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NOVOSENSE Automotive Electronics Solutions

Release Date: April, 2026

Sustaining Leadership in China's Automotive IC Market

NOVOSENSE

In China's automotive analog IC market: Top1* **among Chinese IC providers,** Top2* **among all fabless IC providers.**

Certified by SGS: ISO 9001:2015 Quality Management System Certification

As a member of the Component Technical Committee of AEC (Automotive Electronics Council), NOVOSENSE supports the development of automotive chip technology.

Certified by TÜV Rheinland, NOVOSENSE upgrades ISO 26262 ASIL D certification to "Defined-Practiced Level"

10 Years of proven reliability in mass production

- Launched the first automotive chip in 2016
- Products are used in most of today's new energy vehicles
- Cumulative shipments of automotive chips exceeded 1.418 billion pcs

Help customer to gain competitive advantage

- Chip customization service and experience
- Flexible and timely local support
- Evolving from component supply to collaborative system development

Excellent quality performance based on automotive-grade standards

- One of the first Chinese analog fabless to achieve ISO 26262 ASIL-D functional safety management system certification
- VDE Premium Quality Award

Cementing leadership through comprehensive E-mobility solutions
Powering growth through full-scenario intelligent driving

Vehicle Electrification — Intelligent Driving

Electric powertrain (Traction inverter, OBC/DC-DC, BMS) and thermal management system

Smart cockpit system, intelligent driving system, body electronics and lighting

—— Be Your Preferred Automotive Supply Chain Partner——

*Based on automotive analog chip revenue in 2024

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NOVOSENSE Automotive Business Progress

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2016
Launched the 1st Automotive Chip

2022
- Annual automotive chip shipments exceeded **100 million pcs**
- Automotive business accounted for **23.13%** of revenue

2023
- Annual automotive chip shipments: **164 million pcs**
- Automotive business accounted for **30.95%** of revenue

2024
- Annual automotive chip shipments: **363 million pcs**
- Automotive business accounted for **36.88%** of revenue

2025
- Annual automotive chip shipments: **750 million pcs**
- Cumulative shipments exceeded **1.418 billion pcs**

Mature Mass-Production Business	Rear Light LED Driver	Digital Isolator	Isolated Sensing	Isolated Interface	Isolated Half Bridge Driver	Switches & Latches	Angle Sensor	Current Sensor	Position Sensor	Pressure Sensor Signal Conditioning IC
Rapidly Growing Business	Isolated Smart Drivers	Motor Drivers	Non-isolated Drivers	Power Supplies	General-purpose Interfaces	Pressure Sensors	Embedded Motor Driver IC	ABS Wheel Speed Sensor	Temperature & Humidity Sensor	
Newly Mass-Production Business	Power Path Protection	Solid-state Relay	Class D Audio Amplifier	PWM Controller	Switching LED Driver	Ambient Lighting Driver IC				
Recently Released & In Development	Automotive SerDes Interface	Automotive Audio Interface	Ultrasonic Radar Chip	Automotive PMIC/SBC						

- **Mature Mass-Production Business**
  - Large-scale stable mass production
  - Applications: OBC/DCDC, BMS, Main Inverter, Automotive Lighting
- **Rapidly Growing Business**
  - Scaling production with rapid market expansion
  - Applications: OBC/DCDC, BMS, Main Inverter, Body Domain Control, ICE Powertrain
- **Newly Mass-Production Business**
  - Recently launched products or sampling stage
  - Applications: Body Domain Control, Thermal Management, Battery Pack, ICE Powertrain, Smart Cockpit
- **Recently Released & In Development**
  - Continuously rolling out new products
  - Applications: Automotive Lighting, Body Domain Controls, Smart Cockpit, Chassis & Safety

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Automotive Solution Overview

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Intelligent Connected/Autonomous/In-vehicle Experience

- SerDes
- Class D
- Automotive audio bus
- High-side & low-side switch
- SBC
- Seat air bag MEMS pressure sensor
- Temperature & humidity sensor
- Magnetic switch position sensor
- High current pre-driver
- Digital relay
- Large screen rear light driver
- General power Buck/LDO
- Antenna/Camera load protection
- Voltage supervisor
- Ultrasonic sensor

Body Electronics & Lighting

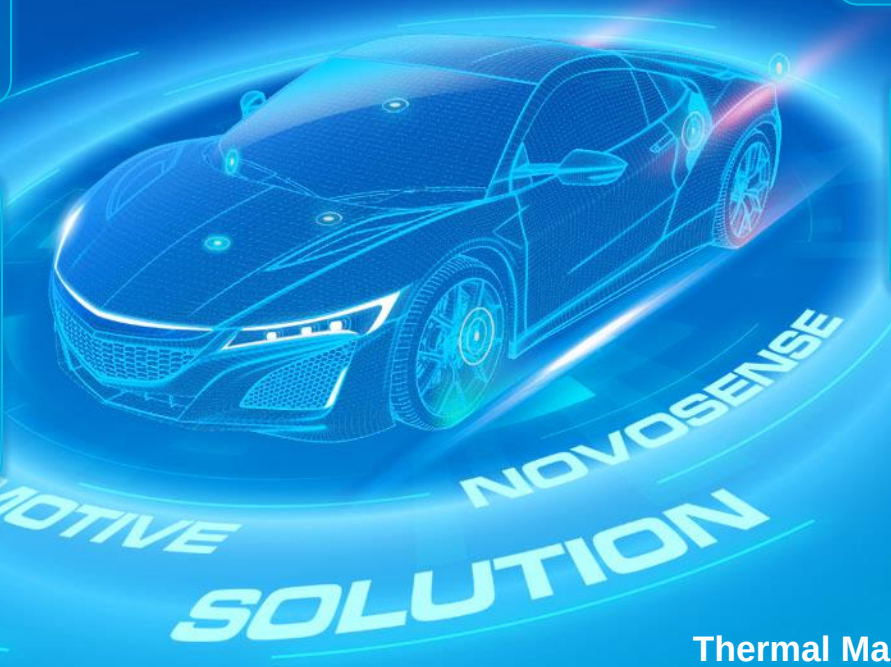
- High-side & low-side switch
- eFuse
- Antenna/Camera load protection
- Multichannel half-bridge driver, pre-driver
- BDC/BLDC/Stepping motor driver
- General power Buck/LDO
- Voltage supervisor
- Magnetic switch position sensor
- Magnetic angle sensor
- Temperature sensor
- Digital relay
- Rear light & headlight driver
- Ambient lighting driver
- Interior lighting driver
- Stepping motor driver
- MCU
- CAN/LIN/MiniSBC interface

Chassis Control & Safety

- Pressure sensor conditioning IC
- Magnetic angle sensor
- Magnetic current sensor
- Magnetic switch position sensor
- ABS wheel speed sensor
- Antenna combiner controller
- eFuse

Fuel/Hybrid Powertrain

- Engine intake manifold MEMS pressure sensor
- Fuel vapor MEMS pressure sensor
- Crankshaft ventilator MEMS pressure sensor
- Canister desorption MEMS pressure sensor
- GPF/DPF differential pressure MEMS pressure sensor
- Pressure sensor conditioning IC



Inverter/Powertrain

- Smart ISO drive/Functional safety driver
- Digital isolator
- CAN/LIN/MiniSBC interface
- Magnetic current sensor
- Rotary transformer drive power amplifier
- Vacuum boost servo MEMS pressure sensor
- Isolated voltage/Current sensing
- PWM Controller
- MCU

Battery Management System

- ISO digital relay
- Digital isolator
- ISO & non-ISO OP amps
- CAN/LIN/MiniSBC interface
- BPS battery pack thermal runaway MEMS pressure sensor
- ISO power supply
- Magnetic current sensor
- Temperature & humidity sensor
- ISO & non-ISO power drive
- ISO current and voltage sensing
- PWM Controller

OBC/DC-DC/PDU

- ISO & non-ISO power drive
- Digital isolator
- ISO & non-ISO OP amps
- Magnetic current sensor
- Temperature sensor
- ISO current and voltage sensing
- Current sensing amplifier
- High-side & low-side /Motor driver
- CAN/LIN/MiniSBC interface
- General power Buck/LDO
- Power stage: Smart GaN
- PWM Controller
- Solid-state relay
- MCU

Thermal Management System

- CAN/LIN/MiniSBC interface
- ISO & non-ISO power drive
- Digital isolator
- Electronic water valve, water pump and fan special motor drive
- Magnetic angle sensor
- Magnetic current sensor
- Magnetic switch position sensor
- Multi-channel half-bridge driver, pre-driver
- BDC/BLDC/Stepping motor driver
- Pressure sensor signal conditioning chip
- Automotive micro & special motor driver IC
- PWM Controller
- MCU

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Automotive Traction Inverter, OBC/DC-DC, BMS Solution

