

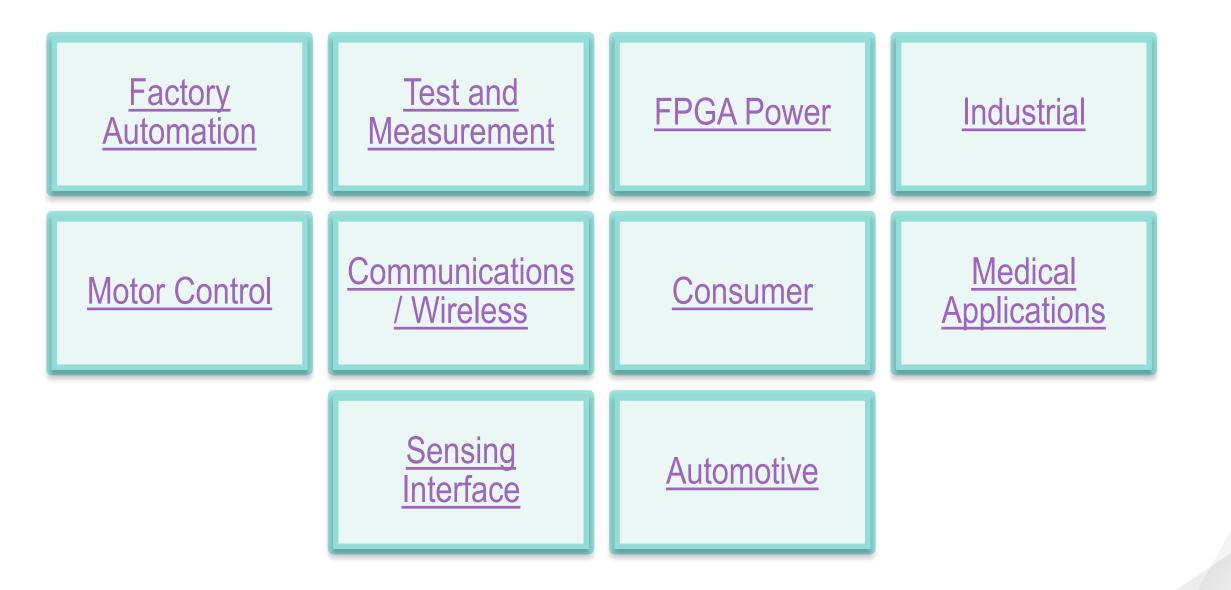
KeyPAD Key Product Application Diagrams



KeyPAD Instructions

- Presentation Mode: Navigate to "View" → "Full Screen Mode" in Adobe Reader and it will act exactly like a PowerPoint presentation.
- **Document Layout**: The first 70 or so slides contain block diagrams, and the rest are family part tables. If you click on any part in a block diagram, it will take you to a family part table inside the presentation.
- Inside Presentation Navigation: Page 3 has a condensed index that leads to each sections block diagram list, however in the bottom left hand corner there is a button for a "Full Index". The "Full Index" button leads to a list of every block diagram in the presentation. If you click on any of the blocks on slide 3, it takes you to the title page for that section and lists out the available block diagrams.
- On Any block diagram slide, there is a "Return", "Home" and title header button. The "Return" takes you back to what you were previously looking at, "Home" takes you to slide 3 (block index), and the title header button takes you to the title header page for that section.













- Communication Fieldbus Module
- IO-Link® and Digital Sensor Input Sensing and

System Solution

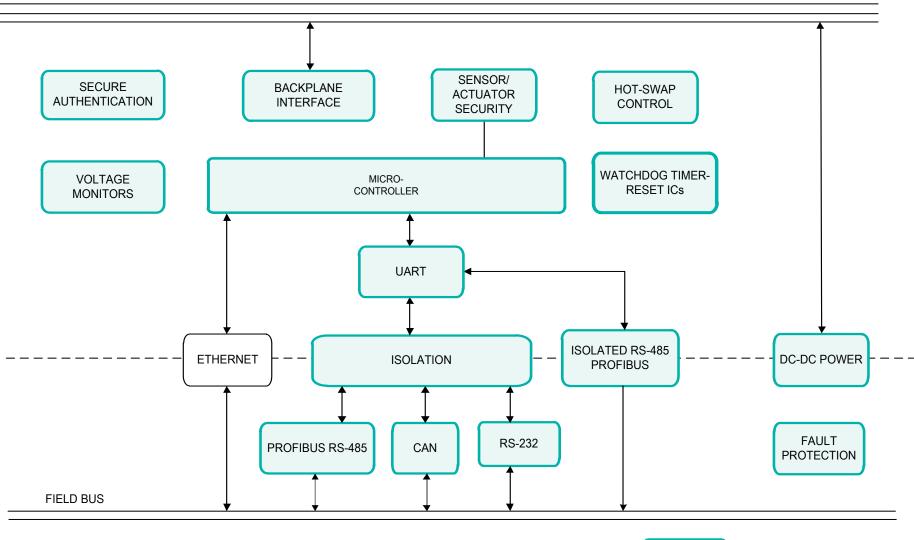
- PLC 12-Bit Analog Input (Voltage/Current)
- PLC Analog Input (RTD/Thermocouple)
- PLC Analog Output
- PLC Digital Input
- PLC Digital Output
- <u>PLC High-Resolution Analog Input</u>
 (Valtere (Current))
 - (Voltage/Current)





Communication Fieldbus Module

DATA AND POWER BACKPLANE



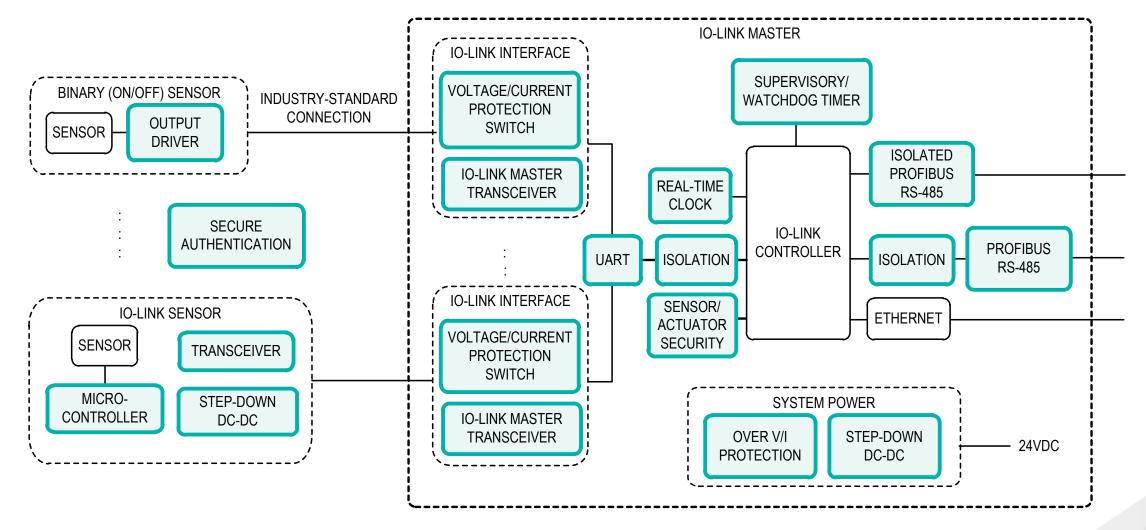


Return

Home



IO-Link[®] and Digital Sensor Input Sensing and System Solution



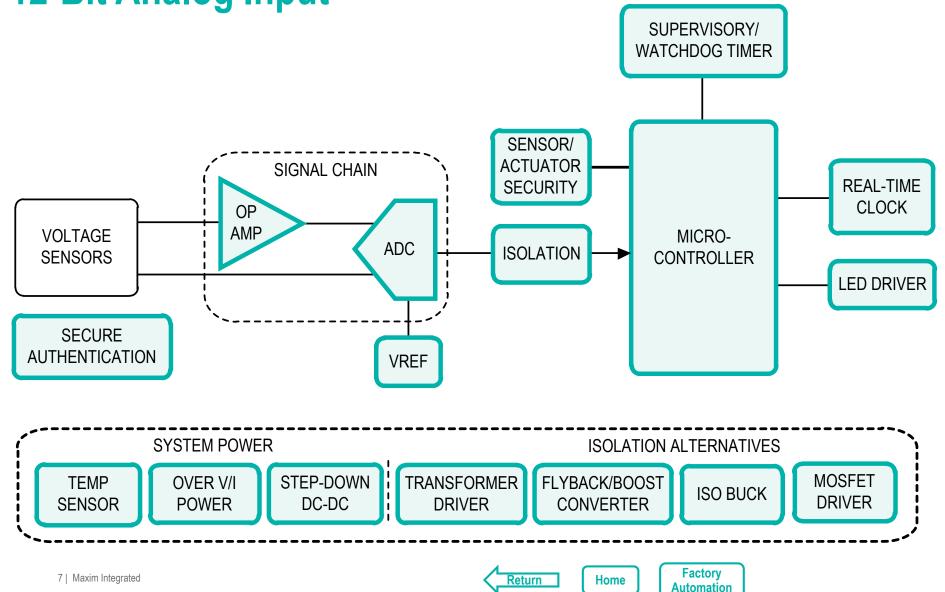
Return



Home

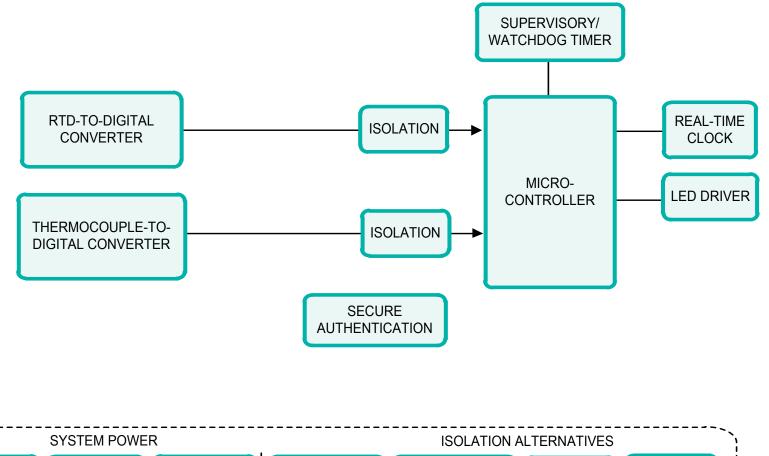


Programmable Logic Controllers (PLCs) – 12-Bit Analog Input





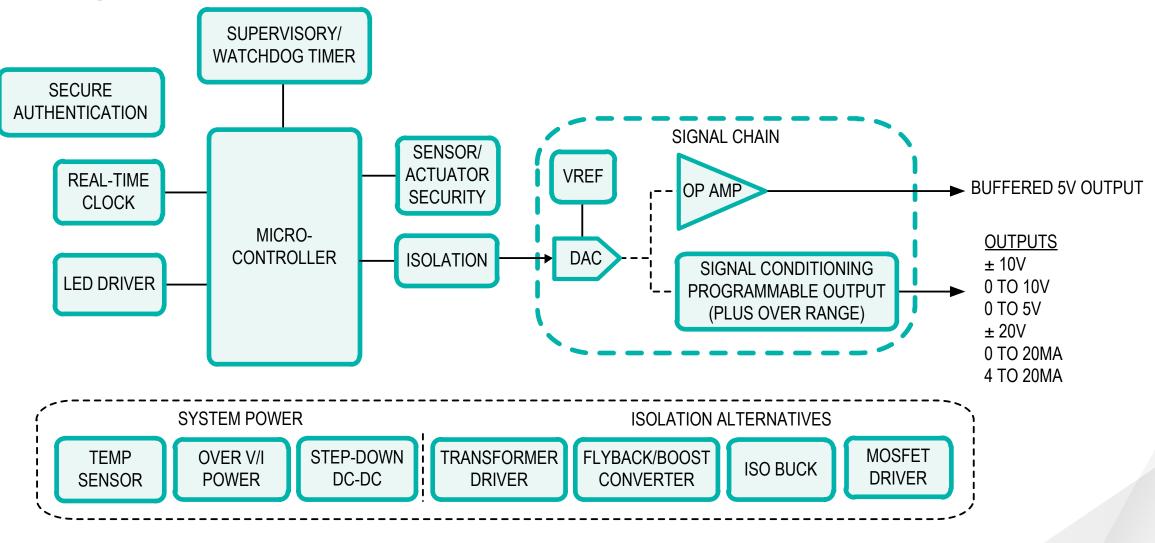
Programmable Logic Controllers (PLCs) -RTD and/or Thermocouple Input



TRANSFORMER MOSFET OVER V/I STEP-DOWN FLYBACK/BOOST TEMP ISO BUCK CONVERTER DRIVER SENSOR DC-DC DRIVER POWER Factory 8 | Maxim Integrated Home Return Automation



Programmable Logic Controllers (PLCs) – Analog Output



Home

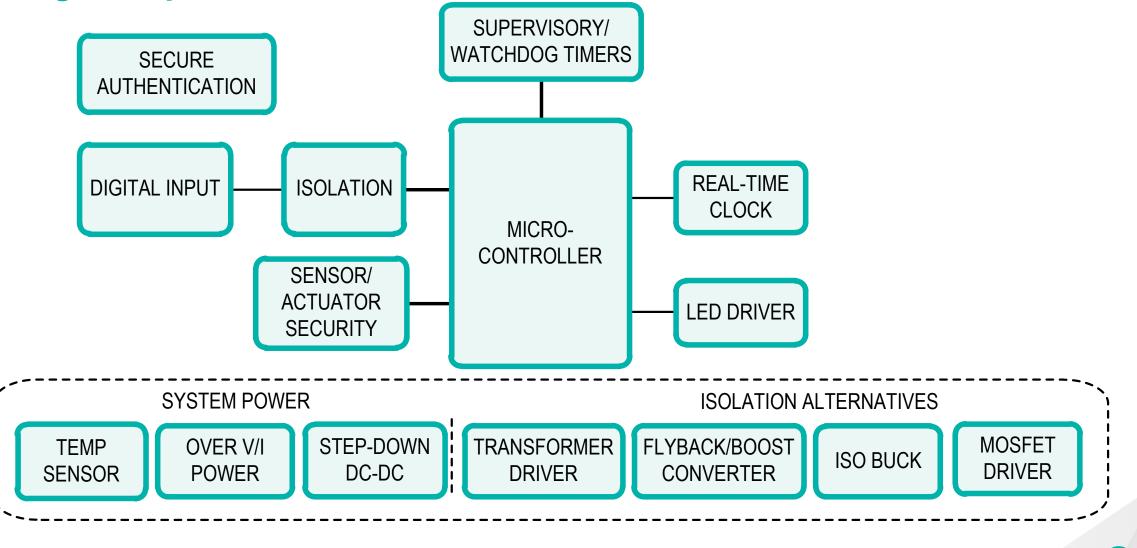
Return

Factory

Automation



Programmable Logic Controllers (PLCs) – Digital Input



Factory

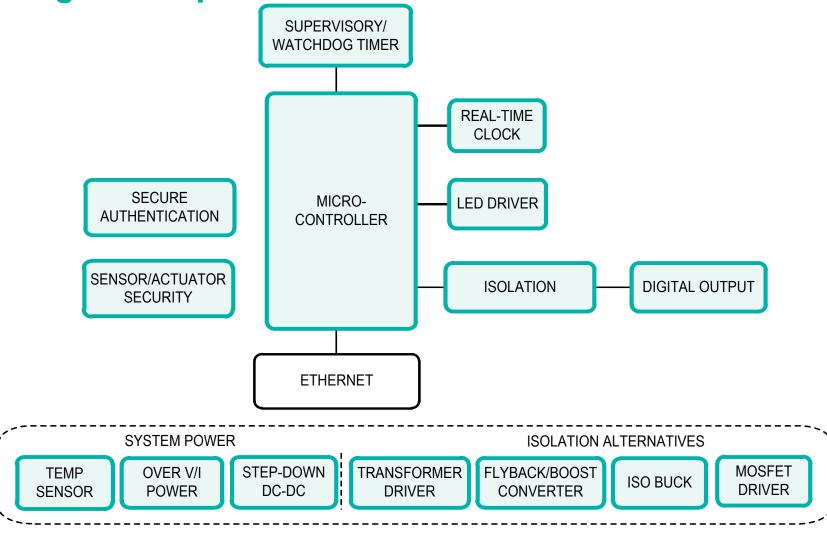
Automation

Home

Return



Programmable Logic Controllers (PLCs) - Digital Output



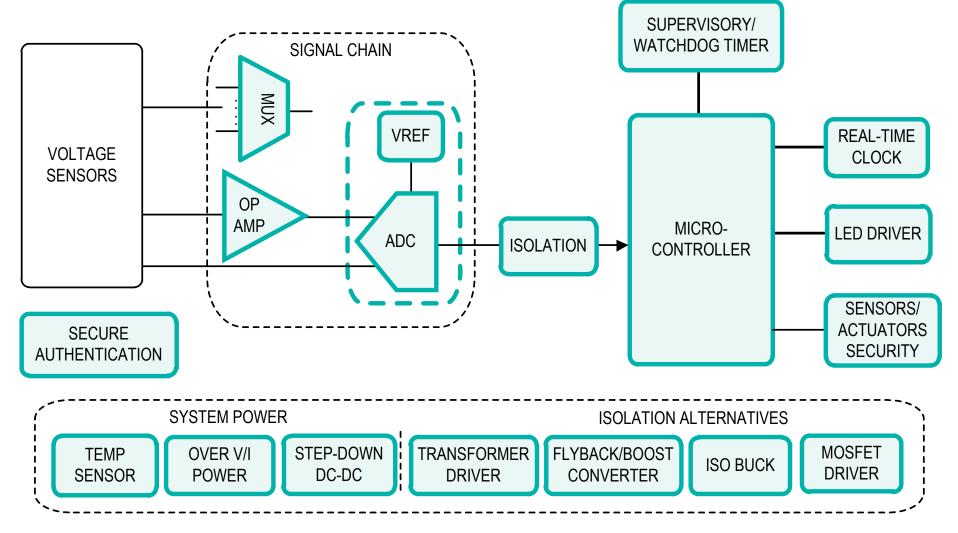
Factory

Automation

Home

Return

Programmable Logic Controllers (PLCs) – High-Resolution Analog Input



Return Home





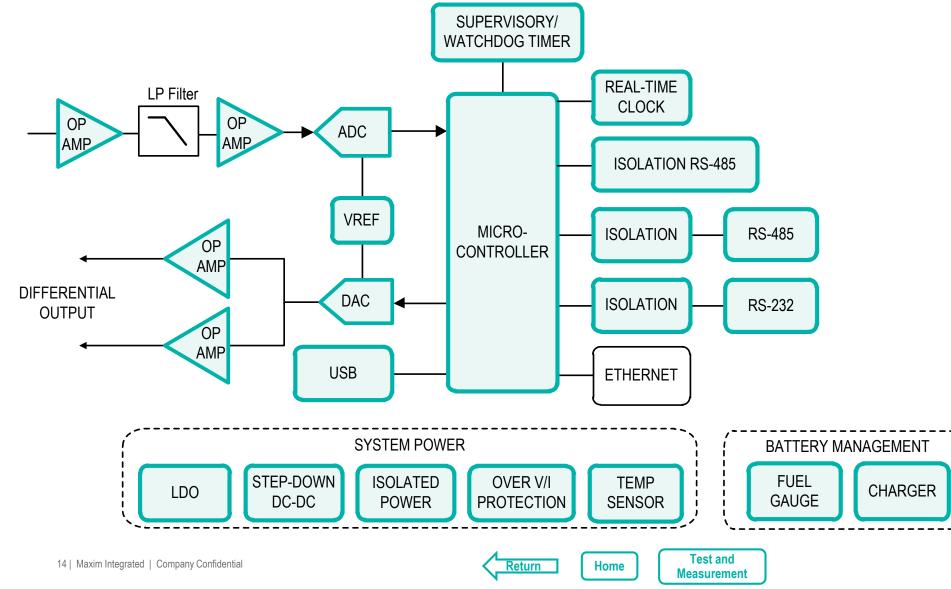






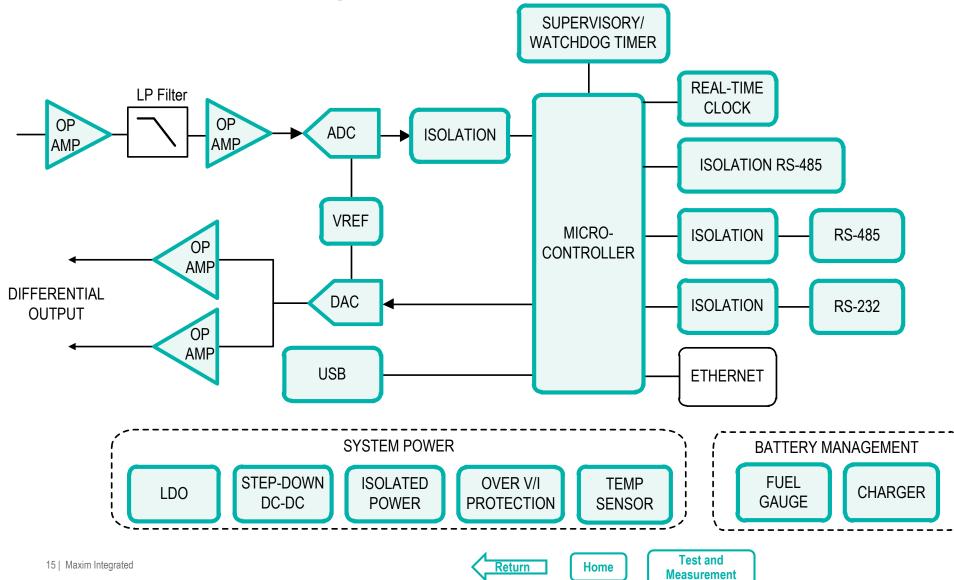


High-Resolution Medium-Speed DAS (Data Acquisition System)





Power Grid Sampling Board





FPGA Power

<u>Kintex® UltraScale KCU105 Power (PMBus and Non-</u>

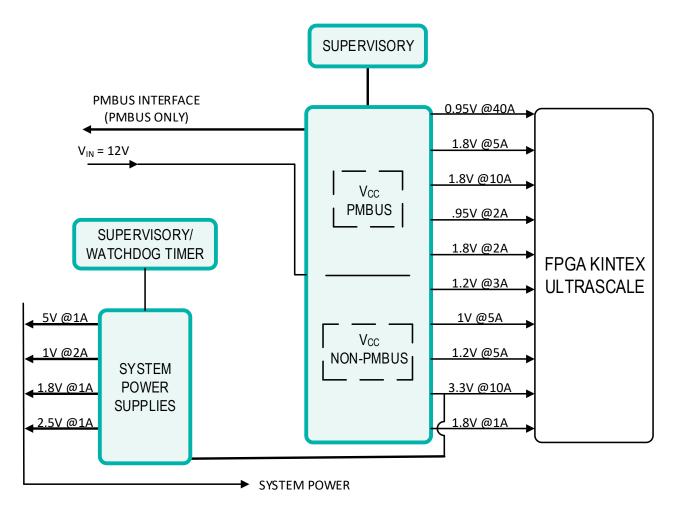
<u>PMBus)</u>

- Virtex® UltraScale VCU108/10 (PMBus and Non-PMBus)
- Xilinx® Remote Radio Head/Wireless Backhaul
- <u>Xilinx® UltraScale FPGA Power</u>



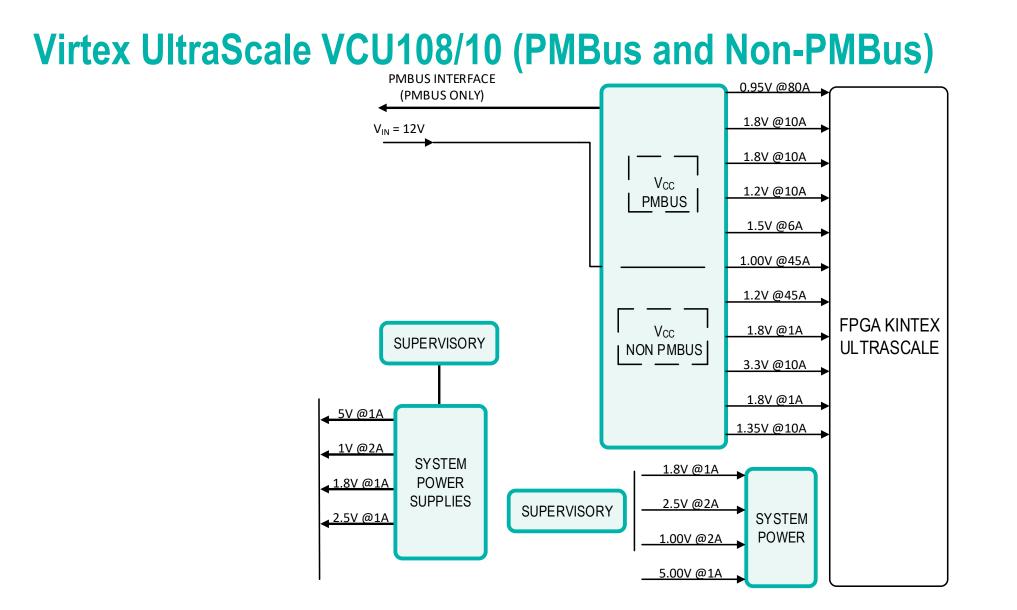


Kintex UltraScale KCU105 Power (PMBus and Non-PMBus)









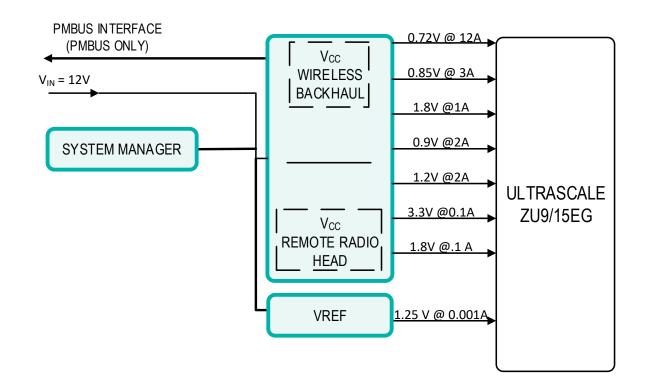


Return

Home

FPGA Power

Xilinx Remote Radio Head/Wireless Backhaul

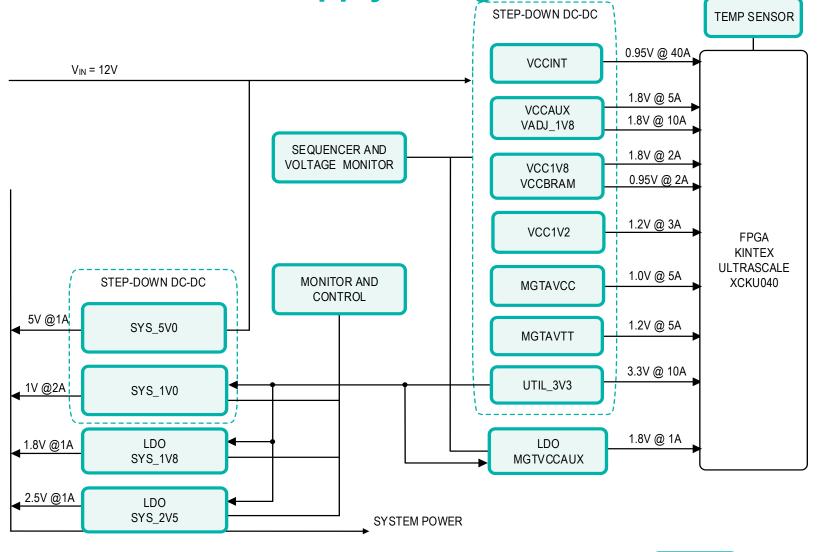




Return

Home FPGA Power

Xilinx UltraScale FPGA KCU-105 Power Supply Design without PMBus



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Return

FPGA Power

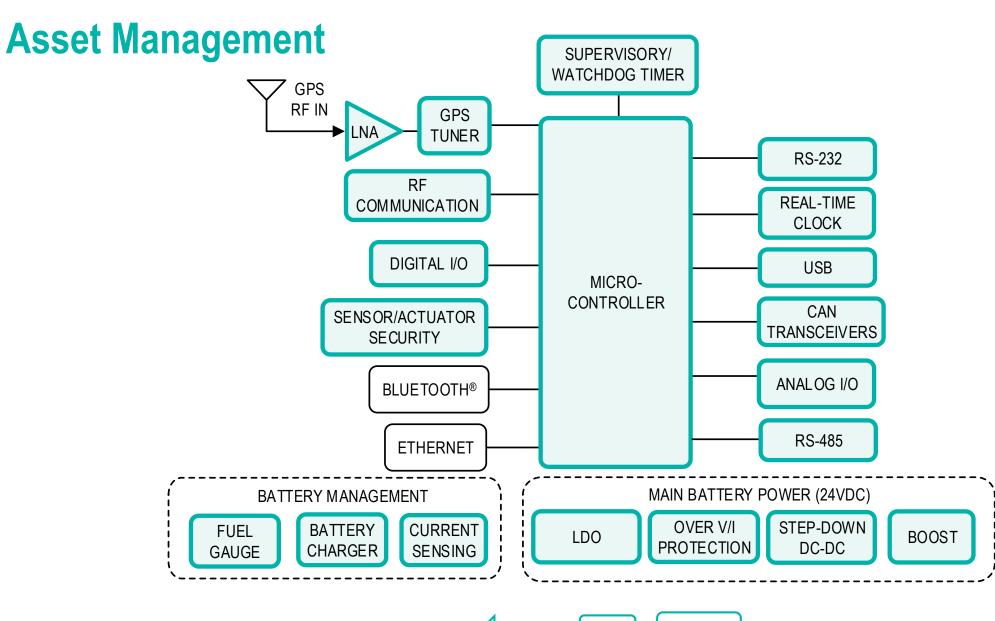
Home

Industrial

- Asset Management
- <u>Automated Test Equipment (ATE)</u>
- Battery Test System
- Blockchain Encryption Machine
- Building Automation
- Distribution Automation: Load Tap Changer
- Distribution Automation: Recloser Controller
- Electricity Meter
- Fault Indicator
- Gas Detector
- General-Purpose Meters and Controllers
- LED Distributed Illumination
- Parking Garage Lot Vacancy Detection System
- Point-of-Sale System
- Portable Calibrator Pressure
- Portable Calibrator Temperature
- Portable Data Logger
- <u>Refrigeration</u>
- Portable Calibrator Temperature RTD or Thermocouple
- <u>Thermocouple Temperature Controllers</u>
- Weigh Scale







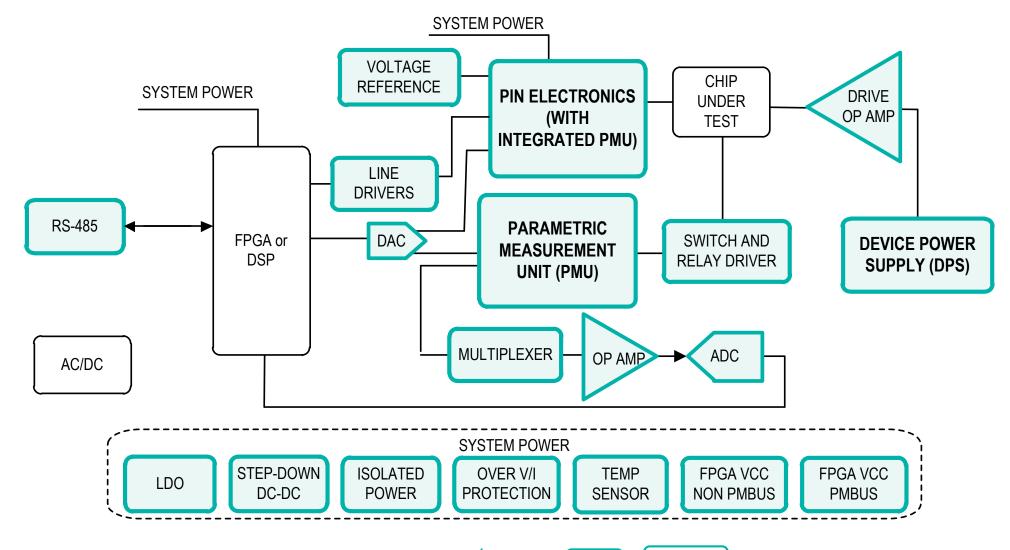


Return

Home

Industrial

Automated Test Equipment (ATE)

