



Analog solutions
for robust, reliable
performance

Advanced Analog Products for Automotive and Industrial Markets

| Category | Device | Description | Auto* | Indus** | Cons*** |
|--------------------------|--|--|-------|---------|---------|
| Smart High Side Switches | MC33981 | High current and high frequency 30 A/27 V, 60 kHz, 4 mΩ high-side switch with protected half bridge configuration enabling up to a 25% board area reduction and module simplification | X | | |
| | MC33982/4/8 | Self-protected multipurpose single 2 mΩ, dual 4 mΩ or 8 mΩ low RDS(on) SPI-driven high side switches for flexible load management from 7 A to 30 A | X | | |
| | 24XS4 | Scalable, programmable family of 24 A/36 V SPI-driven, dual-channel, smart high-side switches from 6-to-50 mΩ RDS(on) for up to a 30% board reduction, and optimum for dense high-current switching applications | X | | |
| | 12XS6 | Scalable family of 22 A/18 V programmable penta, quad and triple high-side switches from 7-to-40 mΩ RDS(on) with wide-range diagnostic current sensing for up to 30% smaller PCB and 50% lower component count | X | | |
| | MC33XS2410 | Quad 100 mΩ or dual 50 mΩ high side driver, 4 x 1.4 A DC current, operating from 3V to 60V, SPI-driven, fully programmable with wide-range diagnostic (short circuit current limit, over load protection, open load detection...), PWM signal and programmable dither signal for proportional solenoid valve | | | |
| LED Drivers | ASL1500/2500/ 4500/4501 ASL1507/2507 | Scalable series of 1, 2 and 4 phase boost converters with integrated SPI, diagnostic, up to 2 flexible and independent output voltages (<80 V) with 3% accuracy, external FETs and adjustable DC/DC converter frequency (125-700 kHz) with or without limp home mode | X | | |
| | ASL2416/3416 ASL2417/3417 | 2 and 3 multi-channel buck converters with integrated SPI, diagnostic, programmable LED current per channel up to 1.5 A with 5% accuracy, LED output voltage range up to 70V, external FETs and PWM dimming from 0 to 100% with or without limp home mode | X | | |
| | ASL5008/5015 | Matrix LED controller for up to 12 single LEDs or 4 segments of 3 switches, 0.8 A or 1.5 A per switch capability, 12 bit resolution, on-chip storage of preprogrammed PWM curves, single LED open/short detection, CAN interface option allowing to connect up to 32 Matrix LEDs Controllers together | X | | |
| | | | | | |
| Smart Low Side Switches | MC33882 | Smart 6-output low-side switches able to control loads up to 1.0 A, daisy chainable SPI and parallel inputs control with PWM capability on all outputs | X | | |
| | MC33880/79 | Configurable 8-output serial switches for load control up to 2.0 A with SPI, up to 2 direct control outputs for PWM applications and very low standby current, including monitoring and protection features | X | | |
| | MC33996/99 | 16-ouput low-side switches able to control loads up to 2.5 A, daisy chainable SPI with or without parallel inputs mode for PWM capability on all outputs | X | | |
| Valve Drivers | MC33SB0400/01 | One-wheel, two-wheel motorcycle ABS integrated device allowing heatsink removal | X | | |
| | MC345B0800/410 | Fully integrated octal, quad valves and pump controller SoC solutions with SPI, PWM up to 5 kHz (5.0 A), real-time valve current regulation (2.25 A – 2% precision w/ calibration) and integrated safe MOSFET to switch off all valves at once | | X | |
| Power Drivers | MPC17510/29/31 MPC17C724/ MC34933 | Low operating voltage (2 V to 15 V) monolithic single and dual H-Bridge for portable applications designed with low quiescent, integrated protection and diagnostics, 1 A output drive and PWM control input frequency up to 200 kHz capabilities | | X | |
| | MC33931S/2S | Medium operating voltage (5 V to 36 V) monolithic single and dual 5A H-Bridge power ICs designed for harsh environments with selectable slew rate control, PWM up to 20 kHz, integrated protection and diagnostics | X | X | |
| | MC33HB2000/1/2 | 3.0 A H-Bridge motor driver (5 V to 28 V) with SPI control, low RDS(on) outputs (235 mΩ or 120 mΩ), PWM up to 35 kHz, daisy chainable, real-time current mirror and available in 32 lead SOIC, PQFN and QFN packages | X | | |
| Gate Drivers | MC33937/ MC33GD3000 | 3-phase high current FET pre-driver (>1 A) with extended voltage range (6 V to 58 V), PWM (> 20 kHz), robust fault monitoring and failure protection for industrial brushless DC motor control (BLDC) | X | | |
| | MC33883 | H-Bridge gate driver with charge pump, independent high and low side gate driver channels, PWM up to 100 kHz and up to 1.0 A peak gate driver current | X | | |
| | MC33GD3100 | Advanced gate driver (<10 A) for high-voltage power IGBTs with integrated high-voltage isolator, SPI interface, safety functions compliant with ASIL D applications and current sense feedback | X | | |
| Small Engine Control | MC33812/3/4 | Electronic fuel injection with diagnostics for air pollution and fuel consumption environmental legislation. Euro 3/ 4 for up to 2 cylinders, Euro 5 & OBDII for 1 cylinder. 2 O ₂ heater pre-drivers | X | | |