Traction Inverter

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MCU

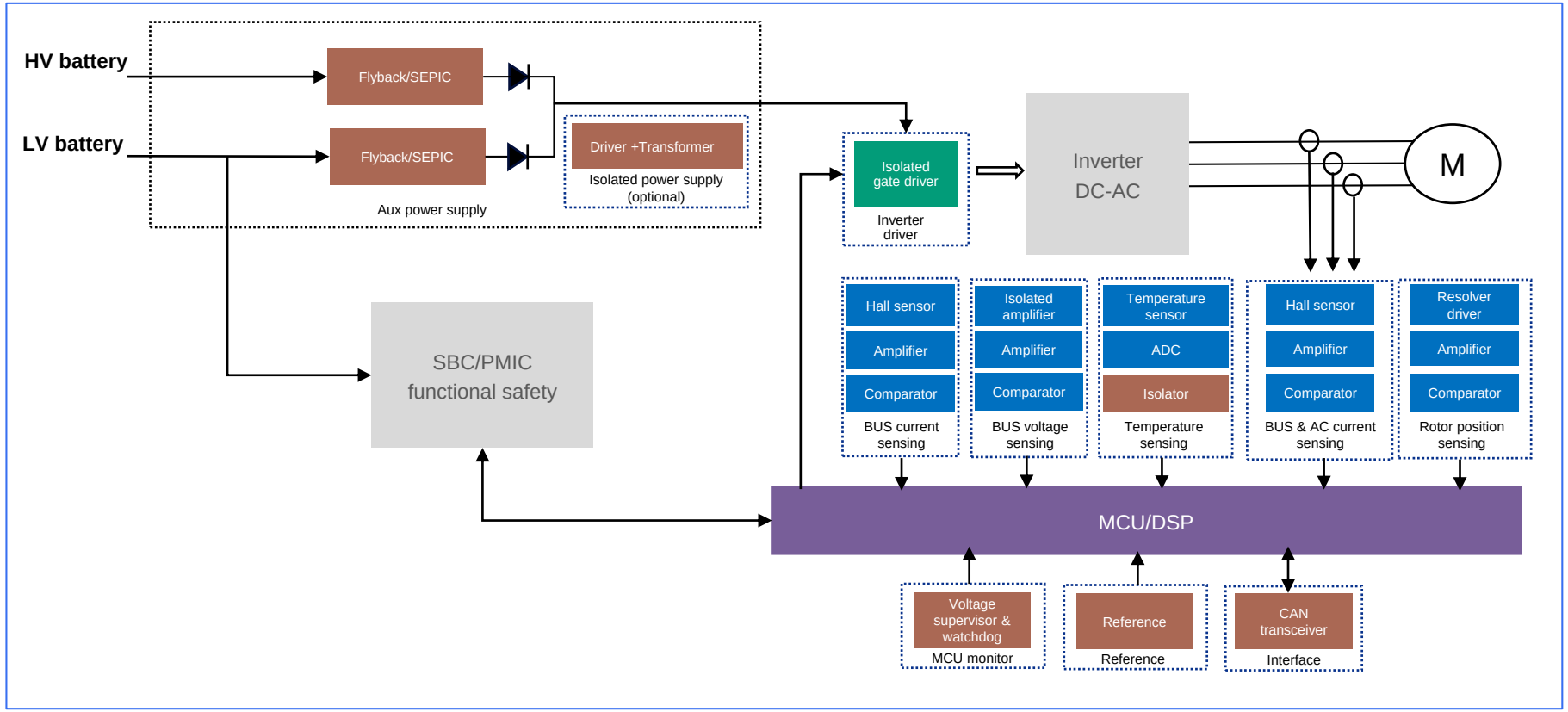
MCU (NS800RT7377D, NS800RT7P65D)

Current & voltage & temperature sensing

Hall sensor (NSM203x, MT9519)
Temperature sensor (NST235-Q1, NST86-Q1, NST175-Q1)
Isolated amplifier (NSI1311, NSI1611, NSI36(C)1x(R))
Amplifier (NSOPA9xxx, NSOPA8xxx, LM29xx)
Comparator (LM29xx)

Gate driver & motor driver

Isolated gate driver (NSI6611, NSI6651, NSI67xx, NSI6911)
Non-isolated driver (NSD1026V)



Power management

Flyback/SEPIC (NSR2240x, NSR2260x, NSR28C4x)
Buck (NSR1143x, NSR1103x)
LDO (NSR31xxx, NSR33xxx, NSR35xxx)
H-bridge (NSIP3266)

Interface & digital isolation

CAN transceiver (NCA1043(B), NCA1145, NCA1044/NCA1462)
Isolator (NSI824x, NSI822x)

Protection & reference & others

MCU monitor (NSR7808)
Reference (NSREF30xx, NSREF31xx)
Resolver driver (NSOPA240x)

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On-board Charger (OBC)

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MCU

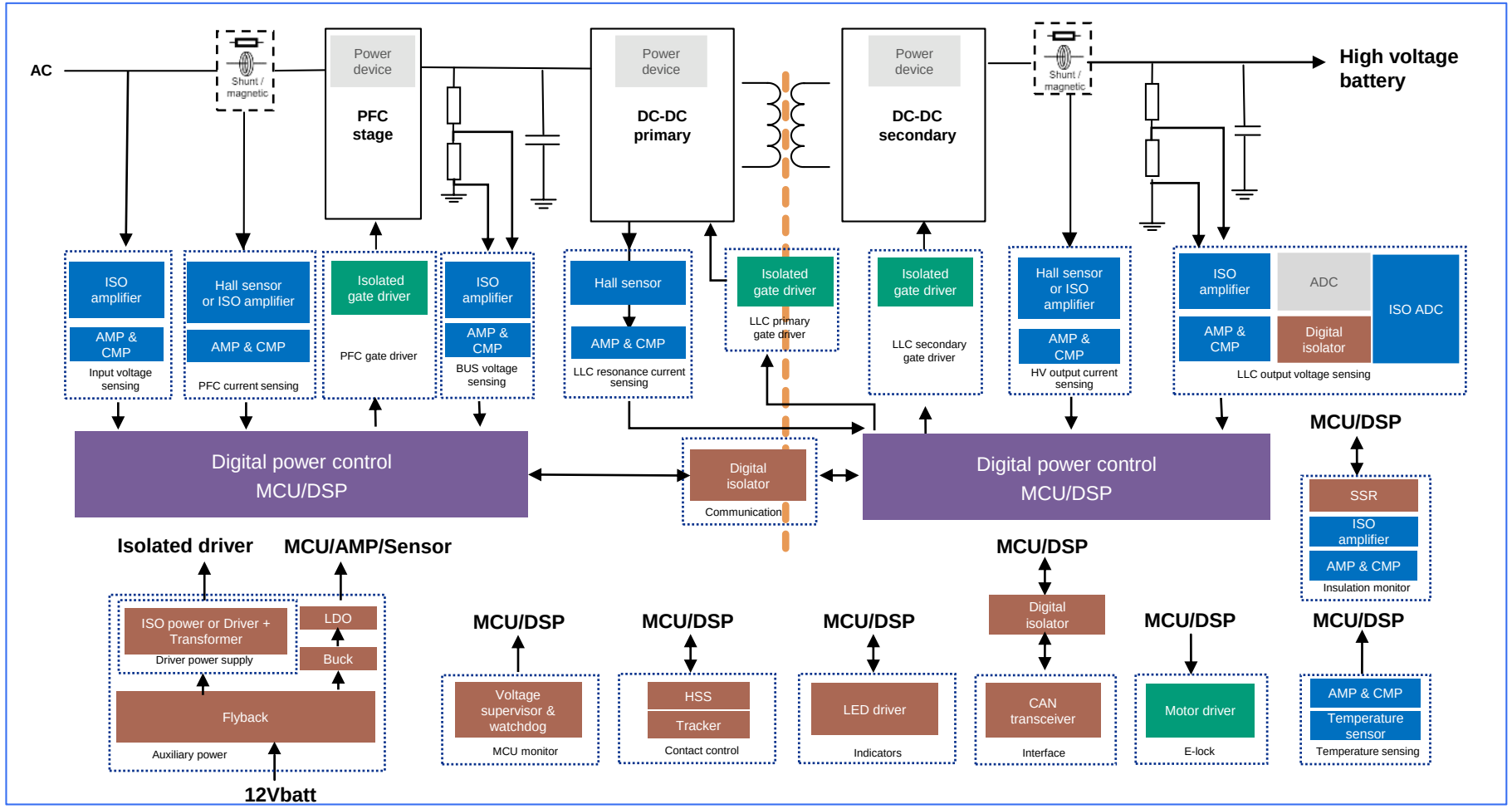
MCU (NS800RT5039, NS800RT5049, NS800RT1157, NS800RT3025)

Current & voltage & temperature sensing

Hall sensor (NSM201x, NSM211x)
Isolated amplifier (NSI1311, NSI1312, NSI1611, NSI1300, NSI1400, NSI36(C)xx(R))
Isolated ADC (NSI1306)
Isolated comparator (NSI22C12, NSI22C13)
Amplifier (NSOPA9xxx, NSOPA8xxx, LM29xx)
Comparator (NSCMP3021, LM29xx)
Temperature sensor (NST235-Q1, NST86-Q1, NST175-Q1)

Gate driver & motor driver

Half bridge isolated driver (NSI6602V/NSI6602N, NSI6602ME, NSI6602U)
Single channel isolated driver (NSI6601M, NSI6601ME, NSI6601, NSI6601AE)
Non-isolated driver (NSD1026V)
Motor driver (NSD731x)
GaN driver (NSD2622N, NSD2012N)



Power management

Flyback (NSR2240x, NSR2260x, NSR28C4x)
Buck (NSR1143x, NSR1103x)
LDO (NSR31xxx, NSR33xxx, NSR35xxx)
ISO power (NSIP3266)
Tracking LDO (NSE425x)