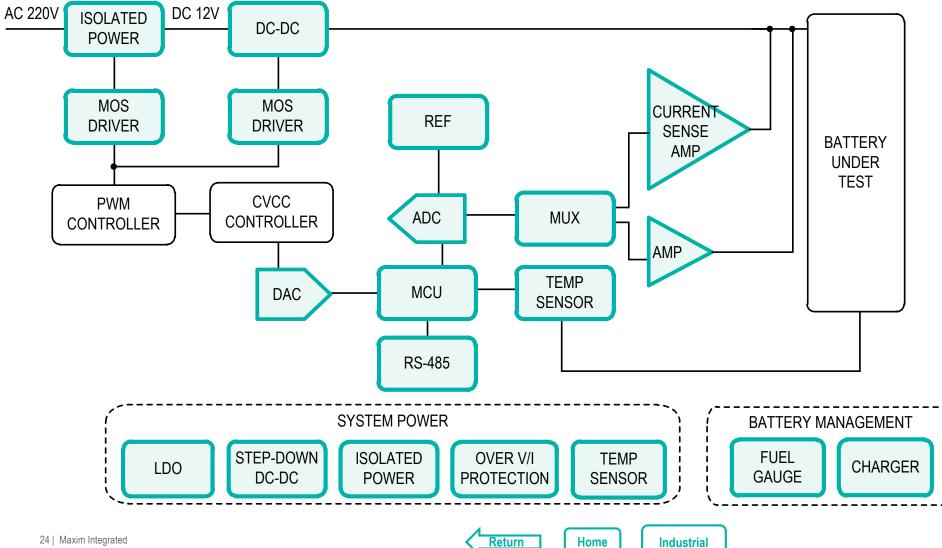


Return Home



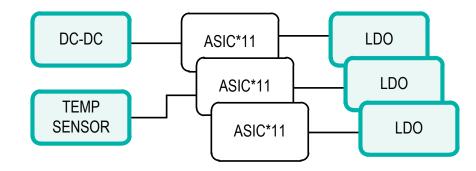


Battery Test System





Blockchain Encryption Machine



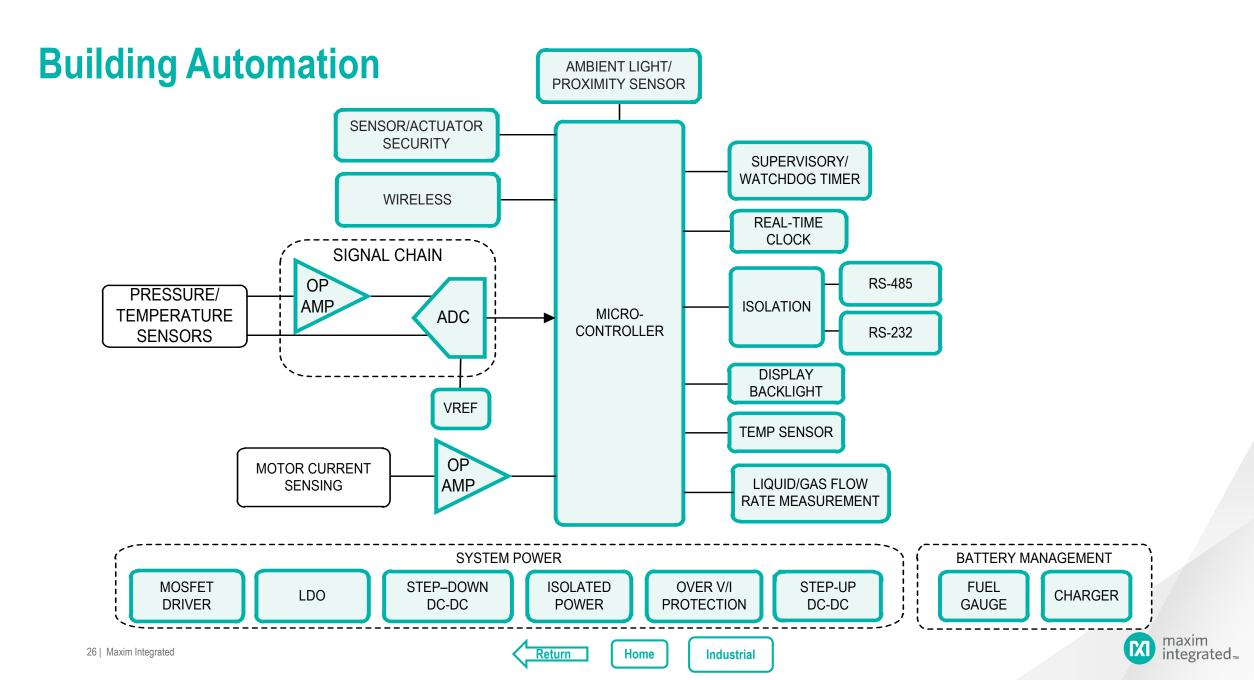


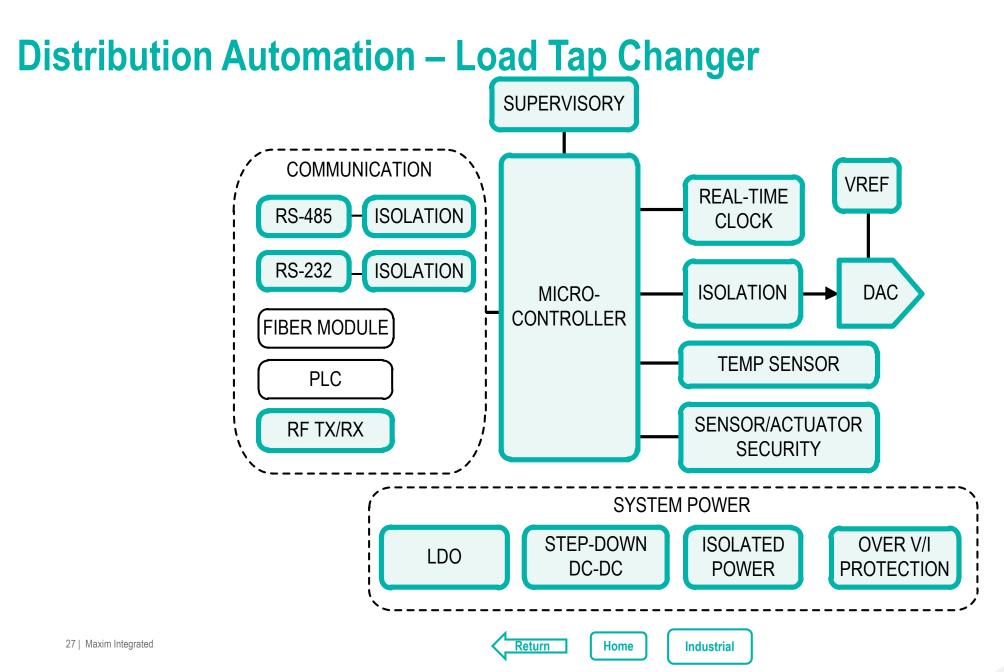
Return

Industrial

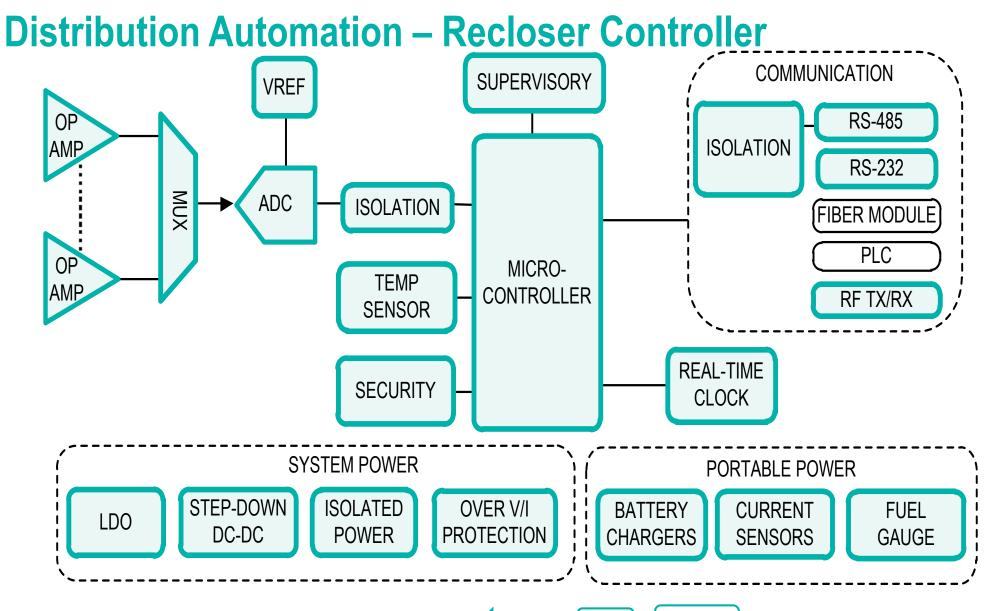
Home











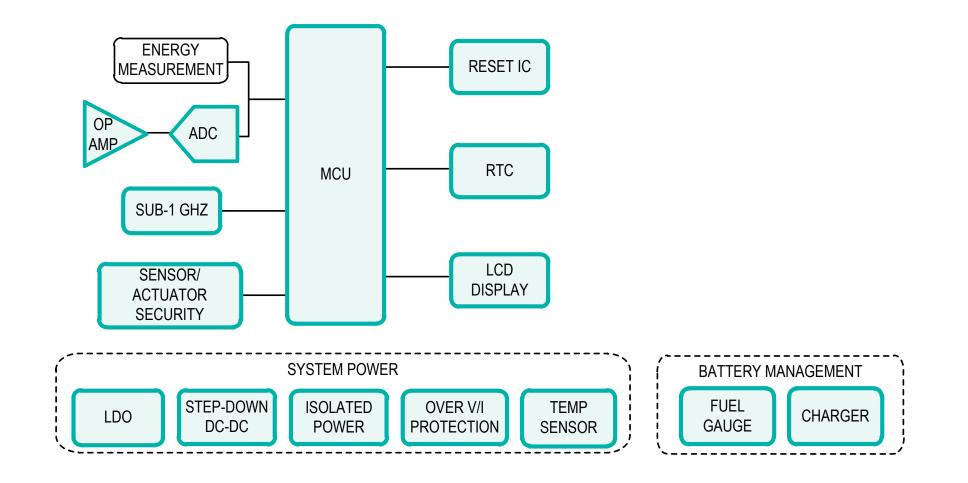


Return

Home

Industrial

Electricity Meter



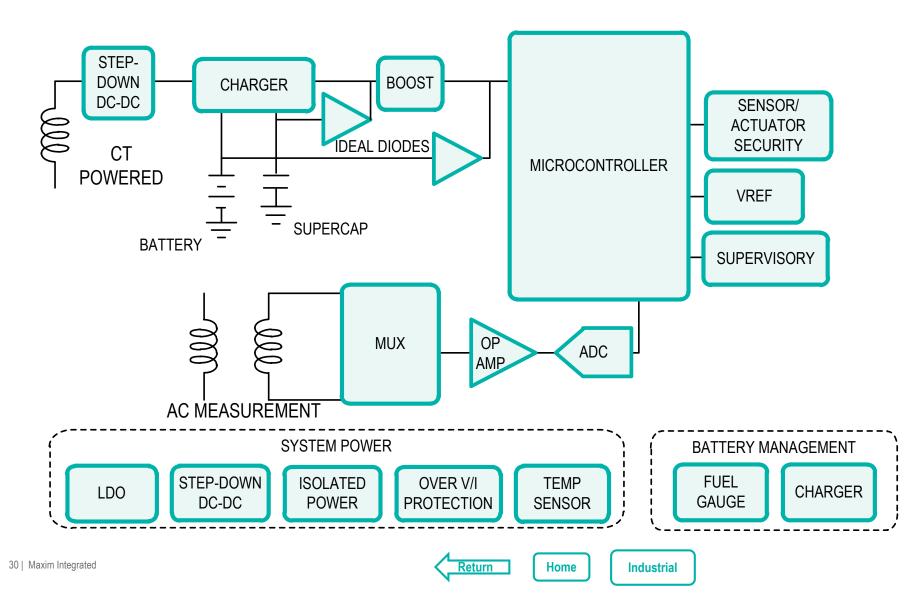
Return

Home

Industrial

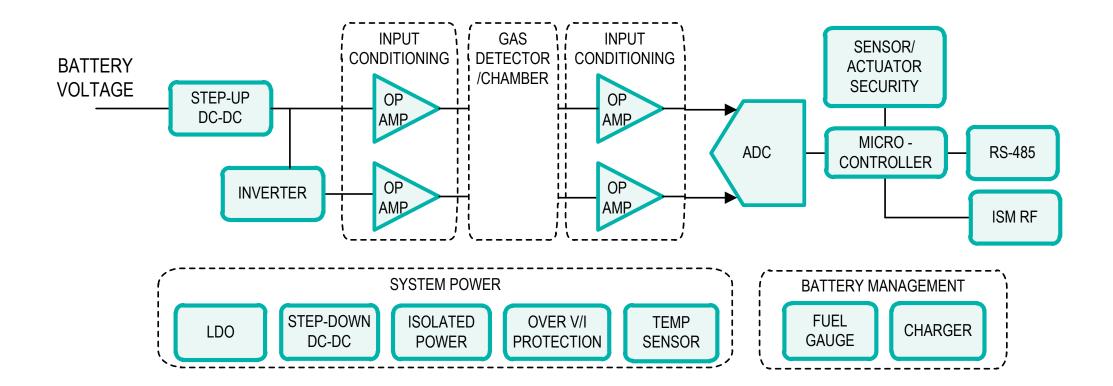


Fault Indicator





Gas Detector



Return

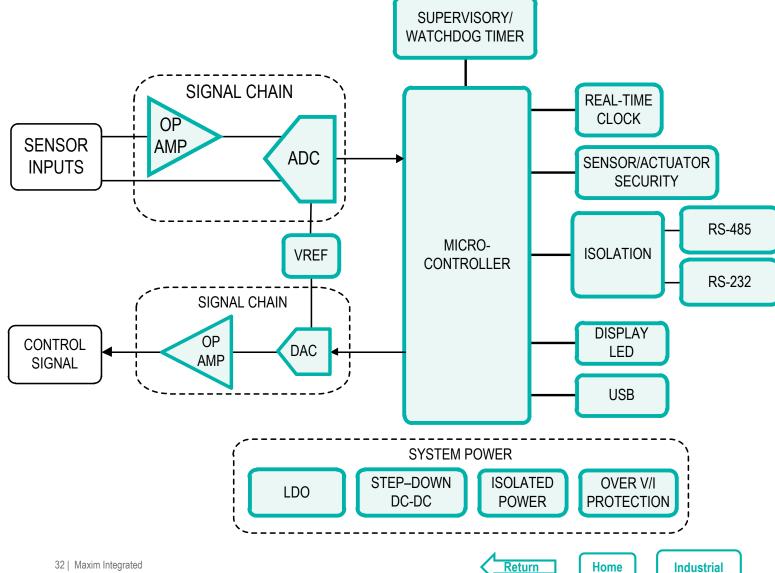
Indus

Home



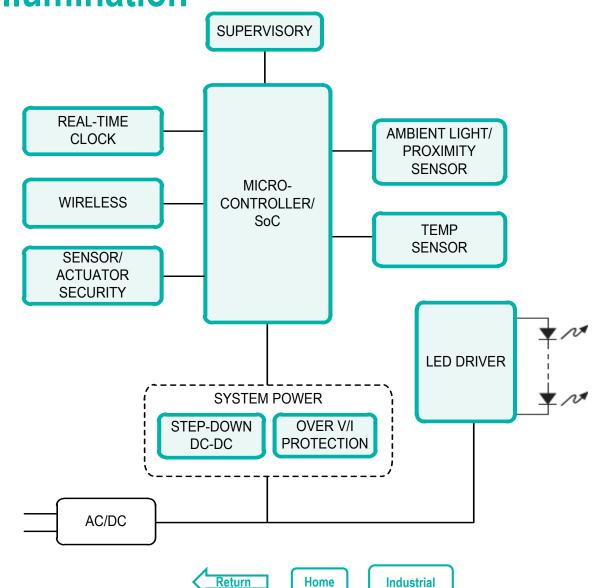


General-Purpose Meters/Controllers

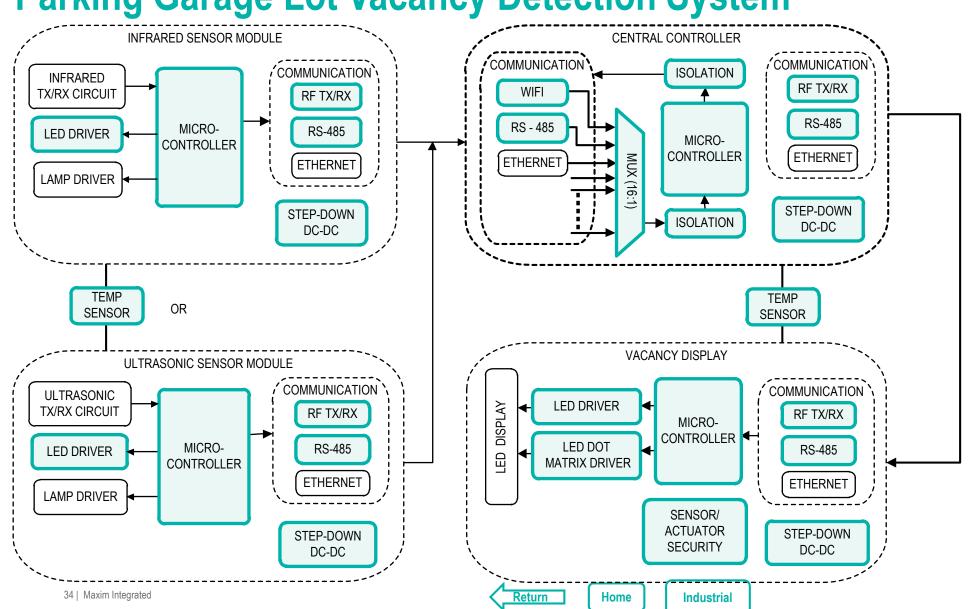




LED Distributed Illumination



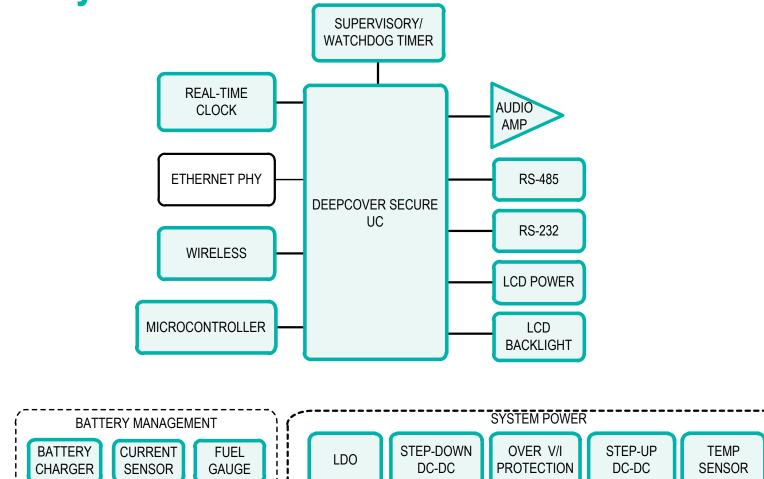




Parking Garage Lot Vacancy Detection System



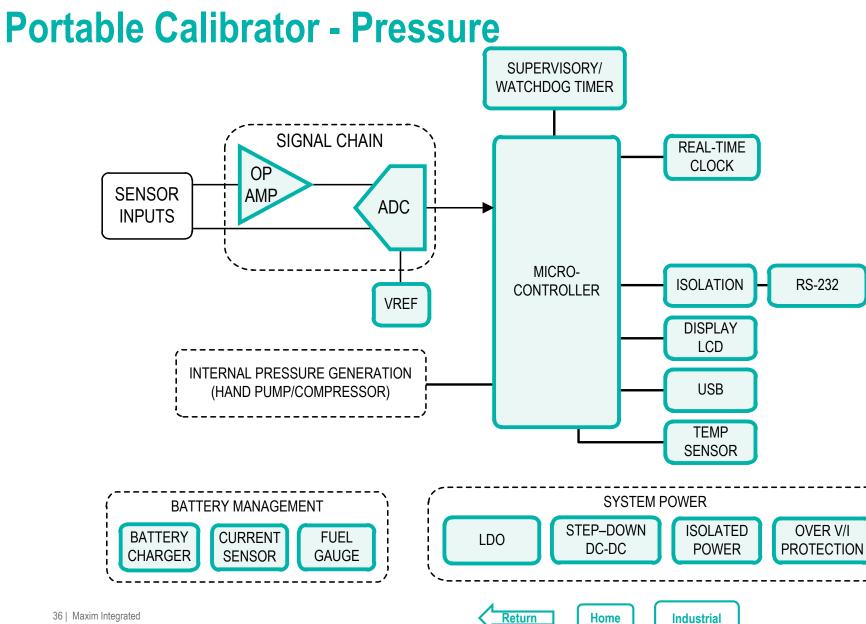
Point-of-Sale System



Return

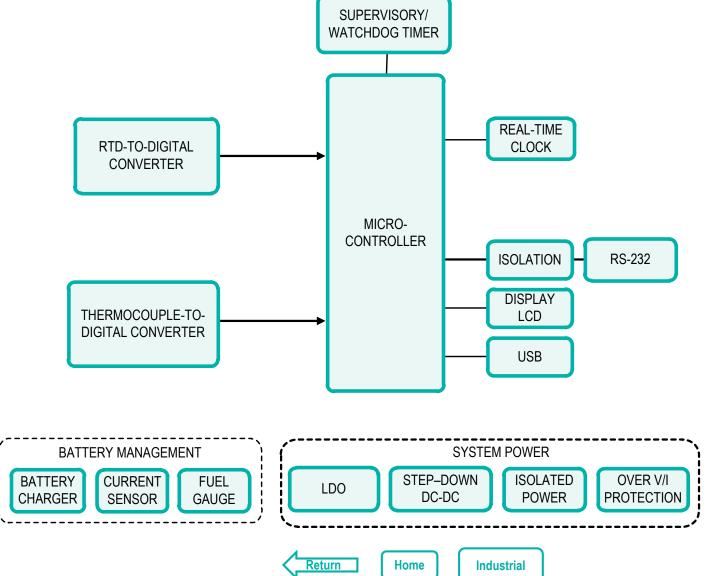
Home

Industrial



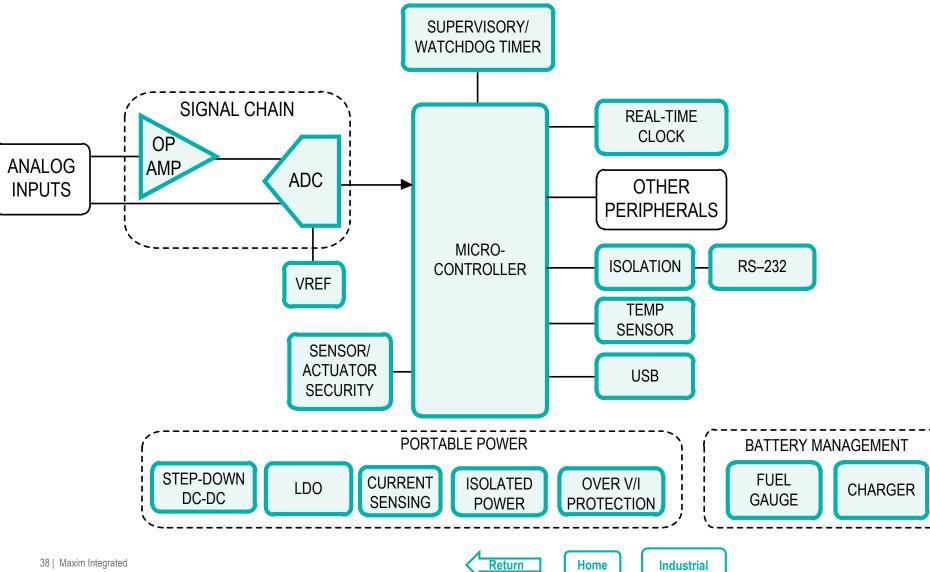


Portable Calibrator – Temperature RTD or Thermocouple

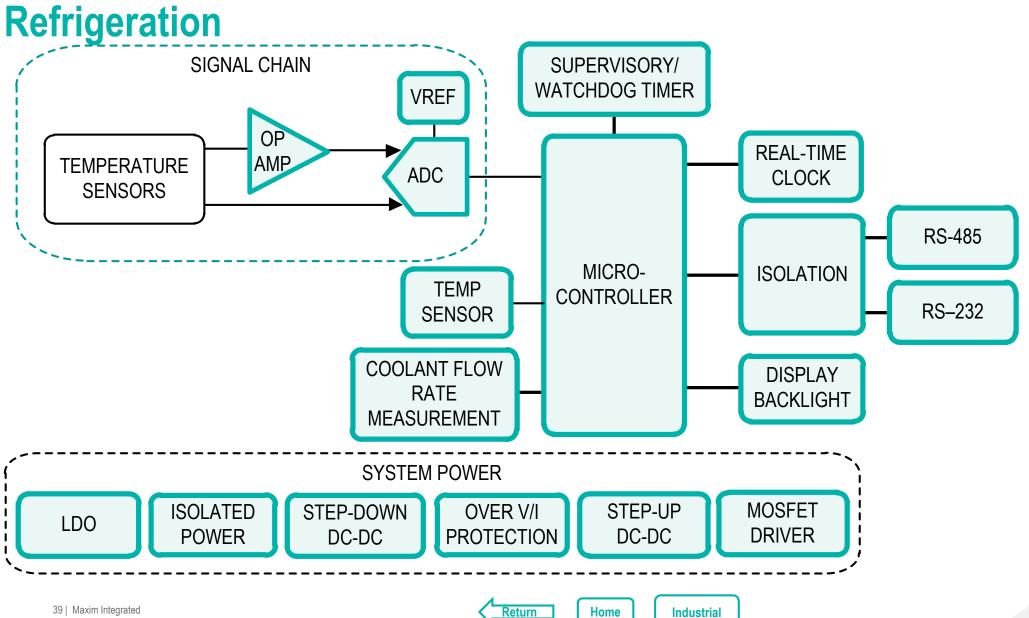




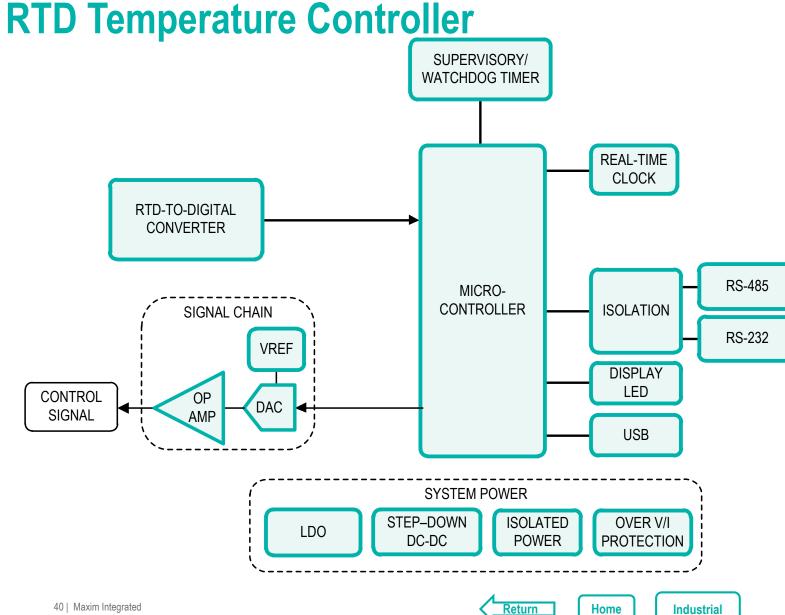
Portable Data Logger



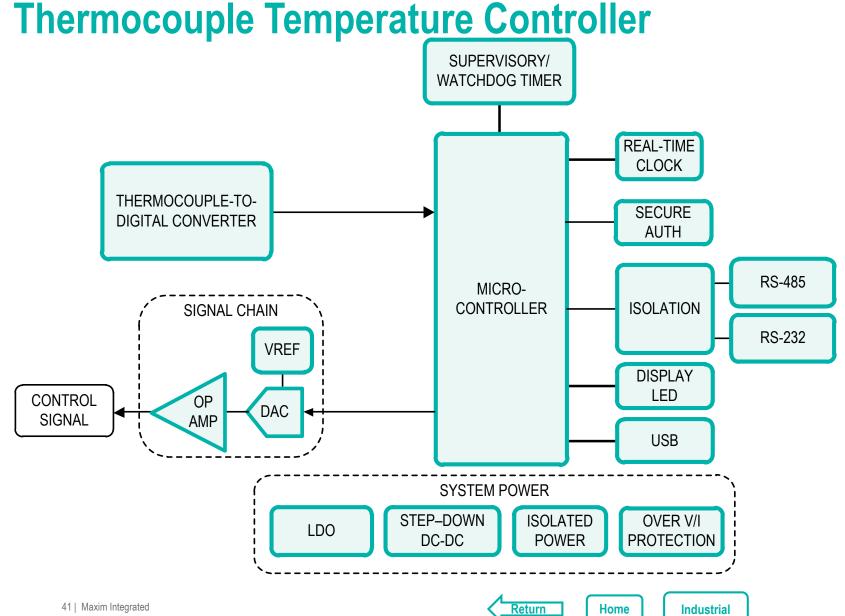




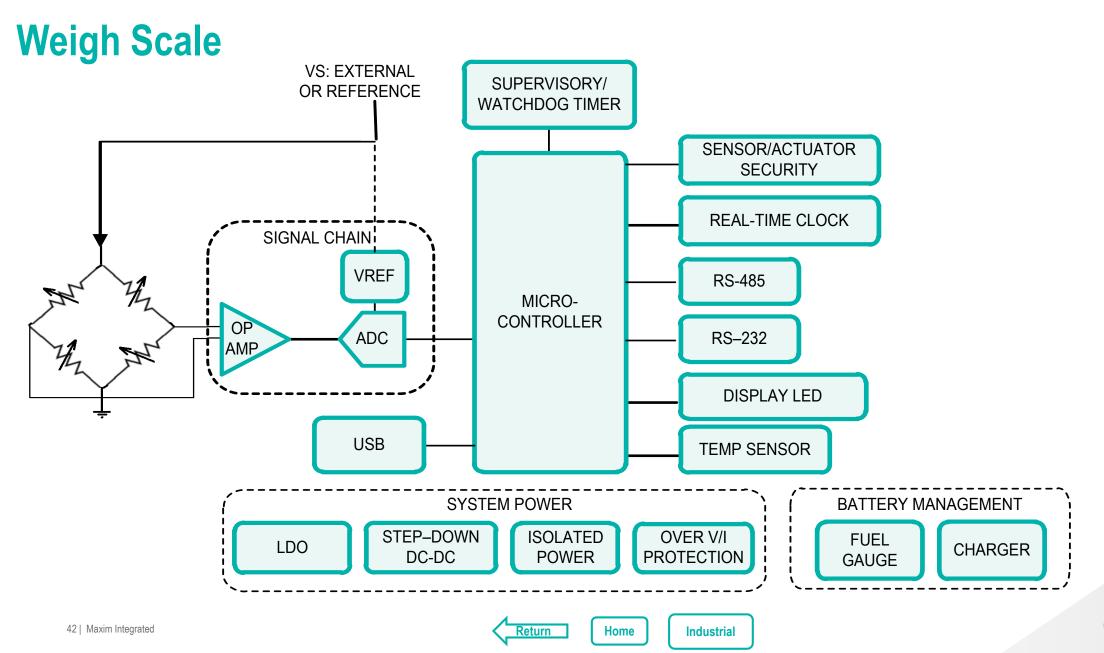




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Control Motor

- AC & BLDC Motor Controller Inputs ٠
- AC & BLDC Motor Controller Outputs
- Brushed DC (PWM) Motor Control ٠
- Brushed DC (Variable Voltage) Motor Control ٠
- Hall Effect Current Sense AC/BLDC ٠
- High-Side Current Sense AC/BLDC •
- Low-Side Current Sense AC/BLDC ٠
- Motor Monitoring: Encoder & Temp Sense ٠
- Motor Monitoring: Resolver ۲
- **Stepper Motor Control** ٠
- Switched Reluctance Motor Control



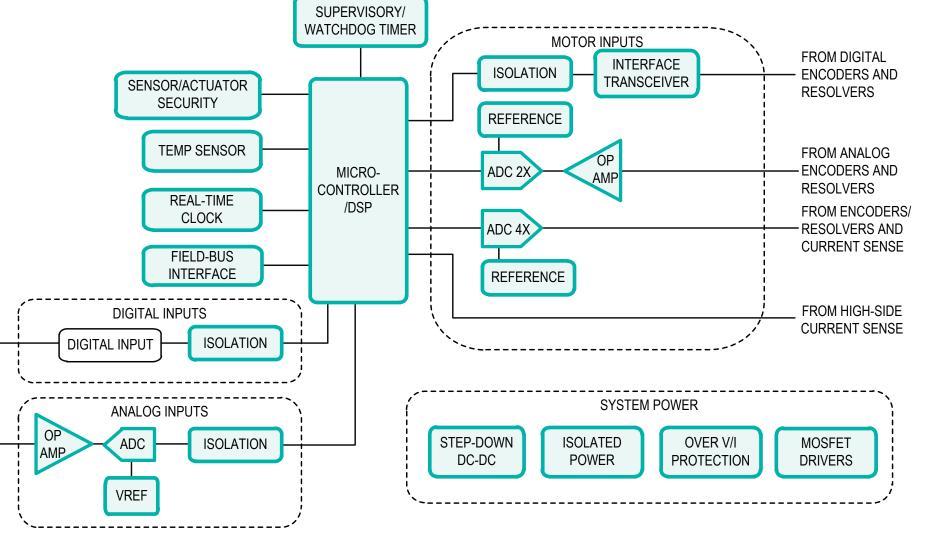
AC Induction, BLDC, HV Brushed DC, HV Stepper Motor, Inputs

Motor

Control

Home

Return





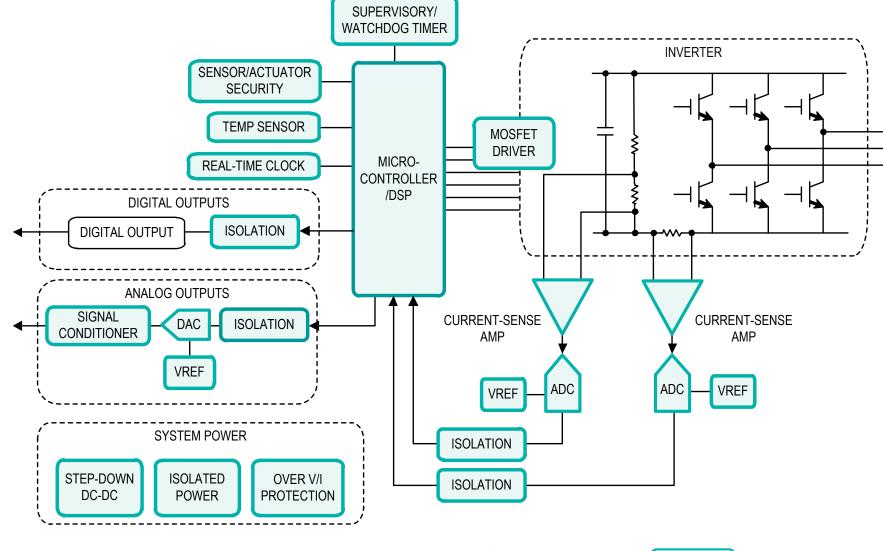
AC Induction, BLDC, HV Brushed DC, HV Stepper Motor, Outputs

