely used in everything from key fobs to garage door openers, Micrel's RF receivers and transmitters have high output power for average supply current and are automotive qualified.

Other products in the high-power arena include DDR terminators, battery chargers, timers, I/O expanders, and more. Micrel has ICs to suit any electronic product designer's needs.

TIMING AND COMMUNICATIONS

The Timing and Communications business group within Micrel focuses on highperformance solutions for the growing communications and networking market segments, driven by exponential demand for bandwidth. The Company's expansive line of Clock and Timing products offers superior performance to enable today's most demanding high-bandwidth applications. Flexibility shortens design cycles and the high

level of integration in Micrel products lowers BOM costs. In addition, Micrel's timing products offer some of the lowest jitter solutions in their class. The product line offers solutions with jitter below 200fs across a wide range of frequencies, up to 850MHz. The ClockWorks[®] FLEX devices specifically provide the highest level of integration, which consolidates BOM and improves performance. The robust packaging technology utilized also enhances reliability. The ClockWorks[®] FUSION products, consisting of flexible ultra-low-jitter clock generators, have the best combination of flexibility and performance, cutting BOM virtually in half. The high fanout feature consolidates the clock tree in high-bandwidth applications. Micrel's PicoPLL and PicoEMI flexible clock generators are carefully optimized for cost and the compact size saves costly board space, particularly in general-purpose clocking applications. PicoEMI flexible spread spectrum clock generators enable fast EMI



compliance using software commands. The PrecisionEdge® product line of highperformance clock and data distribution chips have been developed with Any-In technology utilizes internal termination that simplifies design and reduces that all-important BOM.

Micrel's fiber-optic module PON IC solutions feature superior performance, including high input sensitivity with robust margin to BER specification, increased hysteresis

for reliable small signal operation, and fast LOS/SD timing independent of input signal amplitude. The products offer improved link efficiency in the form of reduced CAPEX/OPEX and have stable, fast LOS/SD timing for higher data throughput which translates into more downstream splits/nodes. The unique noise discriminator feature provides higher link uptime, and provides higher bandwidth for the user, which means higher end user revenue generation. Due to Micrel's focus on improved manufacturability, these products have high sensitivity, hysteresis, and fast LOS/SD timing — all to provide extra margin for customers to reduce manufacturing/rework costs.

LAN SOLUTIONS

Ethernet is seeing rapid adoption in several large and growing segments such as unified communications, automotive infotainment and diagnostics, as well as industrial automation. These applications are characterized by the need for energy efficient, size- and cost-effective products with excellent levels of Quality of Service (QoS) and the lowest possible emissions.

Micrel is focused on delivering highly differentiated solutions to meet these needs. An integral part of this strategy, which includes enterprise networking, is offering customers ever increasing levels of functional integration consisting of analog, mixed signal, and digital capabilities to deliver high-value ASSP solutions to customers. In the area of VoIP, Micrel's solutions provide price performance leadership with fully 30 percent lower BOM cost, more than 40 percent lower power consumption, and high integration with Micrel's power management ICs. Unique product features include IPv6, Energy Efficient Ethernet (EEE), and seamless, pin-compatible upgrade to wideband. Micrel's EtherSynch[™] IEEE1588/IEEE802.1AS industrial ICs offer superior performance with network synchronization jitter at least 10 times lower than the IEEE specification and hardware-assisted time synchronization, significantly reducing host CPU overheads. In addition to the low BOM and compact IEEE1588 node, the devices also provide more than 50 to 75 percent lower power consumption. Micrel is a leading supplier of automotive LAN solutions in the industry, offering a broad AEC-Q100 Ethernet portfolio since 2008. Micrel leads the way with the networking products of choice for automotive OEMs and Tier I suppliers. Micrel's soon-to-be-released 7-port Gigabit switch, with its over 4 million gates, demonstrates Micrel's ability to bring to market highly integrated IC solutions.













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