Interface & digital isolation

CAN transceiver (NCA1042B/1051A/1043(B)/1145)
Digital isolator (NSI824x, NSI822x)

Protection & reference & others

Voltage supervisor (NSR7808)
High side switch (NSE34xxx, NSE35xxx)
LED driver (NSL2161x, NSL2163x)
Reference (NSREF30xx)
Solid-state relay (NSI7107, NSI7258)

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DC-DC Charger

MCU

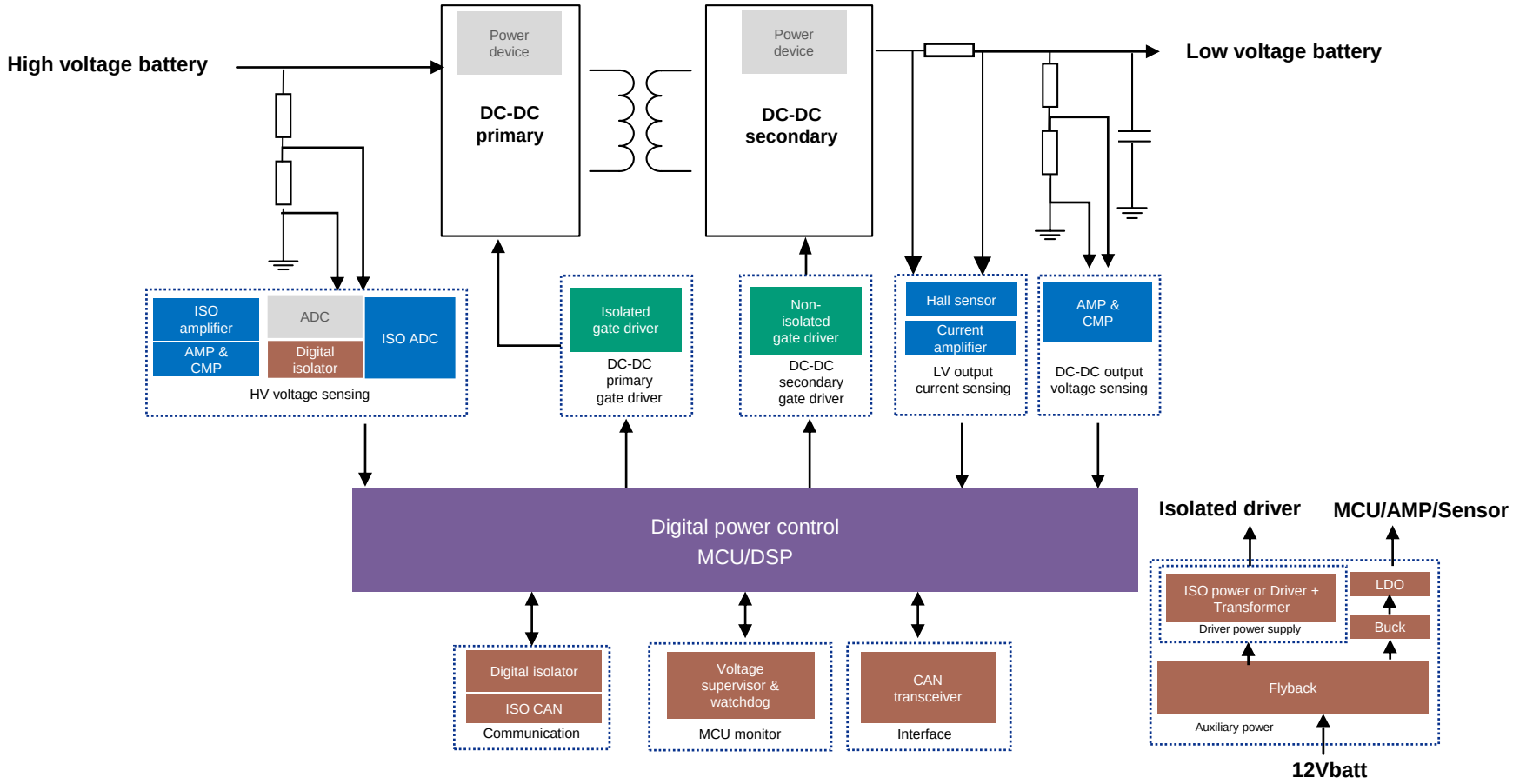
MCU (NS800RT3025, NS800RT5037, NS800RT1157)

Current & voltage & temperature sensing

Hall sensor (MT9519, NSM203x, NSM2040)
Isolated amplifier (NSI1300, NSI1400, NSI1311, NSI1611, NSI36(C)xx(R))
Isolated comparator (NSI22C12, NSI22C13)
Isolated ADC (NSI1306)
Current amplifier (NSCSA21x, NSCSA24x)
Amplifier (NSOPA9xxx, NSOPA8xxx, LM29xx)
Comparator (LM29xx)
Temperature sensor (NST235-Q1, NST86-Q1, NST175-Q1)

Power stage & driver

Half bridge isolated driver (NSI6602V/NSI6602N, NSI6602ME, NSI6602U)
Single channel isolated driver (NSI6601M, NSI6601ME, NSI6601, NSI6601AE)
Non-isolated driver (NSD1026V)
GaN driver (NSD2622N, NSD2012N, NSD2123)
Smart GaN (NSGS100N016/24)



Power management

Flyback (NSR2240x, NSR2260x, NSR28C4x)
Buck (NSR1143x, NSR1103x)
LDO (NSR31xxx, NSR33xxx, NSR35xxx)
ISO power (NSIP3266)

Interface & digital isolation

CAN transceiver (NCA1043(B), NCA1145)
Isolated CAN (NSI1042)
Digital isolator (NSI824x, NSI822x)

Protection & reference & others

Voltage supervisor (NSR7808)
Reference (NSREF30xx)

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Battery Management System (BMS)

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Current & voltage & pressure sensing

Hall sensor (NSM203x, MT9519, NSM204x)
Isolated amplifier (NSI1300, NSI1311, NSI1611, NSI36(C)xx(R))
Isolated ADC (NSI1306)
Amplifier (NSOPA9xxx, NSOPA8xxx)
Comparator (LM29xx)
Pressure sensor (NSPADx, NSPASx)
Temperature & humidity sensor (NSHT30-Q1)

Power management

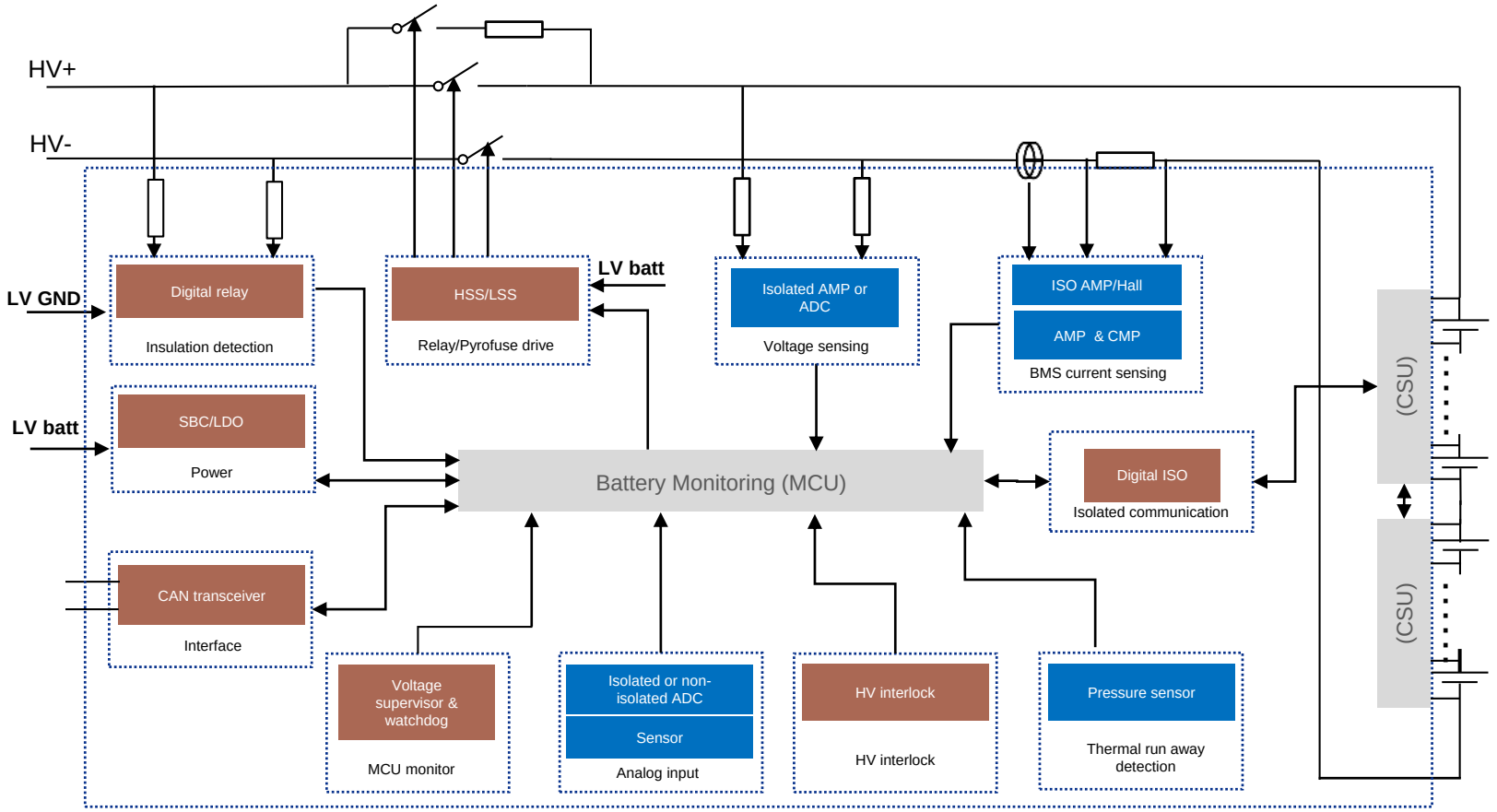
LDO (NSR31/33/35xxx, NSR30x0x)
Isolated transformer driver (NSIP605x)
Digital isolator + isolated power (NSIP9x4x)