Motor

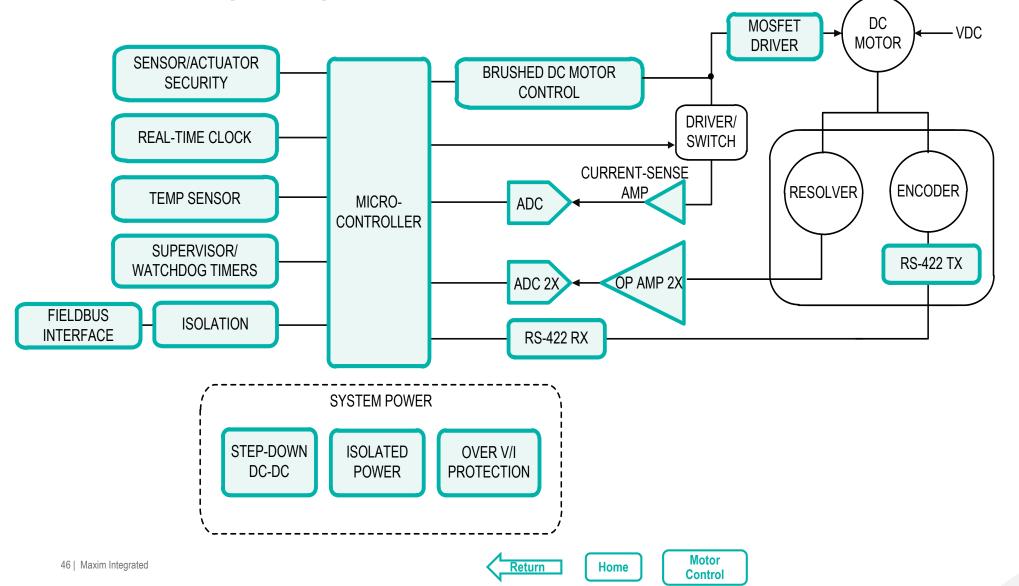
Control

Home

Return

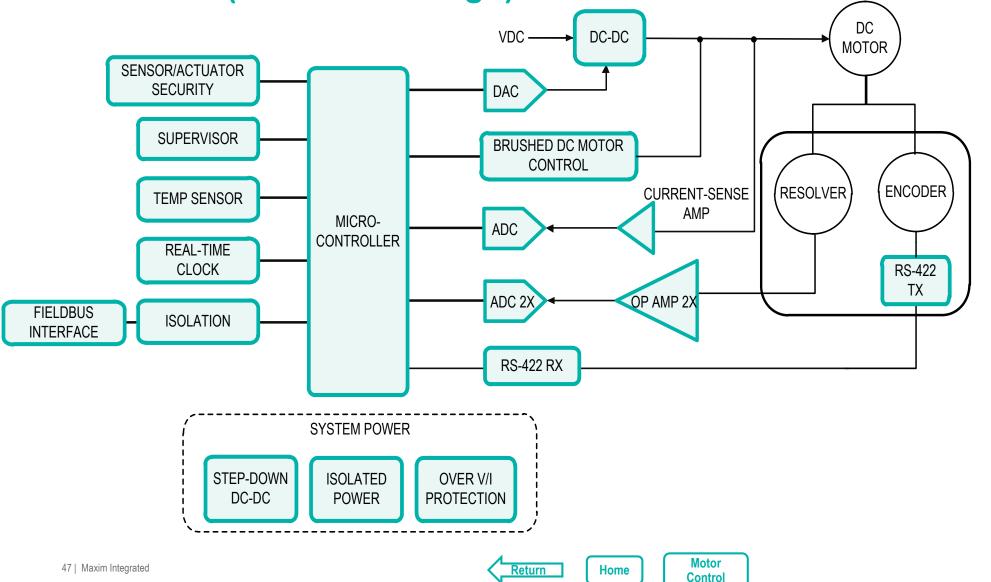


Brushed DC (PWM) Motor Control



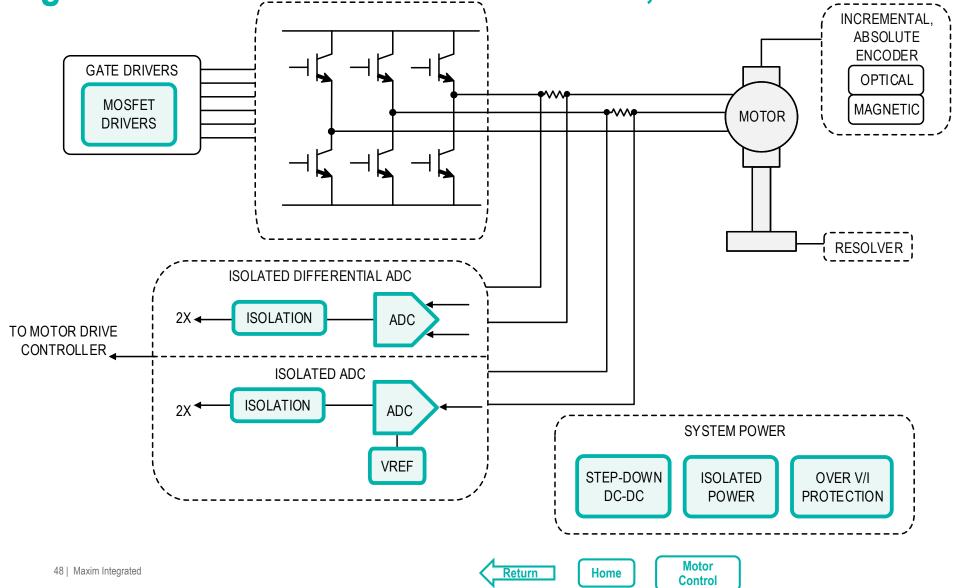


Brushed DC (Variable Voltage) Motor Control

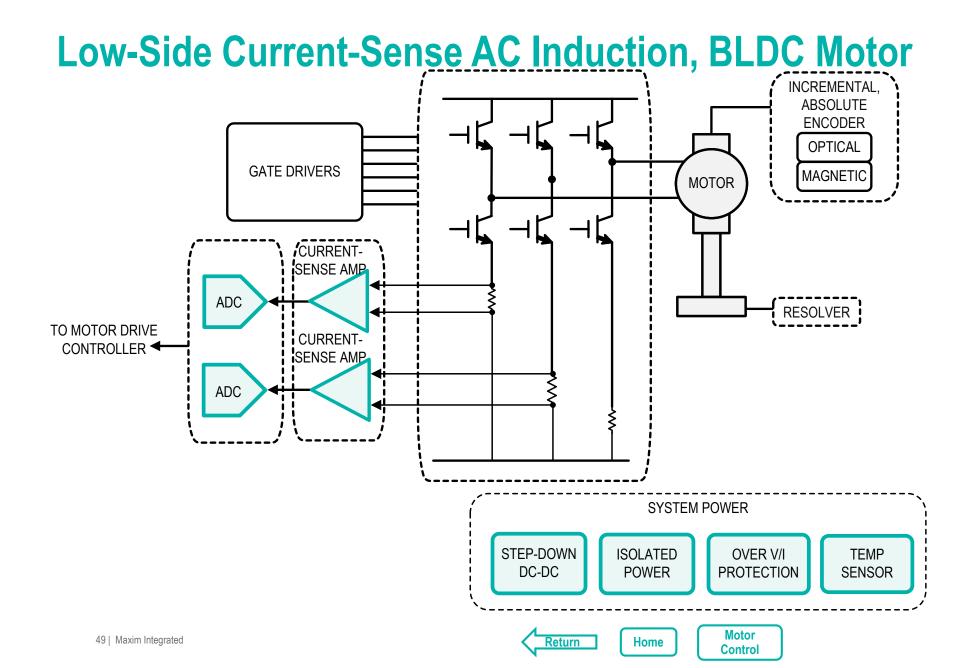




High-Side Current-Sense AC Induction, BLDC Motor

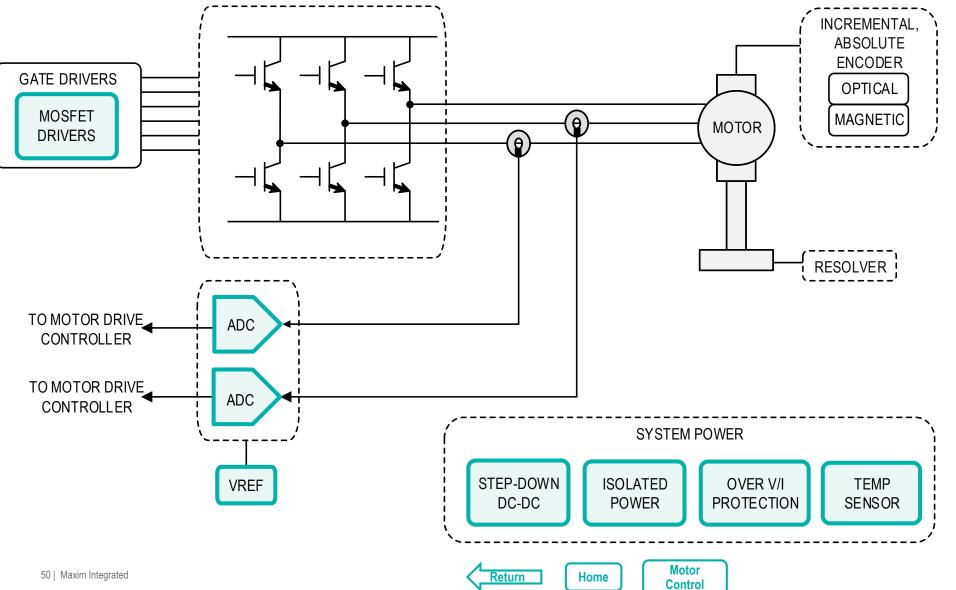




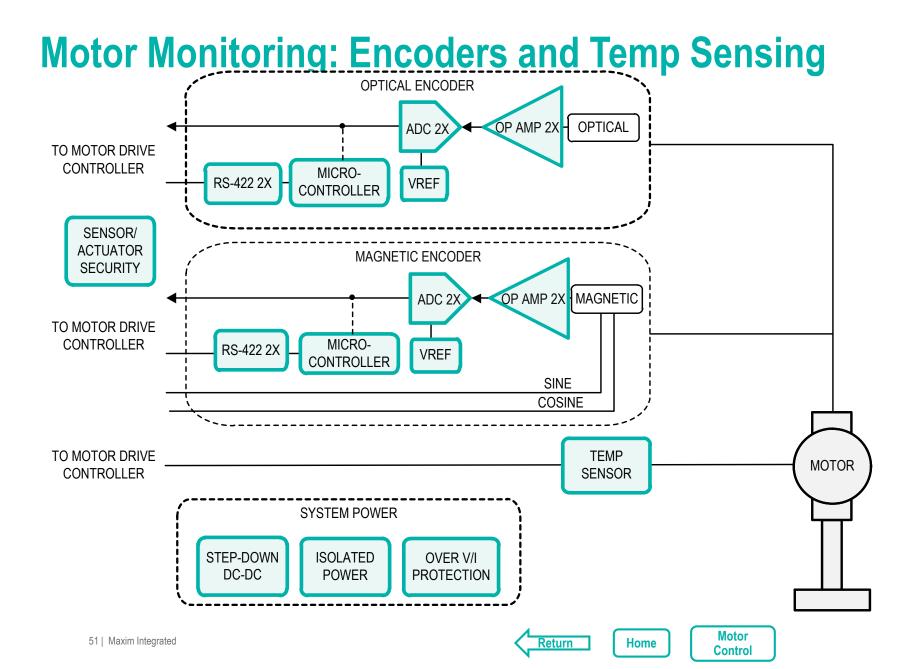




Hall Effect Current-Sense AC Induction, BLDC Motors

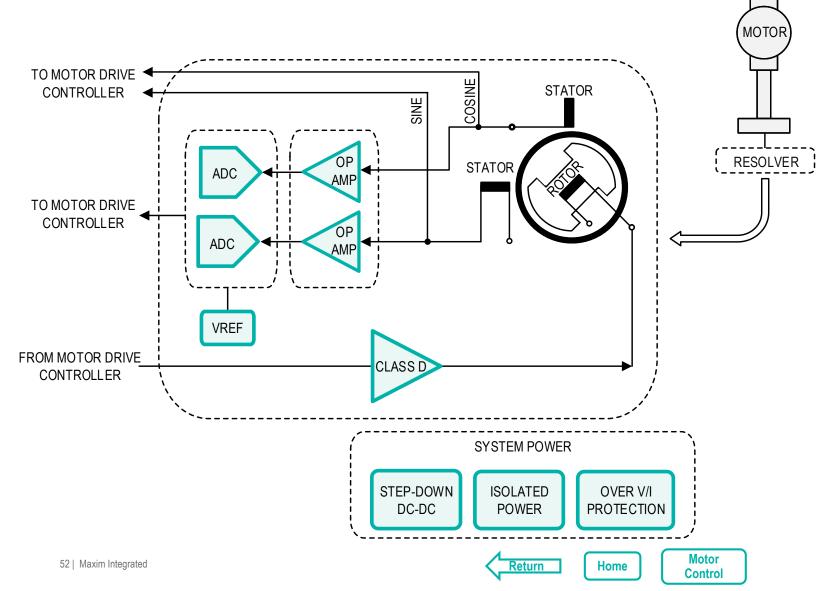






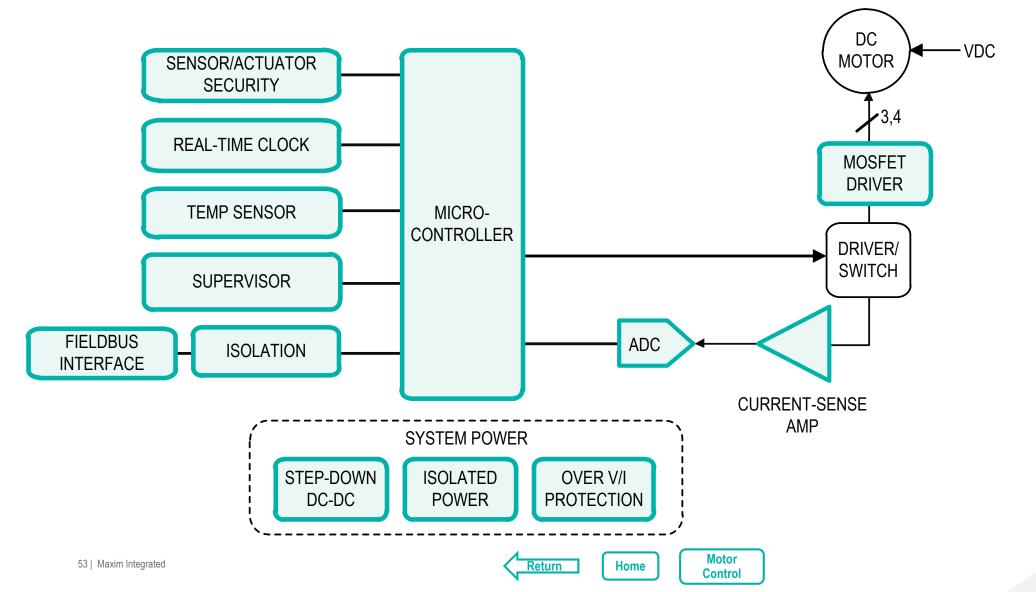


Motor Monitoring: Resolver



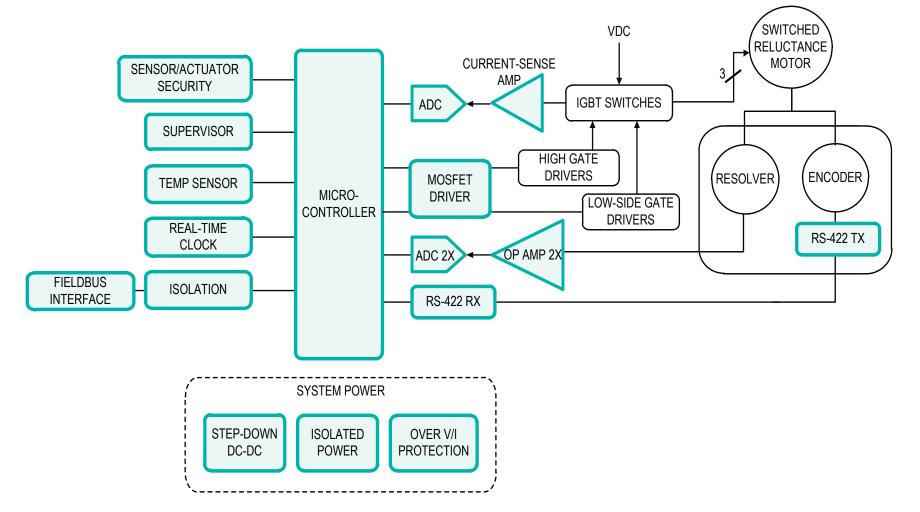


Stepper Motor Control





Switched Reluctance Motor Control



Return



Home





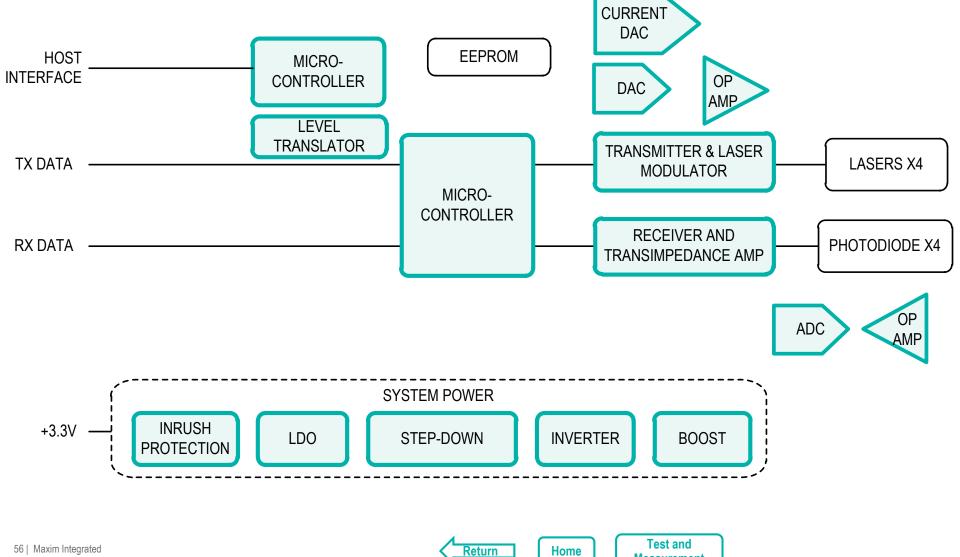
Communications Wireless

- <u>400Gbps Optical Transceiver</u>
- Cable Downstream RF Signal Chain
- Digital Video Broadcast (DVB)
- Macro Base Stations: TX Path
- <u>Microwave Backhaul (5GHz)</u>
- Radio Receiver
- Satellite Communications (VSAT) IDU
- <u>Server/Data Center</u>
- Small Cells, RRH, AAS (698-2700MHz)
- Switch/Router Card
- Tactical and Public Safety Mobile Radio
- <u>VOIP</u>
- Wideband RF Modem
- Wireless Backhaul Sub-3.8GHz





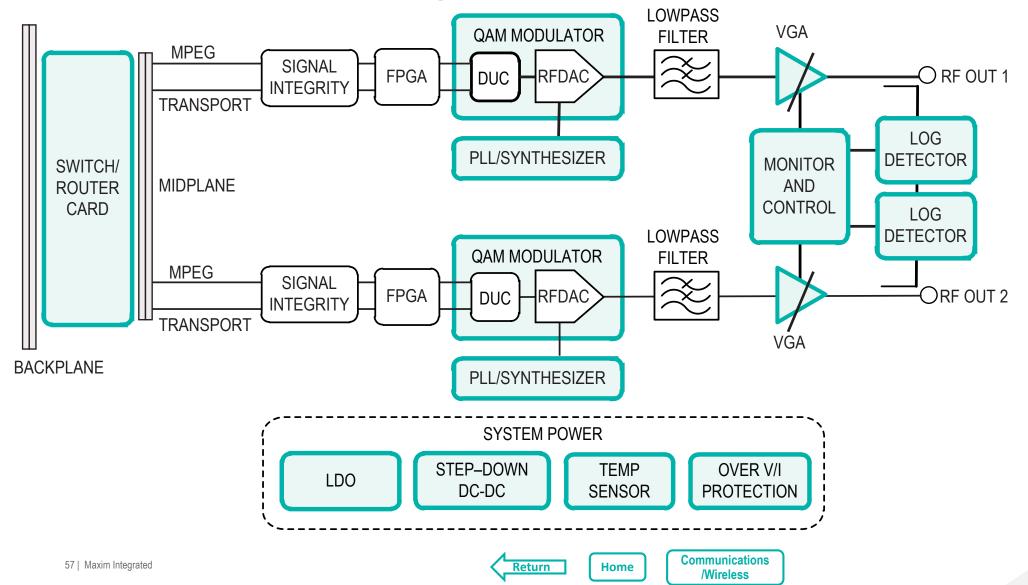
400Gbps Optical Transceiver



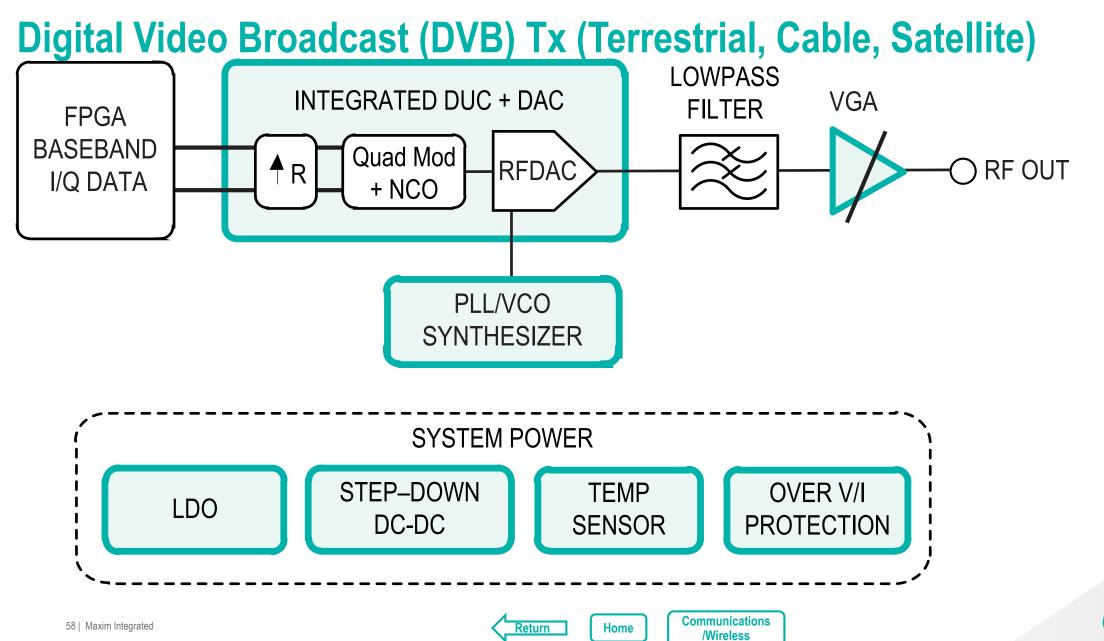
Measurement



Cable Downstream RF Signal Chain

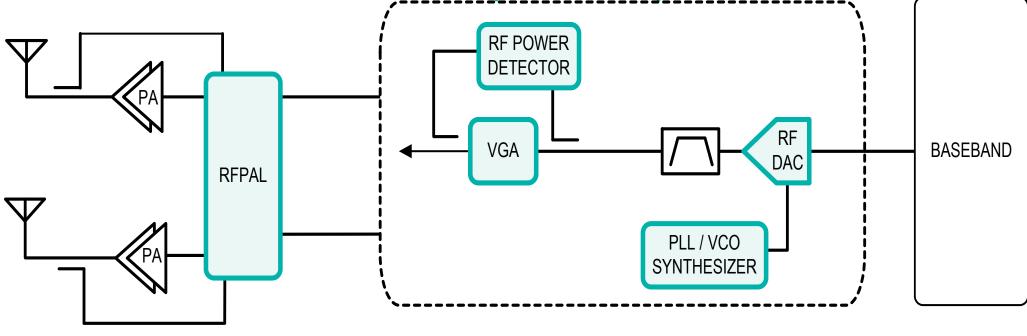


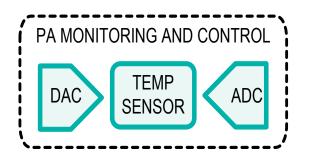


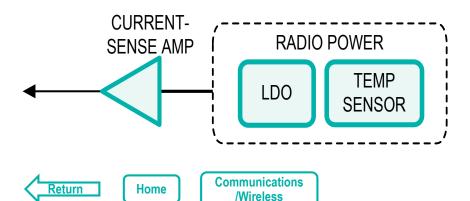




Macro Base Station: TX Path (Direct RF)

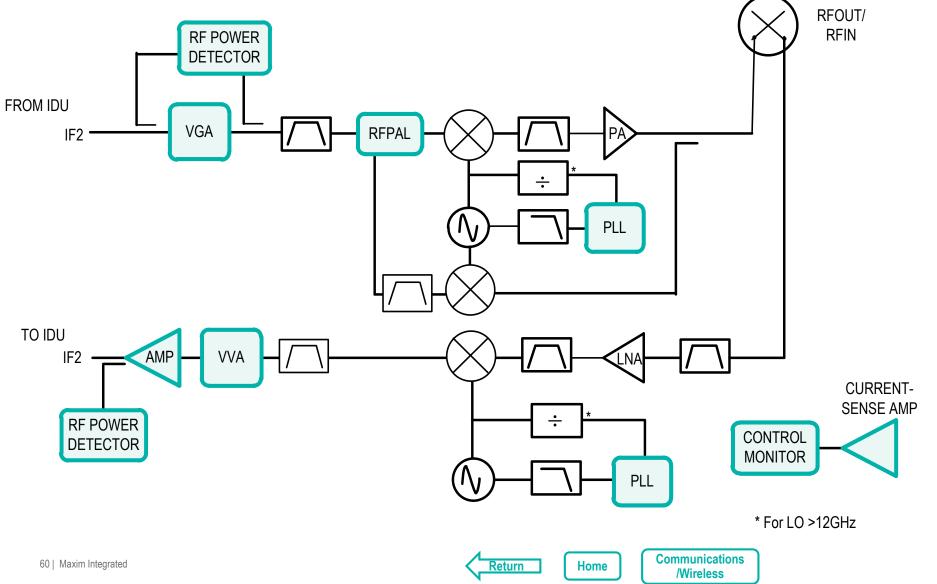




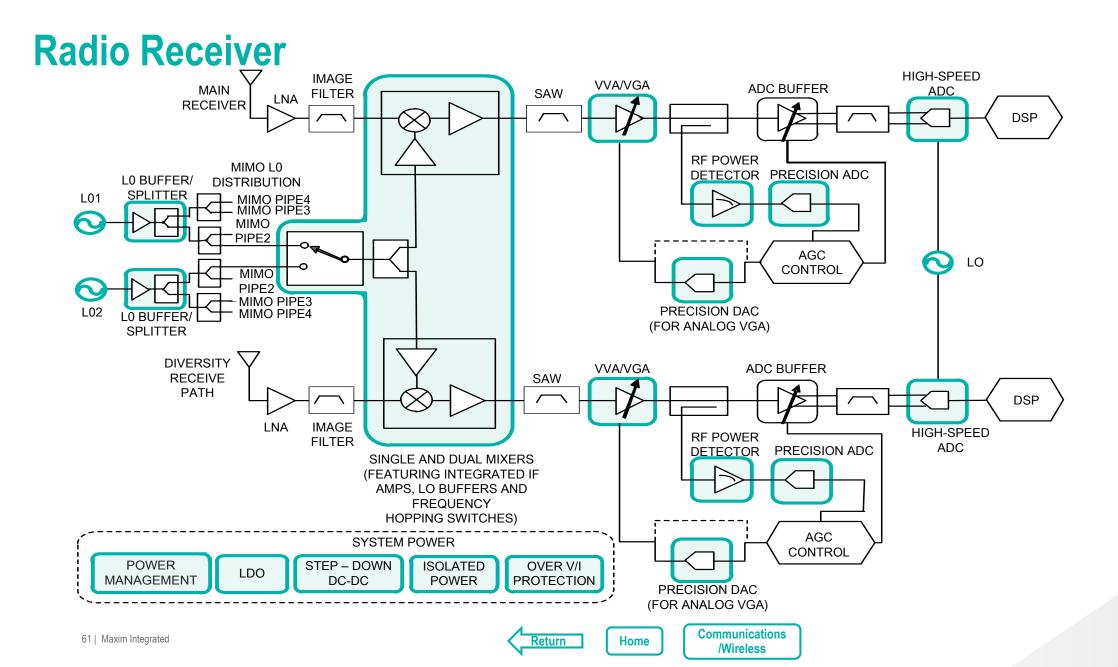




Microwave Backhaul (≥ 5GHz)

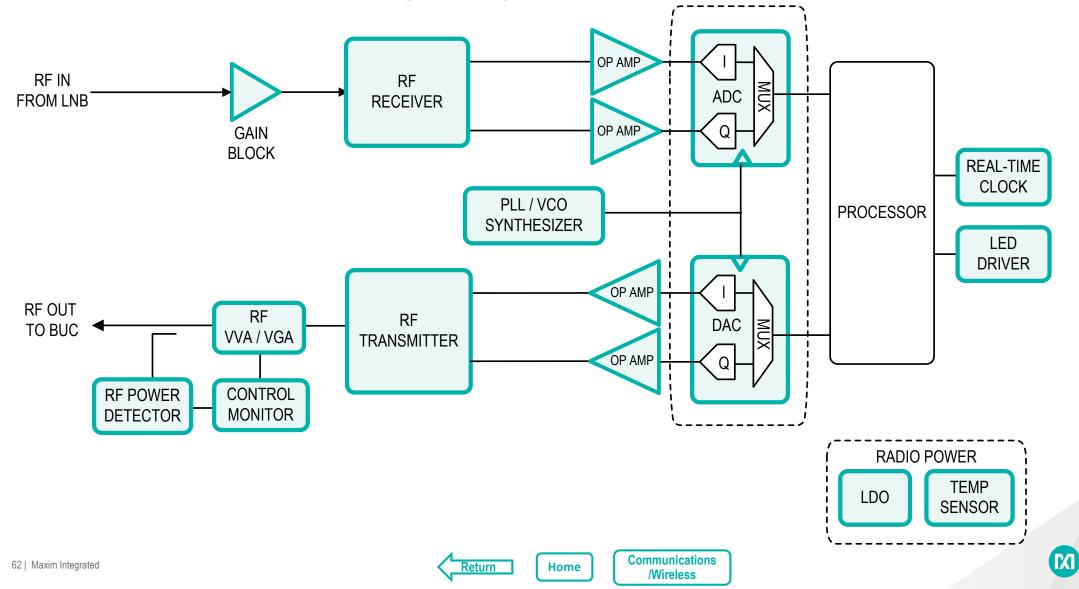








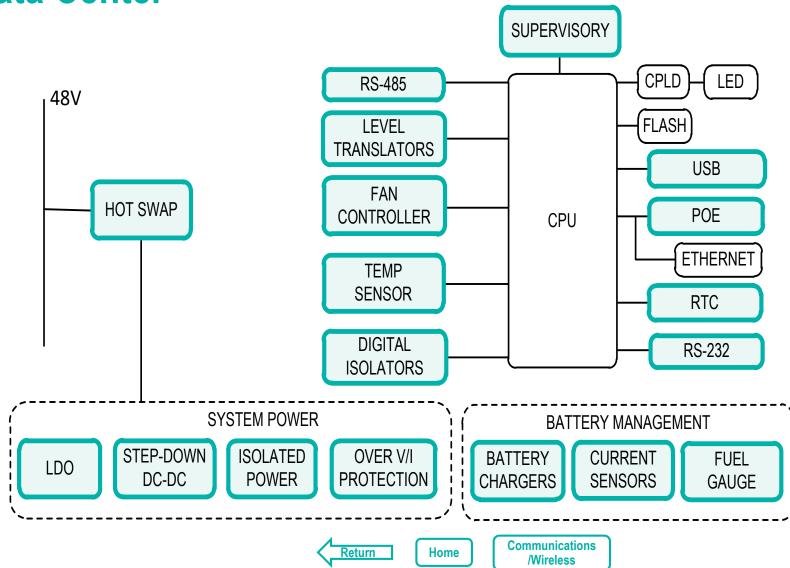
Satellite Communications (VSAT) IDU



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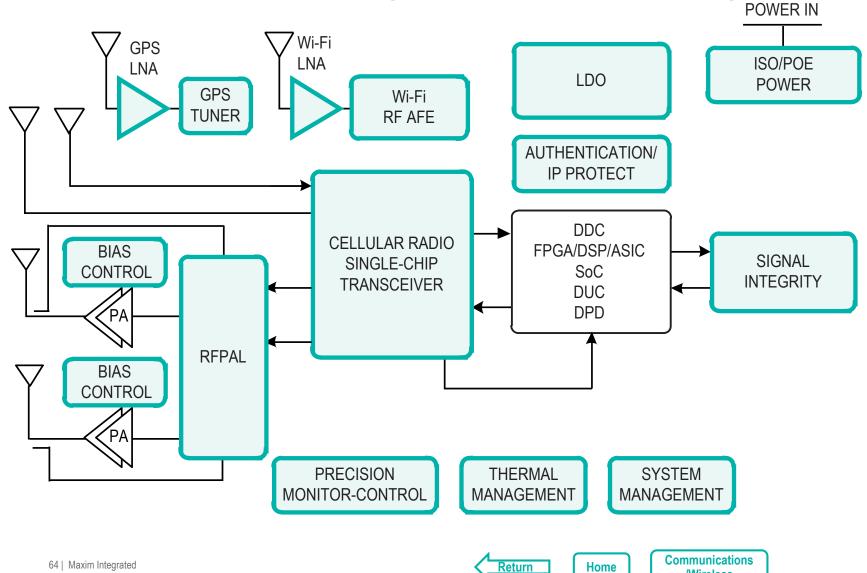
Server/Data Center

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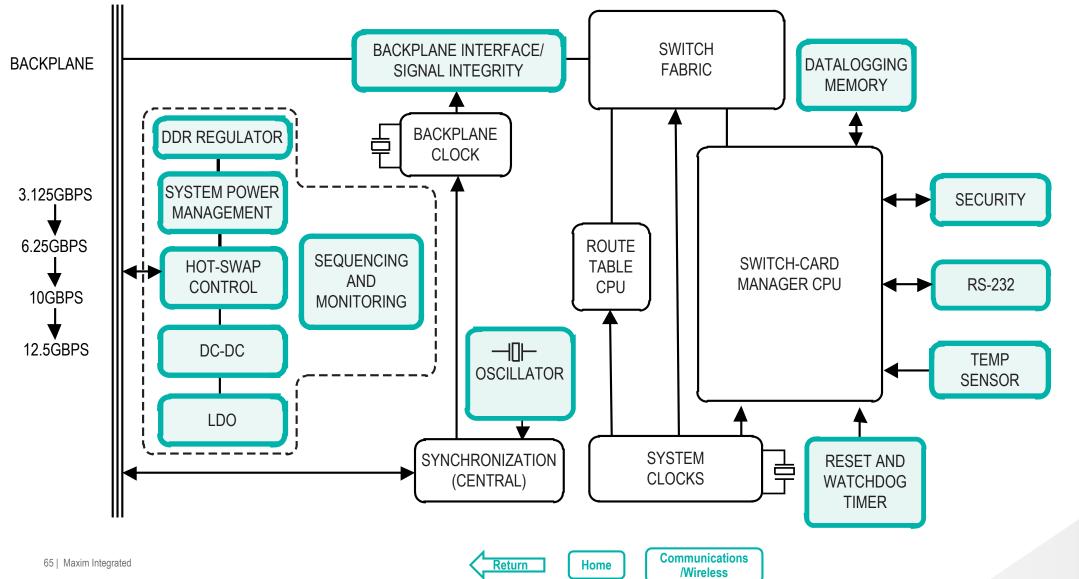
Small Cells, RRH, AAS (225MHz to 3800MHz)



/Wireless

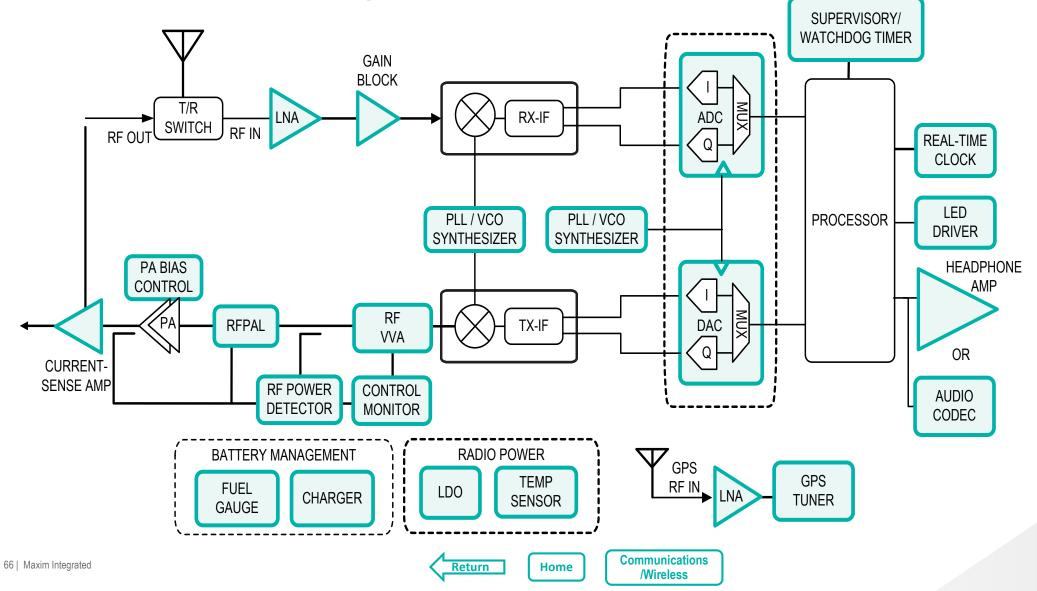


Switch/Router Card



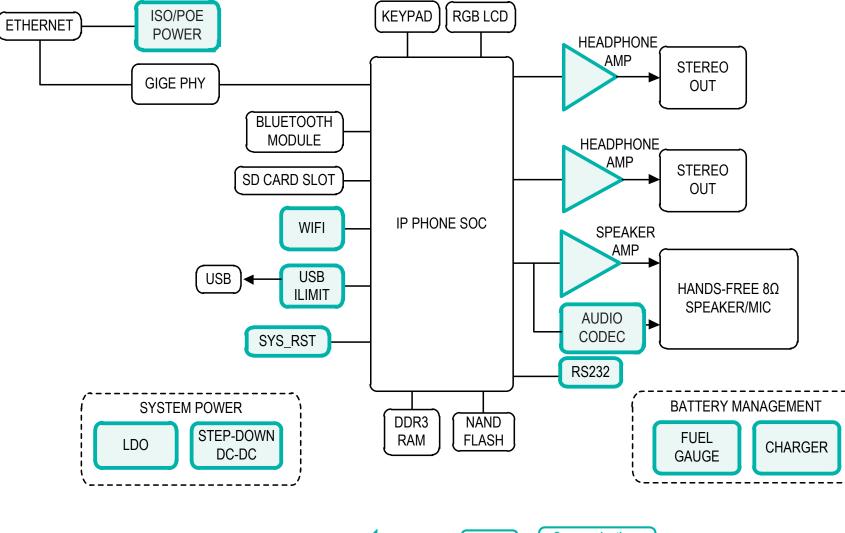


Tactical and Public Safety Mobile Radio





VOIP



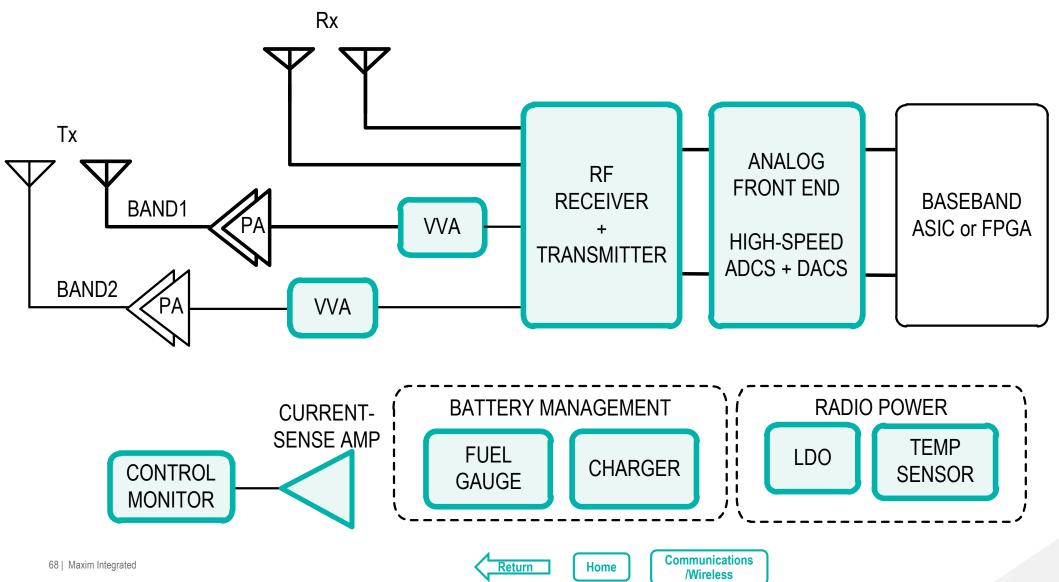


Return

Home

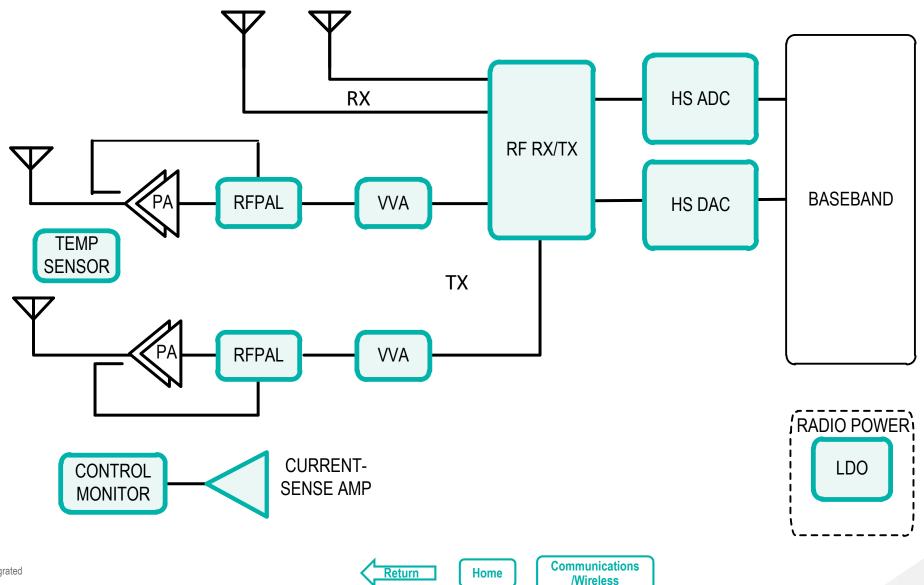
Communications /Wireless

Wideband RF Modem





Wireless Backhaul Sub-3.8GHz





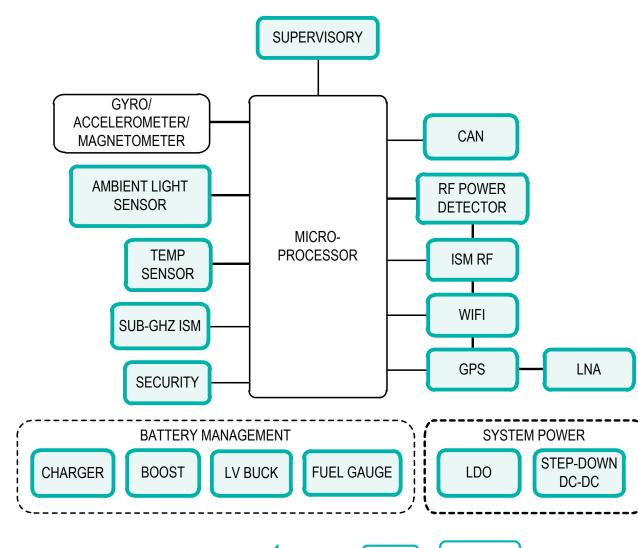


- <u>Drone</u>
- E-Bikes, E-Scooters, Fork Lifts
- <u>E-Cigarette</u>
- Education Video Accessory Box
- GPS/Navigation System
- GPS Watch
- Home Security Control Panel/Gateway
- Home Security Sensor
- Hydration Wearable
- Power Tools
- <u>Toy Robot</u>
- Smart Plug
- Tire Pressure Monitoring System
- Voice-Activated Consumer Device
- <u>Wireless Hearables</u>
- Wireless Speaker