| Category | Device | Description | Auto* | Indus** | Cons*** |
|-------------------|--|--|-------|---------|---------|
| Networking | TJA1057GT/1044GT | 12 V family of basic/standby CAN FD transceivers with optional 3.3 V VIO pin, offering best-in-class EMC performance and common mode choke (useless up to 500 kbit/s); available in SO8 and HVSON8 packages | X | X | |
| | TJA1046TK | 12 V dual standby CAN FD transceivers with optional 3.3 V VIO pin, offers best-in-class EMC performance and available in leadless HVSON14 package | X | | |
| | TJA1051/42 | 12 V/24 V family of basic/standby CAN FD transceivers with optional 3.3 V Vio pin, supporting CAN FD data rates up to 5 Mbit/s and available in SO8 and HVSON8 packages | X | X | |
| | TJA1059 | 12 V/24 V dual standby HS CAN transceivers include 3.3 V VIO pin and available in leadless HVSON14 package | X | | |
| | TJA1043 | 12 V/24 V sleep mode CAN FD transceivers including 3.3 V VIO pin. Supporting CAN FD data rates up to 5 Mbit/s and available in SO14 and HVSON14 packages | X | | |
| | TJA1145 | HS-CAN transceiver supporting CAN FD data rates up to 2 Mbit/s, including Partial Networking Sleep Mode and available in SO14 and HVSON14 packages | X | | |
| | TJA1052i | HS-CAN transceiver supports data rates up to 5 Mbits/s with integrated galvanic isolation for high-voltage applications LIN master termination with diode and 1 K Ω +/- 10% resistor | X | | |
| | TJF1052i | | | X | |
| | TJA1021/27/29 TJA1022/24 | Single and multi LIN 2.x/SAE J2602 compliant LIN transceivers available in several package options | X | X | |
| | SJA1124 TJA1124 | SPI-to-Quad LIN 2.x/SAE J2602 transceiver with integrated LIN controller and LIN master termination (1 K Ω +/- 10% or 955 Ω +/-5.5%), sleep mode and wakeup features | X | | |
| | TJA1101/02/S | Single / Dual low power 100BASE-T1 Ethernet PHY over unshielded twisted pair cable and designed to support ASIL-A system requirements , with QFN and QFP package | X | | |
| | SJA1105/ P/Q/R/S/T | 5-port 10/100/1000 Mbps data rates Ethernet switch with AVB and TSN support, as well as SGMII interface, RGMII internal delay line and double VLAN tagging support | X | X | |
| | MC33664 | 2 Mbit/s isolated network high-speed transceiver with dual SPI architecture to conveniently interface a microcontroller up to 15-node system with battery cell controller devices MC33771/MC33772 | X | | |
| | CD1020/30 | 36 V analog switch interface multiplexer: translates up to 33 I/Os onto a single MCU SPI bus with very low quiescent current, configurable wetting currents (from 2 mA to 20 mA), integrated temperature and supply sensors | X | X | |
| | OL2385 | Sub-GHz transceiver system-on-chip radio solution with pre-loaded modem solution supporting SigFox protocol | | X | |
| Energy Management | MC33771/2 | 3 to 14-cell Li-ion Battery Cell Controller compatible for 5 V up to 1000 V packs with 2 Mbits/s transformer coupled daisy chain transceivers, 300 mA passive cell balancing and shunt current sensor | X | | |
| | MM912_637/ MM921_638 | 16-bit integrated MCU with 3 x 16-bit ADC for precision lead acid and Li-ion battery monitoring solutions with low system power consumption for mission-critical applications up to 52 V and higher voltage battery pack monitoring | X | | |
| | MC34671/3/4 | Scalable high-voltage linear chargers for single cell Li-ion and Li-Polymer batteries. Up to 1.2 A charge current, accurate to 0.4% in constant voltage and 5% in constant current. Available in LDFN package | | X | |