Interface & digital isolation

CAN transceiver (NCA1044/57, NCA1462, NCA1043(B), NCA1145B)
Digital isolator (NSI824x, NSI822x)

Protection & others

High side switch (NSE34xxx, NSE35xxx)
Low side switch (NSE11409, NSD12409, NSD11/2416)
Voltage supervisor (NSR7808)
Digital relay (NSI7258)



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Body Control Module

Body Control Modules (BCM)

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MCU

MCU (NS300K214, NS300K116, NS300S214, NS300S116)

Current & position sensing

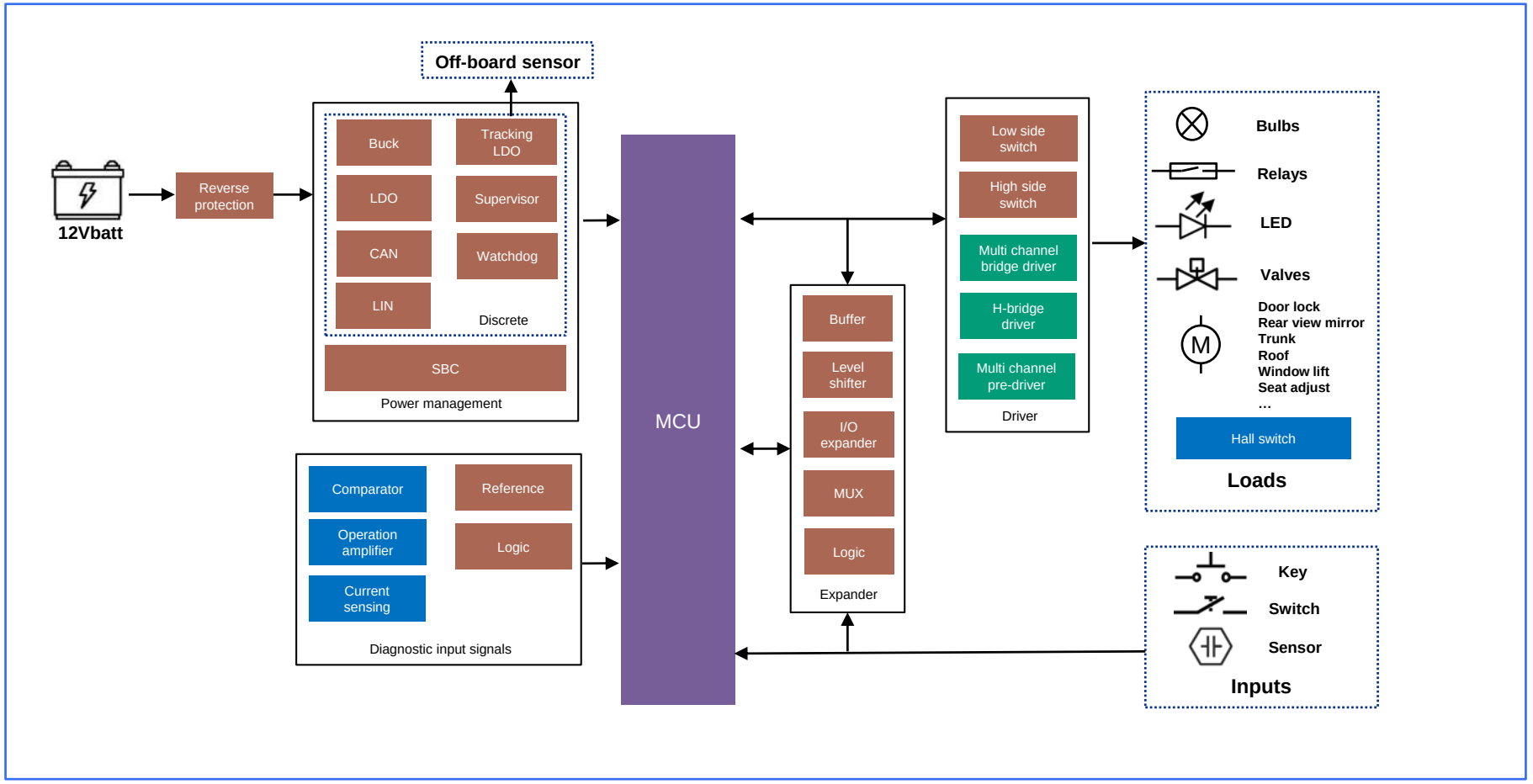
Hall sensor (NSM201x, NSM204x)
Hall Switch (MT83xx, MT89xx, MT72xx, MT73xx)
Amplifier (NSOPA9xxx, NSOPA8xxx, LM29xx)
Current sensing (NSCSA24x, NSCSA21x)
Comparator (NSCMP302x, LM29xx)

Motor driver

Half bridge driver (NSD7315, NSD7312, NSD7314)
Multi-channel bridge driver (NSD830x, NSD831x)
Multi-channel pre-driver (NSD360x)
Automotive MCU+ (NSUC1610, NSUC1612, NSUC1602)

Protection & reference & others

High side switch (NSE34xxx, NSE35xxx, NSD56080)
Low side switch (NSE11409, NSD1x4xx, NSD56008, NSD5614)
Tracking LDO (NSE425x)
Supervisor (NSR7808)
Watchdog (NSR7850)
Reference (NSREF30xx, NSREF31xx)
I/O expander (NCA9539)
Reverse protection (NSE14700, NSE14500)



Interface & digital isolation

CAN transceiver (NCA104x, NCA1057, NCA1462, NCA1145)
LIN transceiver (NCA1021S)
Buffer (NCA824x, NCA8T24x)
Level shifter (NCAS0104, NCAB0104)

Power management

LDO (NSR30xxx, NSR31xxx, NSR33xxx, NSR35xxx)
Buck (NSR104xx, NSR106xx, NSR114xx, NSR110xx)
SBC (NSR926x)

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Zone Control Unit (ZCU)

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Current & position sensing

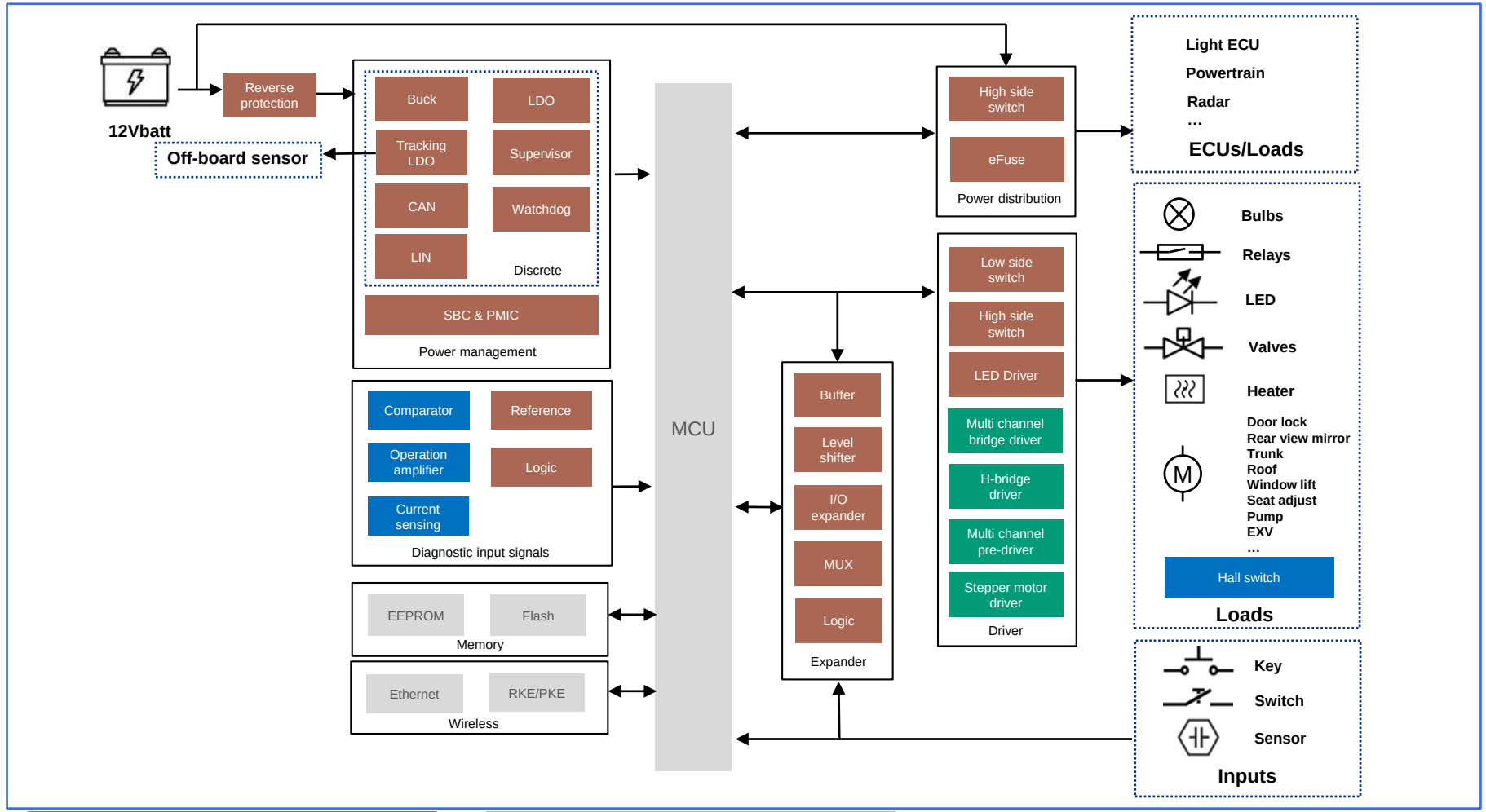
Hall sensor (NSM201x, NSM204x)
Hall Switch (MT83xx, MT89xx, MT72xx, MT73xx)
Amplifier (NSOPA9xxx, NSOPA8xxx, LM29xx)
Current sensing (NSCSA24x, NSCSA21x)
Comparator (NSCMP302x, LM29xx)