Drone

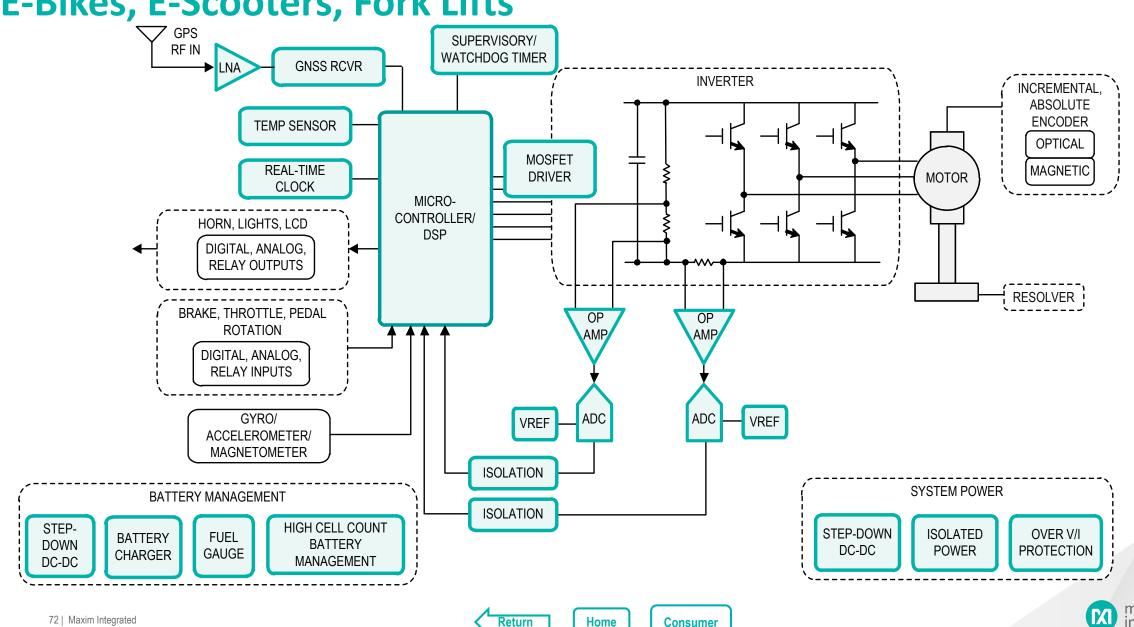




Return

Consumer

Home



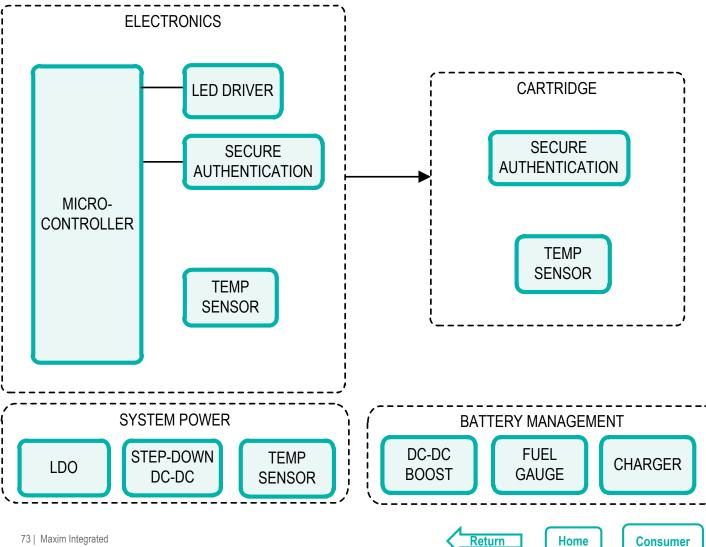
E-Bikes, E-Scooters, Fork Lifts



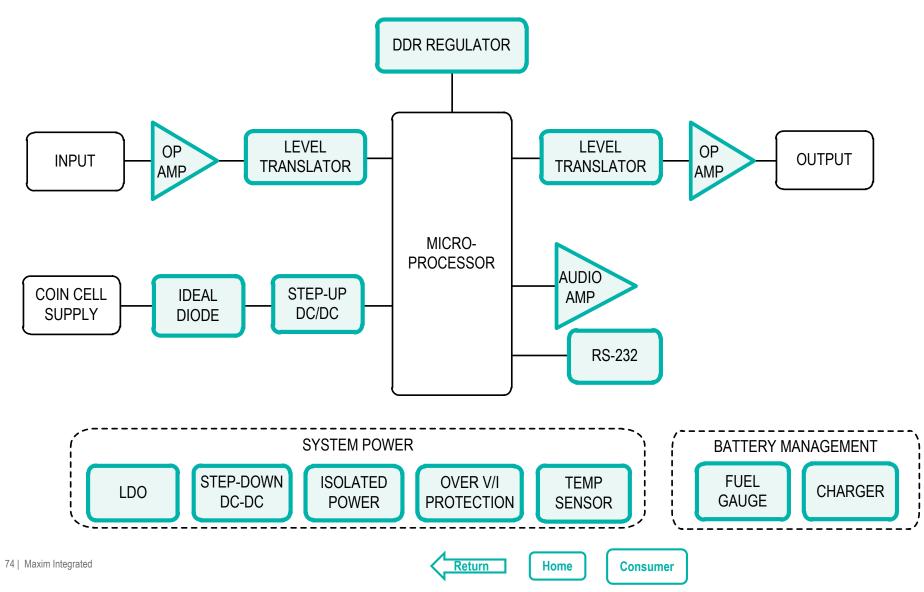
Consumer



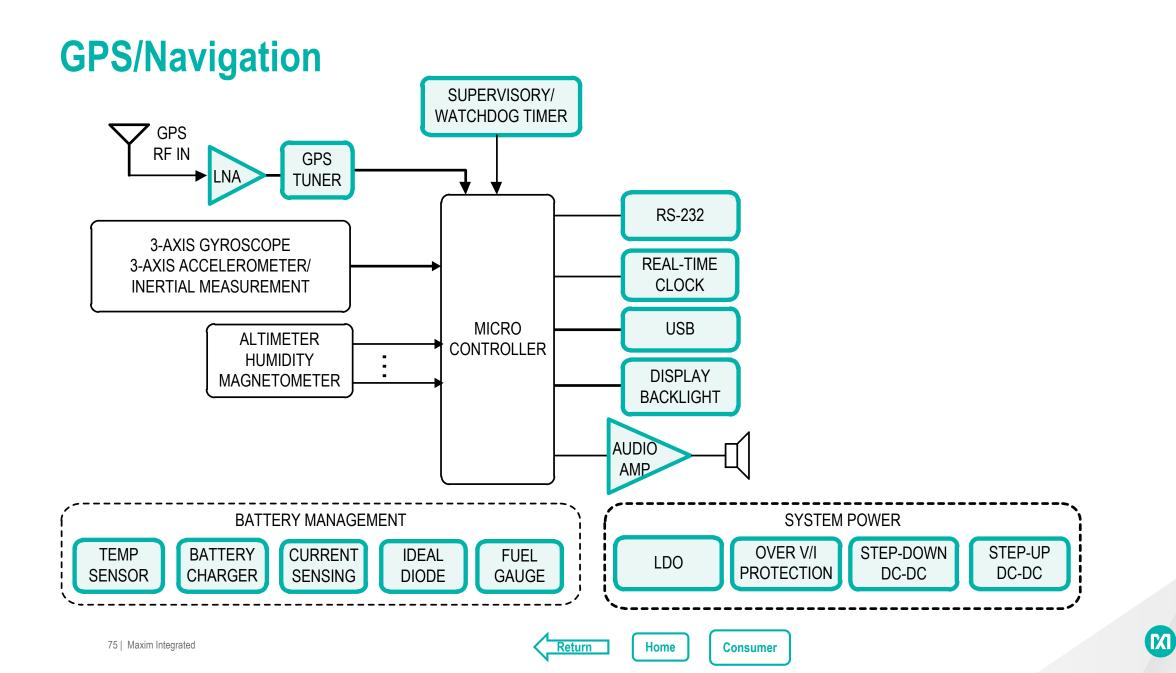
E-Cigarette

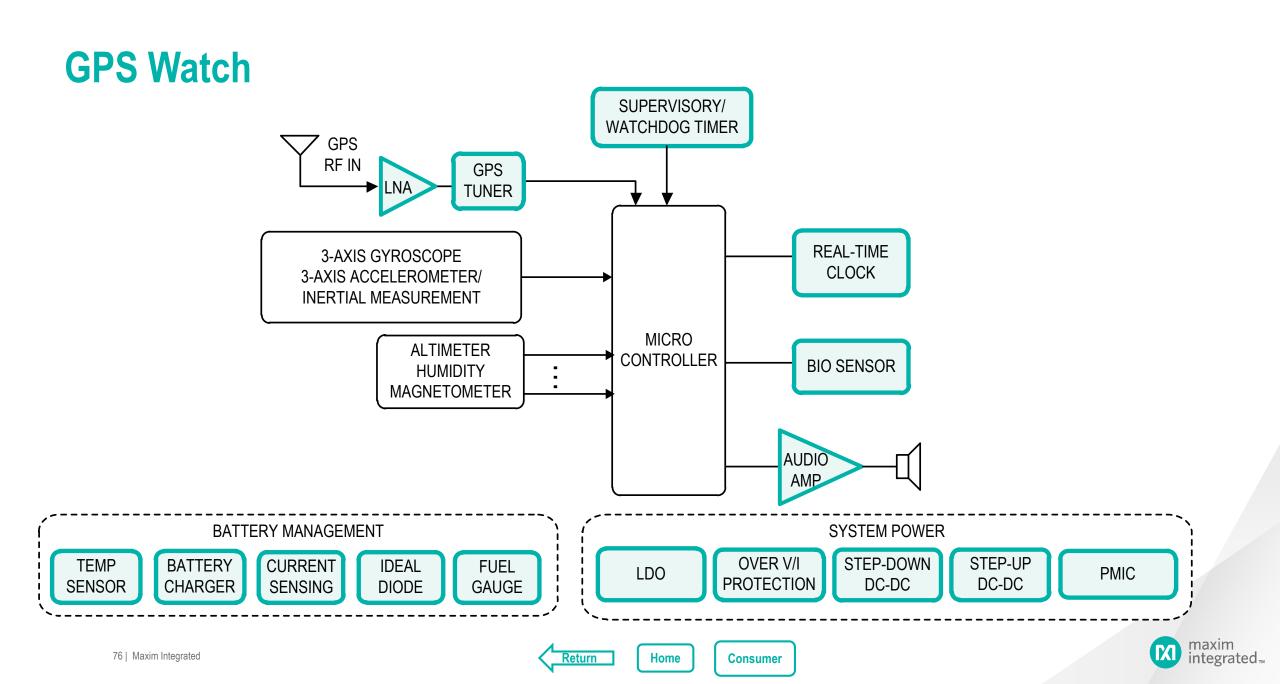


Education Video Accessory Box

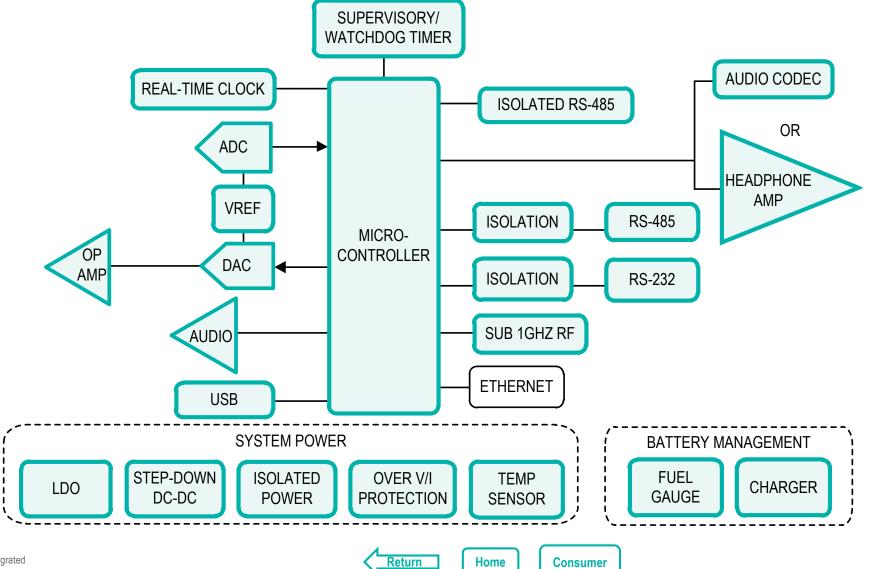






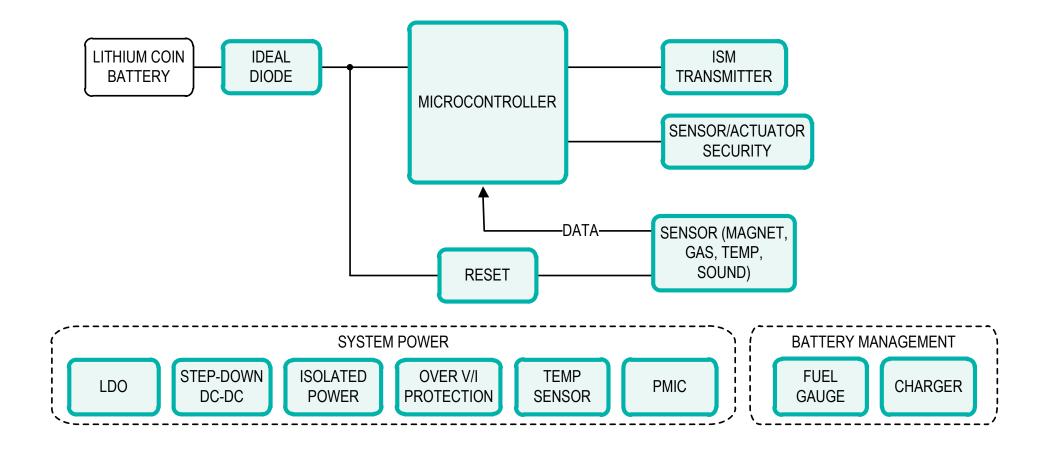


Home Security Control Panel/Gateway





Home Security Sensor



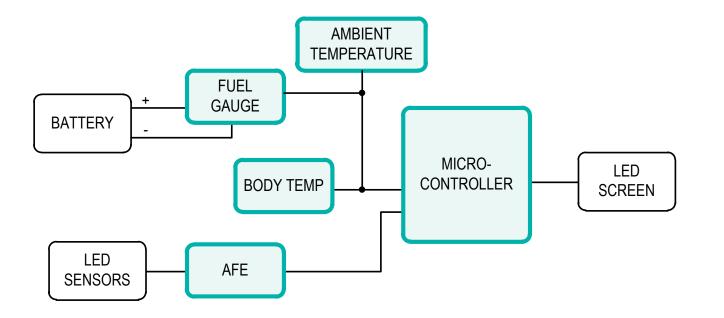
Return

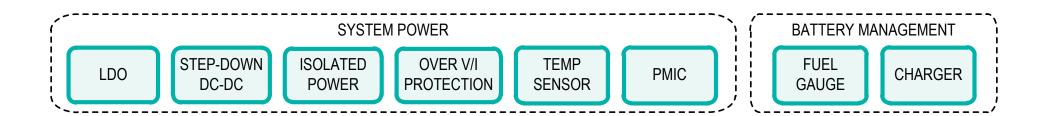
Home

Consumer



Hydration Wearable





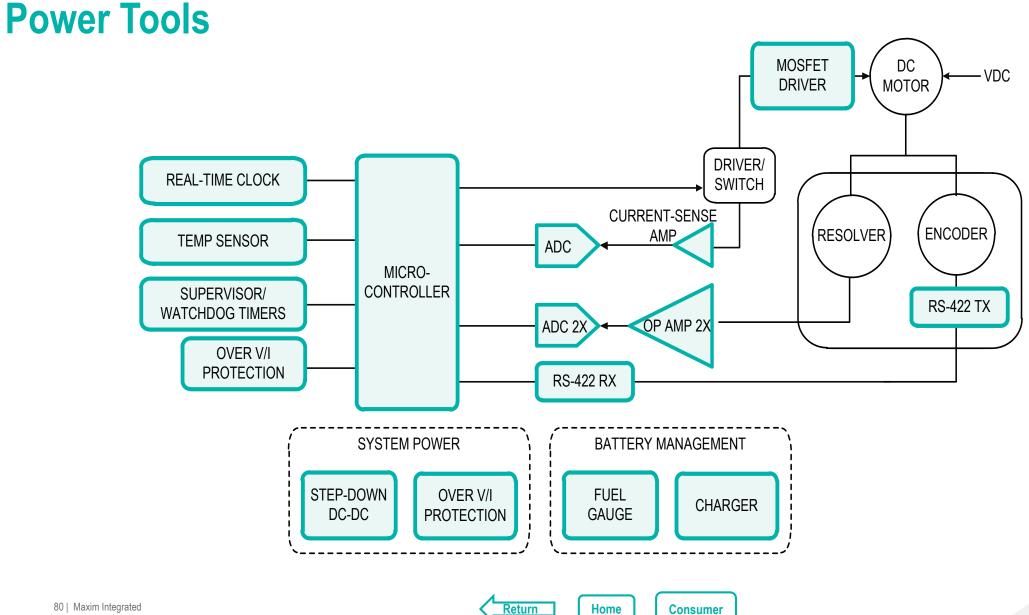
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Return

Home

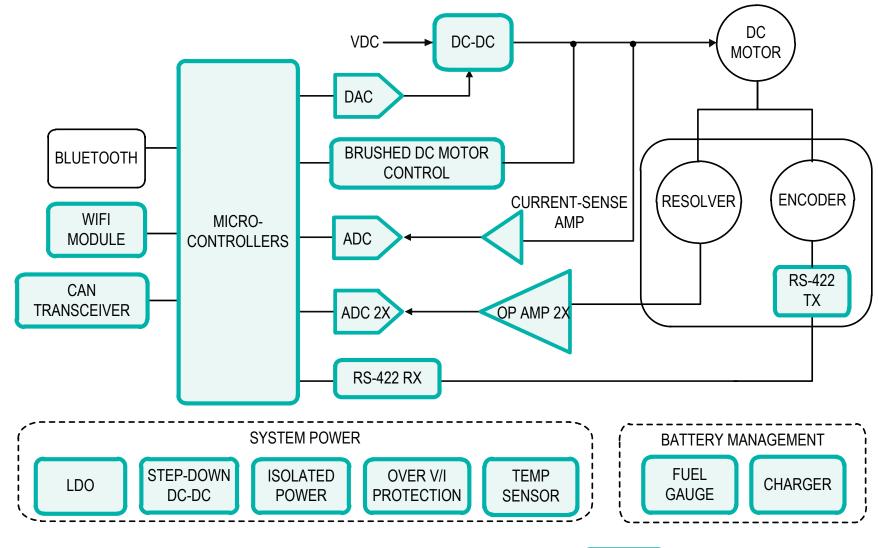
Consumer







Toy Robot

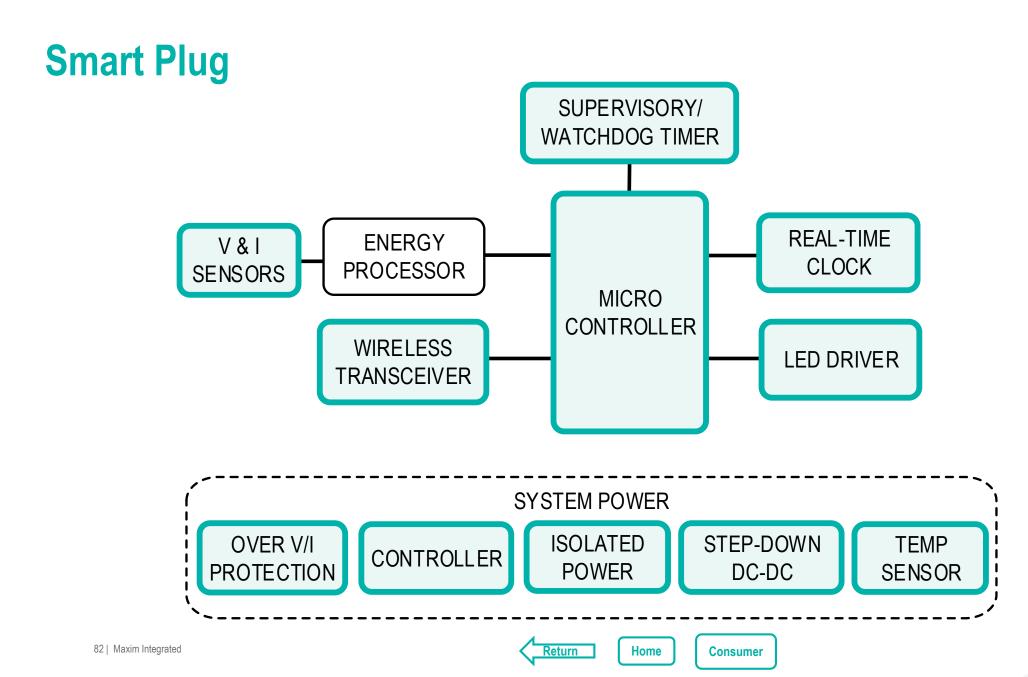




Return

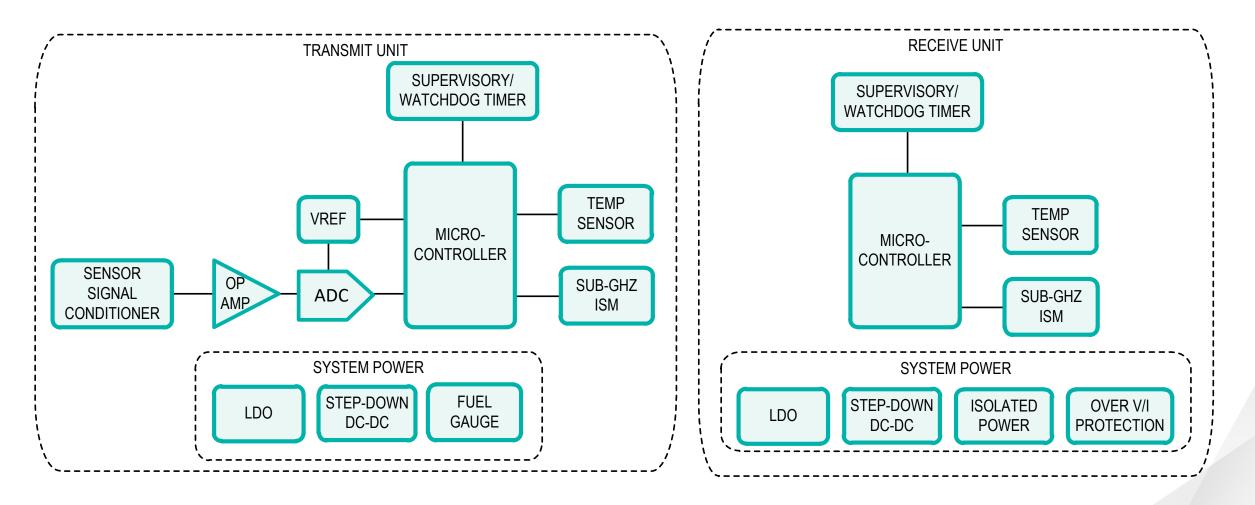
Home

Consumer





Tire Pressure Monitoring System (TPMS)





Return

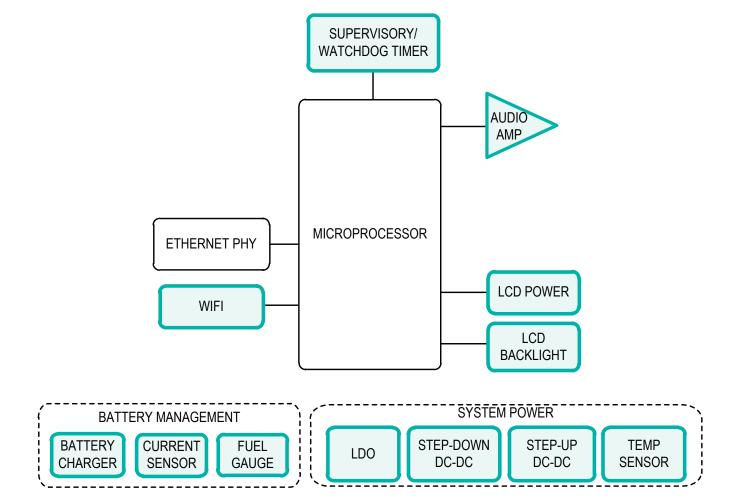


Home



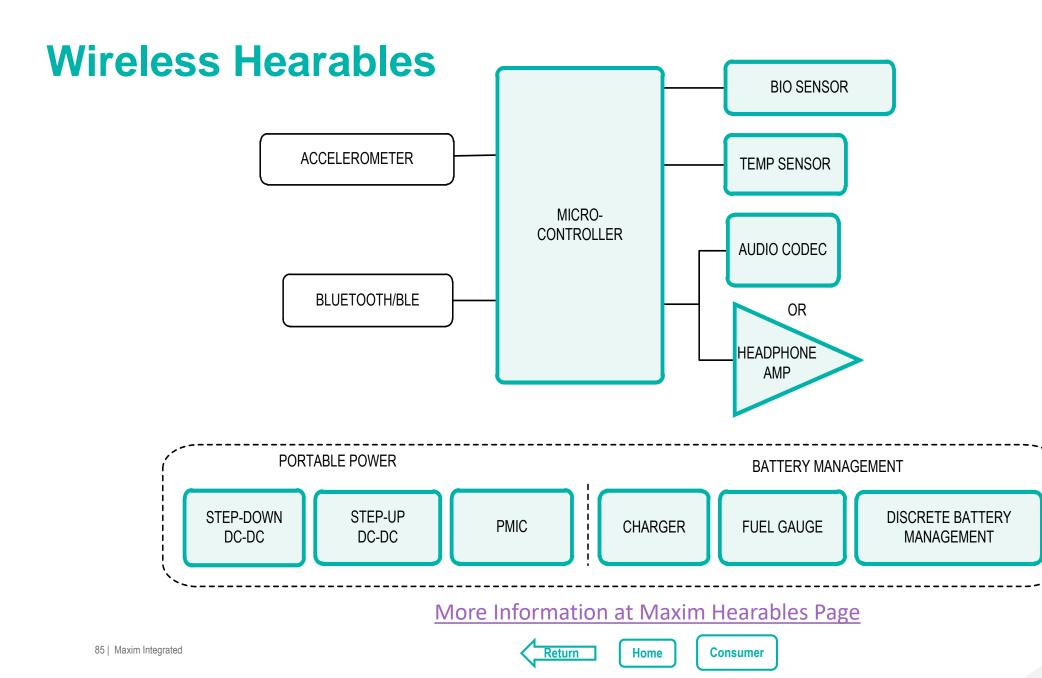


Voice-Activated Consumer Device

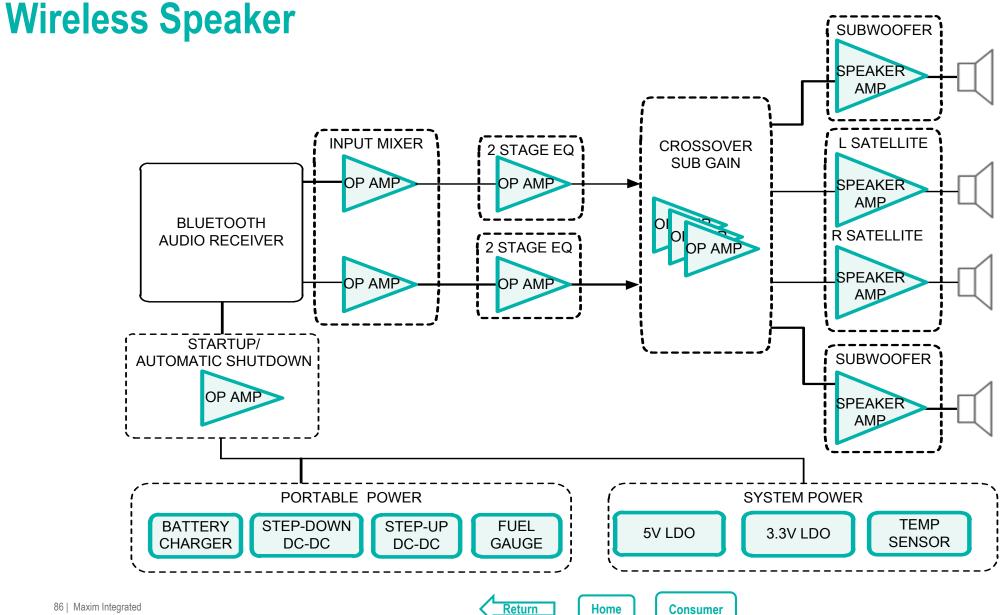


Return

Home







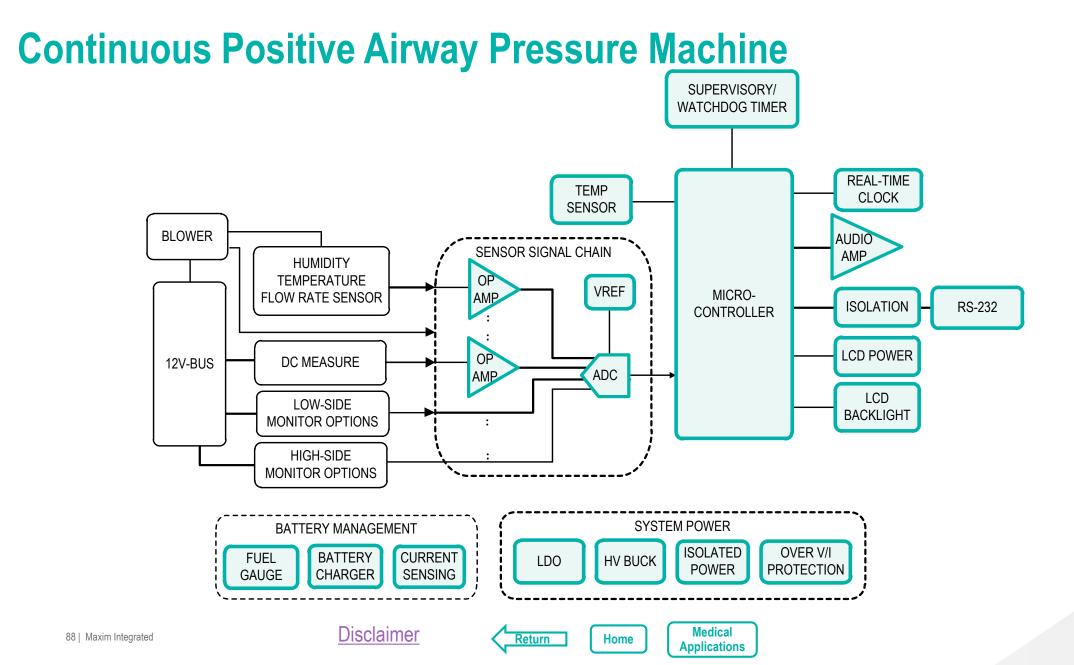


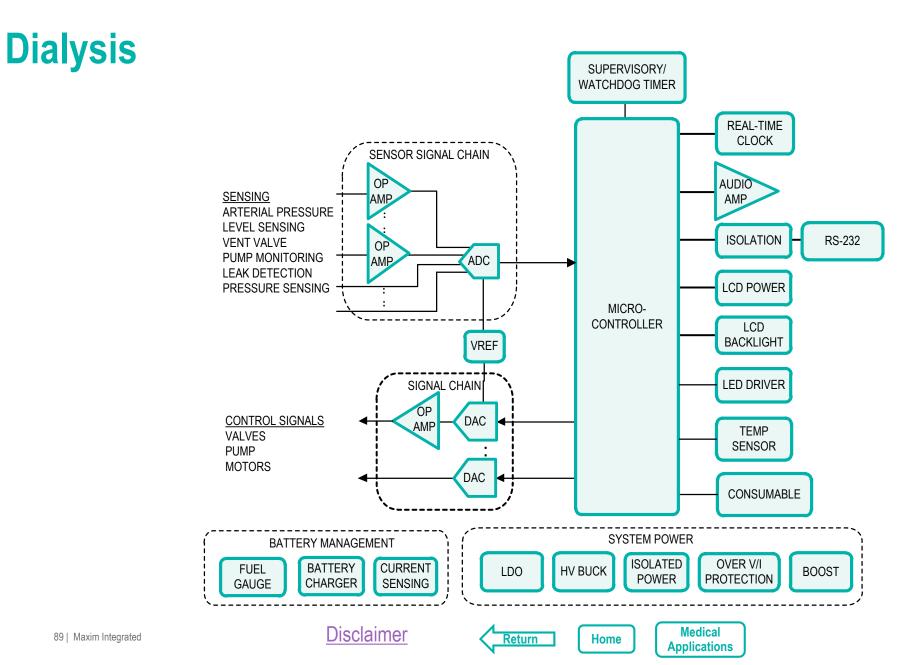


- CPAP (Continuous Positive Airway Pressure)
- Dialysis
- **Glucose Meter**
- Infusion Pump / Drug Delivery Systems
- Patient Monitoring/ECG Patch
- Pulse Oximetry
- Ventilator

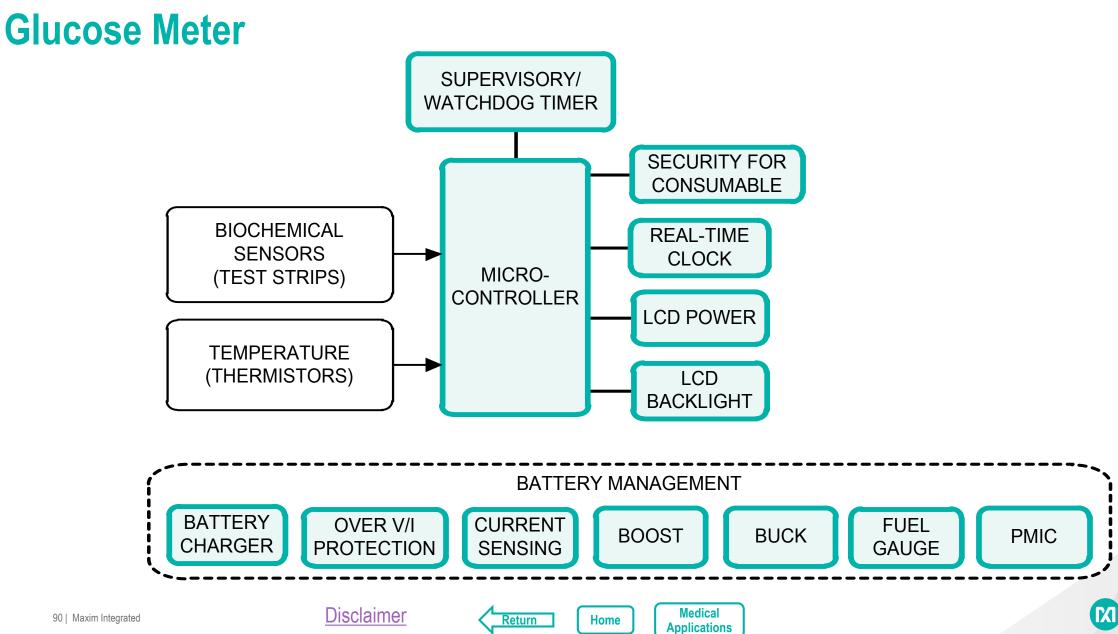






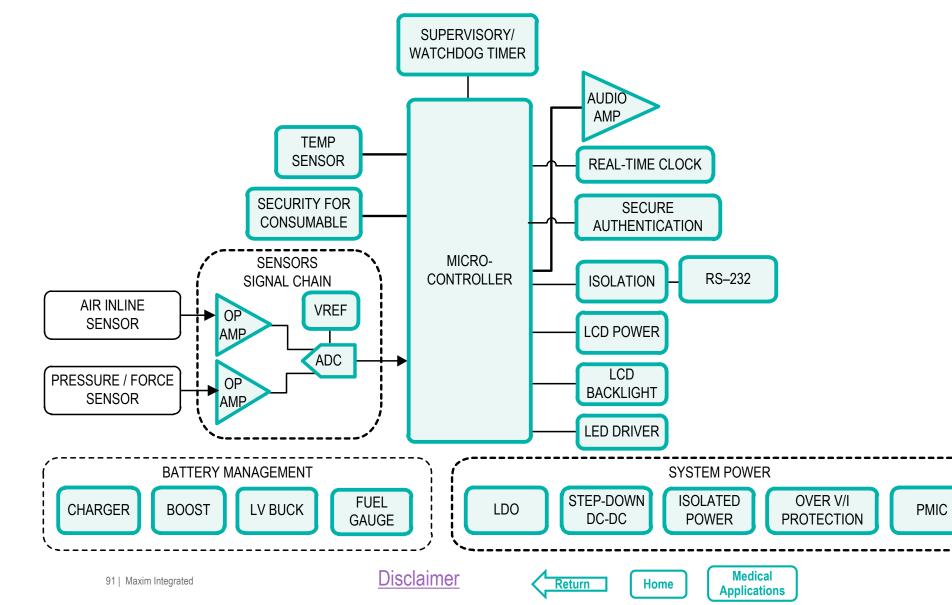




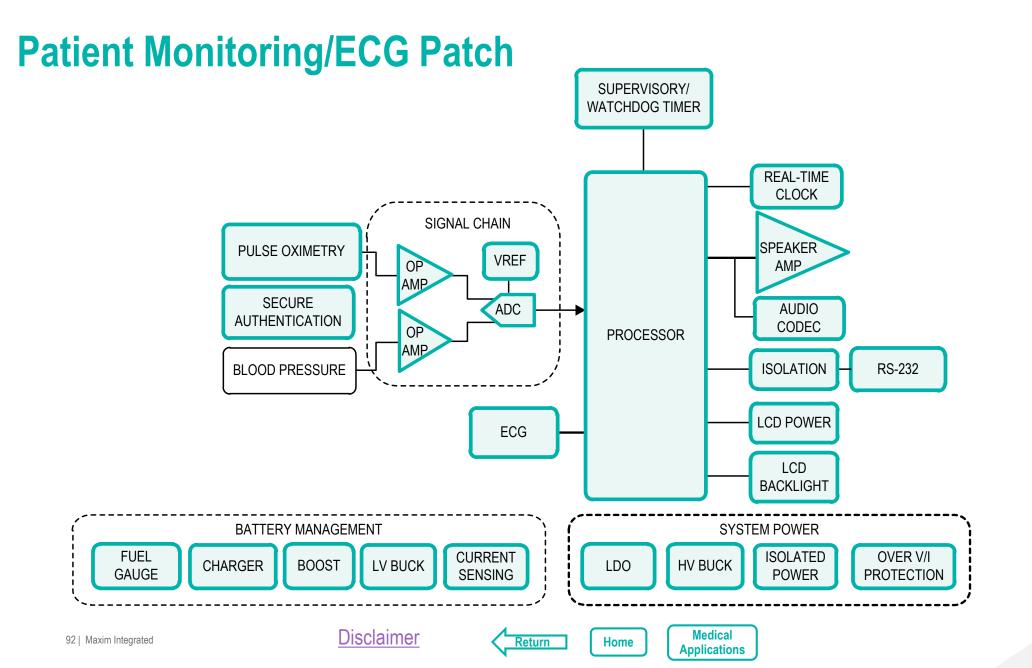




Infusion Pump/Drug Delivery Systems

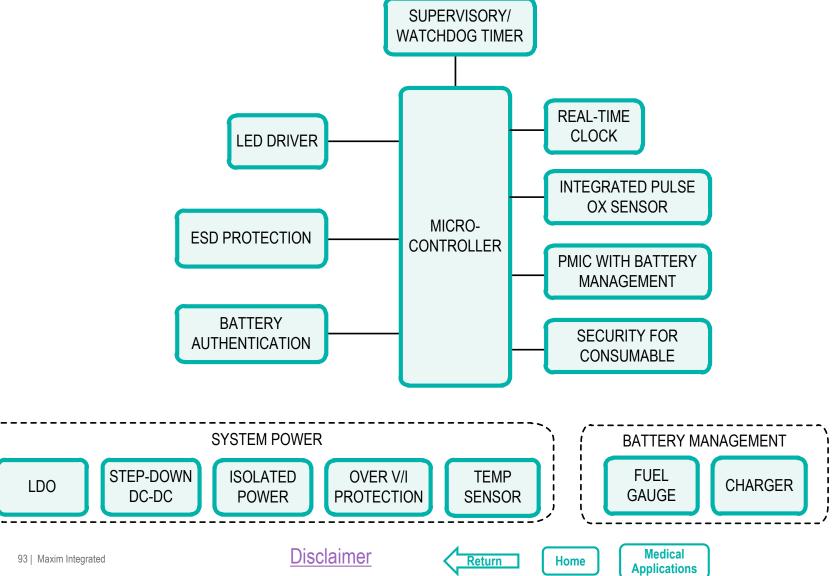




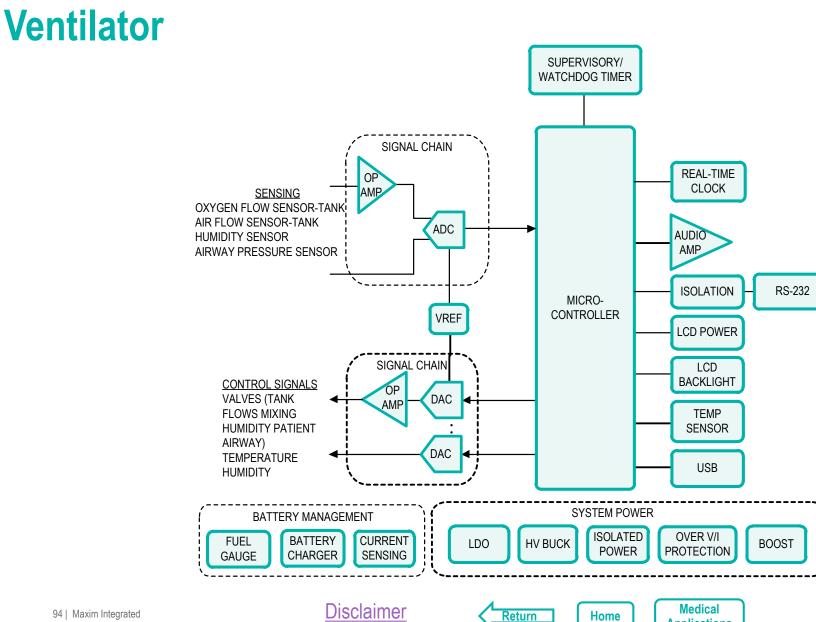




Pulse Oximetry







Applications



Sensing Interface • •

- Pressure Sensing
- <u>RTD-to-Digital Converters</u>
 - Thermocouple-to-Digital Converters