| Power Management | TJA1028 | LIN mini SBC in an SO8 or HVSON8 package integrating a LIN 2.x/SAE J2602 compliant LIN transceiver and a 5V or 3V3 LDO with 70 mA output current capability | X | | |
| | TJA1128 | LIN mini SBC in an HVSON14 package integrating a LIN 2.x/SAE J2602 compliant LIN transceiver, with one time configuration via temporary SPI feature, 1 high voltage output, 1 wake input, and a 5 V or 3V3 LDO with 85 mA output current capability as well as optional watchdog and 2nd wake input | X | | |
| | UJA116x/69 | Mini SBC product family, with 5 V/100 mA LDO, integrated HS-CAN and support for CAN FD up to 2 Mbps. HVSON package with SPI interface and Watchdog. Versions available with partial networking and CSN FD passive support. | X | | |
| | UJA107xA, MC33903/4/5 | Mid-range SBC product family including versions with 1 HS-CAN or 1 HS-CAN & 1/2 LIN. Integrated 3.3V / 5V LDO up to 400 mA with external PNP for thermal distribution. Integrated SPI interface, watchdog function and local Wake inputs | X | | |
| | UJA113x | High power SMPS-based SBC product family with Buck-only or Buck-Boost versions, in QFP48 package. Output voltage 3.3 V / 5 V up to 500 mA and integrated Vaux sensor supply. Integrated HS-CAN with CAN FD 2 Mbps support and up to 4 LIN. Versions available with Partial Networking and CAN FD Passive support | X | | |
| | MC33FS45xx/FS65xx MC35FS45xx/FS65xx | 36 V System Basis Chip with energy-efficient DC/DC power conversion up to 2.2 A (2.0 A on Vpre) and low-voltage operation with configurable advanced fail silent behavior, long duration timer, keep alive memory supply and optional integrated CAN FD transceiver; Compliant with AEC-Q100 Grade 0 automotive qualification (TJ=175°C) | X | | |
| | MMPF0100/200 | Economic quick-turn system power management solutions, up to 14-channel, 11.7 A, fully configurable voltages, sequencing and timing optimized for use with i.MX 6 series applications processors | X | X | X |
| | MC33PF3000/1 | Quick-turn programmable 12-channel, 7.3 A system power management solutions with fully configurable voltage, sequencing and timing optimized for use with i.MX 7 and i.MX 6 series applications processors, in a 7x7 mm package | X | X | X |
| | MC34PF1510/50 | Ultra-low-power programmable 6-channel, 4 A system power management solutions with LED driver, JEITA temperature control and 1 A linear battery charger for i.MX 7ULP, i.MX 6UL/ULL applications processors in a 5x5 mm QFN-EP package | | X | X |
| | MC34PF4210 | Quick-turn programmable 12-channel, 12.7 A system power management solutions optimized for use with i.MX 8MQ and i.MX 8MD applications processors available in a 8x8 QFN wettable flank package | | X | X |
| | MC33PF8100/1/21 MC33PF8200/1 | Scalable, safe, programmable 11-channel, 19.1 A system power management solutions optimized for use with i.MX 8 and i.MX 8X series applications processors available in a 8x8 mm QFN-EP package | X | X | X |
| | MC34VR500/VR5100 | 9-Channel PMIC, optimized to work with Layerscape networking processor systems (LS1021A, LS2024A, LS1043A, LS1046/47A), with custom pre-programmed output voltages, sequencing, timing in a 7x7 mm QFN package | | X | |
| | MC33VR5500 MC33FS84/85 | System Basis Chips scalable in power and safety (from QM up to ASIL-D) targeting 12 & 24 V applications such as infotainment (V2X) and ADAS (Vision, Radar) with power up/down configurable, static voltage scaling with SPI or I ² C communication | X | | |

* Automotive

** Industrial

***Consumer

www.nxp.com/analog

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. All rights reserved. © 2015-2019 NXP B.V.

Document Number: INDCONTANLPDFL REV 11