Motor driver

Half bridge driver (NSD7315, NSD7312, NSD7314)
Multi-channel bridge driver (NSD830x, NSD831x)
Multi-channel pre-driver (NSD360x)
Stepper motor driver (NSD838x)

Protection & reference & others

High side switch (NSE34xxx, NSE35xxx, NSD56080)
Low side switch (NSE11409, NSD1x4xx, NSD56008, NSD5614)
eFuse (NSE1048)
LED Driver (NSL2x6xx, NSL219xx, NSL23716x, NSL239xx)
Tracking LDO (NSE425x)
Supervisor (NSR7808)
Watchdog (NSR7850)
Reference (NSREF30xx, NSREF31xx)
I/O expander (NCA9539)
Reverse protection (NSE14700, NSE14500)



Interface & digital isolation

CAN transceiver (NCA104x, NCA1057, NCA1462, NCA1145)
LIN transceiver (NCA1021S)
Buffer (NCA824x, NCA8T24x)
Level shifter (NCAS0104, NCAB0104)

Power management

LDO (NSR30xxx, NSR31xxx, NSR33xxx, NSR35xxx)
Buck (NSR104xx, NSR106xx, NSR114xx, NSR110xx)
SBC (NSR926x)

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Door Control ECU

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MCU

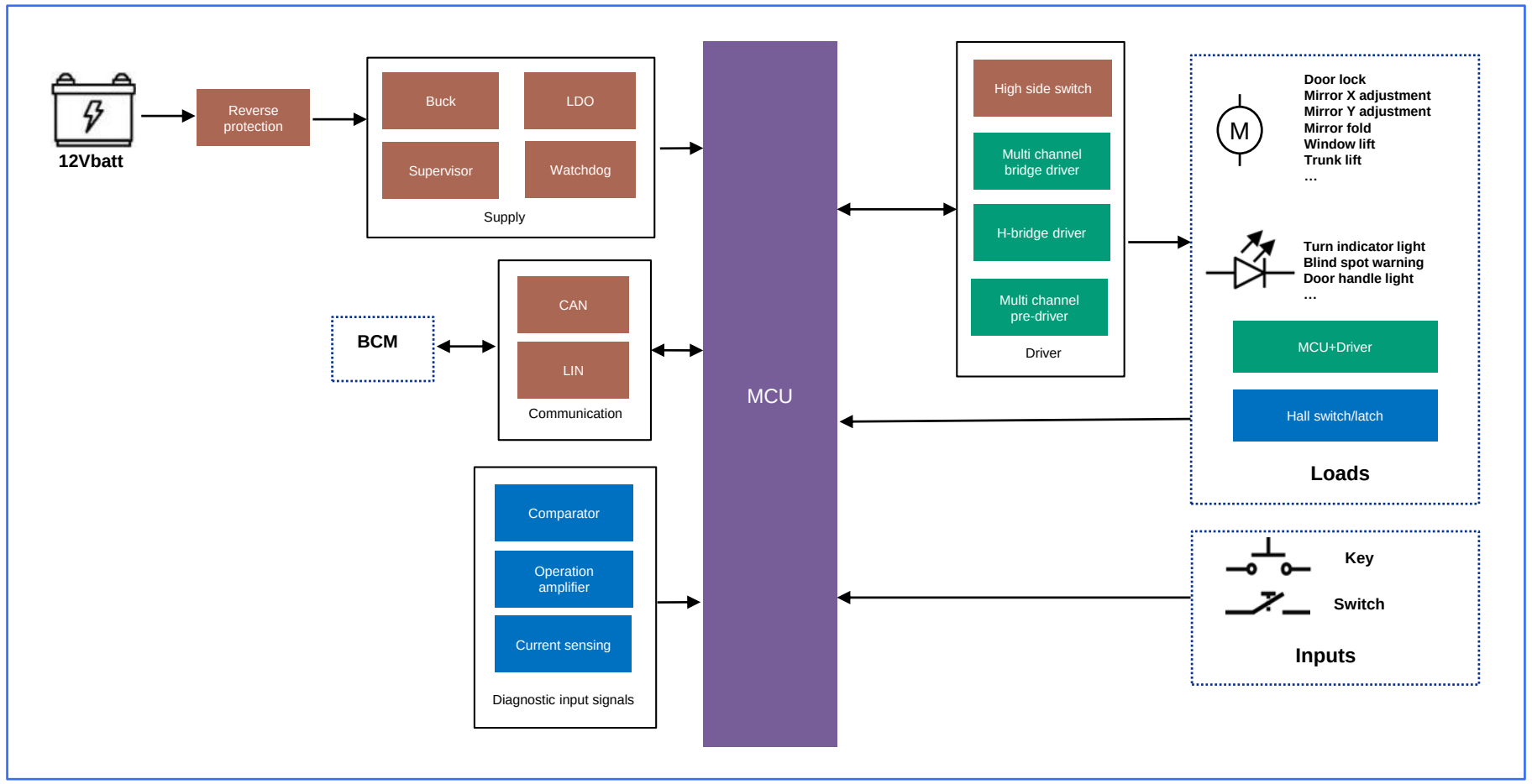
MCU (NS300K214, NS300K116, NS300S214, NS300S116)

Current & position sensing

Hall Switch (MT83xx, MT89xx, MT72xx, MT73xx)
Amplifier (NSOPA9xxx, NSOPA8xxx, LM29xx)
Current sensing (NSCSA24x, NSM204x)
Comparator (NSCMP302x, LM29xx)

Motor driver

Half bridge driver (NSD7315, NSD7312, NSD7314)
Multi-channel bridge driver (NSD830x,NSD831x)
Multi-channel pre-driver (NSD360x)
MCU+Driver (NSUC1610, NSUC1612, NSUC1602)



Protection & reference & others

High side switch (NSE34xxx, NSE35xxx)
Tracking LDO (NSE425x)
Supervisor (NSR7808)
Watchdog (NSR7850)
Reverse protection (NSE14700, NSE14500)

Interface & digital isolation

CAN transceiver (NCA104x, NCA1057, NCA1462, NCA1145)
LIN transceiver (NCA1021S)

Power management

LDO (NSR30xxx, NSR31xxx, NSR33xxx, NSR35xxx)
Buck (NSR104xx, NSR106xx, NSR114xx, NSR110xx)