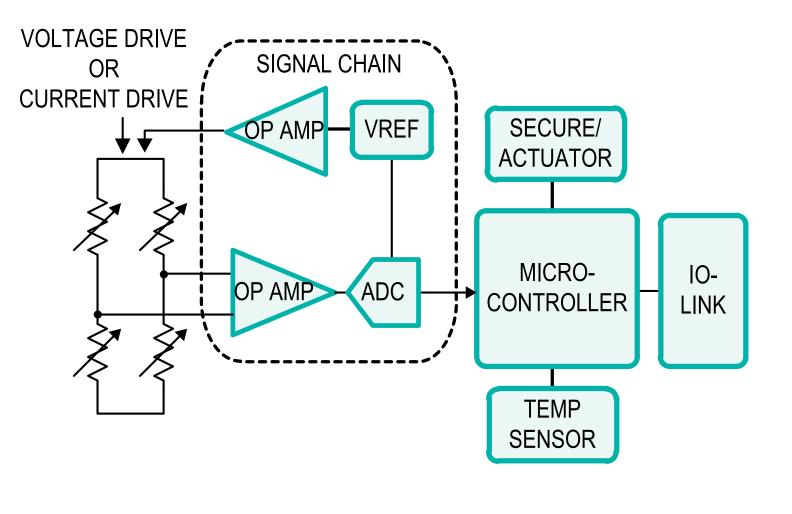
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Pressure Sensing



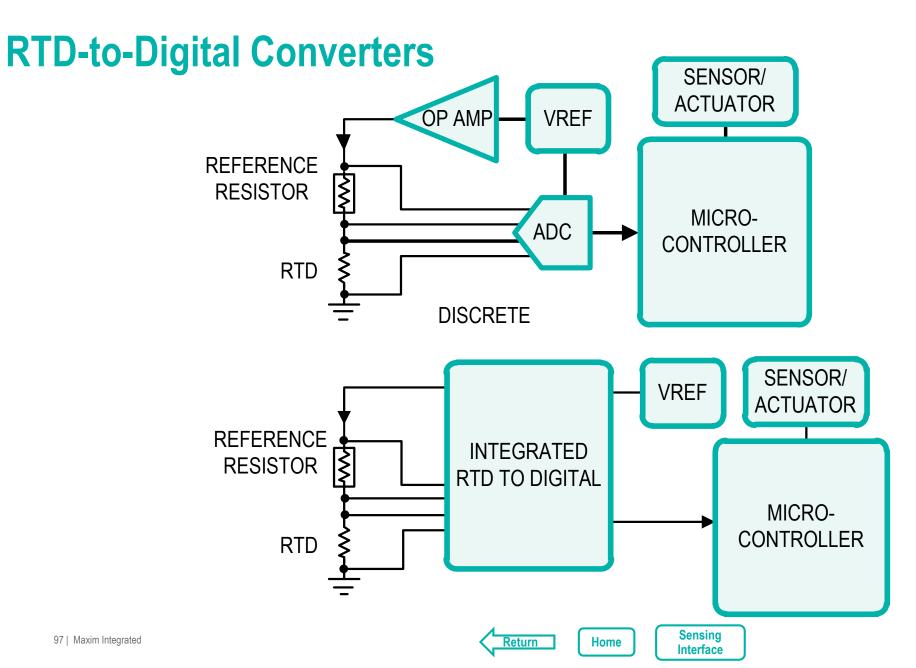
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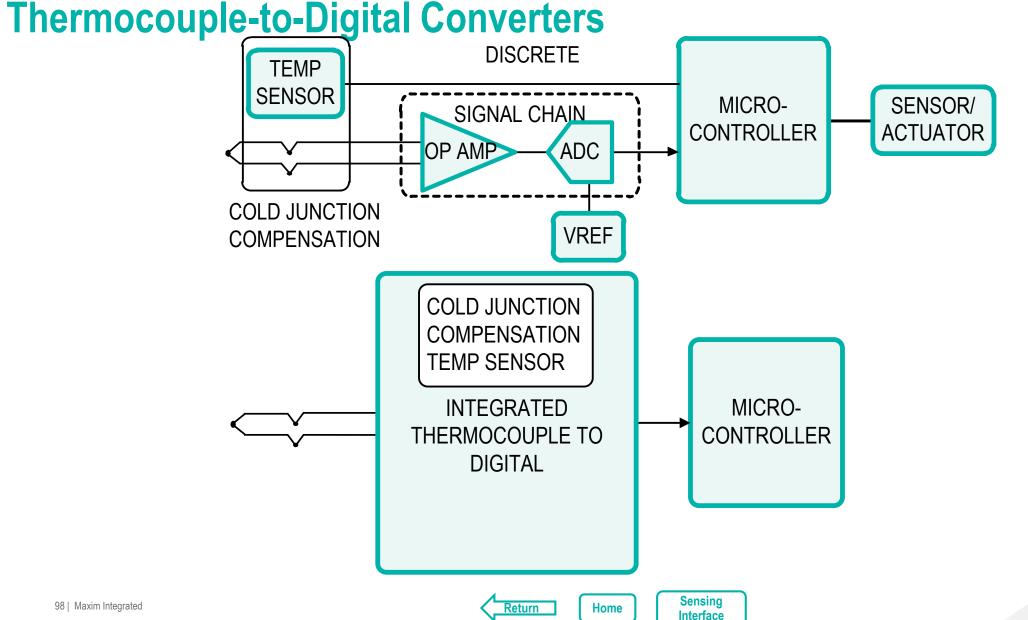
Sensing

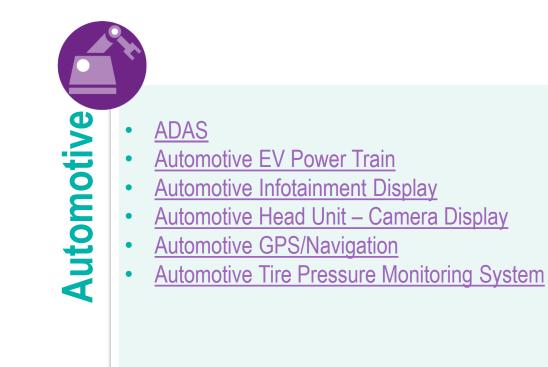
Interface









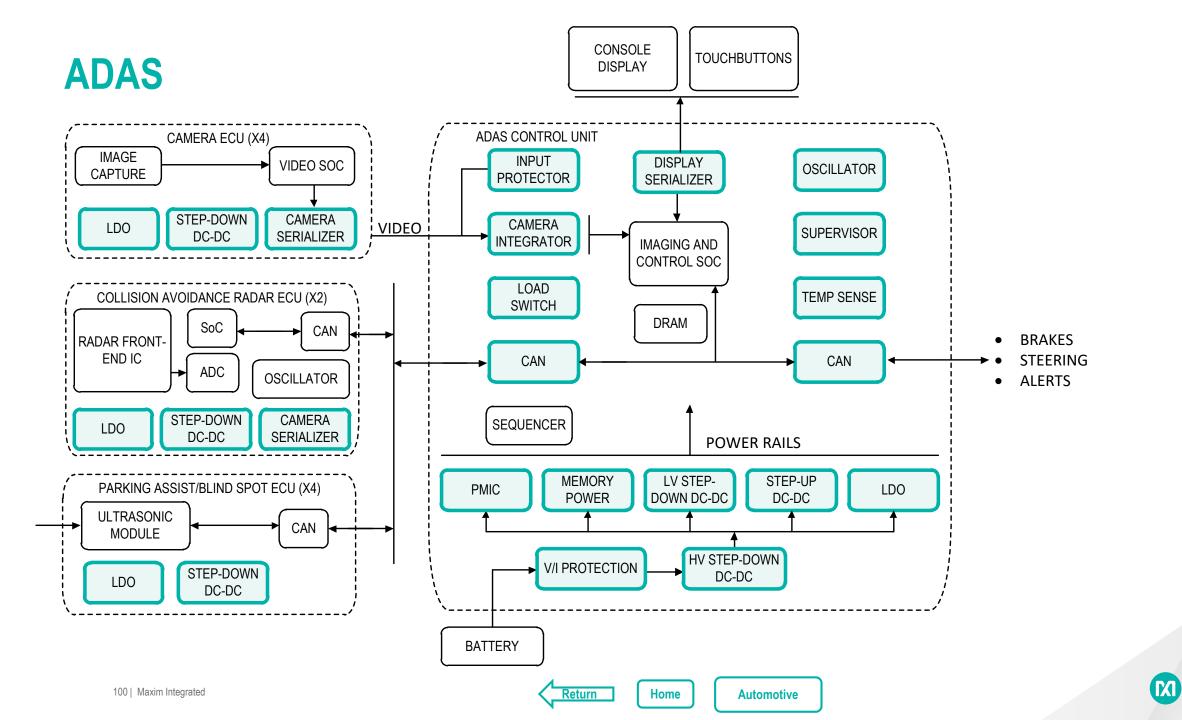


PRODUCT

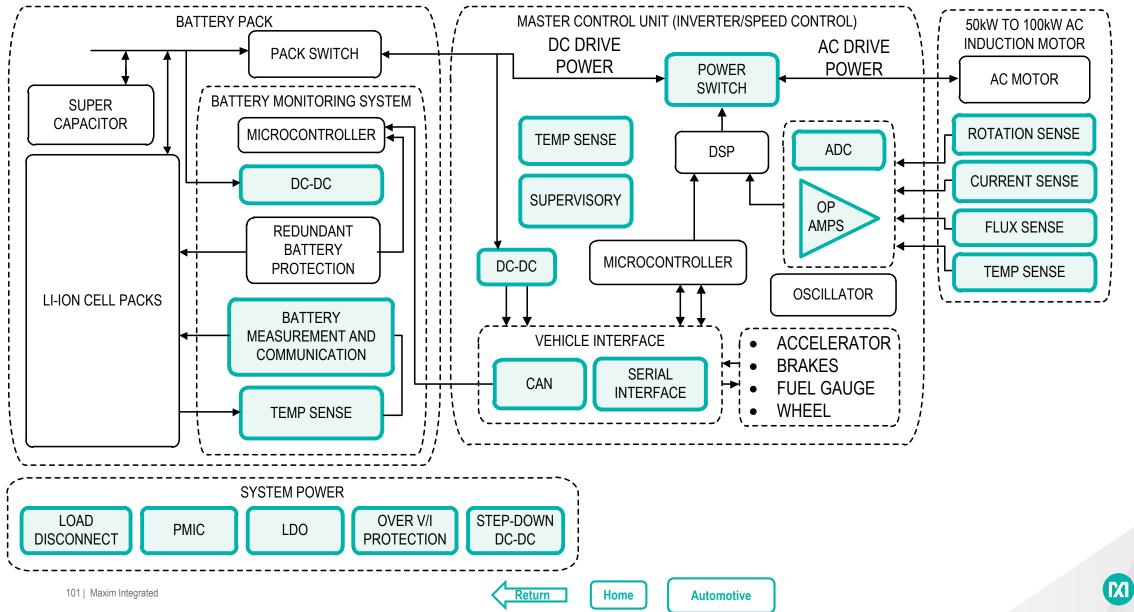
In Automotive block diagrams, gray outlined boxes indicate a product line which Maxim offers, but does not yet feature automotive qualified or /V versions.



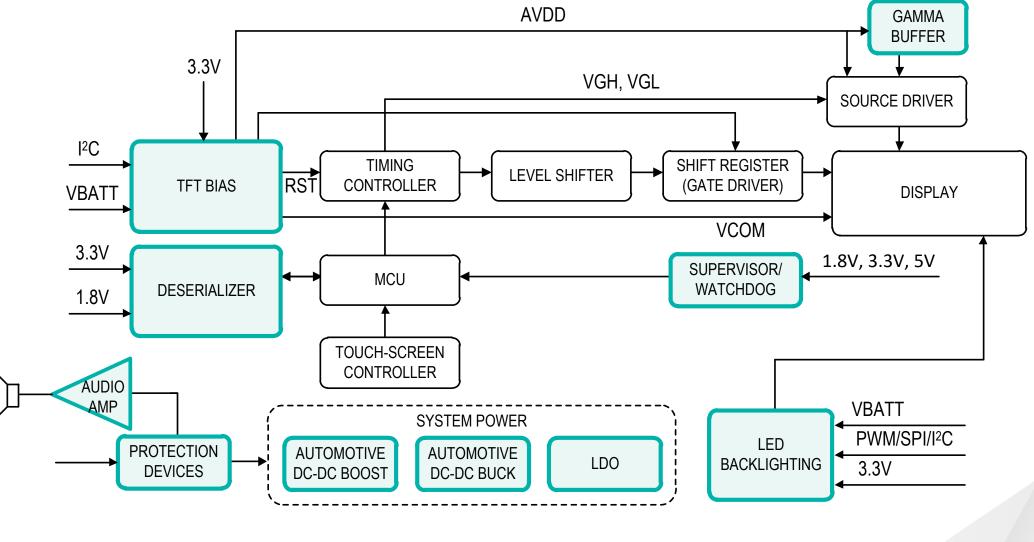




Automotive EV Power Train



Automotive Infotainment Display



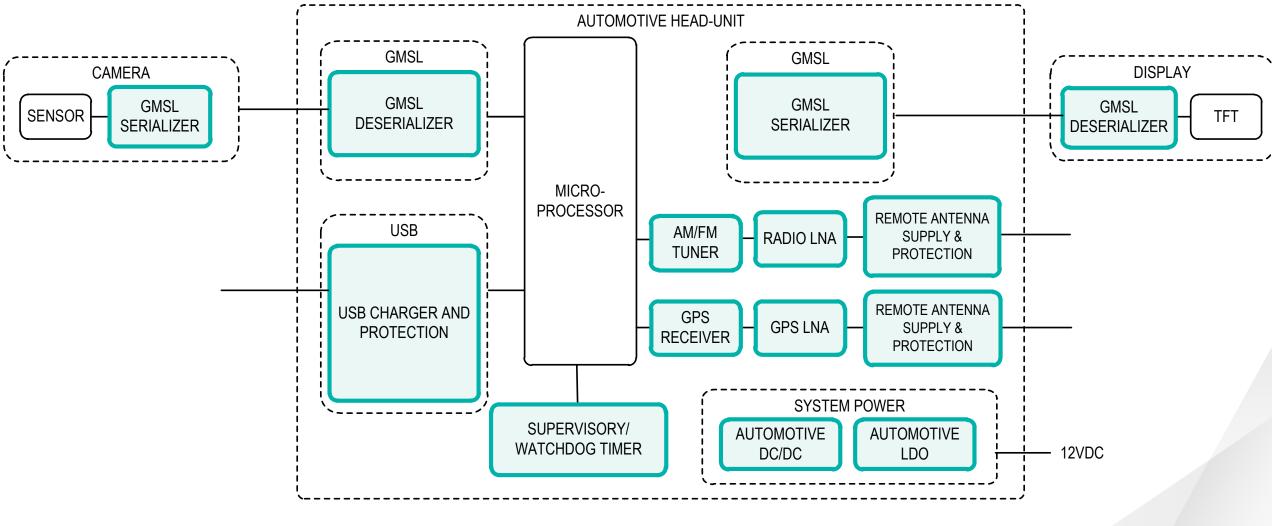
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Automotive Head Unit – Camera – Display

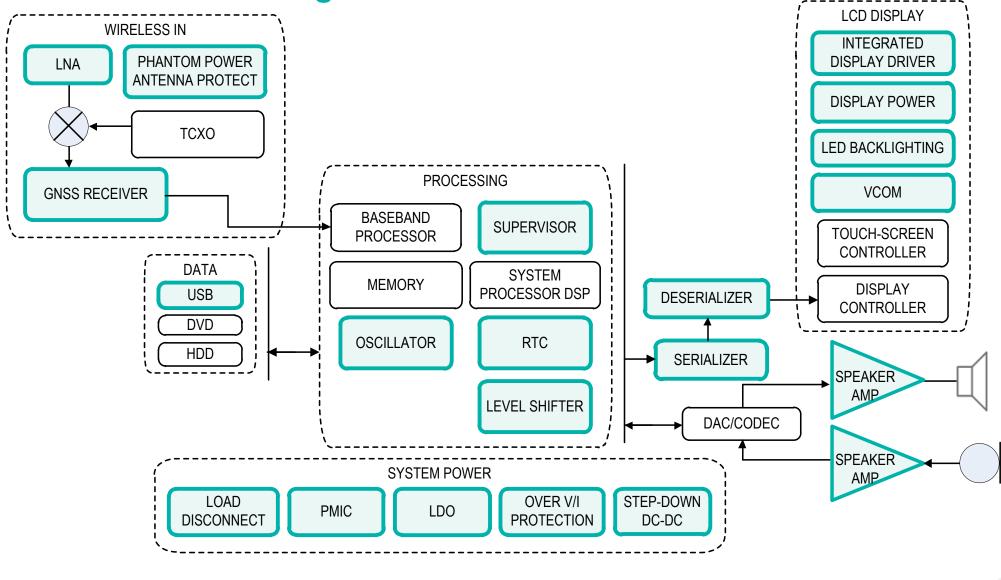


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Automotive GPS/Navigation

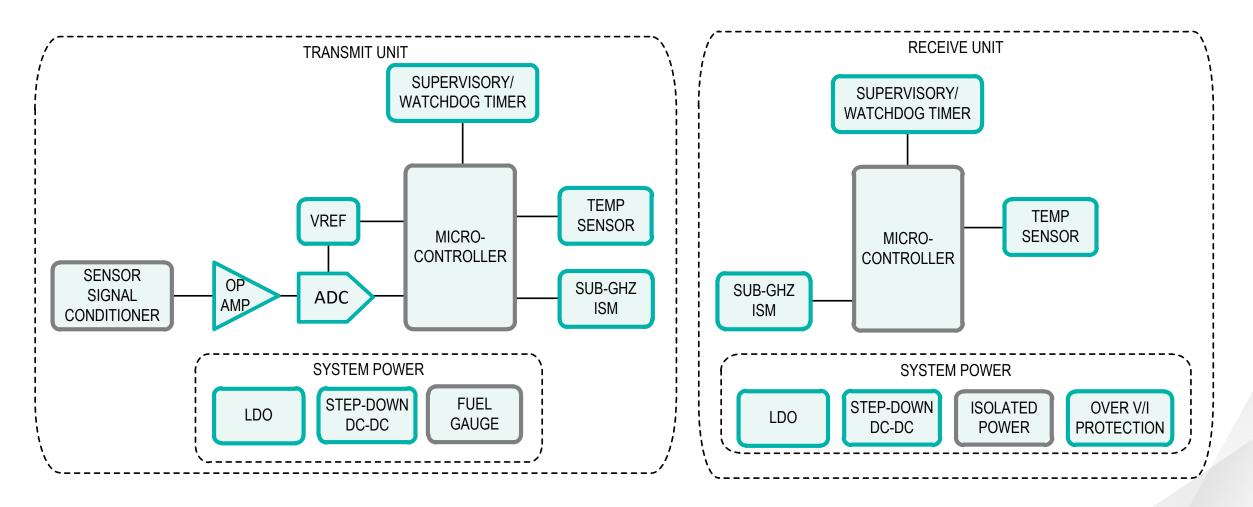


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Automotive Tire Pressure Monitoring System (TPMS)



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Family Part Tables



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RS-232 Transceivers

Part Number	Description	Key Advantages
<u>MAX13234E/35E</u>	Family of high-speed 1Tx/1Rx and 2Tx/2Rx transceivers with integrated VL pin and ESD protection	Highest Data Rate of 3Mbps, Integrated VL for easy interface with low-logic ASIC or microcontrollers down to 1.62V, Dual voltage supply 3V to 5.5V for ease of design
<u>MAX3221E/23E</u>	Family of 250kbps 1Tx/1Rx and 2Tx/2Rx transceivers with AutoShutdown™ and ESD protection	AutoShutdown activates when RS-232 is not connected for > 30s, drawing only 1µA, Dual voltage supply 3V to 5.5V for ease of design
<u>MAX3222E/32E</u>	Family of 250kbps 2Tx/2Rx transceivers with low current shutdown mode and ESD protection	Very low shutdown current mode of 10nA for power savings, Dual voltage supply 3V to 5.5V for ease of design





Half-Duplex RS-485 Transceivers

Part Number	Description	Key Advantages
<u>MAX14782E/83E</u>	500kbps & 42Mbps, dual-voltage transceivers with high ESD protection in SOIC-8 package	ESD HBM rating of ±35kV to eliminate or minimize external protection devices, Dual voltage supply 3V to 5.5V for ease of design
<u>MAX14770E</u>	20Mbps Profibus transceiver with high ESD protection in SOIC-8 package	Highest ESD-protected, compliant Profibus with ±35kV ESD HBM to eliminate or minimize external protection devices
<u>MAX14780E</u>	500kbps, 5V transceiver with high ESD protection in SOIC-8 package	High ±30kV ESD HBM to eliminate or minimize external protection devices
MAX3483AE/85AE	250kbps & 20Mbps, 3.3V transceivers with ESD protection in SOIC-8 package	High ±20kV ESD HBM protection to eliminate or minimize external protection devices
<u>MAX3440E/41E</u>	250kbps & 10Mbps, 5V transceivers with ESD protection and fault detection	Fault detection pin alerts local microcontroller when there is an open, short, exceeded CMR, or low receiver differential High ESD HBM protection
<u>MAX13442E</u>	±15kV ESD-protected, ±80V fault- protected, fail-safe RS-485/J1708 transceiver	Simplifies design and reduces board space by eliminating external components required for overvoltage protection up to ±80V, such as TVSs and PTCs





Full-Duplex RS-485 Transceivers

Part Number	Description	Key Advantages
<u>MAX14789E</u>	25Mbps, dual voltage transceiver with high ESD protection in SOIC-8 package	ESD HBM rating of ±35kV to eliminate or minimize external protection devices Dual voltage supply 3V to 5.5V for ease of design
<u>MAX3490E/91E</u>	+3.3V, 20Mbps transceivers with high ESD protection in SOIC-8 and SOIC-14 package	±20kV ESD HBM protected to eliminate or minimize external protection devices
<u>MAX13442E</u>	±15kV ESD-protected, ±80V fault- protected, fail-safe RS-485/J1708 transceiver	Simplifies design and reduces board space by eliminating external components required for overvoltage protection up to ±80V, such as TVSs and PTCs
<u>MAX13089E</u>	±15kV ESD-protected, highly configurable RS-485 transceiver to cover most applications with flexible options	Configurable data rate of 250kbps, 500kbps, and 16Mbps, Configurable pin for half and full duplex operation Inverting pin for reversed polarity, Slew-rate limiting pin to minimize reflections on the line





CAN Transceivers

Part Number	Description	Key Advantages
<u>MAX13051</u>	±80V fault-protected CAN transceiver with autobaud	Ideal for device net and other industrial network applications where overvoltage protection is required
<u>MAX13050/52/53/54</u>	1Mbps, high voltage fault-protected CAN transceivers with ESD protection and feature options	±80V fault-protected CAN transceivers provide highest data line fault protection, Multiple feature options to accommodate any CAN application with SPLIT, RS, S, VCC2, and REF pins
<u>MAX3051</u>	Smallest 3.3V CAN transceiver with four operating modes	Smallest packaged 3.3V CAN transceiver in 8-pin SOT-23, saving up to 70% PCB space versus SOIC-8 package, Flexible operation optimizes performance and power consumption with slew-rate control to minimize EMI, standby mode, low current shutdown mode, and high-speed operation
<u>MAX14883E</u>	CAN transceiver with ±60V fault protection selectable polarity	Robust CAN transceiver with selectable polarity increases up-time and reduces installation errors





Digital Isolators Transceivers

Part Number	Description	Key Advantages
<u>MAX12930/31</u>	Dual-channel family of 3kV digital isolators with low power consumption and low prop delay in compact SOIC-8 package	Lowest power isolators in the industry, consume only 0.65mW per channel at 1Mbps with 1.8V supply capable of supporting data rates up to 150Mbps
<u>MAX12934/35</u>	Dual-channel family of 5kV digital isolators with low power consumption and low prop delay in robust wide SOIC-16 package with 8mm of creepage and clearance	Lowest power isolators in the industry, consume only 0.65mW per channel at 1Mbps with 1.8V supply, and only isolators capable of supporting data rates up to 200Mbps
<u>MAX22444/45/46</u>	Quad-channel family of 5kV, VDE reinforced, dual isolation barrier digital isolators with low power consumption and low prop delay in robust wide SOIC-16 package with 8mm of creepage and clearance	Lowest power, lowest propagation delay, lowest jitter, highest data rate and most robust and reliable reinforced digital isolators in the industry
<u>MAX14430/31/32</u>	Quad-channel family of 3.75kV digital isolators with low power consumption and low prop delay in compact narrow SOIC-16 package	Lowest power isolators in the industry, consume only 0.58mW per channel at 1Mbps with 1.8V supply, and only isolators capable of supporting data rates up to 200Mbps with 10.5ns max prop delay
<u>MAX14434/35/36</u>	Quad-channel family of 5kV digital isolators with low power consumption and low prop delay in robust wide SOIC-16 package with 8mm of creepage and clearance	Lowest power isolators in the industry, consume only 0.58mW per channel at 1Mbps with 1.8V supply, and only isolators capable of supporting data rates up to 200Mbps with 10.5ns max prop delay
<u>MAX14130/31</u>	Quad-channel family of 1kV digital isolators with low prop delay in tiny QSOP-16 package	Smallest and lowest prop delay quad-channel isolators Capable of supporting data rates up to 150Mbps with only 8.3ns max prop delay





Isolated RS-485

Part Number	Description	Key Advantages
<u>MAX14940/46</u>	2.75kV _{RMS} isolated RS-485 transceivers, 500kbps & 20Mbps data rate with integrated transformer driver & LDO	Widest input supply voltage (1.71V to 5.5V) on primary side, highest ESD of ±35kV, most robust insulation material, and integrated LDO to power external circuitry on secondary side
<u>MAX14943/49</u>	5kV _{RMS} isolated RS-485 transceivers, 500kbps & 20Mbps data rate with integrated transformer driver & LDO	Widest input supply voltage (1.71V to 5.5V) on primary side, highest ESD of ±35kV, most robust insulation material, and integrated LDO to power external circuitry on secondary side



LNAs

Part Number	Description	Key Advantages
<u>MAX2659</u>	GPS/GNSS low-noise amplifier	0.8dB Noise Figure, 20dB Gain, GPS Low-Noise Amplifier (LNA) Improves Performance over Your Existing Solution
MAX2686L/MAX2693L	GPS/GNSS low-noise amplifiers with integrated LDO	Low-noise-figure GPS LNA in an ultra-small WLP; Versions available with different levels of gain
<u>MAX2667/ MAX2669</u>	GPS/GNSS ultra-low-noise-figure low- noise amplifiers	Ultra-low-noise figure, high gain, Optimized for low current (MAX2667) or high linearity (MAX2669) to best meet system requirements
<u>MAX2640</u>	300MHz to 1500MHz SiGe ultra-low- noise amplifier	Ultra low-noise figure, high gain and best linearity/mA provide high-performance operation
<u>MAX2641</u>	1400MHz to 2500MHz SiGe ultra-low- noise amplifier	
<u>MAX2692</u>	WLAN low-noise amplifier	Ultra low-noise figure, high gain and best linearity/mA provide high-performance operation



GNSS Receivers

Part Number	Description	Key Advantages
<u>MAX2769C</u>	Universal GNSS Receiver	GPS L1, Galileo E1, GLONASS G1, and BeiDou B1 support excellent RF performance with 1.4dB cascaded noise figure highly flexible with programmable IF and IF bandwidth
<u>MAX2769</u>	Universal GPS Receiver	Improve GPS and GALILEO Performance and Reduce Cost with the First Fully Programmable, Universal GNSS RF Receiver
<u>MAX2769B</u>	Universal GPS Receiver	High-Performance, Automotive-Grade GPS, GLONASS, Galileo, and Compass RF Receiver





RF Power Amplifier Linearizers (RFPAL)

Part Number	Description	Key Advantages
<u>SC1894</u>	Single-channel RF Power Amplifier Linearizer (RFPAL) 225MHz to 3800MHz	Ease of Implementation, Reduces System Power Consumption and OPEX, Reduces BOM Costs, Area, and Total Volume
<u>SC2200</u>	Dual RF Power Amplifier Linearizer (RFPAL) 698MHz to 2700MHz	Ease of Implementation, Reduces System Power Consumption and OPEX, Reduces BOM Costs, Area, and Total Volume





LO Buffers/Splitters

Part Number	Description	Key Advantages
MAX9989 (Cellular/GSM bands)	+14dBm to +20dBm LO Buffers	Excellent ±1dB output power variation over supply, temperature, and input power, Precision output power control from +14dBm to +20dBm,
MAX9990 (DCS/PCS/UMTS bands)		40dB reverse isolation prevents LO pulling



VCO/PLL

Part Number	Description	Key Advantages
<u>MAX2871</u>	23.5MHz to 6000MHz Fractional/Integer-N Synthesizer/VCO	High-performance (low phase noise), wide-frequency PLL with integrated VCOs simplifies signal chain and improves performance





PLL

Part Number	Description	Key Advantages
<u>MAX2880</u>	250MHz to 12.4GHz, high- performance, fractional/integer-N PLL	High-Performance (Ultra-Low Phase Noise) Wide-Frequency Simplifies Signal Chain and Improves Performance





RF Tuners

Part Number	Description	Key Advantages
<u>MAX2112</u>	Complete, Direct-Conversion Tuner for DVB-S2 Applications	3.3V Tuner Provides DVB-S2 Performance at Only 330mW High integration reduces system cost
<u>MAX2121</u>	Complete Direct-Conversion L- Band Tuner	Excellent RF performance High integration reduces system cost





Single and Dual Mixers

Part Number	Description	Key Advantages
<u>MAX19985A/95A</u>	Dual, SiGe, High-Linearity, 700MHz to 1000MHz/ 1700MHz to 2200MHz Down-conversion Mixers with LO Buffer/Switch	Excellent linearity and noise performance Highly integrated with two double-balanced passive mixer cores, two LO buffers, a dual-input LO selectable switch, a pair of differential IF output amplifiers and on-chip Baluns
<u>MAX19997A/99</u>	Dual, SiGe, High-Linearity, 1800MHz to 2900MH/ 3000MHz to 4000MHz Down-conversion Mixers with LO Buffer	Excellent linearity and noise performance Highly integrated with Baluns in the RF and LO ports, an LO buffer, two double-balanced mixers, and a pair of differential IF output amplifiers
<u>MAX2680/81/82</u>	400MHz to 2.5GHz, Low-Noise, SiGe Downconverter Mixers	Exceptional Input IP3 performance versus current consumption ratio -6.9dBm at 5.0mA (MAX2680) +1.0dBm at 8.7mA (MAX2681) +3.2dBm at 15.0mA (MAX2682)



Gain Block

Part Number	Description	Key Advantages
<u>MAX2615</u>	40MHz to 4GHz Linear Broadband Amplifier	High-Performance broadband amplifier with low NF and exceptional < 0.5dB gain flatness





VVA/VGA

Part Number	Description	Key Advantages
<u>MAX19790</u>	250MHz to 4000MHz Dual, Analog Voltage Variable Attenuator	Features 44dB of Linearly Controlled Dynamic Range and Excellent Attenuation Flatness
<u>MAX19791/93/94</u>	Dual Analog Voltage Variable Attenuator with On-Chip 10-Bit SPI-Controlled DAC 50MHz to 4000MHz/ 1.5GHz to 6GHz/ 10MHz to 500MHz	High-Performance RF VVA Features 46dB of Linearly Controlled Dynamic Range and Excellent Attenuation Flatness
<u>MAX2090/92</u>	50MHz to 1000MHz/ 700MHz to 2700MHz Analog VGA with Threshold Alarm Circuit and Error Amplifier for Level Control	Industry's Highest Linearity Analog RF VGA with Integrated Alarm and Leveling Control





RF Power Detectors/Controllers

Part Number	Description	Key Advantages
<u>MAX9930</u> (-45dBm to 0dBm) <u>MAX9931</u> (-35dBm to +10dBm) <u>MAX9932</u> (-30dBm to +15dBm)	2MHz to 1.6GHz 45dB RF- Detecting Controllers	Temperature Stable – Linear in dB response Power-on-Delay – 2.5µs for glitch-free controller output. Three different input voltage ranges eliminate the need for external attenuators, thus simplifying PA control-loop design
<u>MAX2014</u>	50MHz to 1000MHz, 75dB Logarithmic Detector/Controller	50MHz to 1000MHz, 75dB RF Log Detector/Controller Delivers the Best Dynamic Range and Precision Over Temperature
<u>MAX2016</u>	LF-to-2.5GHz Dual Logarithmic Detector/Controller for Power, Gain, and VSWR Measurements	Dual RF Power Detector Delivers 80dB Dynamic Range at 900MHz
<u>MAX4003</u>	100MHz to 2500MHz, 45dB RF Detector	Features a power-on delay, which holds the detector output (OUT) low for approximately 5µs to ensure glitchless controller output, Low cost
<u>MAX2015</u>	0.1GHz to 3GHz, 75dB Logarithmic Detector/Controller	0.1GHz to 3GHz, 75dB RF Log Detector/Controller Delivers Best Dynamic Range and Precision Over Temperature



Sub-GHz ISM

Part Number	Description	Key Advantages	
<u>MAX7034</u>	300MHz to 450MHz ASK Image-Rejection Receiver	Low 6.7mA Supply Current with Best-in-class Sensitivity at -114dBm	
<u>MAX7044</u>	300MHz to 450MHz High-Efficiency ASK Transmitter	Lowest 7.7mA Supply Current at High +13dBm Output Power, Automatic shutdown Feature with Data Activity Detector	
<u>MAX7032</u>	300MHz to 450MHz Programmable ASK/FSK Transceiver	Fractional-N PLL, Auto-polling Low-power Management at <23.5µA Polling-mode Current	
<u>MAX7037</u>	300MHz to 930MHz Ultra-Low-Power, ASK/FSK Transceiver with Integrated 8051 MCU	Industry's Lowest Shutdown Current at 100nA, Wide 2.1- 5.5V Supply Range	





Real-Time Clocks (RTCs)

Part Number	Description	Key Advantages
<u>DS3231M</u>	Extremely Accurate, I ² C Real-Time Clock (RTC) with Integrated MEMS Resonator	Greater Accuracy and Stability Across Temperature (< ±5ppm, All Conditions) No Frequency Shift after Reflow No Aging
<u>DS3232M</u>	Extremely Accurate, I ² C Real-Time Clock (RTC) with Integrated MEMS Resonator and 236-Bytes of Battery-Backed SRAM	Greater Accuracy and Stability Across Temperature (< ±5ppm, All Conditions) No Frequency Shift after Reflow No Aging
<u>DS1338</u>	Low-Power, Full Binary-Coded Decimal (BCD) Clock/Calendar Plus 56-bytes of NV SRAM.	Low-Power Operation Extends Battery Backup Run Time Automatic Power-Fail Detect and Switch Circuitry





High-Density QAM Modulators (Cable Downstream Transmitter)

Part Number	Description	Features and Benefits
MAX5862 8/16/24/32 QAM Channels	High-Density Downstream Cable QAM Modulator, DUC + RFDAC	High density, symbols-to-QAM RF solution Highly flexible and configurable Scalable capacity via pin-compatible family Significantly less power/QAM than FPGA+RFDAC. Lower cooling
MAX5860 32/48/64/96/128 QAM Channels		cost and operating expense. Feature set eases RF design





Integrated DUC + DAC Digital Video Broadcast (DVB) Transmitters

Part Number	Description	Features and Benefits
<u>MAX5868</u>	16-Bit, 5Gsps Interpolating/ Modulating RFDAC with Parallel LVDS Interface	Simplifies RF design, reduces solution cost, and enables new communications architectures Enables multi-band RF modulation Enables software-defined radio transmitter
<u>MAX5869</u>	16-Bit, 5.9Gsps Interpolating/ Modulating RFDAC with JESD204B Interface and VCO/PLL	Eliminates I/Q imbalance and LO feedthrough Direct RF synthesis of 500MHz/600MHz bandwidth up to 2.2GHz/2.8GHz (MAX5868/MAX5869)





High-Speed ADCs (Radio Receiver High-IF Sampling)

Part Number	Description		Key Advantages
<u>MAX12557/8/9</u>	Dual 14-bit ADCs	65/80/96Msps	Direct IF sampling up to 400MHz
<u>MAX12527/8/9</u>	Dual 12-bit ADCs		Eliminates down-conversion stages simplifying
MAX19515/6/7	Dual 10-bit ADCs	65/100/130Msps	system design and reducing cost
<u>MAX19505/6/7</u>	Dual 8-bit ADCs		





High-Speed 10-/8-Bit ADCs and DACs

Part Number	Description		Key Advantages
MAX19515/6/7	Dual 10-bit ADCs	65/100/130Msps	Highly flexible and configurableADC: Programmable data timing and clock divider
<u>MAX19505/6/7</u>	Dual 8-bit ADCs		DAC: Programmable I/Q gain matching
<u>MAX5854/3</u>	Dual 10-bit DACs	165/80Msps	 Interleaved data mode for single/dual-port operation Standby and power-down operation modes
<u>MAX5852/1</u>	Dual 8-bit DACs		Low power, complementary Rx/Tx solution with exceptional RF performance





Analog Front-End

Part Number	Description	Key Advantages
MAX19713/0 (Full Duplex) MAX19707/6/8/5 (Half Duplex)	High-Speed Analog Front-Ends 45/22/11/7.5Msps	 Highly Integrated: Dual 10-Bit ADCs and DACs, Auxiliary ADC/DACs for Monitor/Control, Optional Tx filter Eliminates analog converters from digital baseband ASIC No NRE Faster time-to-market No mixed-signal test Use fine-geometry CMOS for ASIC Lower implementation risk