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Seat Control ECU

Current & position sensing

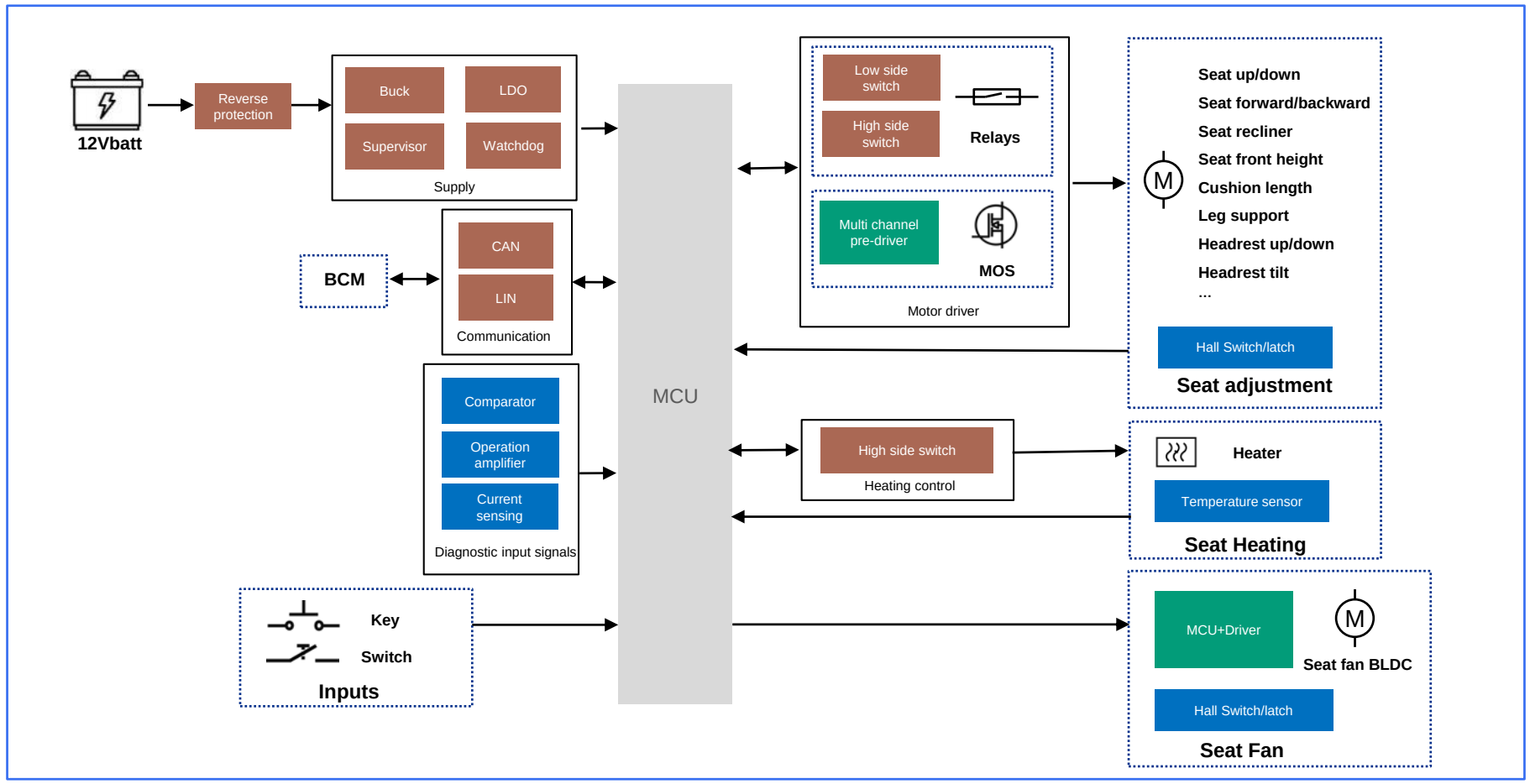
Amplifier (NSOPA9xxx, NSOPA8xxx, LM29xx)
Current sensing (NSCSA24x, NSCSA21x, NSM204x)
Comparator (NSCMP302x, LM29xx)
Temperature sensor (NST86, NST235, NST60, NST175)
Pressure sensor (NSPASx, NSPAD1)
Hall switch/latch (NSM101x, MT83xx, MT72xx, MT89xx)

Motor driver

Multi-channel pre-driver (NSD360x)
MCU+Driver (NSUC1610, NSUC1612)

Protection & reference & others

High side switch (NSE34xxx, NSE35xxx, NSD56080)
Low side switch (NSE11409, NSD1x4xx, NSD56008, NSD5614)
Supervisor (NSR7808)
Watchdog (NSR7850)
Reverse protection (NSE14700, NSE14500)



Interface & digital isolation

CAN transceiver (NCA104x, NCA1057, NCA1462, NCA1145)
LIN transceiver (NCA1021S)

Power management

LDO (NSR30xxx, NSR31xxx, NSR33xxx, NSR35xxx)
Buck (NSR104xx, NSR106xx, NSR114xx, NSR110xx)

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Smart Cockpit and Intelligent Driving System

Smart Cockpit System

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Power management

LDO (NSR31xxx, NSR33xxx, NSR35xxx, NSR30xxx)
Antenna LDO (NSE5701, NSE5702)
Buck (NSR104xx, NSR106xx, NSR114xx, NSR1103x)

Interface & digital isolation

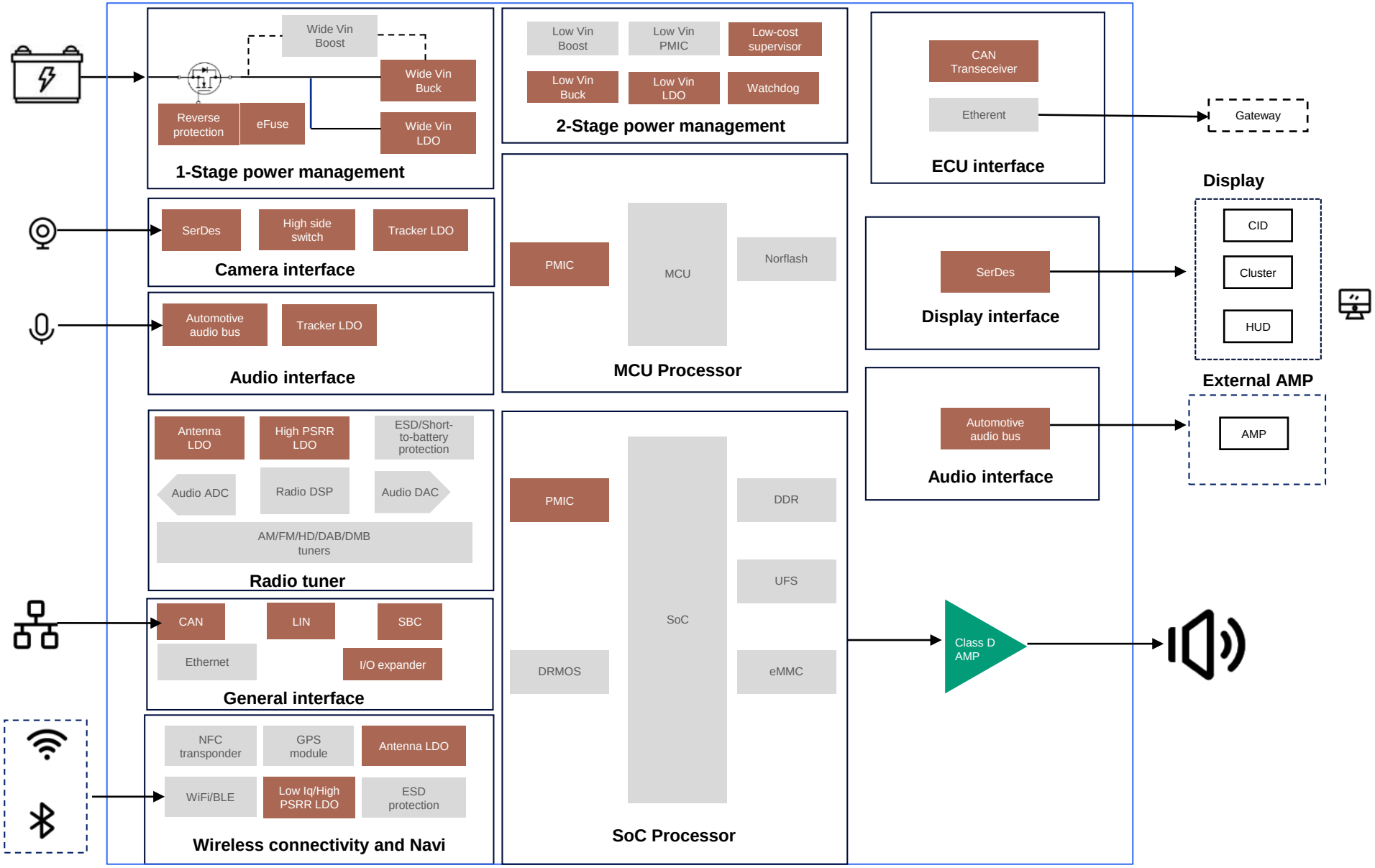
CAN transceiver (NCA1043(B), NCA1042B /NCA1044, NCA1145, NCA1169)
LIN transceiver (NCA1021S)
SerDes (NLS911x, NLS924x)

Protection & others

High side switch (NSE34xxx, NSE35xxx)
eFuse (NSE1048)
Tracking LDO (NSE4250)
Supervisor (NSR7808)
Watchdog (NSR7850)
I/O expander (NCA9539)
Reverse protection (NSE14700, NSE14500)

Class D amplifier

Class D (NSDA6934, NSDA6954)



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Intelligent Driving System

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Power management

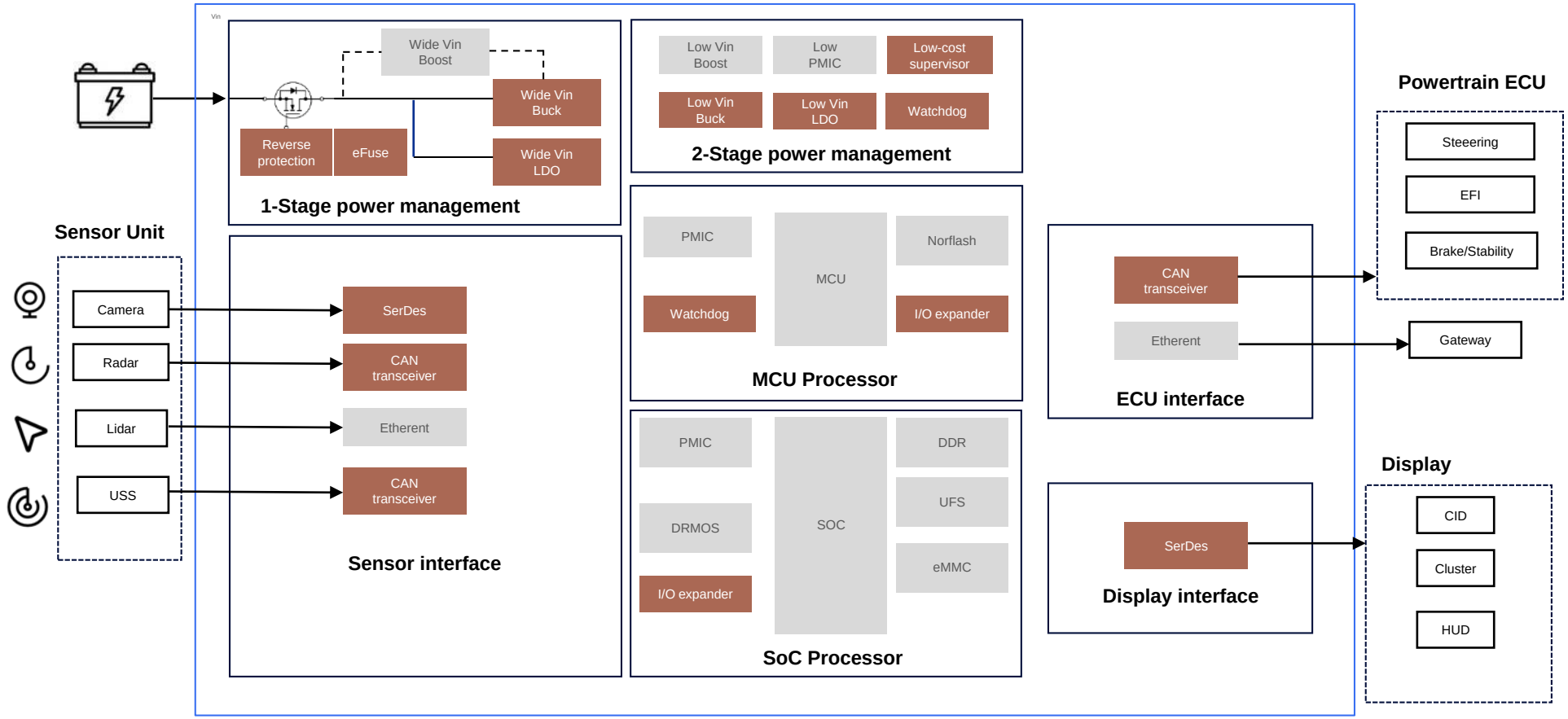
LDO (NSR31xxx, NSR33xxx, NSR35xxx)
Antenna LDO (NSE5701, NSE5702)
LV LDO (NSR30xxx)
Buck (NSR104xx, NSR106xx, NSR114xx, NSR1103x)

Interface & digital isolation

CAN transceiver (NCA1043(B), NCA1042B /NCA1044, NCA1145, NCA1169)
SerDes (NLS911x, NLS924x)

Protection & others

High side switch (NSE34xxx, NSE35xxx)
eFuse (NSE1048)
Tracking LDO (NSE4250)
Voltage supervisor (NSR7808)
Watchdog (NSR7850)
I/O expander (NCA9539)
Reverse protection (NSE14700, NSE14500)



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Automotive Thermal Management System

Thermal Management Controller

MCU

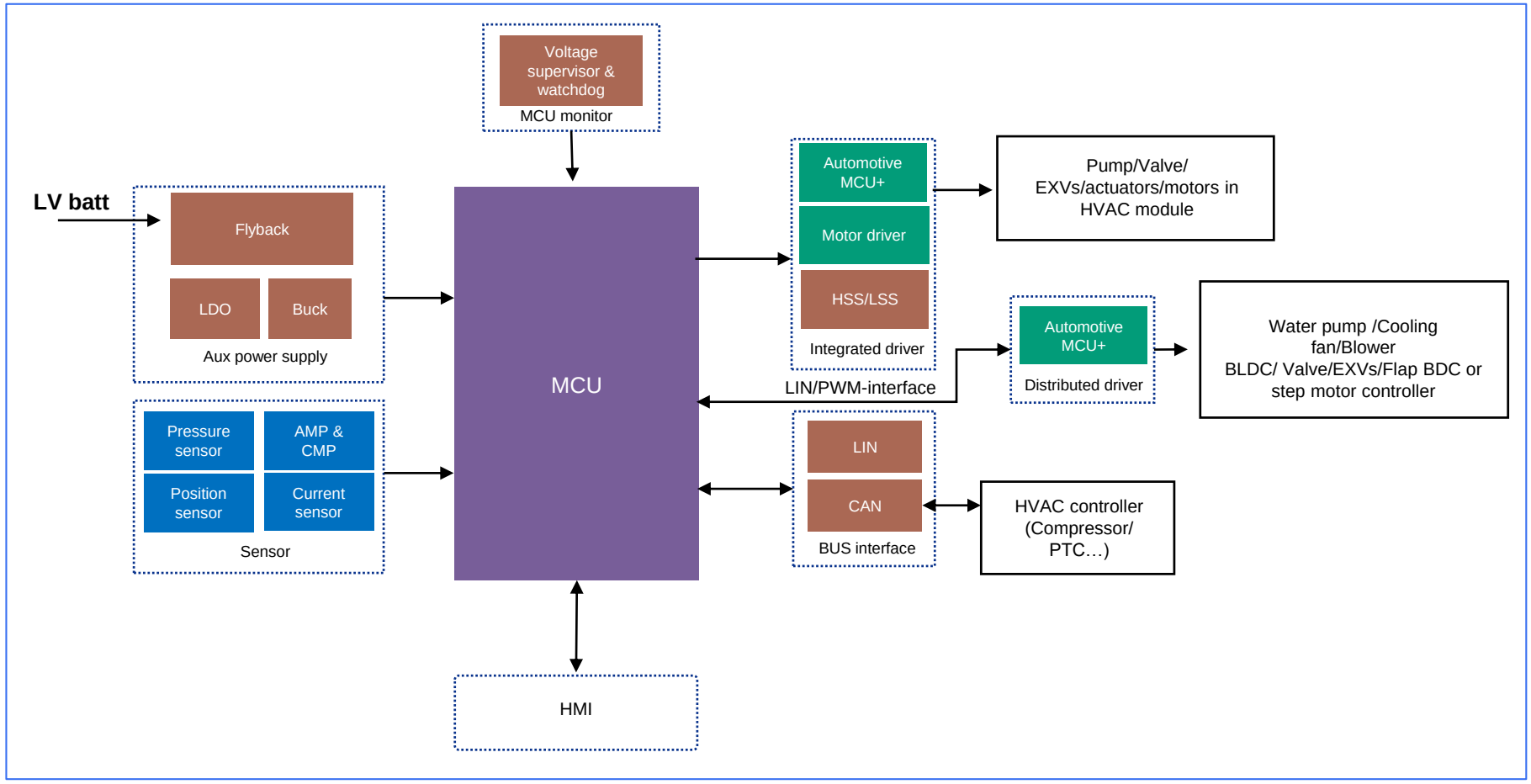
MCU (NS800RT3025)

Position & pressure & current sensing

Amplifier (NSOPA9xxx, NSOPA8xxx, LM29xx, NSOPA610x)
Comparator (LM29xx, NSCMP302x)
Pressure sensor (NSC9262, NSC9260X, NSC9264)
Position sensor (NSM1013, NSM301x, MT83xx, MT6511, MT652x)
Current sensing (NSM2x1x, NSCSA24x, NSCSA21x)

Motor driver

DC motor drivers (NSD731x)
Pre-driver (NSD3602, NSD3604, NSD3608)
Stepper (NSD8381)
Multi-channel 1/2 half-bridge driver (NSD8308, NSD8306, NSD8312)
Relay & solenoid (NSD56008)
Automotive MCU+ (NSUC1602, NSUC1610, NSUC1612)



Power management

Flyback (NSR2240x, NSR2260x, NSR28C4x)
Buck (NSR1143x, NSR1103x)
LDO (NSR31xxx, NSR33xxx, NSR35xxx)

Interface

CAN transceiver (NCA1043B, NCA1044/57, NCA1462, NCA1145B)
LIN transceiver (NCA1021S)

Protection & reference & others

High side switch (NSE34xxx, NSE35xxx)
Low side switch (NSE11409, NSD12409, NSD11/2416)
Voltage supervisor (NSR7808)

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MCU

MCU (NS300K214, NS300K116, NSUC1700)

Current & voltage & temperature sensing

Hall sensor (NSM201x, NSM211x)

Isolated amplifier (NSI1300, NSI1400, NSI1311, NSI1611)

Temperature sensor (NST20, NST175)

Amplifier (NSOPA9xxx, NSOPA8xxx, LM29xx, NSOPA610x)

Comparator (LM29xx, NSCMP302x)