Normal Precision ADCs and Integrated Converters

Part Number	Description	Key Advantages
<u>MAX11300</u>	20-Port Programmable Mixed-Signal I/O with 12-Bit ADC, 12-Bit DAC, Analog Switches, and GPIO	Flexible Design Configurability adapts to requirements Reduces BOM Cost
<u>MAX11105</u>	2Msps/3Msps, Low-Power, Serial 12-/10-/8- Bit ADC with SPI Interface	Higher speed for better performance Minimize Power consumption Small size saves area
<u>MAX11128</u>	1Msps, Low-Power, Serial 12-/10-/8-Bit, 4-/8- /16-Channel ADCs with SPI Interface	Higher speed Minimize Power consumption Sequencer for flexible design
<u>MAX11629</u>	12-/10-/8- Bit, 4-/8-/12-/16-Chs, 300ksps SAR ADC with SPI Interface	Minimize Power consumption Integration saves cost and area
<u>MAX14001/02</u>	Configurable, Isolated 10-bit ADCs for Multi- Range Binary Inputs	Industry's First Integrated Solution for Detection of Multi-Voltage Binary Inputs





High-Precision SAR ADCs

Part Number	Description	Key Advantages
<u>MAX11168</u>	16-Bit, 1-Channel, 500ksps, ±5V SAR ADC with ±7ppm/°C Internal Reference in Tiny 10- pin μMAX®	True Bipolar support with single supply, High DC/AC Performance Accuracy Integration; saves cost and space
<u>MAX1301</u>	16-Bit, 4/8-Channel, 115ksps, Up to ±12.288V programmable multi-range input SAR ADC	S/W programmable input range Integrated Reference Over voltage protection
<u>MAX11163</u>	16-Bit, 1-Channel, 250ksps, 5V Unipolar Input SAR ADC in Tiny 10-pin µMAX	High DC/AC Performance Accuracy 19mW Power consumption at 250ksps Industry-standard package
<u>MAX11905</u>	20-Bit, 1-Channel, 1.6Msps, Low-Power, Fully Differential SAR ADC with Integrated Reference Buffers	Highest Precision with the Lowest Power Integration simplifies Design Scalable power with Speed
<u>MAX11046</u>	8-Channel, 16 Bit, Simultaneous-Sampling ADC	Industry's First Single-Supply Bipolar ADC with High- Impedance Input



High-Precision Sigma-Delta ADCs

Part Number	Description	Key Advantages
<u>MAX11270</u>	24-Bit, 1-Ch, 10mW, 130dB SNR, 64ksps Delta-Sigma ADC with Integrated low-noise PGA	Wide dynamic range with Precision Low power savings and sleep mode Integration saves cost and area
<u>MAX11410</u>	24-Bit Multi-Channel Low-Power 1.9ksps Delta-Sigma ADC with PGA and Excitation sources	Programmable Excitation sources Flexible channel assignment Low Power for efficient systems
<u>MAX11200</u>	24-Bit, Single-Channel, Ultra-Low Power, 0.48ksps Delta-Sigma ADC with GPIO	Minimize Power consumption Increase System Accuracy Integration saves cost and area
<u>MAX11254</u>	24-Bit, 6-Channel, 64ksps, 6.2nV/√Hz PGA, Delta-Sigma ADC with Sequencer	Wide dynamic range with Precision Active sensor control for Power Saving Enables System Integration
<u>MAX11040K</u>	24-/16-Bit, 4-Channel, Simultaneous- Sampling, Cascadable, Sigma-Delta ADC	Sigma-Delta ADC Cascadable Up to 32 Simultaneous Channels





High-Precision DACs

Part Number	Description	Key Advantages
<u>MAX5216</u>	14-/16-Bit, Low-Power, Buffered Output, Rail-to- Rail DAC with SPI Interface	Saves Application Power and Board Space with Less than $80\mu A I_Q$ and a 3mm x 5mm, 8-Pin μMAX Package
<u>MAX5816</u>	Ultra-Small, Quad-Channel, 12-Bit Buffered Output DAC with Internal Reference and I ² C Interface	Complete 4-Channel DAC Saves PCB Area with Integrated Reference and Output Buffer
<u>MAX5134</u>	Low-Power, 4-Channel, 16-Bit, Buffered Voltage- Output, high-linearity SPI DAC	Complete 4-Channel DAC Saves PCB Area with Integrated Reference and Output Buffer with Daisy- Chaining capability
MAX5180/1/2/3 MAX5187/90 MAX5188/91	2-Channel, Lower-Power, 10-Bit, Simultaneous- update, current output, Parallel DAC	True 2-Channel ±0.5LSB INL DAC with the lowest possible power dissipation of 1µA (max) shutdown current
<u>MAX5318</u>	18-Bit, High-Accuracy Voltage Output DAC with Digital Gain, Offset Control, and SPI Interface	Lowest Noise, Fast-Settling Precision 18-Bit DAC
<u>MAX5719</u>	16- and 20-Bit Voltage DAC	Industry's Highest Performance DAC in 14 Pin Standard Pin-Out
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General-Purpose DACs

Part Number	Description	Key Advantages
<u>MAX5705</u>	12-Bit, low-Power, Buffered Output DAC with internal Reference and SPI interface	Complete 1-Channel ±1LSB INL DAC Saves PCB Area with Integrated Reference and Output Buffer
<u>MAX5702</u>	Ultra-Small, Quad-Channel, 12-Bit Buffered Output DAC with Internal Reference and SPI Interface	Complete 2-Channel ±1LSB INL DAC Saves PCB Area with Integrated Reference and Output Buffer
<u>MAX5715</u>	Low-Power, 4-Channel, 12-Bit, Buffered Voltage-Output, high-linearity SPI DAC	Power and Space-saving 4-Channel ±1LSB INL DAC Saves PCB Area with Integrated Reference and Output Buffer in a very small 3.5mm x 3.5mm 12-Pin WLP package
<u>MAX5825</u>	Ultra-Small, Octal Channel, 8-/10-/12-Bit Buffered Output DAC with Internal Reference and I ² C Interface	Feature-Rich, 8-Channel DAC Family Offered in a 5.75mm ² WLP Footprint
<u>MAX5386</u>	Dual, 256-Tap, Volatile Low-Voltage Linear Taper Digital Potentiometer	Dual, 256-Step, Digital Potentiometer with a 2.6V Supply in a 3mm x 3mm TQFN
<u>MAX5394</u>	Single, 256-Tap Volatile, SPI, Low-Voltage Linear Taper Digital Potentiometer	Industry's Smallest, Lowest Power, Lowest Voltage Digital Potentiometer





Over V/I Protection – Surge Stopper, Efuse, Current Limiters

Part Number	Description	Key Advantages
MAX17523 MAX14588	36V, 1A Adjustable Overcurrent and Overvoltage Protector with High Accuracy	Industry's Most Integrated OCP and OVP Solution with More Robust Reverse- Current Blocking Capability
MAX17561/2/3 MAX14571/2/3	40V, 4.2A Adjustable Overvoltage and Overcurrent Protectors with High Accuracy	Industry's Most Integrated OCP and OVP Solution with More Robust Reverse- Current Blocking Capability
<u>MAX17608/9/10</u>	60V, 1A Adjustable Overcurrent, Overvoltage, Overtemperature and Reverse Protection	Industry's Most Integrated OCP and OVP Solution with More Robust Reverse- Current Blocking Capability
<u>MAX17561/2/3</u>	40V, 4.2A Adjustable Overvoltage and Overcurrent Protectors with High Accuracy	Industry's Most Integrated OCP and OVP Solution with More Robust Reverse- Current Blocking Capability
<u>MAX14721/2/3</u>	60V, 2A Adjustable Overcurrent and Overvoltage Protectors with Thermal Foldback	Industry's Most Integrated Current-Limit and Overvoltage-Protection Solutions
<u>MAX14691/2/3,</u> <u>MAX17525</u>	60V, 6A Adjustable Overcurrent and Overvoltage Protectors with Thermal Foldback	Industry's Most Integrated Current-Limit and Overvoltage-Protection Solutions
<u>MAX6495</u>	72V, Overvoltage-Protection Switch/Limiter Controller External MOSFET	Small, Low-current, Overvoltage-Protection Circuit for High-Voltage Transient Systems
<u>MAX16126-29</u>	Load-Dump/Reverse-Voltage Protection Circuits	Wide Input-Voltage Protection Range with Fast Gate Shutoff During Fault Conditions with Complete Load Isolation and Automotive Qualified





Supervisory/ Watchdog Timers

Part Number	Description	Key Advantages
<u>MAX6369/73</u>	Pin-Selectable Watchdog Timers	Precision Watchdog Timer for Critical µP Applications
<u>MAX16134</u>	Low-Voltage, Precision, Single/Dual/Triple/Quad- Voltage µP Supervisor	OV/UV 1% Accurate Three-Channel Monitor with Supervisory in Small SOT23
<u>MAX16125</u>	Dual Pushbutton Controller in Tiny 6-Bump WLP Package	New Pushbutton Controller Offer Hardware Solutions to Eliminate the Need to Program a μC
<u>MAX16056-59</u>	125nA Supervisory Circuits with Capacitor-Adjustable Reset and Watchdog Timeouts	Capacitor-Adjustable Nanopower Supervisory Circuit
<u>MAX6814</u>	5-Pin Watchdog Timer Circuit	Low-power watchdog circuit in a tiny 5-pin SC70 package
<u>MAX6746</u>	µP Reset Circuit with Capacitor-Adjustable Reset/Watchdog Timeout Delay	Low-power μ P supervisory circuit monitor single/dual system supply voltages from 1.575V to 5V
MAX6766/69	Automotive Micropower Linear Regulators with Supervisor	Low-quiescent-current, high-voltage linear regulators operate from 4V to 72V and deliver up to 100mA of load current
<u>MAX16074</u>	NanoPower µP Supervisory Circuit in a 4-Bump (1mm x 1mm) Chip-Scale Package	µP Supervisor Offered in a Space-Saving, 1mm x 1mm Package and Consume Very Little Power
<u>MAX6880</u>	Dual-/Triple-Voltage, Power-Supply Sequencer/Supervisor	Dual-/triple-voltage monitor are designed to sequence power supplies during power-up condition





Step-Down DC-DC Converters

Part Number	Description	Key Advantages
<u>60V/42V Himalaya</u> ICs	4.5V to 60V _{IN} , 25mA to 25A, High-Efficiency, Synchronous Step-Down DC-DC Converters (Dual channel available)	Industry's Smallest, thermally efficient High-Voltage Synchronous Buck Regulators, Passed CISPR22 EMI
60V/42V Himalaya Power Modules	4.5V to 60V _{IN} , 25mA to 6A, High-Efficiency, Synchronous Step-Down DC-DC Power Modules	Industry's Smallest, thermally efficient Wide-Voltage Synchronous Buck Power Modules, Passed CISPR22 EMI
<u>MAX17244/5</u>	3.5V to 36V, 2.5A/3.5A, Synchronous Buck Converters with 15µA Quiescent Current and Reduced EMI	Reliable Operation (42V Input Transient Protection), Long Battery Life (15 μ A I _Q)
<u>MAX17620</u>	2.7V to 5.5V, 4MHz, Miniature 600mA, Synchronous Step- Down DC-DC Converter with Integrated MOSFETs	High-Efficiency Synchronous Buck Regulator Offers High Performance, Wide Temp Range, and Small Size
<u>MAX17509</u>	4.5V to 16V, Dual 3A, High-Efficiency, Synchronous Step- Down DC-DC Converter with Resistor Programmability	High integration value with dual outputs; Passed EN55022 EMI standard
<u>MAX8640</u>	2.7V to 5.5V, Tiny 500mA, 4MHz/2MHz Synchronous Step- Down DC-DC Converters	PWM mode operation for low output ripple and noise immunity; Small Solution Size (1µH Inductor)
<u>MAX1836/7</u>	24V Internal Switch, 100% Duty Cycle, Step-Down Converters	High-efficiency, small package ideal for low-cost, low- power, space-sensitive applications
<u>MAX15023/6</u>	Low-Cost, Wide 4.5V to 28V Input, Dual-Output Synchronous Buck Controller	Low-Cost, Dual DC-DC Controller Operates from 4.5V to 28V Suitable for Multiple Applications
<u>MAX17761</u>	$\rm 4.5V$ to $\rm 76V_{IN}, 1A, High-Efficiency, Synchronous Step-Down DC-DC Converter and Power ModuleKey$	Industry's Smallest, High-Voltage and thermally efficient, passed CISPR 22 EMI





Step-Up DC-DC Converters

Part Number	Description	Key Advantages
MAX17222-MAX17225	400mV to 5.5V Input, nanoPower Synchronous Boost Converters with True Shutdown™	nanoPower Boost Converters Extend Battery Life and Reduce Solution Size
<u>MAX668/9</u>	1.8V to 28V Input, PWM Step-Up Controllers in µMAX	Flexible topology: Step-Up, SEPIC, Flyback and Isolated; PWM and Idle modes; Small solution size
<u>MAX17290/2</u>	2.5V to 36V, 2.5MHz, PWM Boost Controllers with 4µA Shutdown Current and Reduced EMI	Extends battery life; Flexible topology; Robust operation with 42V transient protection
<u>MAX8815</u>	1.2V to 5.5V Input, 1A, 97% Efficiency, 30µA Quiescent Current, Step-Up Converter with True Shutdown	True Shutdown minimizes battery current leakage; Overload/Short-Circuit Protection guarantees robust operation
<u>MAX17597</u>	4.5V to 36V _{IN} , 250V _{OUT} , 4A, 100kHz-1MHz, ext FET	Suitable for industrial holdup and piezo control
MAX17498B	4.5V to $36V_{IN}$, $60V_{OUT}$, 2A, 500kHz, internal FET	Suitable for holdup and dying gasp for 12/24/48V _{IN}
<u>MAX17497B</u>	4.5V to 36V_{IN}, 60V_{OUT}, 2A, 500kHz, internal FET & 3.3V_{OUT} Buck	Built-in buck for remote radio terminals in water meters, gas meters
<u>MAX77801</u>	High–Efficiency Buck–Boost Regulator	2A High-Efficiency Buck and Boost Operating Including Seamless Transition Between Buck and Boost Mode





LDOs

Part Number	Description	Key Advantages
<u>MAX8902A / B</u>	Low-Noise 500mA LDO Regulators in a 2mm x	Low-Noise, Low-Dropout, High-PSRR, 500mA Linear
	2mm TDFN Package	Regulators in a 2mm x 2mm TDFN Package
<u>MAX8510</u>	Ultra-Low-Noise, High PSRR, Low-Dropout,	Low-Noise, Low-Dropout, 120mA Linear Regulator Fits in
	120mA Linear Regulator	an SC70 Package without Compromising Performance
<u>MAX8880</u>	12V, Ultra-Low-I _Q , Low-Dropout Linear	Ultra-Low Supply Current, Low-Dropout Linear Regulator,
	Regulator with POK	Capable of Delivering up to 200mA
<u>MAX1806</u>	2.5V to 5.5V, 500mA, Low-Voltage Linear	0.8V Output Voltage Enables Wide Range of Applications;
	Regulator in µMAX	Low 175mV Dropout at 500mA reduces heat dissipation
MAX15027	1.425V to 3.6V Input, 1A Low-Dropout	High-Performance LDO Delivers 1A of Output Current
	Regulator with BIAS Input	
MAX8842	Ultra-Low-Noise, High PSRR, Low-Dropout,	Ultra-Low-Noise, Low-Dropout, 150mA Linear Regulator
	150mA Linear Regulators in µDFN	Requires Only 3.9mm ² Total Solution Size without
		Compromising Performance
<u>MAX17651</u>	4V to 60V, 100mA LDO with ±2% accuracy	Highly versatile, low $I_Q 0.9 \mu A$ shutdown, small TSOT
	over temperature40°C to 125°C	package
MAX38902	12µV _{RMS} Low-Noise 500mA LDO Linear	12µV _{RMS} , Low-Noise, Low-Dropout, 500mA Linear
	Regulator	Regulator in a 2mm x 2mm TDFN Package





Battery Chargers

Part Number	Description	Key Advantages
<u>MAX8903</u>	Dual-Input 2A Switch-Mode Charger with PowerPath	Dual input allows power from USB or AC adapter; Tiny solution size due to 4MHz switching (small inductor), integrated FETs and current sensing
<u>MAX8808</u>	1A Linear Li+ Battery Charger with Integrated Pass FET and Thermal Regulation	Integrated current-sense, MOSFET, thermal- regulation circuitry eliminates the reverse-blocking Schottky diode to create the simplest charging solution in 2mm x 2mm TDFN package
<u>MAX8971</u>	Industry's Smallest 1.55A 1-Cell Li+ DC-DC Charger	Switching Charger Delivers High Efficiency (90%~92%)
<u>MAX1737</u>	28V, Stand-Alone Switch-Mode Lithium-Ion Battery-Charger Controller	Stand-Alone Charger for Up to Four Li+ Cell



Operational Amplifiers

Part Number	Description	Key Advantages
<u>MAX44260/61/63</u>	1.8V, 15MHz Low-Offset, Low-Power, Rail-to-Rail I/O Op Amps	On-Demand Calibration Provides Accuracy Over Time and Temperature
<u>MAX44280</u>	1.8V, 50MHz, Low-Offset, Rail-to-Rail I/O Op Amp	High Bandwidth, Excellent V_{OS} Accuracy Over Time & Temperature
<u>MAX4232</u>	High-Output-Drive, 10MHz, 10V/µs, Rail-to-Rail I/O Op Amp with Shutdown in SC70	Dual, High-Output Drive CMOS Op Amp Features 200mA of Peak Output Current, Rail-to-Rail Input, and Output Capability from Single 2.7V to 5.5V Supply
<u>MAX40006</u>	Micropower, Rail-to-Rail, 300kHz Op Amp with Shutdown in a Tiny, 6-Bump WLP	Save Power and Board Space—Op Amp Consumes Only 4.5µA and Offers 300kHz BW in 0.73mm x 1.07mm WLP and SOT23
<u>MAX44241/46</u>	36V, Low-Noise, Precision, Single/Quad/Dual Op Amps	Precision, Low-Noise Performance in High-Voltage Applications
<u>MAX44242</u>	20V, Low Input Bias-Current, Low-Noise, Dual Op Amplifier	Dual Amplifier Offers a Combination of Very Low Bias Current and Low Noise Per Unit of Power
<u>MAX4238/9</u>	Ultra-Low Offset/Drift, Low-Noise, Precision SOT23 Amplifiers	Low-noise, low-drift, ultra-high precision amplifiers in 8-pin narrow SO, 6-pin TDFN and SOT23 packages.
<u>MAX4477</u>	SOT23, Low-Noise, Low-Distortion, Wide-Band, Rail- to-Rail Op Amp	Wideband, low-noise, low-distortion operational amplifier in space- saving, 6-pin SOT23 and TDFN packages





Current-Sense Amplifiers/Ideal Diode/Comparators

Part Number	Description	Key Advantages
<u>MAX9918</u>	-20V to +75V Input Range, Precision Uni- /Bidirectional, Current-Sense Amplifier	Current-Sense Amplifier with Input Common Range that Extends Well Below Ground (-20V)
<u>MAX4372</u>	Low-Cost, UCSP/SOT23, Micropower, High-Side Current-Sense Amplifier with Voltage Output	Space-saving 5-pin SOT23 package and three gain versions (T = $20V/V$, F = $50V/V$, and H = $100V/V$)
<u>MAX9611/12</u>	High-Side, Current-Sense Amplifiers with 12-Bit ADC and Op Amp/Comparator	Current-Sense Amplifiers with Digital Output and 60V Common-Mode Range
<u>MAX44284</u>	36V, Input Common-Mode, High-Precision, Low- Power Current-Sense Amplifier	Measures Four Decades of Dynamic Range without Increasing Measurement Errors
<u>MAX4080</u>	76V, High-Side, Current-Sense Amplifier	Current-Sense Amplifier Achieves 0.1% Accuracy
<u>MAX9938</u>	nanoPower, 4-Bump UCSP/SOT23, Precision Current-Sense Amplifier	Industry's Smallest Current-Sense Amplifier: 1mm x 1mm with I_{CC} < 1µA, V_{OS} < 500µV, Gain Error < 0.5%
<u>MAX40200</u>	Ultra-Tiny Micropower, 1A Ideal Diode with Ultra-Low Voltage Drop	Current Switch/Ideal Diode Saves Space and Offers 10x Lower Voltage Drop Than Schottkys
<u>MAX40004</u>	nanoPower 4-Bump Comparator in Ultra-Tiny 0.73mm x 0.73mm WLP/SOT23 Packages	nanoPower Comparator Offers Industry's Smallest Package (0.73 x 0.73mm)





Speaker Amplifiers

Mid-power amps

Part Number	Description	Key Advantages
<u>MAX98372</u>	Digital Class D Amp with Active Edge Limiting and Spread Spectrum Modulation	High-Power Digital Class D with Brownout Protection and DHT Requires No Programming
<u>MAX98400A/B</u>	Stereo, High-Power, Class D Amplifier	Differential Input, Power Limiting, Anti-clipping, Thermal Foldback, and Excellent EMI Performance

Low power amps

Part Number	Description	Key Advantages
<u>MAX98357</u>	PCM Input Class D Audio Power Amplifier	Supports I ² S and 8-Channel TDM Data
<u>MAX98300</u>	Mono 2W Class D Amplifier	Latest Generation Class D Technology Features the Industry's Best EMI Performance with Low 0.8mA $\rm I_Q$
<u>MAX98306</u>	Stereo 3.7W Class D Amplifier	Big 3.7W/Channel Power in a Small, 14-Pin TDFN Package





Voltage References

Part Number	Description	Key Advantages	
<u>MAX6070/B</u>	Low-Noise, High-Precision Series Voltage References	Highest Performance SOT23 Voltage References with 6ppm/°C Maximum Temperature Coefficient	
<u>MAX6126</u>	Ultra-High-Precision, Ultra-Low-Noise, Series Voltage Reference	es Ultra-High-Precision, Ultra-Low-Noise, Series Voltage Reference Features 3ppm/°C (max) Temperature Coefficients and an Excellent ±0.02% (max) Initial Accuracy	
<u>MAX6325</u>	1ppm/°C, Low-Noise, +2.5V/+4.096V/+5V Voltage Reference	Low-noise, Precision Voltage Reference with Extremely Low, 0.5ppm/°C Typical Temperature Coefficients and Excellent, ±0.02% Initial Accuracy	
<u>LM4040</u>	Micropower Shunt Voltage Reference with Multiple Reverse Breakdown Voltages	Precision two-terminal shunt mode reference, bandgap voltage reference in 3-pin SC70/SOT23 packages	
<u>MAX6025</u>	Precision, Low-Power, Low-Dropout, SOT23-3 Voltage Reference	Precision, low-dropout, micropower voltage reference in miniature SOT23-3 packages	





LED Drivers

Part Number	Description	Key Advantages
<u>MAX1553/4</u>	High-Efficiency, 40V Step-Up Converters for 2 to 10 White LEDs	Smallest, Highest Efficiency, 40V Driver for Up to 10 White LEDs
<u>MAX8901A</u>	Highest Efficiency Supply for 2 to 6 Series WLEDs in a 2mm x 2mm TDFN Package	Drives a String of 2 to 6 WLEDs for 1.5in to 4in LCD Backlighting Used in Battery-Operated Devices
<u>MAX8831</u>	High-Efficiency White LED Step-Up Converter with I ² C Interface in 2mm x 2mm WLP	Easily Drives Five Banks of 9 LEDs with Over 90% Efficiency Using an I ² C Interface in a 2mm x 2mm WLP
<u>MAX6950/51</u>	+2.6V to +5.5V multi-segment LED driver with RAM, brightness control, and multiplexing	Drive 7-segment digits, or 40 discrete LEDs with 50% reduction of drive lines by multiplexing technique
<u>MAX7219/21</u>	+5V multi-segment LED drivers with RAM, brightness control, and integrated BCD code-B decoder	Drive 8-Digit 7-segment or 64 individual LEDs with SPI interface and integrated decoder





USB

Part Number	Description	Key Advantages
<u>MAX3421E</u>	USB Peripheral/Host Controller with SPI Interface	A Single IC with USB Functionality
<u>MAX3349EA</u>	USB 2.0 Full-Speed Transceiver with UART Multiplexing Mode	Increased Hysterisis on VBUS detection and control overshoot on D+/D- lines





Isolated Power

Part Number	Description	Key Advantages	
<u>MAX13253</u>	1A Spread-Spectrum Push-Pull Transformer Driver for Isolated Power Supplies	Simplifies Isolated Power Designs	
<u>MAX13256</u>	36V H-Bridge Transformer Driver	Wide-Range Transformer Driver Simplifies Design	
<u>MAX17681</u>	4.5V to 42V Input, 5W High-Efficiency, Iso-Buck DC-DC Converter with internal FETs	Reduces ext components, 2X higher efficiency than transformer driver, No optocoupler, 10% accuracy	
<u>MAX17682</u>	4.5V to 42V Input, 10W High-Efficiency, Iso- Buck DC-DC Converter with internal FETs	Reduces ext components, 2X higher efficiency than transformer driver, No optocoupler, 10% accuracy	
<u>MAX17690</u>	4.5V to 60V Input, Patented No-Opto Flyback DC-DC Controller with external MOSFETs	2X higher efficiency than a transformer driver, Eliminates optocoupler, 5% accuracy	
<u>MAX17595/6</u>	Universal AC-DC and 36/72V _{IN} DC-DC PWM Controllers for Flyback applications in 3x3 TQFN	Unique adjustable switching frequency 100kHz to 1MHz helps mitigate EMI issues	
<u>MAX17598/9</u>	Universal AC-DC and 36/72V _{IN} DC-DC PWM Controllers for Active Clamp in 3x3 TQFN	Unique adjustable switching frequency 100kHz to 1MHz helps mitigate EMI issues	
<u>MAX17606</u>	4.5V to 36V Secondary synch driver replaces diode	Improve flyback controller efficiency by 3 to 4%	





Temp Sensors

Part Number	Description	Key Advantages
<u>DS1775</u>	Digital Thermometer and Thermostat in SOT23	Measures Temperatures from -55°C to +125°C (-67°F to +257°F) without external components.
<u>DS600</u>	±0.5°C Accurate Analog-Output Temperature Sensor	Analog Temperature Sensor Is ±0.5°C Accurate Over Entire 2.7V to 5.5V Operating Voltage Range, and Wide -20°C to +100°C Temperature Range
<u>MAX31725</u>	±0.5°C Local Temperature Sensor	Ultra-Accurate Temperature Sensor Offers ±0.5°C (max) Accuracy Over a Wide -40°C to +105°C Range
<u>DS1631</u>	High-Precision Digital Thermometer and Thermostat	High-Precision Digital Thermometer and Thermostat Provide 9-/10-/11-/12-Bit Temperature Readings Over a -55°C to +125°C Range
<u>DS18B20</u>	Programmable Resolution 1-Wire® Digital Thermometer	High-Precision Temperature Monitoring with Minimal Connections Ideal for Multi-sensor Systems
<u>DS75</u>	Digital Thermometer and Thermostat	Ideal for Personal Computers, Cellular Base Stations, Office Equipment, or Any Thermally Sensitive System





Sensor Output Drivers

Part Number	Description	Key Advantages
<u>MAX14832</u>	One-Time Programmable Industrial Sensor Output Driver	Industry's First 100mA Robust OTP Output Driver
<u>MAX14836</u>	24V Dual-Output Sensor Transceiver	Most Feature-Rich Dual Sensor Transceiver with Integrated LDOs and < 1.8V Output Voltage Drop
<u>MAX14838/39</u>	24V Pin-Configurable Industrial Sensor Output Drivers	Simplify and Shrink Sensor Designs by 25x





IO-Link Transceivers

Part Number	Description	Key Advantages
<u>MAX14824</u>	IO-Link Master Transceiver	Easily Scalable to 16 Channels with Auto Wake-Up Polarity Generation
<u>MAX14821</u>	IO-Link Device Transceiver	Industry's Smallest Full-Featured IO-Link Device Transceiver in 2.5mm x 2.5mm, 25-Bump WLP
<u>MAX14826</u>	IO-Link Device Transceiver Reduces Design SKUs	
<u>MAX14827A</u>	Low-Power, Ultra-Small, Dual Driver, IO-Link Device Transceiver	Tiny, Low-Power Dual IO-Link Transceiver
<u>MAX14819</u>	Dual IO-Link Master Transceiver with Integrated Framers and L+ Supply Controllers	Low-power, dual-channel, IO-Link master transceiver with sensor/actuator power-supply controllers
<u>MAX14828</u>	Low-Power, Ultra-Small IO-Link Device Transceiver	Low-Power, Ultra-Small, Robust IO-Link Transceiver





System Power Management

Part Number	Description	Key Advantages	
<u>MAX34440</u>	PMBus™ 6-Channel Power-Supply Manager	Power-Supply Manager Provides Unparalleled "Black Box" Failure Logging for Improving System Performance	
<u>MAX16024</u>	Battery-Backup Circuit with Regulated Output Voltage	Low-Power Battery-Backup Circuit with Regulated Output Reduce Total Number of External Components	
<u>MAX6715</u>	Dual/Triple Ultra-Low-Voltage SOT23 µP Supervisory Circuit	Integrated dual/triple supervisory circuit significantly improve system reliability and reduce size	
<u>MAX6381</u>	SC70/μDFN, Single/Dual Low-Voltage, Low-Power μP Reset Circuit	Monitor power-supply voltage from +1.8V to +5.0V while consuming only 3µA of supply current at +1.8V	
<u>MAX5978</u>	0 to 16V, Hot-Swap Controller with 10-Bit Current, Voltage Monitor, and 4 LED Driver	Industry's First Hot-Swap Controller Operates Down to 0V and Integrates a Voltage and Current Monitor	
<u>MAX34565</u>	12V Hot-Plug Switch in TDFN Package	Integrated, Self-Protected Electronic Switch Allows the Safe Insertion and Removal of Equipment Into 12V Backplanes	
<u>MAX34461</u>	PMBus 16-Channel Voltage Monitor and Sequencer	Provides Unparalled Sequencing, Monitoring, and "Black Box" Fault Logging of Up to 16 POL Power Supplies	





Above-1GHz ISM, Wi-Fi and Small Cell Transceivers

Part Number	Description	Key Advantages
<u>MAX2832</u>	High-Performance Universal 2.4GHz ISM Transceiver	Fully Integrated 2.4GHz Radio Front-End with 40MHz BW and 2.6dB NF
<u>MAX2850/51</u>	4.9GHz to 5.9GHz MIMO 40MHz Transceivers Radio Front-End	MAX2850: 4 Transmitters, 1 Receiver MAX2851: 1 Transmitter, 5 Receivers
<u>MAX2829</u>	Dual-band 2.4GHz to 5GHz and 4.9GHz to 5.8GHz 40MHz BW Transceiver	Low NF Enabling <-75dBm Sensitivity 3.5dB Noise Figure at 2.4GHz 4.5dB Noise Figure at 5GHz
<u>MAX2550/51</u>	3G Femtocell Transceivers for Bands I, II, V, VIII	WCDMA/CDMA2000 with Downlink/2G sniff, DC offset and I/Q Calibration
<u>MAX2838</u>	3.3GHz to 3.9GHz Wireless Broadband RF Transceiver	Industry's First Production-Ready, Single-Chip 3.3GHz to 3.9GHz WiMAX RF Transceiver
<u>MAX2837</u>	2.3GHz to 2.7GHz Wireless Broadband RF Transceiver	Industry's First Production-Ready, Single-Chip 2.3GHz to 2.7GHz WiMAX RF Transceiver
<u>MAX2828</u>	Single-/Dual-Band 802.11a/b/g World- Band Transceiver	802.11a and 802.11a/g RF Transceiver Supports Pre- 802.11n MIMO and Smart-Antenna Radio Systems





Monitor and Control

Part Number	Description	Key Advantages	
<u>MAX11618</u>	10-Bit, 300ksps ADC with FIFO and Internal Reference	Low-Cost 10-Bit 4-Channel ADC with Internal Reference, FIFO, and SPI Interface	
<u>MAX5714</u>	Ultra-Small, Quad-Channel, 8-/10-/12-Bit Buffered Output DAC with Internal Reference and SPI Interface	Feature-Rich, 4-Channel DAC Offered in a 3.5mm ² WLP Footprint	
<u>MAX1042</u>	10-Bit, Multichannel ADC/DAC with FIFO, Temperature Sensing, and GPIO Ports	Integrates a multichannel, 10-bit, analog-to-digital converter (ADC) and a quad, 10-bit, digital-to-analog converter (DAC) in a single IC	
<u>MAX1058</u>	10-Bit, Multichannel ADC/DAC with FIFO, Temperature Sensing, and GPIO Ports	Integrates a multichannel, 10-bit, analog-to-digital converter (ADC) and an octal, 10-bit, digital-to-analog converter (DAC) in a single IC	



Secure Authenticators

Part Number	Crypto Engine	Interface	User Memory	Key Advantages
DS28C36 DS28E36	ECC-P256 SHA-256	I ² C 1-Wire	4kb	Includes bidirectional asymmetric key authentication, ECDH key exchange, HMAC, user-accessible FIPS RNG, and two secure authenticated GPIOs
<u>DS2476</u>	ECC-P256 SHA-256	I ² C 1-Wire	4kb	Supports all the features of the DS28C36 with added coprocessor functions
DS28E15 DS28E22 DS28E25	SHA-256	1-Wire	512b 2kb 4kb	Includes bidirectional symmetric key authentication, user-programmable and irreversible EEPROM protection modes with minimalist 1-Wire interface
<u>DS2465</u>	SHA-256	I ² C 1-Wire	512b	Supports host-side SHA-256 coprocessor with integrated 1-Wire master function
MAX66240 MAX66242	SHA-256	NFC NFC/I ² C	4kb	Includes bidirectional symmetric key authentication, user-programmable and irreversible EEPROM protection modes with wireless NFC interface
<u>MAX66300</u>	SHA-256	NFC SPI/UART	1kb	Supports host-side SHA-256 coprocessor with integrated NFC reader





ISO/POE Power (V_{IN} = 48V)

Part Number	Description	Key Advantages
<u>MAX5974A</u>	Active-Clamped, Spread-Spectrum, Current-Mode PWM Controller	Active-Clamped, Spread-Spectrum, Current-Mode PWM Controller with Adjustable Frequency from 100kHz to 600kHz
<u>MAX5982A</u>	IEEE 802.3af/at-Compliant, Powered Device Interface Controller with Integrated 70W High-Power MOSFET	70W, PoE Powered Device Interface Controller with Integrated MOSFET
<u>MAX17599</u>	4.5V to 36V, Active Clamp Current- Mode PWM Controller with flexible protection	Extended V _{IN} ,-45°C to +125°C temp range, 100kHz to 1MHz extended frequency, flexible UVLO enhancements to MAX5974
MAX17503 and other <u>Himalaya</u> DC-DC	4.5V to 60V, 2.5A regulator & family for POE not needing isolation	Simplify design by replacing isolated with non-isolated in security cameras, IP Phones
<u>MAX5969A</u>	IEEE 802.3af/at-Compliant, Powered Device Interface Controller with Integrated Power MOSFET	IEEE 802.3af/at-Compliant Power-Device Interface Controllers Target PoE+ Applications





Signal Integrity

Part Number	Description	Key Advantages
<u>MAX3987</u>	8.5Gbps Quad Equalizer and Preemphasis Driver	Best-in-Class Redriver Can Equalize 25in to 30in of FR4
<u>MAX3983</u>	Quad Copper-Cable Signal Conditioner	2.5Gbps to 3.2Gbps Quad, Copper-Cable Signal Conditioner Provides Compensation for 4x Copper Infiniband and 10Gbase- Cx4 Ethernet Links, Allowing Spans of 20m with 24AWG and 15m with 28AWG
<u>MAX3804</u>	12.5Gbps Settable Receive Equalizer	Industry's First 12.5Gbps Equalizer Extends Reach to 30in of FR4 in Serial Communications
<u>MAX3785</u>	6.25Gbps, 1.8V PC Board Equalizer	Industry's Smallest Backplane Equalizer Measures Only 1.5mm x 1.5mm
<u>MAX3980</u>	3.125Gbps XAUI Quad Equalizer	Achieve Clean 3.125Gbps XAUI Interfaces over 40in Backplanes





Bias Control

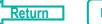
Part Number	Description	Key Advantages
<u>MAX11008</u>	Dual RF LDMOS Bias Controller with Nonvolatile Memory	Offers Integration and Reduces Cost with Power Savings





UART

Part Number	Description	Key Advantages
<u>MAX14830</u>	Quad Serial UART with 128-Word FIFOs	Industry's First Quad SPI/I ² C UART
<u>MAX3109</u>	Dual Serial UART with 128-Word FIFOs	Industry's Most Advanced Dual SPI/I ² C UART Increases System Flexibility





Multiplexers

Part Number	Description	Key Advantages
MAX14752 (Single Channel) MAX14753 (Dual Channel)	8-Channel/Dual 4-Channel 72V Analog Multiplexers	Ideal for Industrial Applications such as PLCs, Industrial Controllers and ATE Equipment
<u>MAX14778</u>	Dual ±25V Above- and Below-the-Rails 4:1 Analog Multiplexer	Simplifies Designs with the Industry's First ±25V Above- and Below-the-Rails Multiplexer





Signal Conditioners

Part Number	Description	Key Advantages
MAX15500 (0 to 4.096V) MAX15501 (0 to 2.5V)	Industrial Analog Current/Voltage Output Conditioners	Industry's First Programmable Outputs—Current Up to ±24mA or Voltage Up to ±12V





Backplane Interface

Part Number	Description	Key Advantages
<u>MAX9259</u>	Gigabit Multimedia Serial Link with Spread Spectrum and Full-Duplex Control Channel	Single-Link Serializer/Deserializer Chipset with Integrated Control Channel Is Ideal for Digital Video Applications
<u>MAX4986</u>	SAS/SATA Single Lane 2:1/1:2 Multiplexer/Demultiplexer Plus Redriver with Equalization	1:2/2:1 Active Mux with Redrive Maintains Signal Integrity While Providing High-Frequency Performance at SAS/SATA 2.0s
<u>MAX4888B</u>	Up to 8.0Gbps Dual Passive Switch	Supports Multiple High-Speed Interfaces up to 8.0Gbps While Maintaining Signal Integrity in the Application





RS-422/RS-485 Receivers

Part Number	Description	Key Advantages
<u>MAX3280E/81E/83E/</u> 84E	Dual-voltage, high-speed, single- channel receivers with integrated ESD, and true fail-safe feature in a tiny form factor	 Packaged in a 5-pin SOT23, saving more than 70% PCB space compared to 8-pin SO package. 52Mbps bandwidth covers high-speed motors for dependable tracking. 3V to 5.5V operation simplifies power rail requirements.
<u>MAX14890E</u>	Highly configurable, 35Mbps four- differential receiver and two single- ended receiver with high CMR, ESD, and FP.	Configurable with SPI or pins for RS-422, TTL, and HTL receive signals. ±20V common-mode range, ±40V fault protected, ±25kV ESD HBM, and fault detection for robust communication.
<u>MAX14891E</u>	Quad-channel 35Mbps RS-422/RS- 485 receiver with high CMR, ESD, and FP	\pm 20V common-mode range, \pm 40V fault protected, \pm 25kV ESD HBM, and fault detection for robust communication
<u>MAX14783</u>	High-Speed 3.3V/5V RS-485/RS-422 Transceiver with ±35kV HBM ESD Protection	Industry's Fastest Dual-Voltage RS-485/RS-422 Transceiver with Highest ESD Protection



Security Managers

Part Number	Description	Key Advantages
<u>DS3600</u>	DeepCover [®] Security Manager with 64B Nonimprinting, Battery-Backed Encryption Key SRAM	Single-Chip Solution Integrates Advanced Physical Security to Protect Against Physical and Environmental Tamperings
<u>DS3605</u>	DeepCover Security Manager for NV SRAM Control with RTC and Thermal Tamper Detection	Single-Chip Solution Integrates Advanced Physical Security to Protect Against Physical and Environmental Tamperings
<u>DS3640</u>	DeepCover Security Manager with I ² C Interface and 1KB Nonimprinting Battery-Backed Encryption Key SRAM	Single-Chip Solution Integrates Advanced Physical Security to Protect Against Physical and Environmental Tamperings
<u>DS3645</u>	DeepCover Security Manager with 4KB Secure Memory and Tamper Protection	Single-Chip Solution Integrates Advanced Physical Security with On-Chip Encryption Key Memory
<u>DS3650</u>	DeepCover Security Manager with Thermal Tamper Detection	Single-Chip Solution Integrates Advanced Physical Security with On-Chip Encryption Key Destruction





Sequencing and Monitoring

Part Number	Description	Key Advantages
<u>DS4402</u>	Two/Four-Channel, I ² C Adjustable Current DAC	Two and Four I ² C Adjustable Current Sources Capable of Sinking or Sourcing Current
<u>DS4412/32</u>	Dual-Channel, I ² C Adjustable Sink/Source Current DACs	Inexpensive Power-Supply Control Made Easy
<u>DS4422</u>	Two-/Four-Channel, I ² C, 7-Bit Sink/Source Current DAC	Low-Cost, Sink/Source Current DAC Simplifies Power-Supply Margin Testing
<u>MAX16050</u>	Voltage Monitor/Sequencer Circuit with Reverse- Sequencing Capability	Easy-to-Use, Four-/Five-Voltage, Power-Up/Power- Down Sequencer/Monitor
<u>MAX16052</u>	High-Voltage, Adjustable Sequencing/Supervisory Circuit	Simple Reset and Supervisory Circuit Operates from High Voltage and are Fully Adjustable
<u>MAX16025</u>	Dual-/Triple-/Quad-Voltage, Capacitor-Adjustable, Sequencing/Supervisory Circuit	Dual-/Triple-/Quad-Voltage Sequencer/Monitor with Capacitor-Adjustable Timing
<u>MAX6895</u>	Ultra-Small, Adjustable Sequencing/Supervisory Circuit	Small, low-power, voltage-monitoring circuit with sequencing capability



Oscillators

Part Number	Description	Key Advantages
<u>DS4156</u>	DS4-XO Series Clock Oscillator	Crystal Oscillator Features Small 5mm x 3.2mm Outline, High- Frequency Differential Outputs to 622.08MHz
<u>DS4100H</u>	100MHz HCSL Clock Oscillator	Only Oscillator Module Provides a Direct 100MHz HCSL Output





Ambient and Proximity Sensor

Part Number	Description	Key Advantages
<u>MAX44009</u>	Industry's Lowest Power Ambient Light Sensor with ADC	Reduces System Cost and Simplifies System Design





Simultaneous Sampling ADCs

Part Number	Description	Key Advantages
<u>MAX11190</u>	4-Channel, Dual, Simultaneous- Sampling, 2.2V to 3.6V, 12-Bit, 3Msps SAR ADC in Tiny 3mm x 3mm TQFN Package	High-Speed, Ultra-Low-Power Simultaneous-Sampling SAR ADC in a Small Form Factor
<u>MAX1377</u>	Dual, 12-Bit, 1.25Msps, Simultaneous- Sampling ADC with Serial Interface	12-Bit Simultaneous Sampling, 2x2 Muxed ADC is Ideal for Motor Control with No Pipeline Delay
<u>MAX11040K/60</u>	24-/16-Bit, 4-Channel, Simultaneous- Sampling, Cascadable, Sigma-Delta ADC	Sigma-Delta ADC Cascadable Up to 32 Simultaneous Channels
<u>MAX11046</u>	16-Bit, 4-/6-/8-Channel, 250ksps, Simultaneous-Sampling ±5V SAR ADC with Internal Reference	Simultaneous sampling Integration simplifies Design Total system accuracy
<u>MAX11192/95/98</u>	12-/14-/16-Bit, 2Msps, Dual Simultaneous-Sampling SAR ADCs with Internal Reference	Industry's smallest dual simultaneous-sampling ADC with Reference in 2mm x 3mm package





Temperature Sensor Digitizers

Part Number	Description	Key Advantages
<u>MAX31865</u>	RTD-to-Digital Converter	Complete Solution Provides a Digital Temperature Reading from an RTD with Fault Detection and Input Voltage Protection
<u>MAX31855</u>	Cold-Junction Compensated Thermocouple- to-Digital Converter	Accurate Thermocouple-to-Digital Converter IC Simplifies Designs and Lowers System Cost
<u>MAX31856</u>	Precision Thermocouple-to-Digital Converter with Linearization	Simplifies Thermocouple Designs with Integrated Automatic Cold-Junction Compensation and Linearization Correction





DARWIN Ultra-Low-Power Microcontrollers

<u>DARWIN</u> is a new breed of low-power microcontrollers built to thrive in the rapidly evolving Internet of Things (IoT). They are smart, with the biggest memories in their class and a massively scalable memory architecture. They run forever, thanks to wearable-grade power technology. They are also tough enough to withstand the most advanced cyberattacks. DARWIN microcontrollers are designed to run any application imaginable—in places where you would not dream of sending other microcontrollers.

Part Number	Core	F _{max}	Flash	SRAM	Key advantages
<u>MAX32650/51/52</u>	Cortex®-M4F	120MHz	3MB	1MB	Biggest memory low-power micro, 104mW/MHz highly integrated (SD, USB 2.0 HS, TFT controller). Advanced security engines.
<u>MAX32630/31</u>	Cortex-M4F	96MHz	2MB	512KB	Best-in-industry SRAM retention in backup mode
MAX32620/21	Cortex-M4F	96MHz	1MB to 2MB	256KB	(3.4mW retains 512KB). Wide range of memory sizes. Security engines to build a trusted IoT.
<u>MAX32625/26</u>	Cortex-M4F	96MHz	256kB to 512kB	128kB to 160kB	sizes. Security engines to build a trusted for.
<u>MAX32660</u>	Cortex-M4F	96MHz	64kB to 256kB	32kB to 96kB	The smallest Cortex M4F in the world. Pick your power profile (down to 45mW/MHz @ 24MHz f _{max}).





DeepCover Secure Microcontrollers

Designed to thwart attackers and protect critical infrastructure, DeepCover Secure Microcontrollers integrate advanced security features that help detect and react to physical attacks. Raise the bar on security for mission critical applications with technology proven through over 20 years as the leading player in financial transaction security.

Part Number	Core	F _{max}	Flash	SRAM	Key advantages
<u>MAX32550</u>	Cortex-M3	108MHz	1MB	256kB	Family of compatible highly secure microcontrollers with
<u>MAX32552</u>	Cortex-M3	108MHz	1MB	384kB	advanced security features to protect critical equipment. — Secure PKI bootloader and architecture for highest
<u>MAX32555</u>	Cortex-M3	60MHz	512kB	96kB	assurance. Option for contactless interface (MAX32560).
<u>MAX32560</u>	Cortex-M3	108MHz	1MB	384kB	





RF Transmitter/I and Q Modulator

Part Number	Description	Features and Benefits
<u>MAX2150</u>	Wideband I/Q Modulator with Sigma-Delta Fractional-N Synthesizer	Integrated broadband I/Q modulator, internally matched broadband output driver amplifier, fractional-N frequency synthesizer, LO buffer amplifier, and low-noise crystal oscillator circuit reduces BOM cost





Digital Input/Output

Part Number	Description	Key Advantages
<u>MAX31910/11</u>	Ultra-Low-Power, Industrial, Octal, Digital Input Translators/Serializers	8 High-Voltage Input Channels (36V max) Wide Operating Field Supply Range of 7V to 36V
<u>MAX14900E</u>	Octal, High-Speed, Industrial, High-Side Switch	Industry's Lowest Latency and Fastest 24V Driver, Capable of 100kHz Switching Rate, Improves Factory Throughput
<u>MAX14912/13</u>	Octal High-Speed, High-Side Switch/Push-Pull Driver	Industry's Most Robust and Fastest 24V Driver, Capable of 200kHz Switching Rate, Improves Factory Throughput
<u>MAX14914</u>	High-Side Switch with Settable Current-Limiting, Push-Pull Driver Option, and Digital Input Configuration	Ultra Robust, Configurable Driver facilitates High Speed and Safety Digital I/O module Designs





DC Motor Driver

Part Number	Description	Key Advantages
<u>MAX14870</u>	Compact 4.5V to 36V Full-Bridge DC Motor Driver	Industry's Smallest 4.5V to 36V DC Brushed Motor Drivers/Relay Drivers



MOSFET Drivers

Part Number	Description	Key Advantages
<u>MAX5048C,</u> <u>MAX15070</u>	4V to 14V _{IN} , 3/7A source sink, single-channel, TTL/CMOS logic in SOT23	Fast 8ns/12ns propagation delays. Used with microcontroller or PWM controller to drive MOSFETs. Also enhancement GaN
<u>MAX15024/5</u>	4.5V to 28V, 2/4A and 4/8A source/sink, dual- channel, TTL/CMOS, Inverting/noninverting, 10-pin TDFN	Fast 16ns propagation delays. Used with microcontroller or PWM controller to drive MOSFETs.
<u>MAX17600/1/</u> <u>2/3/4/5</u>	4.5V to 14V, 4/4A source/sink, dual-channel, TTL/CMOS, Inverting/noninverting, SO-8, TDFN-8, μMAX-8	12ns propagation delays. P2P to TI and Microchip



Isolated Data Converters

Part Number	Description	Key Advantages
<u>MAX14001/02</u>	Configurable, Isolated 10-bit ADCs for Multi- Range Binary Inputs	Industry's First Integrated Solution for Detection of Multi- Voltage Binary Inputs





Fuel Gauges

Part Number	Description	Key Advantages
<u>MAX17055</u>	7µA 1-Cell Fuel Gauge with ModelGauge™ m5 EZ	Industry's Lowest I _Q Fuel Gauge with ModelGauge m5 EZ Eliminates Battery Characterization
<u>MAX17201/05</u>	Stand-Alone ModelGauge m5 Fuel Gauges with SHA-256 Authentication	Industry's First Stand-Alone ModelGauge m5 Fuel Gauge with SHA-256 Authentication





Biopotential Sensors

Part Number	Description	Key Advantages
<u>MAX30101/02</u>	High-Sensitivity Pulse Oximeters and Heart-Rate Sensors for Wearable Health	High-Sensitivity Pulse Oximeter and Heart-Rate Sensor for Fitness & Healthcare
<u>MAX86160</u>	Integrated Heart-Rate Sensor for In-Ear Applications	Smallest Integrated Optical Heart Rate Sensor
<u>MAX30001</u>	Ultra-Low-Power, Single-Channel Integrated Biopotential (ECG, R-to-R, and Pace Detection) and Bioimpedance (BioZ) AFE	Biopotential and bioimpedance (BioZ), analog front- end (AFE) solution for wearable applications
<u>MAX86140</u>	Best-in-Class Optical Pulse Oximeter and Heart-Rate Sensor for Wearable Health	Ultra-low-power, completely integrated, optical data acquisition systems



Audio CODECs

Part Number	Description	Key Advantages
<u>MAX98090</u>	Ultra-Low-Power Stereo Audio Codec	Small, Ultra-Efficient, High-Performance, Stereo Codec with integrated headphone and speaker amps
<u>MAX9867</u>	Low-Power, Stereo Audio Codec	Integrates Auxiliary Battery-Measurement ADC and Capacitorless Headphone Amps





PMICs

Part Number	Description	Key Advantages
<u>MAX77650/1</u>	Ultra-Low Power PMICs with 3-Output SIMO and Charger Optimized for Small Li+ Batteries	Highly Integrated battery-charging and power solution for low power, size-constrained applications with Ultra-Low 6.5µA Operating Current
<u>MAX20310</u>	Wearable Power Management Solution for Primary Cells	Wearable Power Management for single-cell Zinc Air, Silver Oxide and Alkaline Battery Architectures
<u>MAX14745</u>	PMIC with Ultra-Low I _Q Voltage Regulators and Battery Charger for Small Lithium Ion Systems	Extends Battery Life of Wearable Electronics
MAX20303	Wearable Power Management Solution	Extends Battery Life of Wearable Electronics
<u>MAX14720/50</u>	Power-Management Solution	Extend Battery Life of Wearable Electronics





Low-Current USB Protectors

Part Number	Description	Key Advantages
<u>MAX20046/2F</u>	Automotive Hi-Speed USB 2.0 Protectors	Tiny Solution for Module-to-Module Connections with Best- in-Class Eye Diagram and Integrated Protection



Headphone Amplifiers

Part Number	Description	Key Advantages
<u>MAX9722/3</u>	Stereo DirectDrive® Headphone Amplifiers with BassMax, Volume Control, and I ² C	Next-Generation DirectDrive Headphone Amplifiers Offer Differential Inputs and 5V Operation
<u>MAX97220</u>	Differential Input DirectDrive Line Driver/Headphone Amplifier	Dual-Use Headphone Amplifier and Line Driver with Flexible Gains and Low Noise Performance
<u>MAX9890</u>	Audio Click-Pop Suppressor	Low current suppression of clicks and pops





VCC Non-PMBus

Part Number	Description	Key Advantages
<u>MAX20751</u>	Multiphase Master with PMBus Interface and Internal Buck Converter	PMBus-compliant multiphase master IC, with extensive status and parameter monitoring, is capable of driving up to four smart-slave integrated power devices.
<u>MAX15023</u>	Wide 4.5V to 28V Input, Dual-Output Synchronous Buck Controller	Low-Cost, Dual DC-DC Controller Operates from 4.5V to 28V Suitable for Multiple Applications
<u>MAX17509</u>	4.5V to 16V, Dual 3A, High-Efficiency, Synchronous Step-Down DC-DC Converter with Resistor Programmability	Highly Customizable Buck Regulator Can Be Configured for Two Independent 3A Outputs or a Dual-Phase 6A Single Output
<u>MAX17504/06</u>	4.5V to 60V, 3.5A/5A, High-Efficiency, Synchronous Step-Down DC-DC Converters with Internal Compensation	Industry's Only 60V, 3.5A Internal FET Synchronous Buck Converter
<u>MAX15046</u>	40V, High-Performance, Synchronous Buck Controller	40V Industrial Controller Operates at 1MHz
<u>MAX8869</u>	1A, Microcap, Low-Dropout, Linear Regulator	Compact, 1A, Low-Dropout Linear Regulator Requires Just 1µF Output Capacitor!
<u>MAX15066</u>	High-Efficiency, 4A, Step-Down DC-DC Regulator with Internal Power Switches	Smallest, Efficient, 4A DC-DC Converter for 5V/12V Applications





System Power Supplies

Part Number	Description	Key Advantages
<u>MAX17542</u>	42V, 1A, Ultra-Small, High-Efficiency, Synchronous Step-Down DC-DC Converter	42V Synchronous Buck Converter with Internal FETs Enables High Efficiency
<u>MAX15053</u>	High-Efficiency, 2A, Current-Mode Synchronous, Step-Down Switching Regulator	Smallest, Most Efficient 2A Solution in the Market
<u>MAX15027</u>	1.425V to 3.6V Input, 1A Low-Dropout Regulator with BIAS Input	High-Performance LDO Delivers 1A of Output Current





WBH VCC

Part Number	Description	Key Advantages
<u>MAX20730</u>	Integrated, Step-Down Switching Regulator with PMBus	Monolithically Integrated, PMBus-Enabled Step-Down Switching Regulator with High-Power Density and Low Component Count
<u>MAX15303</u>	6A Digital PoL DC-DC Converter with InTune™ Automatic Compensation	6A InTune Automatically Compensated Converter with PMBus Telemetry
<u>MAX8869</u>	1A, Microcap, Low-Dropout, Linear Regulator	Compact, 1A, Low-Dropout Linear Regulator Requires Just 1µF Output Capacitor!
<u>MAX17541G</u>	42V, 500mA, Ultra-Small, High-Efficiency, Synchronous Step-Down DC-DC Converter	42V Synchronous Buck Converter with Internal FETs Enables High Efficiency



RRH VCC

Part Number	Description	Key Advantages
<u>MAX20743</u>	Integrated, Step-Down Switching Regulator with PMBus	Monolithically Integrated, PMBus Enabled Step-Down Switching Regulator with High Power Density and Low Component Count
<u>MAX15303</u>	6A Digital PoL DC-DC Converter with InTune Automatic Compensation	6A InTune Automatically Compensated Converter with PMBus Telemetry
<u>MAX17509</u>	4.5V to 16V, Dual 3A, High-Efficiency, Synchronous Step-Down DC-DC Converter with Resistor Programmability	Highly Customizable Buck Regulator Can Be Configured for Two Independent 3A Outputs or a Dual-Phase 6A Single Output
<u>MAX17510</u>	Low-Voltage DDR Linear Regulator	Low-Cost, Low-Voltage DDR Linear Regulator Source and Sink Up to 3A Peak (typ) Using Internal n-Channel MOSFETs
<u>MAX17541G</u>	42V, 500mA, Ultra-Small, High-Efficiency, Synchronous Step-Down DC-DC Converter	42V Synchronous Buck Converter with Internal FETs Enables High Efficiency
<u>MAX8559</u>	Dual, 300mA, Low-Noise Linear Regulator with Independent Shutdown in UCSP or TDFN	Dual, low-noise, low-dropout (LDO) linear regulator operates from a 2.5V to 6.5V input voltage





VCC VCU108/10 PMBus

Part Number	Description	Key Advantages
<u>MAX20751</u>	Multiphase Master with PMBus Interface and Internal Buck Converter	PMBus-compliant multiphase master IC, with extensive status and parameter monitoring, is capable of driving up to four smart-slave integrated power devices.
<u>MAX15301</u>	InTune Automatically Compensated Digital PoL Controller with Driver and PMBus Telemetry	Only Digital Power IC To Meet Transient and Light-Load Efficiency Performance Metrics Set by Analog Controllers
<u>MAX20743</u>	Integrated, Step-Down Switching Regulator with PMBus	Monolithically Integrated, PMBus-Enabled Step-Down Switching Regulator with High Power Density and Low Component Count





VCC VCU108/10 Non-PMBus

Part Number	Description	Key Advantages
<u>MAX20751</u>	Multiphase Master with PMBus Interface and Internal Buck Converter	The MAX20751 PMBus-compliant multiphase master IC, with extensive status and parameter monitoring, is capable of driving up to four smart-slave integrated power devices.
<u>MAX15301</u>	InTune Automatically Compensated Digital PoL Controller with Driver and PMBus Telemetry	Only Digital Power IC To Meet Transient and Light-Load Efficiency Performance Metrics Set by Analog Controllers
<u>MAX20745</u>	Integrated, Step-Down Switching Regulator	Monolithically Integrated, Step-Down Switching Regulator with High Power Density and Low Component Count
<u>MAX20733</u>	Integrated, Step-Down Switching Regulator	Monolithically Integrated, Step-Down Switching Regulator with High Power Density and Low Component Count





Board Functions

Part Number	Description	Key Advantages
<u>MAX16052</u>	High-Voltage, Adjustable Sequencing/Supervisory Circuit	Simple Reset and Supervisory Circuit Operates from High Voltage and is Fully Adjustable
<u>MAX8892</u>	High PSRR, Low-Dropout, 150mA Linear Regulator	Low-Dropout Linear Regulator Designed for Ultra-Low Noise in a SC70 Package
<u>MAX13035</u>	6-Channel High-Speed Logic-Level Translator	High-Speed (100Mbps), 6-Channel Translator Compatible with 4mA Drivers
<u>MAX6816</u>	±15kV ESD-Protected, Single/Dual/Octal, CMOS Switch Debouncer	Industry's-first SOT Switch Debouncer Features \pm 15kV ESD Protection and \pm 25V Fault Tolerance





Fan Controllers

Part Number	Description	Key Advantages
<u>MAX31790</u>	6-Channel PWM-Output Fan RPM Controller	Versatile Fan RPM Controller Can Be Configured for Closed-Loop Control for Up to 6 Fans or Monitoring for Up to 12 Fans
<u>MAX6650</u>	Fan-Speed Regulator and Monitor with SMBus-Compatible Interface	Controls and Monitors Fan Speed for High-Performance
<u>MAX6651</u>	Fan-Speed Regulator and Monitor with I ² C- Compatible Interface	Thermal Management
<u>MAX31760</u>	Precision Fan-Speed Controller with Nonvolatile Lookup Table	Customizable Lookup Table-Based Fan Controller Enables Smooth Control of Fan Speed to Reduce Acoustic Noise
<u>MAX31782</u>	System Management Microcontroller	Industry's First Microcontroller with Six Independent Channels of Closed-Loop Fan Control





Hot-Swap

Part Number	Description	Key Advantages
<u>MAX15090</u>	2.7V to 18V, 12A, Hot-Swap Solution with Current Report Output	Smallest and Most integrated Hot Swap for 12V Applications
<u>MAX15096</u>	2.7V to 18V, 6A Integrated Hot- Swap/Electronic Circuit Breaker	Smallest 6A Hot-Swap Solution with Only $12m\Omega$ R_{DSON} and 10% Circuit Breaker Threshold Accuracy
<u>MAX15068</u>	Dual ORing, Single Hot-Swap Controller with Accurate Current Monitoring	Board-Saving, 0.6% Current-Sense Accuracy, Single Chip for Both ORing and Hot-Swap SOA Control





Level Translators

Part Number	Description	Key Advantages
<u>MAX13035E</u>	6-Channel High-Speed Logic-Level Translator	High-Speed (100Mbps), 6-Channel Translator Compatible with 4mA Drivers
<u>MAX3394E/5E</u>	±15kV ESD-Protected, High-Drive Current, Dual-/Quad-Level Translators with Speed-Up Circuitry	Internal slew-rate enhancement circuitry features 10mA current-sink and 15mA current-source drivers to isolate capacitive loads from lower current drivers.
<u>MAX3373E/78E</u>	±15kV ESD-Protected, 1µA, 16Mbps, Dual/Quad Low-Voltage Level Translators in UCSP	Industry's Smallest Level Translators
<u>MAX9912/13</u>	200kHz, 4µA, Rail-to-Rail I/O Op Amps with Shutdown	Feature a maximized ratio of gain bandwidth (GBW) to supply current and are ideal for battery-powered applications



High Cell-Count Battery Management

Part Number	Description	Key Advantages
<u>MAX14920/21</u>	High-Accuracy 12-/16-Cell Measurement AFEs	Industry's Most Accurate and Flexible Battery Management System Building Blocks







DDR Regulators

Part Number	Description	Key Advantages
<u>MAX1510</u>	Low-Voltage DDR Linear Regulators	Low-Cost, Low-Voltage DDR Linear Regulators Source and Sink Up to 3A Peak (typ) Using Internal n-Channel MOSFETs
<u>MAX8632</u>	Integrated DDR Power-Supply Solution for Desktops, Notebooks, and Graphic Cards	Integrates a synchronous-buck PWM controller to generate V_{DDQ} , a sourcing and sinking LDO linear regulator to generate VTT, and a 10mA reference output buffer to generate VTTR



Liquid/Gas Flow Rate Measurement

Part Number	Description	Key Advantages
<u>MAX35102/3</u>	Time-to-Digital Converter Without RTC and Reduced Power Time-to-Digital Converter with AFE, RTC, and Flash	Accurate Low-Flow Measurement with Low Power Consumption
<u>MAX35104</u>	Gas Flow Meter SoC	Industry's First Integrated SoC Designed to Address the Unique Requirements of Natural Gas Meters





Clock Distribution/High-Speed Signaling

Part Number	Description	Key Advantages
<u>MAX9110/2</u>	Single/Dual LVDS Line Drivers with Ultra-Low Differential Skew in SOT23	Industry's Lowest Pulse-Skew LVDS Drivers





Switches and Relay Drivers

Part Number	Description	Key Advantages
<u>MAX312</u>	10Ω, Quad, SPST, CMOS Analog Switch	Precision, Dual Supply, SPST, Analog CMOS Switch
<u>MAX4554</u>	Force-Sense Switch	High-current, low-resistance switches for forcing current, and higher resistance switch
<u>MAX4822</u>	+3.3V/+5V, 8-Channel, Relay Driver with Fast Recovery Time and Power-Save Mode	Octal Relay Driver for Non-Latching Relays or Dual-Coil Latching Relays
<u>MAX4896</u>	Space-Saving, 8-Channel Relay/Load Driver	Built-in inductive kickback protection, drive for latching/nonlatching or dual-coil relays, and open-load and short-circuit fault detection
<u>MAX4655</u>	High-Current, 10Ω, SPST, CMOS Analog Switch	Can replace reed relays with a million times the speed and virtually unlimited number of lifetime cycles
<u>MAX4659</u>	High-Current, 25Ω, SPDT, CMOS Analog Switch	Medium voltage CMOS analog switch with a low on- resistance of 25Ω max specifically designed to handle large switch currents



Pin Electronics

Part Number	Description	Key Advantages
<u>MAX9964</u>	Quad Low-Power 500Mbps ATE Driver/Comparator	High-speed pin electronics driver and comparator IC includes, for each channel, a three-level pin driver, a dual comparator, and variable clamps
<u>MAX9967</u>	Dual, Low-Power, 500Mbps ATE Driver/Comparator with 35mA Load	High-speed, pin electronics driver/comparator/load (DCL) IC includes, for each channel, a three-level pin driver, a dual comparator, variable clamps, and an active load
<u>MAX9969</u>	Dual, Low-Power, 1200Mbps ATE	High-speed, pin electronics driver/comparator with 35mA load IC includes, for each channel, a three-level pin driver, a dual comparator, variable clamps, and an active load
<u>MAX9972</u>	Quad, Ultra-Low-Power, 300Mbps ATE Driver/Comparator	Low Cost, Low-Power ATE Pin Electronics for Memory, Burn- In, and Structural ATE
<u>MAX9957</u>	Fast Dual Driver for ATE with Waveform Shaping	DDR2 Memory Testers, GDDR3, and GDDR4 for ATE Applications Requiring 2Gbps Performance and Waveform Fidelity Control
<u>MAX9979</u>	Dual 1.1Gbps Pin Electronics with Integrated PMU and Level-Setting DACs	Integrates Levels, Active Load, Driver, Comparator, and Switches, While Maintaining Discrete Device Performance





Parametric Measurement Unit (PMU)

Part Number	Description	Key Advantages
<u>MAX9951</u>		Featuring a small package size, wide force and measurement range, and high accuracy
<u>MAX9959</u>		Fully Integrated 25V Span, 800mA Device Power Supply for Industrial Test and Instrumentation Applications





Device Power Supply

Part Number	Description	Key Advantages
<u>MAX9959</u>		Fully Integrated 25V Span, 800mA Device Power Supply for Industrial Test and Instrumentation Applications



Sensor Signal Conditioners

Part Number	Description	Key Advantages
<u>MAX1454</u>	Precision Sensor Signal Conditioner with Overvoltage Protection	Low-Cost, Precision Sensor Signal Conditioner
<u>MAX1358</u>	16-Bit, Data-Acquisition System with ADC, DACs, UPIOs, RTC, Voltage Monitors, and Temp Sensor	Smart data-acquisition system (DAS) is based on a 16-bit, sigma-delta analog-to-digital converter (ADC) and system- support functionality for a microprocessor (µP)-based system
<u>MAX11359</u>	16-Bit, Data-Acquisition System with ADC, DAC, UPIOs, RTC, Voltage Monitors, and Temp Sensor	Provides a Highly Integrated AFE Offering Higher Accuracy and Lower Cost
<u>MAX1464</u>	Low-Power, Low-Noise Multichannel Sensor Signal Processor	Multichannel Sensor Signal Processor Provides Amplification, Calibration, Linearization, and Temperature Compensation of Variety of Sensors
<u>MAX1455</u>	Low-Cost Precision Sensor Signal Conditioner	Highly integrated, sensor signal processor for resistive element sensors
<u>MAX1452</u>	Low-Cost Precision Sensor Signal Conditioner	Low-Cost, Precision Sensor Signal Conditioner





Automotive Supervisory

Part Number	Description	Key Advantages
<u>MAX6369</u>	Pin-Selectable Watchdog Timer	Supervises microprocessor (μP) activity and signal when a system is operating improperly
<u>MAX6746</u>	µP Reset Circuit with Capacitor-Adjustable Reset/Watchdog Timeout Delay	Low-power microprocessor (µP) supervisory circuit monitors single/dual system supply voltages from 1.575V to 5V
<u>MAX6769</u>	Automotive Micropower Linear Regulator with Supervisor	Low-quiescent-current, high-voltage linear regulator that operates from 4V to 72V
<u>MAX6320</u>	5-Pin µP Supervisory Circuit with Watchdog and Manual Reset	Versatile, Customizable SOT Reset + Watchdog IC Offers 3,224 Unique Options
<u>MAX6765</u>	Automotive Micropower Linear Regulator with Supervisor	Features a push-pull or open-drain, active-low RESET output with either fixed or adjustable thresholds
<u>MAX6412</u>	Low-Power, Dual-Voltage µP Reset Circuit with Capacitor-Adjustable Reset Timeout Delay	Small, Low-Power, Dual-Voltage µP Reset Circuit with Adjustable Reset Timeout Provides Flexibility
<u>MAX16132/3/4/5</u>	Low-Voltage, Precision, Single/Dual/Triple/Quad- Voltage µP Supervisors	Highly Accurate Three-Channel Voltage Monitoring Supervisory in Small SOT23



Automotive Camera GMSL Deserializers

Part Number	Description	Key Advantages
<u>MAX96706/08</u>	14-Bit GMSL Deserializers with Coax or STP Cable Input	Compact 1.6Gbps Deserializer with Eye-Width Monitor and CRC Protection of Video and Control Data for ADAS Applications
<u>MAX9208</u>	10-Bit Bus LVDS Deserializer	Transform a high-speed serial bus low-voltage differential signaling (BLVDS) data stream into 10-bit-wide parallel LVCMOS/LVTTL data and clock
<u>MAX9288</u>	3.12Gbps GMSL Deserializer for Coax or STP Input and MIPI CSI-2 Output	Deserializer Enables Use of Coax Cables, Reducing Weight and Cost of Cabling in Automotive Infotainment
<u>MAX9276A</u>	3.12Gbps GMSL Deserializer for Coax or STP Input and Parallel Output	Deserializer Enables Use of Coax Cables, Reducing Weight and Cost of Cabling in Automotive Infotainment
<u>MAX9280A</u>	3.12Gbps GMSL Deserializer for Coax or STP Input and Parallel Output	Deserializer Enables Use of Coax Cables, Reducing Weight and Cost of Cabling in Automotive Infotainment
<u>MAX9278A</u>	3.12Gbps GMSL Deserializer for Coax or STP Input and LVDS Output	Deserializer Enables Use of Coax Cables, Reducing Weight and Cost of Cabling in Automotive Infotainment
<u>MAX9282A</u>	3.12Gbps GMSL Deserializer for Coax or STP Input and LVDS Output	Deserializer Enables Use of Coax Cables, Reducing Weight and Cost of Cabling in Automotive Infotainment
<u>MAX9288</u>	3.12Gbps GMSL Deserializer for Coax or STP Input and MIPI CSI-2 Output	Deserializer Enables Use of Coax Cables, Reducing Weight and Cost of Cabling in Automotive Infotainment
<u>MAX9290</u>	3.12Gbps GMSL Deserializer for Coax or STP Input and MIPI CSI-2 Output	Deserializer Enables Use of Coax Cables, Reducing Weight and Cost of Cabling in Automotive Infotainment
203 Maxim Integrated	Return	Home

Automotive Remote Antenna

Part Number	Description	Key Advantages
<u>MAX16946</u>	Remote Antenna, Current-Sense and LDO/Switch	Fault Protection and Diagnostics for Automotive Antenna and Remote Modules
<u>MAX16948</u>	Automotive Dual Remote Antenna Current- Sense LDO/Switch	Dual Antenna Phantom Supply Provides Diagnostics for Multiband Antenna Systems
<u>MAX16913</u>	Remote Antenna Current-Sense Amplifier and Switch	Precision Current-Sense Amplifier and Integrated High- Voltage Switch Protect Phantom Power to Automotive LNA





Automotive Radio LNAs

Part Number	Description	Key Advantages
<u>MAX2180A</u>	AM/FM Car Antenna Low-Noise Amplifier	Industry-Leading AM/FM LNA with Adjustable Gain Control Saves Space, Cost and Improves Functionality
<u>MAX2181</u>	FM Automotive Low-Noise Amplifier	Highly Integrated FM Variable-Gain Low-Noise Amplifier Ideal for Use in Automotive FM and FM-Diversity
<u>MAX2181A</u>	FM Automotive Low-Noise Amplifier	Smaller BOM and Cost with Programmable Attack Point and Gain





Automotive Camera Display Serializers

Part Number	Description	Key Advantages
<u>MAX96705</u>	16-Bit GMSL Serializer with High- Immunity/Bandwidth Mode and Coax/STP Cable Drive	Compact 1.6Gbps Serializer with Crosspoint and CRC Protection of Video and Control Data for ADAS Applications
<u>MAX96709</u>	14-Bit GMSL Serializer with High-Immunity Mode and Coax/STP Cable Drive	1.6Gbps Serializer in 4mm × 4mm TQFN with Crosspoint and CRC Protection of Video Data for ADAS Applications
<u>MAX96711</u>	Coax/STP Cable Drive	Compact 1.6Gbps Serializer with Line-Fault Detection and CRC Protection of Video and Control Data for ADAS Applications





Automotive Display Serializers

Part Number	Description	Key Advantages
<u>MAX9275</u>	3.12Gbps GMSL Serializer for Coax or STP Output Drive and Parallel Input	Enable Use of Coax Cables, Reducing Weight and Cost of Cabling in Automotive Infotainment
<u>MAX9277</u>	3.12Gbps GMSL Serializer for Coax or STP Output Drive and LVDS Input	Enable Use of Coax Cables, Reducing Weight and Cost of Cabling in Automotive Infotainment





Automotive GPS LNAs

Part Number	Description	Key Advantages
<u>MAX2678</u>	GPS/GNSS Front-End Amplifier	Dual-Stage, Low-Noise Amplifier Solution Includes Gain-Step Control
<u>MAX2659</u>	GPS/GNSS Low-Noise Amplifier	0.8dB Noise Figure, 20dB Gain, GPS Low-Noise Amplifier (LNA) Improves Performance over Existing Solution



Automotive USB Charger and Protection

Part Number	Description	Key Advantages
<u>MAX16984</u>	Automotive High-Current Step-Down Converter with USB Protection/Host Charger Adapter Emulator	Industry's First USB Data Protection Switch that Integrates a High-Voltage, Feedback-Adjustable DC-DC Converter
<u>MAX20037</u>	Automotive High-Current Step-Down Converter with USB Protection/Host Charger Adapter Emulation	Industry's first Synchronous USB Buck Converter with I ² C and Protection/Host Charge Emulator
<u>MAX16942E</u>	Automotive Hi-Speed USB 2.0 Protector	Industry's First Automotive-Grade USB Protectors for Automotive Radio, Navigation, Connectivity, and USB Hub Applications
<u>MAX16969</u>	500mA to 3A Automotive Hi-Speed USB Protector with Apple® iPod® Fast-Charge Detection and USB Host-Charger Port Detection	Fully Integrated Automotive-Grade USB Protector with Apple and USB Host Charger Detection





Automotive Display Deserializers

Part Number	Description	Key Advantages
<u>MAX9282</u>	· ·	Deserializer Enables Use of Coax Cables, Reducing Weight and Cost of Cabling in Automotive Infotainment
<u>MAX9276A/8A</u>	· ·	Deserializers Enable Use of Coax Cables, Reducing Weight and Cost of Cabling in Automotive Infotainment





Automotive LDOs

Part Number	Description	Key Advantages
<u>MAX1792</u>	500mA, Low-Dropout Linear Regulator in µMAX	0.5A LDO Has Only 130mV Dropout Voltage, Fits in 1.3W Power µMAX Package
<u>MAX8891</u>	High PSRR, Low-Dropout, 150mA Linear Regulator	Low-Dropout Linear Regulator Designed for Ultra-Low Noise in a SC70 Package
<u>MAX8902</u>	Low-Noise 500mA LDO Regulator in a 2mm x 2mm TDFN Package	Low-Noise, Low-Dropout, High-PSRR, 500mA Linear Regulator in a 2mm x 2mm TDFN Package
<u>MAX15027</u>	1.425V to 3.6V Input, 1A Low-Dropout Regulator with BIAS Input	High-Performance LDO Delivers 1A of Output Current
<u>MAX16910</u>	200mA, Automotive, Ultra-Low Quiescent Current, Linear Regulator	Ideal for Low-Quiescent Current, Always-On Applications
<u>MAX15006/07</u>	40V, Ultra-Low Quiescent Current Linear Regulators in 6-Pin TDFN/8-Pin SO	Low 9µA Quiescent-Current Linear Regulators Ideal for Always-On Automotive Applications





Automotive DC-DC Converters

Part Number	Description	Key Advantages
<u>MAX16962</u>	4A, 2.2MHz, Synchronous Step-Down DC-DC Converter	Industry's First Automotive-Grade Synchronous Step-Down DC-DC Converter that Delivers Up to 4A
<u>MAX16963</u>	Dual 2.2MHz, Low-Voltage Step-Down DC-DC Converter	Automotive-Grade Dual DC-DC Converter Offers Two 1.5A Rails in a Small Footprint
<u>MAX20021/22</u>	Automotive Quad, Low-Voltage Step-Down DC-DC Converters	Four Integrated Power Rails and High Operating Frequency Minimize Solution Size for Multirail Point-of-Load Regulation
<u>MAX16935</u>	36V, 3.5A, 2.2MHz Step-Down Converter with 28µA Quiescent Current	3.5A, 36V, 2MHz Automotive Buck Converter with Low $I_{\rm Q}$ and EMI Management
<u>MAX16936</u>	36V, 220kHz to 2.2MHz Step-Down Converter with 28µA Quiescent Current	2.5A Automotive Buck with FPWM Capability at Light Loads for EMI Management
<u>MAX16930</u>	2MHz, 36V, Dual Buck with Preboost and 20µA Quiescent Current	Industry's Highest Performance Automotive Dual Buck Controller with Preboost Enables a Space-Efficient, Crank-Ready Design
<u>MAX16932</u>	2.2MHz, 36V, Dual Buck with 20µA Quiescent Current	Low I _Q , High-Frequency, Dual Buck Controller Saves Board Space and Meet Automotive OEM Power-Consumption Requirements
<u>MAX16956</u>	36V, 300mA, Mini Buck Converter with $1.1\mu A I_Q$	Industry's Lowest I _Q Automotive Buck Converter Replaces Always-On LDO
MAX20002/03	36V, 220kHz to 2.2MHz, 2A/3A Fully Integrated Step-Down Converters with 15µA Operating Current	2A/3A Automotive Synchronous Step-Down Converter with Low I _Q
<u>MAX15026</u>	Low-Cost, Small, 4.5V to 28V Wide Operating Range, DC-DC Synchronous Buck Controller	Low-Cost, Versatile DC-DC Controller Operates from 4.5V to 28V Suitable for Multiple Applications
<u>MAX16922</u>	2.2MHz, Dual, Step-Down DC-DC Converter, Dual LDO, and Active-Low RESET	Automotive Converter in a 5mm x 5mm Package



Automotive LED Boost Drivers

Part Number	Description	Key Advantages
<u>MAX16814</u>	Integrated, 4-Channel, High-Brightness LED Driver with High-Voltage DC-DC Controller	Multistring Driver Provides Highest Efficiency and Complete Fault Protection with the Lowest External Component Count
<u>MAX16813</u>	Integrated, 4-Channel, High-Brightness LED Driver with High-Voltage DC-DC Controller and Battery Disconnect	Multistring Driver Provides Highest Efficiency and Complete Fault Protection with the Lowest External Component Count
<u>MAX16833</u>	High-Voltage HB LED Driver with Integrated High-Side Current Sense	LED Driver Substantially Reduces Costs of EMI Filter, Load Dump Filter, and Short-Circuit Protection Components
<u>MAX16815/28</u>	High-Voltage, 100mA/200mA Adjustable Linear High-Brightness LED Drivers with PWM Dimming	High-Voltage LED Drivers with Adjustable LED Current and High-Voltage Dimming Input Ease Driver Design
<u>MAX16823</u>	High-Voltage, 3-Channel Linear High-Brightness LED Driver with Open LED Detection	Highly Integrated, High-Voltage LED Driver Ideal for Automotive Applications
<u>MAX16835</u>	High-Voltage, 350mA, Adjustable Linear High- Brightness LED Driver	350mA LED Driver Provides 3.5% Current Accuracy for Long LED Strings
<u>MAX16836</u>	High-Voltage, 350mA, High-Brightness LED Driver with PWM Dimming and 5V Regulator	350mA LED Driver Provides 3.5% Current Accuracy for Long LED Strings and PWM Dimming





VCC PMBus

Part Number	Description	Key Advantages
<u>MAX20751</u>	Multiphase Master with PMBus Interface and Internal Buck Converter	PMBus-compliant multiphase master IC, with extensive status and parameter monitoring, is capable of driving up to four smart-slave integrated power devices.
<u>VT1697</u>	Smart-Slave IC with Integrated Current and Temperature Sensors	High-Current, Smart-Slave IC with Integrated Current and Temperature Sensors
<u>MAX15303AA00</u>	6A Digital PoL DC-DC Converter with InTune Automatic Compensation	6A InTune Automatically Compensated Converter with PMBus Telemetry
<u>MAX20730</u>	Integrated, Step-Down Switching Regulator with PMBus	Monolithically Integrated, PMBus-Enabled Step-Down Switching Regulator with High-Power Density and Low Component Count
<u>MAX15301AA02</u>	InTune Automatically Compensated Digital PoL Controller with Driver and PMBus Telemetry	Only Digital Power IC To Meet Transient and Light-Load Efficiency Performance Metrics Set by Analog Controllers
<u>MAX8869</u>	1A, Microcap, Low-Dropout Linear Regulator	Compact, 1A, Low-Dropout Linear Regulator Requires Just 1µF Output Capacitor!





Automotive TFT Power Supply

Part Number	Description	Key Advantages
<u>MAX16928</u>	Automotive TFT-LCD Power Supply with Boost Converter and Gate Voltage Regulators	Rugged Automotive TFT-LCD Power Supply Operates at 2.2MHz to Reduce Solution Size and Minimize AM Band Interference
<u>MAX16945</u>	30mA Inverting Charge Pump in SOT23 for EMI- Sensitive Automotive Applications	Low-EMI, Automotive-Qualified Charge Pump in SOT23 Package that Operates at 105°C
<u>MAX16927</u>	Automotive TFT-LCD Power Supply with Boost, Buck, and Cuk Converters, VCOM Buffers, Gate Drivers, and SPI Interface	Complete Automotive TFT-LCD Bias Power Supply
<u>MAX16929</u>	Automotive TFT-LCD Power Supply with Boost Converter and Gate Voltage Regulators	High-Voltage TFT-LCD Power Supply Offers a Wide Array of Trim Options to Fit Any Automotive Display Power Requirements
<u>MAX17075</u>	Boost-Regulator with Integrated Charge Pumps, Switch Control, and High-Current Op Amp	Integrated Power Solution for LCD Monitors Saves Cost and Design Time
<u>MAX20067</u>	Automotive 3-Channel Display Bias IC with VCOM Buffer, Level Shifter, and I ² C Interface	Industry's First Integrated Power Solution for TFT-LCD with Synchronous Boost, Gate-Shading and I ² C
<u>MAX20070</u>	Integrated TFT Power Supply and LED Backlight Drivers	Integrated TFT Power Supplies and LED Backlight Driver Reduce System Component Count



Automotive Universal GPS Receiver

Part Number	Description	Key Advantages
<u>MAX2769B</u>	Universal GPS Receiver	High-Performance, Automotive Grade GPS, GLONASS, Galileo, and Compass RF Receiver







Automotive AM/FM Tuners

Part Number	Description	Key Advantages
<u>MAX2175</u>	RF to Bits [®] Automotive Radio Tuner	Analog/Digital Radio Receiver Supports Remote Tuners and Software-Defined Radios
<u>MAX2173</u>	RF to Bits Tuner for Digital Audio Broadcast	RF to Bits DAB/FM Front-End Helps Reduce the DSP MIPS with Internal Digital Filtering
<u>MAX2172</u>	Direct-Conversion to Low-IF Tuner for Digital Audio Broadcast	High-Performance Digital Radio Tuner Incorporates Fast and Accurate RSSI Function
<u>MAX2170/1</u>	Direct-Conversion to Low-IF Tuners for Digital Audio Broadcast	Highest Performance, Most Integrated Triple-Band Receivers for T-DMB/DAB/FM Digital Radios
<u>MAX2140</u>	Complete SDARS Receiver	Includes a fully monolithic VCO and only needs a SAW at the IF and a crystal to generate the reference frequency





Current DACs

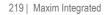
Part Number	Description	Key Advantages
<u>MAX5112</u>	9-Channel, 14-Bit, Current DAC with I ² C Interface	Multichannel Current-Output DAC Optimized to Bias Fiber Optic Tunable Laser Sources
<u>MAX5113</u>	9-Channel, 14-Bit Current DAC with SPI Interface	Multichannel Current-Output DAC Optimized to Bias Fiber Optic Tunable Laser Sources
<u>MAX5550</u>	Dual, 10-Bit, Programmable, 30mA High- Output-Current DAC	Sources up to 30mA per DAC, making it ideal for PIN diode biasing applications





Body Temperature Sensor

Part Number	Description	Key Advantages
<u>MAX30205</u>		Clinical-Grade Temperature Sensor Offers ±0.1°C (max) Accuracy for Thermometer Applications



Return



Automotive Display Backlight

Part Number	Description	Key Advantages
<u>MAX16813</u>	Integrated, 4-Channel, High-Brightness LED Driver with High-Voltage DC-DC Controller and Battery Disconnect	Multistring Driver Provides Highest Efficiency and Complete Fault Protection with the Lowest External Component Count
<u>MAX16814</u>	Integrated, 4-Channel, High-Brightness LED Driver with High-Voltage DC-DC Controller	Multistring Driver Provides Highest Efficiency and Complete Fault Protection with the Lowest External Component Count
<u>MAX16838</u>	Integrated, 2-Channel, High-Brightness LED Driver with High-Voltage Boost and SEPIC Controller	Industry's Only 2-String HB LED Driver for Automotive Applications Provides a Highly Integrated, Cost-Effective Solution





Automotive VREF

Part Number	Description	Key Advantages
<u>LM4040</u>	Improved Precision Micropower Shunt Voltage Reference with Multiple Reverse Breakdown Voltages	Ideal for space-critical applications, the LM4040 is offered in the subminiature 3-pin SC70 surface-mount package
<u>LM4050</u>	50ppm/°C Precision Micropower Shunt Voltage Reference with Multiple Reverse Breakdown Voltages	Industry Standard 50ppm/°C Voltage Reference Fits in SC70
<u>MAX6070/1</u>	Low-Noise, High-Precision Series Voltage References	Highest Performance SOT23 Voltage References with 6ppm/°C Maximum Temperature Coefficient
<u>MAX6174/5</u>	High-Precision Voltage References with Temperature Sensor	Low-noise, high-precision voltage references. The devices feature a proprietary temperature-coefficient curvature-correction circuit and laser-trimmed thin-film resistors that result in a very low 3ppm/°C temperature coefficient and excellent ±0.06% initial accuracy





Automotive Reverse-Battery Overvoltage Protection

Part Number	Description	Key Advantages
<u>MAX6495/96/99</u>	72V, Overvoltage-Protection Switches/Limiter Controllers with an External MOSFET	Small, low-current, overvoltage-protection circuits for high- voltage transient systems such as those found in automotive and industrial applications
<u>MAX16914/15</u>	Ideal Diode, Reverse-Battery, and Overvoltage Protection Switch/Limiter Controllers with External MOSFETs	Overvoltage Protection Devices are Ideal Diodes with Reverse-Current Protection and Small Forward Drop
<u>MAX16126</u>	Load-Dump/Reverse-Voltage Protection Circuit	Protect Power-Supply Inputs from Automotive Voltage Transients, Including Load Dump
<u>MAX16141</u>	3.5V to 36V Ideal Diode Controller with Voltage and Current Circuit Breaker	Protect Automotive Supplies from Reverse Current Conduction and Down Stream Loads from High Voltage/Current Transients





Automotive ADCs

Part Number	Description	Key Advantages
<u>MAX11043</u>	4-Channel, 16-Bit, Simultaneous Sampling ADC with PGA, Filter, and 8-/12-Bit Dual- Stage DAC	Industry's First Integrated Signal Converter for Automotive Adaptive Cruise Control
<u>MAX1111</u>	+2.7V, Low-Power, Multichannel, Serial, 8-Bit ADC	Lowest-Power 8-Bit 4-Channel ADC has Internal Reference
<u>MAX1240</u>	+2.7V, Low-Power, 12-Bit Serial ADC in 8-Pin SO	Features a 7.5µs successive-approximation ADC, a fast track/hold (1.5µs), an on-chip clock, and a high-speed, 3-wire serial interface
<u>MAX11254</u>	24-Bit, 6-Channel, 64ksps, 6.2nV/√Hz PGA, Delta-Sigma ADC with SPI Interface	24-Bit Delta-Sigma ADC Offers 10X Less Power with Superior Noise Performance





Automotive Current-Sense Amplifiers

Part Number	Description	Key Advantages
<u>MAX9918/19/20</u>	-20V to +75V Input Range, Precision Uni- /Bidirectional, Current-Sense Amplifiers	Current-Sense Amplifiers with Input Common Range that Extends Well Below Ground (-20V)
<u>MAX4376</u>	Single High-Side Current-Sense Amplifier with Internal Gain	Industry's-First SOT23 High-Side Current-Sense Amplifier with Buffered Output
<u>MAX16913/A</u>	Remote Antenna Current-Sense Amplifiers and Switches	Precision Current-Sense Amplifiers and Integrated High- Voltage Switches Protect Phantom Power to Automotive LNA





Automotive PMICs

Part Number	Description	Key Advantages
<u>MAX16993</u>	Step-Down Controller with Dual 2.1MHz Step- Down DC-DC Converter	Highly Integrated Automotive PMIC with Three DC-DC Step- Down Outputs, Low I_Q , and Low Minimum On-Time
<u>MAX16922</u>	2.2MHz, Dual, Step-Down DC-DC Converter, Dual LDO, and Active-Low RESET	Four Automotive Converters in a 5mm x 5mm Package



Automotive Load Disconnect

Part Number	Description	Key Advantages
<u>MAX16126</u>	Load-Dump/Reverse-Voltage Protection Circuit	Protects Power-Supply Inputs from Automotive Voltage Transients, Including Load Dump
<u>MAX16141</u>	3.5V to 36V Ideal Diode Controller with Voltage and Current Circuit Breaker	Protects Automotive Supplies from Reverse Current Conduction and Down Stream Loads from High Voltage/Current Transients





Automotive Oscillators

Part Number	Description	Key Advantages
<u>MAX31180</u>	Spread-Spectrum Crystal Multiplier	Ideal for Applications Requiring a Clock with a Precise Center Frequency, Yet Need to Modulate Frequency to Reduce EMI at the Center Frequency and Its Harmonics
<u>DS1080L</u>	Spread-Spectrum Crystal Multiplier	Ideal for Applications Requiring a Clock with a Precise Center Frequency, Yet Need to Modulate Frequency to Reduce EMI at the Center Frequency and Its Harmonics
<u>DS1091L</u>	Automotive Temperature Range Spread- Spectrum EconOscillator™	Industry's Only 3V All-Silicon Center Spread Clock Generator to Reduce EMI in the Automotive Temperature Range
<u>DS1090</u>	Low-Frequency, Spread-Spectrum EconOscillator	Industry's Only Spread-Spectrum Resistor-Programmable Oscillator
<u>MAX31091</u>	Automotive Temperature Range Spread- Spectrum EconOscillator	Automotive-Qualified, Feature-Rich, Spread-Spectrum Clock Generator to Reduce EMI



Automotive Level Shift

Part Number	Description	Key Advantages
<u>MAX3378E</u>	±15kV ESD-Protected, 1µA, 16Mbps, Dual/Quad Low-Voltage Level Translator in UCSP	Industry's Smallest Level Translator
<u>MAX3001E</u>	+1.2V to +5.5V, ±15kV ESD-Protected, 0.1µA, 35Mbps, 8-Channel Level Translator	Industry's First Bidirectional Octal Level Translator





Automotive Audio Amplifiers

Part Number	Description	Key Advantages
<u>MAX13301</u>	4-Channel, Automotive Class D Audio Amplifier	Offers Wide Operating Voltage Range (6V to 25.5V) with Full Automotive Diagnostics and Load-Dump Protection
<u>MAX13331</u>	Automotive DirectDrive® Headphone Amplifier with Output Protection and Diagnostics	Industry's First Automotive Headphone Amplifier with Output Protection Up to 45V and Short-Circuit Diagnostics
<u>MAX98357</u>	Tiny, Low-Cost, PCM Class D Amplifier with Class AB Performance	Supports I ² S and 8-Channel TDM Data





Automotive Display Serializers

Part Number	Description	Key Advantages
<u>MAX9257A</u>	Programmable Serializer/Deserializer with UART/I ² C Control Channel	Single-Link Serializer/Deserializer with Integrated Control Channel Ideal for Digital Video Applications
<u>MAX9249</u>	Gigabit Multimedia Serial Link Serializer with LVDS System Interface	Single-Link Serializer with LVDS Interface and Integrated Control Channel Is Ideal for Digital Video Applications
<u>MAX9265</u>	HDCP Gigabit Multimedia Serial Link Serializer with LVDS System Interface	LVDS Interface Serializer with Integrated Control Channel Is Ideal for Digital Video Applications





Automotive LV Step-Down DC-DC Converters

Part Number	Description	Key Advantages
<u>MAX20022</u>	Automotive Quad, Low-Voltage Step-Down DC-DC Converter	Four Integrated Power Rails and High Operating Frequency Minimize Solution Size for Multirail Point-of-Load Regulation
<u>MAX16904</u>	2.1MHz, High-Voltage, 600mA Mini-Buck Converter	600mA Automotive Buck Converter Integrates High-Side and Low-Side FETs and Uses Only 25µA Quiescent Current
<u>MAX16903</u>	2.1MHz, High-Voltage, 1A Mini-Buck Converter	1A Automotive Buck Converter Integrates High- and Low-Side FETs and Uses Only 25µA Quiescent Current





Automotive VCOM

Part Number	Description	Key Advantages
<u>MAX16927</u>	Automotive TFT-LCD Power Supply with Boost, Buck, and Cuk Converters, VCOM Buffers, Gate Drivers, and SPI Interface	Complete Automotive TFT-LCD Bias Power Supply
<u>MAX9650</u>	High-Current VCOM Drive Op Amp for TFT LCDs	High Current and Fast Settling Time Quickly Restores VCOM Voltage for TFT LCDs





Automotive DC-DC Boost Controllers

Part Number	Description	Key Advantages
<u>MAX16990</u>	36V, 2.5MHz Automotive Boost/SEPIC Controller	2.5MHz Automotive PWM Controller Enables Space-Efficient Preboost Supplies for Cold/Warm Crank Applications
<u>MAX16992</u>	36V, 2.5MHz Automotive Boost/SEPIC Controller	2.5MHz Automotive PWM Controller Enables Space-Efficient Preboost Supplies for Cold/Warm Crank Applications





Automotive Integrated Display Driver

Part Number	Description	Key Advantages
<u>MAX16928</u>		Rugged Automotive TFT-LCD Power Supply Operates at 2.2MHz to Reduce Solution Size and Minimize AM Band Interference





Automotive Serial Interface

Part Number	Description	Key Advantages
<u>MAX16928</u>	Automotive TFT-LCD Power Supply with Boost Converter and Gate Voltage Regulators	Rugged Automotive TFT-LCD Power Supply Operates at 2.2MHz to Reduce Solution Size and Minimize AM Band Interference
<u>MAX13444</u>	±15kV ESD-Protected, ±80V Fault-Protected, Fail-Safe RS-485/J1708 Transceiver	Simplifies Design and Reduces Board Space by Eliminating External Components Required for Overvoltage Protection Up to $\pm 80V$, Such as TVSs and PTCs
<u>MAX3077E</u>	+3.3V, ±15kV ESD-Protected, Fail-Safe, Hot-Swap, RS-485/RS-422 Transceiver	±15kV ESD-Protected, +3.3V, Fail-Safe, Hot-Swap, RS-485/RS-422 Transceiver
<u>MAX3222E</u>	±15kV ESD-Protected, Down to 10nA, 3.0V to 5.5V, Up to 1Mbps, True RS-232 Transceiver	Communications interface devices feature low power consumption, high data-rate capabilities, and enhanced electrostatic-discharge (ESD) protection
<u>MAX3227E</u>	±15kV ESD-Protected, 1µA, 1Mbps, 3.0V to 5.5V, RS- 232 Transceiver with AutoShutdown Plus™	Communications interfaces with automatic shutdown/wakeup features, high data-rate capabilities, and enhanced electrostatic discharge (ESD) protection
<u>MAX3280E</u>	±15kV ESD-Protected 52Mbps, 3V to 5.5V, SOT23 RS- 485/RS-422 True Fail-Safe Receiver	Industry's First RS-485/RS-422 SOT Receiver
<u>MAX3295</u>	20Mbps, +3.3V, SOT23 RS-485/RS-422 Transmitter	±15kV ESD-Protected, 20Mbps +3.3V, SOT23 RS-485/RS-422 Transmitter
MAX3420E	USB Peripheral Controller with SPI Interface	Add USB Functionality with a Single IC





Security for Consumables

Unique Identification

Cost-effective universally unique ID number plus user-programmable memory. Not rigorous from a security standpoint, but provides a low cost way to track assets and potentially detect fraud.

Part Number	Crypto	Interface	User Memory	Key advantages
<u>DS2401</u>	N/A	1-Wire	None	Unique 64-bit ROM ID. Minimalist 1-Wire interface.
<u>DS28E07</u>	N/A	1-Wire	128B	Unique 64-bit ROM ID, 1-Wire interface, user-programmable EEPROM

Authentication

Cryptographically rigorous mechanism for validating that the consumable is of correct origin. Availability of coprocessors provides very low overhead means of adding security to your system.

Part Number	Crypto	Interface	User Memory	Coprocessor	Key advantages
<u>DS28E38</u>	ECC-P256	1-Wire	256B	DS2476	ChipDNA [®] technology for robust key protection. Bidirectional asymmetric authentication for large networks.
DS28E15/22/25	SHA-256	1-Wire	Up to 512B	DS2465	Bidirectional symmetric authentication
MAX66240/242	SHA-256	NFC, I ² C	512B	MAX66300	Bidirectional symmetric authentication over NFC





Transmitter & Laser Modulator | Receiver and Transimpedance Amp

• For more information on Maxim's advanced high-speed optical products, please contact your local Maxim representative: Maxim Optical Communications





Automotive Battery Measurement and Communication

Part Number	Description	Key Advantages
<u>MAX17841B</u>	Automotive SPI Communication Interface (ASCI)	Enables Robust Daisy-Chain EMC/EMI Performance and Cost-Effective Isolation Solution
<u>MAX17843</u>	12-Channel, High-Voltage Smart Sensor Data-Acquisition Interface	Industry-leading ASIL D Battery Monitor ASIC
<u>MAX17830</u>	12-Channel, High-Voltage Battery Sensor with Advanced SMBus Ladder and External Cell Balancing	Meets the Industry's Toughest Automotive OEM Standards for Safety, Performance, and Reliability





Automotive Camera Integrator

Part Number	Description	Key Advantages
<u>MAX9286</u>	Quad 1.5Gbps GMSL Deserializer with Coax or STP Input and CSI-2 Output	Integrated GMSL Deserializer Receives and Automatically Synchronizes Video from Up to Four Serializers





Security for Sensors/Actuators

Unique Identification

Cost-effective universally unique ID number plus user-programmable memory. Asset tracking, calibration, and supply chain flexibility.

Part Number	Crypto	Interface	User Memory	Key advantages
<u>DS2401</u>	N/A	1-Wire	None	Unique 64-bit ROM ID. Minimalist 1-Wire interface.
<u>DS28E07</u>	N/A	1-Wire	128B	Unique 64-bit ROM ID, 1-Wire interface, user-programmable EEPROM

Authentication

Proves through rigorous cryptographic algorithms that a device is valid. Also use it to validate sensor data and commands.

Part Number	Crypto	Interface	User Memory	Coprocessor	Key advantages
<u>DS28E38</u>	ECC-P256	1-Wire	256B	DS2476	ChipDNA TM technology for robust key protection. Bidirectional asymmetric authentication for large networks.
DS28E15/22/25	SHA-256	1-Wire	Up to 512B	DS2465	Bidirectional symmetric authentication
MAX66240/242	SHA-256	NFC, I2C	512B	MAX66300	Bidirectional symmetric authentication over NFC

Secure Communication

Use a secure coprocessor when the data needs to be encrypted, or to add a fully flexible cryptographic block next to an existing microcontroller.

Part Number	Crypto	Interface	User Memory	Key advantages
<u>MAXQ1061</u>	Includes AES-128/256, ECC-P256/521/384, SHA-256/384/512…	I ² C, SPI	32KB	Turnkey cryptographic coprocessor for certificate management, TLS, and general-purpose crypto toolbox.





Automotive Flux Sensor

Part Number	Description	Key Advantages
<u>MAX9924</u>	Variable-Reluctance Sensor Interface with Differential Input and Adaptive Peak Threshold	Industry's First Single-Chip Solution for Variable-Reluctance Sensor Interface and Adaptive Peak Threshold





Automotive CAN Transceiver

Part Number	Description	Key Advantages
<u>MAX13041</u>	±80V Fault-Protected High-Speed CAN Transceiver with Low-Power Management and Wake-On CAN	GIFT Certified CAN Transceiver Offering ±80V Fault Protection, Consuming Only 18µA Sleep Current





Automotive Memory Power

Part Number	Description	Key Advantages
<u>MAX17510</u>	Low-Voltage DDR Linear Regulator	Low-Cost, Low-Voltage DDR Linear Regulator Source and Sinks Up to 3A Peak (typ) Using Internal n-Channel MOSFETs





Automotive Input Protector

Part Number	Description	Key Advantages
<u>MAX20087</u>	Dual/Quad Camera Power Protector	Industry's Only ASIL-Grade Camera Protector with integrated I ² C-Based Diagnostics





Automotive Gamma Buffer

Part Number	Description	Key Advantages
<u>MAX9669</u>		10-Bit DAC Resolution and MTP Memory Provides Nonvolatile Memory, Eliminating the Need for External EEPROM





Automotive Rotation Sensor

Part Number	Description	Key Advantages
<u>MAX9924</u>		Industry's First Single-Chip Solution for Variable-Reluctance Sensor Interface and Adaptive Peak Threshold





Automotive Power Switches

Part Number	Description	Key Advantages
<u>MAX15024</u>	Single, 16ns, High Sink/Source Current Gate Driver	4A, 20ns, Dual MOSFET Driver Available in 3mm x 3mm, Thermally Enhanced TDFN Package
<u>MAX5048</u>	7.6A, 12ns, SOT23/TDFN MOSFET Driver	High-speed MOSFET driver capable of sinking/sourcing 7.6A/1.3A peak currents
<u>MAX15012</u>	175V/2A, High-Speed, Half-Bridge MOSFET Driver	175V/2A Half-Bridge Driver with Low 35ns Propagation Delay and 8ns Propagation Delay Matching Between Drivers





Automotive Temperature Sensors

Part Number	Description	Key Advantages
<u>MAX7500</u>	Digital Temperature Sensors and Thermal Watchdog with Bus Lockup Protection	Digital Temperature Sensors and Thermal Watchdog with Bus- Lockup Protection and Manual Reset



Automotive Load Switches

Part Number	Description	Key Advantages
<u>MAX16913</u>	Remote Antenna Current-Sense Amplifier and Switches	Precision Current-Sense Amplifier and Integrated High- Voltage Switches Protect Phantom Power to Automotive LNA
<u>MAX16946</u>	Remote Antenna, Current-Sense and LDO/Switches	Fault Protection and Diagnostics for Automotive Antenna and Remote Modules
<u>MAX16948</u>	Automotive Dual Remote Antenna Current- Sense LDO/Switch	Dual Antenna Phantom Supply Provides Diagnostics for Multiband Antenna Systems





Automotive Sub-1GHz ISM

Part Number	Description	Key Advantages
<u>MAX7036</u>	300MHz to 450MHz ASK Receiver with Internal IF Filter	Provides Excellent Receive Sensitivity, While Reducing the Overall Component Count and System Cost
<u>MAX1471</u>	315MHz/434MHz Low-Power, 3V/5V ASK/FSK Superheterodyne Receiver	300MHz to 450MHz Superheterodyne ASK/FSK Receiver with Integrated Image Rejection Operates from 3V or 5V Supply
<u>MAX7060</u>	280MHz to 450MHz Programmable ASK/FSK Transmitter	Maximizes Output Transmit Power While Complying with Regulatory (FCC, ETSI, etc.) Requirements





Automotive Operational Amplifiers

Part Number	Description	Key Advantages
<u>MAX9650</u>	High-Current VCOM Drive Op Amp for TFT LCDs	High Current and Fast Settling Time to Quickly Restore VCOM Voltage for TFT LCDs
<u>MAX4232/34</u>	High-Output-Drive, 10MHz, 10V/µs, Rail-to- Rail I/O Op Amps with Shutdown in SC70	Single/dual/quad, high-output drive CMOS op amps feature 200mA of peak output current, rail-to-rail input, and output capability from single 2.7V to 5.5V supply
<u>MAX4238/39</u>	Ultra-Low Offset/Drift, Low-Noise, Precision SOT23 Amplifiers	Offer near-zero DC offset and drift through the use of autocorrelating zeroing techniques
<u>MAX4475/77/78/89</u>	SOT23, Low-Noise, Low-Distortion, Wide- Band, Rail-to-Rail Op Amps	Offer rail-to-rail outputs and single-supply operation down to 2.7V
<u>MAX4257</u>	UCSP, Single-Supply, Low-Noise, Low- Distortion, Rail-to-Rail Op Amp	Offer rail-to-rail outputs and single-supply operation down to 2.4V





Inverters

Part Number	Description	Key Advantages
<u>MAX1687</u>	Step-Up DC-DC Converter with Precise, Adaptive Current Limit for GSM	Reduces GSM Battery Peak Current by 6x, Eliminates DC-DC Noise during Transmission with User Selectable Disable
<u>MAX1852/53</u>	SC70 Inverting Charge Pumps with Shutdown	SC70 Inverting Charge Pump with Shutdown
<u>MAX889</u>	High-Frequency, Regulated, 200mA, Inverting Charge Pump	Regulated Inverting Charge Pump Delivers 200mA for Negative Supply without Inductors
<u>MAX1719</u>	SOT23, Switched-Capacitor Voltage Inverter with Shutdown	Smallest, High-Efficiency Bias for Small LCD/GaAsFET PA Bias: Small Cap Size, No Inductors and Low Supply Current





Factory Automation

- <u>Communication Fieldbus Module</u>
- IO-Link® and Digital Sensor Input Sensing and System
 Solution
- PLC 12-Bit Analog Input (Voltage/Current)
- PLC Analog Input (RTD/Thermocouple)
- PLC Analog Output
- PLC Digital Input
- PLC Digital Output
- PLC High-Resolution Analog Input (Voltage/Current)
 Consumer
- <u>Drone</u>
- E-Bikes, E-Scooters, Fork Lifts
- <u>E-Cigarette</u>
- Education Video Accessory Box
- GPS/Navigation System
- GPS Watch
- Home Security Control Panel/Gateway
- Home Security Sensor
- Hydration Wearable
- Power Tools
- Toy Robot
- Smart Plug
- Tire Pressure Monitoring System
- Voice-Activated Consumer Device
- Wireless Hearables
- Wireless Speaker

FPGA

- <u>Kintex® UltraScale KCU105 Power (PMBus and Non-</u> <u>PMBus)</u>
- <u>Virtex® UltraScale VCU108/10 (PMBus and Non-PMBus)</u>
- Xilinx® Remote Radio Head/Wireless Backhaul
- <u>Xilinx® UltraScale FPGA Power</u>
 Sensing Interface
- Pressure Sensing

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RTD-to-Digital Converters 253 | Maxim Integrated

- Thermocouple-to-Digital Converters Communications/Wireless
- 400Gbps Optical Transceiver
- Cable Downstream RF Signal Chain
- Digital Video Broadcast (DVB)
- Macro Base Stations: TX Path
- Microwave Backhaul (5GHz)
- Radio Receiver
- Satellite Communications (VSAT) IDU
- Server/Data Center
- <u>Small Cells, RRH, AAS (698-2700MHz)</u>
- Switch/Router Card
- Tactical and Public Safety Mobile Radio
- <u>VOIP</u>

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- Wideband RF Modem
- Wireless Backhaul Sub-3.8GHz
 Motor Control
- AC & BLDC Motor Controller Inputs
- <u>AC & BLDC Motor Controller Outputs</u>
- Brushed DC (PWM) Motor Control
- Brushed DC (Variable Voltage) Motor Control
- Hall Effect Current Sense AC/BLDC
- High-Side Current Sense AC/BLDC
- Low-Side Current Sense AC/BLDC
- Motor Monitoring: Encoder & Temp Sense
- Motor Monitoring: Resolver
- Stepper Motor Control
- Switched Reluctance Motor Control
 Medical Applications
- <u>CPAP (Continuous Positive Airway Pressure)</u>
- Dialysis
- Glucose Meter
- Infusion Pump / Drug Delivery Systems
- Patient Monitoring/ECG Patch
- Pulse Oximetry
- Ventilator

Industrial

- Asset Management
- Automated Test Equipment (ATE)
- Battery Test System
- Blockchain Encryption Machine
- Building Automation
- Distribution Automation: Load Tap Changer
- Distribution Automation: Recloser Controller
- Electricity Meter
- Fault Indicator
- Gas Detector
- General-Purpose Meters and Controllers
- LED Distributed Illumination
- Parking Garage Lot Vacancy Detection System
- Point-of-Sale System
- Portable Calibrator Pressure
- Portable Calibrator Temperature
- Portable Data Logger
- Refrigeration
- Portable Calibrator Temperature RTD or Thermocouple
- <u>Thermocouple Temperature Controllers</u>
- Weigh Scale

Test and Measurement

- High-Resolution Medium-Speed DAS (Data Acquisition System)
- Power Grid Sampling Board

Automotive

- <u>ADAS</u>
- Automotive EV Power Train
- <u>Automotive Infotainment Display</u>
- <u>Automotive Head Unit Camera Display</u>
- <u>Automotive GPS/Navigation</u>
- Automotive Tire Pressure Monitoring System

Home

Part Family Tables

- Above -1GHz ISM, Wi-Fi and Small Cell Transceivers
- Ambient and Proximity Sensor
- Analog Front End
- Audio CODEC
- Backplane Interface
- Battery Charger
- Bias Control
- Biopotential Sensors
- Board Functions
- Body Temperature
- CAN Transceiver
- <u>Clock Distribution/High Speed</u>
 <u>Signaling</u>
- <u>Current DAC</u>
- <u>Current Sense Amplifiers/ Ideal</u> <u>Diode/ Comparators</u>
- DC Motor Driver
- DDR Regulator
- DeepCover Secure Microcontrollers
- Device Power Supply
- Digital Input/Output
- Digital Isolators
- Fan Controllers
- Fuel Gauge
- Full-Duplex RS-485 Transceivers

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- Gain Block
- General Purpose DAC
- GNSS Receiver

- Half-Duplex RS-485 Transceivers
- Headphone Amplifiers

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- High Cell Count Battery
 Management
- High Density QAM Modulator (Cable Downstream Transmitter)
- High-Precision DAC
- High-Precision SAR ADC
- High-Precision Sigma-Delta ADC
- High-Speed 10-/8-Bit ADC and DAC Selection Table
- High-Speed ADC (Radio Receiver High-IF Sampling)
 - <u>Hot Swap</u>

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- Integrated DUC + DAC Digital Video
 Broadcast (DVB) Transmitter
- Inverters
- IO-Link Transceivers
- ISO/POE Power (VIN = 48V)
- Isolated Data Converter
- Isolated Power
- Isolated RS-485
- <u>LDO</u>
- <u>LED Driver</u>
- Level Translators
- Liquid/Gas Flow Rate Measurement
 - <u>LNAs</u>
- LO Buffer/Splitter
- Low Current USB Protector

- <u>Microcontroller</u>
- Monitor and Control
- MOSFET Drivers
- <u>Multiplexer</u>
- Normal Precision ADC and Integrated Converters
- Operational Amplifiers
- Oscillators
- Over V/I Protection Surge Stopper, Efuse, Current Limiters
- Parametric Measurement Unit (PMU)
- Pin Electronics
- <u>PLL</u>
- <u>PMIC</u>
- Real-Time Clock (RTC)
- RF Power Detector/Controller
- RF Transmitter / I and Q Modulator
- <u>RF Tuner</u>
- <u>RFPAL</u>

Home

- <u>RRH VCC</u>
- RS-232 Transceivers
- RS-422/485 Receivers
- Secure Authenticator
- Security for Consumables
- Security for Sensors/Actuators
- <u>Security Manager</u>
- Sensor Output Driver
- Sensor Signal Conditioner

Automotive Part Family Table

- Sequencing and Monitoring
- Signal Conditioner
- Signal Integrity
- Simultaneous Sampling ADCs
- Single and Dual Mixers
- Speaker Amp
- <u>Step-Down DC-DC</u>
- Step-Up DC-DC
- <u>Sub-GHz ISM</u>
- <u>Supervisory/Watchdog Timer</u>
- Switches and Relay Drivers
- System Power Management
- System Power Supplies
- Temp Sensor
- <u>Temperature Sensor Digitizers</u>
- <u>Transmitter & Laser Modulator |</u>
 <u>Receiver and Transimpedance Amp</u>
- <u>UART</u>
- USB
- VCC Non PMBus
- VCC PMBus

VVA/VGA

WBH VCC

VCC VCU108/10 non PMBus

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- VCC VCU108/10 PMBus
- VCO/PLL
 Voltage Reference

Automotive Part Family Tables

- <u>Automotive ADCs</u>
- <u>Automotive AM/FM Tuner</u>
- <u>Automotive Audio Amplifier</u>
- <u>Automotive Battery Measurement and</u>
 <u>Communication</u>
- <u>Automotive Camera Display</u>
 <u>Serializer</u>
- <u>Automotive Camera GMSL</u>
 <u>Deserializer</u>
- <u>Automotive Camera Integrator</u>
- <u>Automotive CAN Transceiver</u>
- <u>Automotive Current Sense Amplifiers</u>
- <u>Automotive DC-DC</u>
- <u>Automotive DC-DC Boost Controllers</u>
- <u>Automotive Display Backlight</u>
- <u>Automotive Display Deserializer</u>
- <u>Automotive Display Serializer</u>
- <u>Automotive Display Serializer</u>
- <u>Automotive Flux Sensor</u>
- <u>Automotive Gamma Buffer</u>
- <u>Automotive GPS LNA</u>

- <u>Automotive Input Protector</u>
- <u>Automotive Integrated Display Driver</u>
- <u>Automotive LDO</u>
- <u>Automotive LED Boost Driver</u>
- <u>Automotive Level Shift</u>
- Automotive Load Disconnect
- <u>Automotive Load Switches</u>
- <u>Automotive LV Step-Down DC-DC</u>
 <u>Converters</u>
- <u>Automotive Memory Power</u>
- <u>Automotive Operational Amplifiers</u>
- <u>Automotive Oscillator</u>
- <u>Automotive PMIC</u>
- <u>Automotive Power Switches</u>
- Automotive Radio LNA
- <u>Automotive Remote Antenna</u>
- <u>Automotive Reverse-Battery</u>
 <u>Overvoltage Protection</u>
- Automotive Rotation Sensor
- <u>Automotive Serial Interface</u>
- <u>Automotive Sub 1GHz ISM</u>

- <u>Automotive Supervisory</u>
- <u>Automotive Temperature Sensors</u>
- Automotive TFT Power Supply
- <u>Automotive Universal GPS Receiver</u>
- Automotive USB Charger and Protection
- <u>Automotive VCOM</u>
- <u>Automotive VFEF</u>