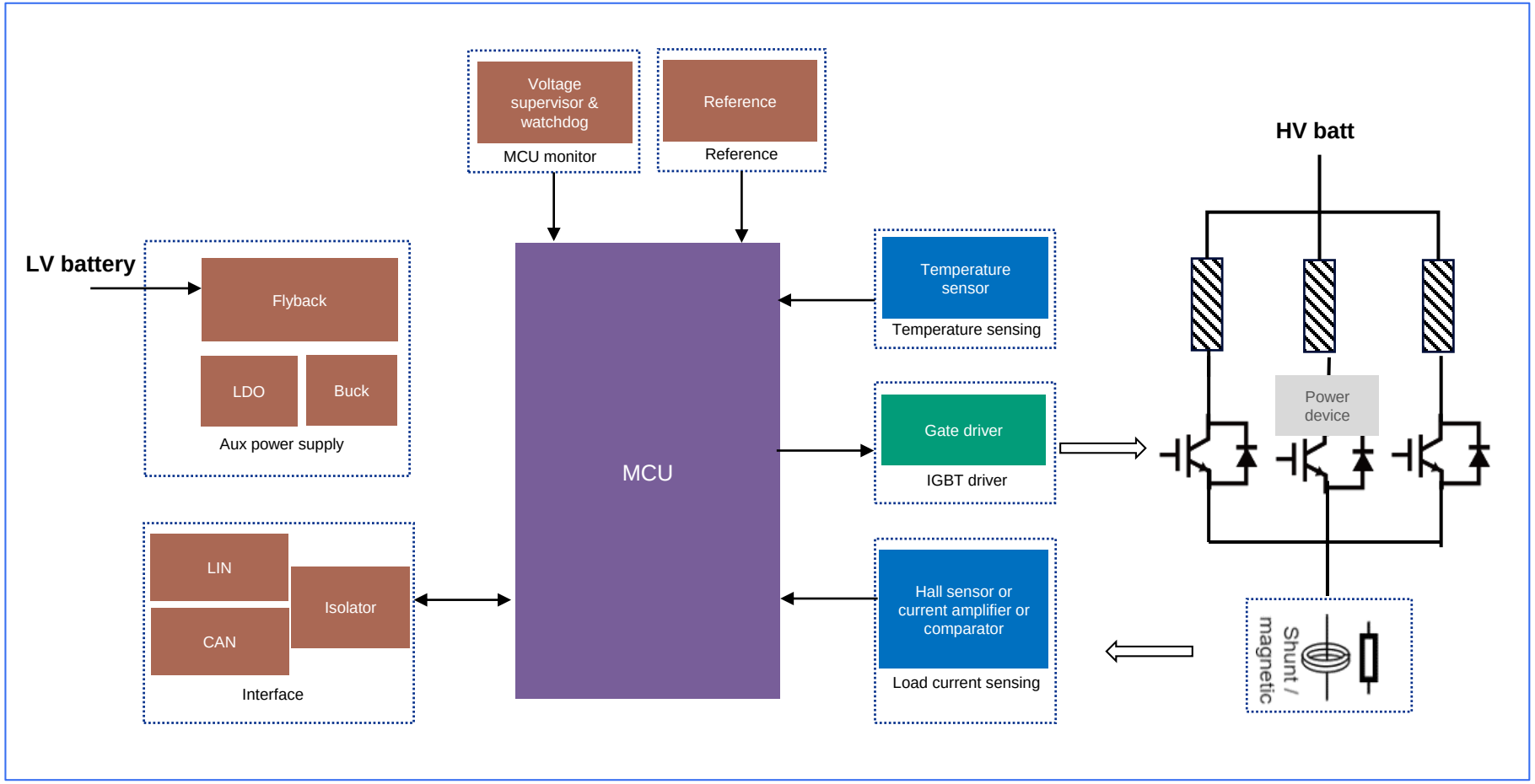
Current amplifier (NSCSA21x, NSCSA240Ax)

Gate driver & motor driver

Single channel isolated driver (NSI6601M, NSI6601ME, NSI6601, NSI6601AE)

Dual-channel isolated driver (NSI6602V, NSI6602ME)

Non-isolated driver (NSD1026V, NSD10151, NSD1015MT)



Power management

Flyback (NSR2240x, NSR2260x, NSR28C4x)
Buck (NSR1143x, NSR1103x)
LDO (NSR31xxx, NSR33xxx, NSR35xxx)

Interface & digital isolation

CAN transceiver (NCA1043B, NCA1145B, NCA1044/57, NCA1462)

LIN transceiver (NCA1021S)
Digital isolator (NSI822x)

Protection & reference & others

Voltage supervisor (NSR7808)
Reference (NSREF30xx, NSREF31xx)

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E-Compressor

NOVOSENSE

MCU

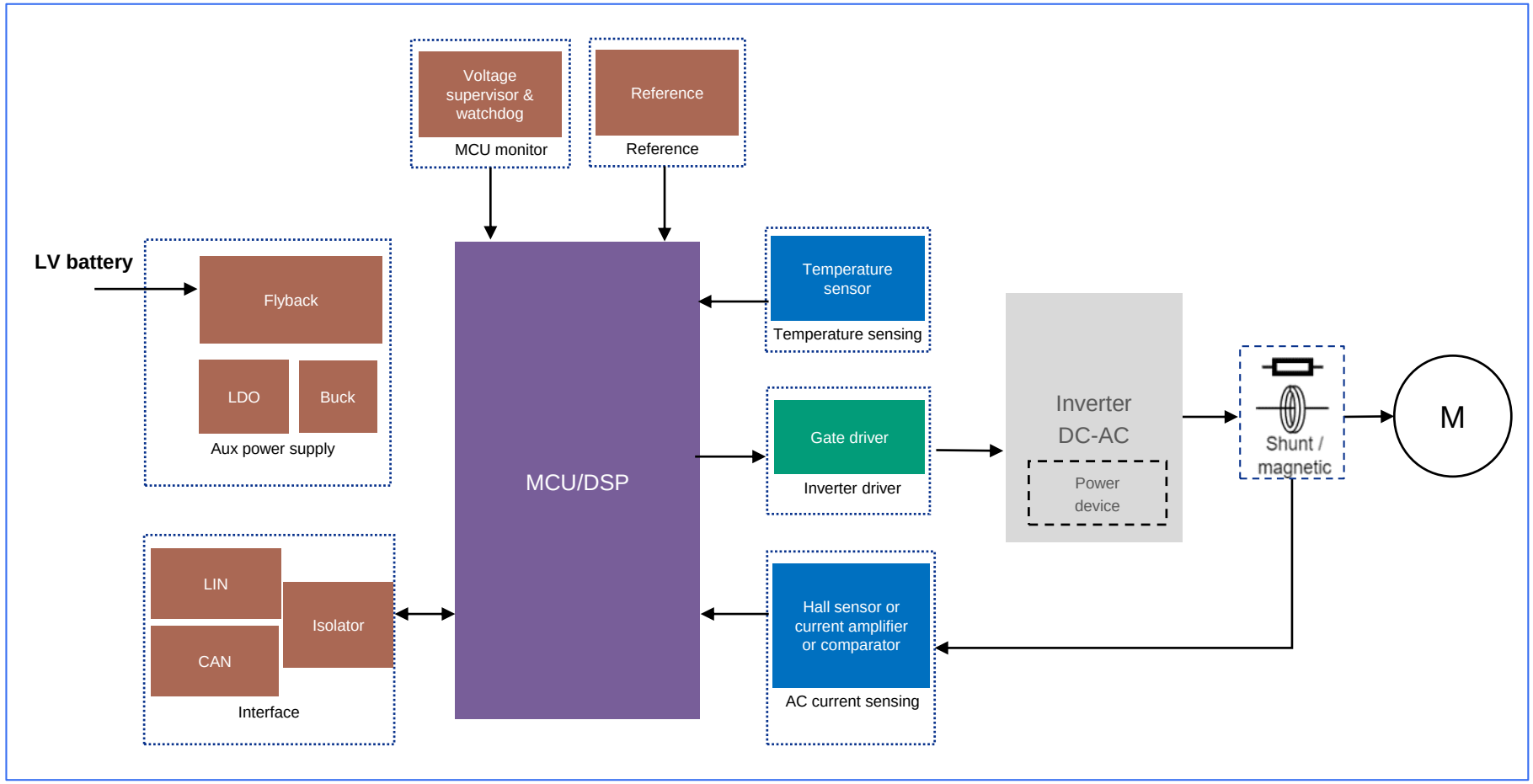
MCU (NSCU1700, NS800RT3025)

Current & voltage & temperature sensing

Hall sensor (NSM201x, NSM211x)
Isolated amplifier (NSI1300, NSI1400, NSI1311, NSI1611)
Temperature sensor (NST20, NST175)
Amplifier (NSOPA9xxx, NSOPA8xxx, LM29xx, NSOPA610x)
Comparator (LM29xx, NSCMP302x)
Current amplifier (NSCSA240Ax)

Gate driver & motor driver

Single channel isolated driver (NSI6601M, NSI6601ME, NSI6601AE)
Half bridge isolated driver (NSI6602V, NSI6602ME)
Non-isolated half bridge driver (NSD1624x)
Non-isolated driver (NSD1015MT)



Power management

Flyback (NSR2240x, NSR2260x, NSR28C4x)
Buck (NSR1143x, NSR1103x)
LDO (NSR31xxx, NSR33xxx, NSR35xxx)

Interface & digital isolation

CAN transceiver (NCA1043B, NCA1145B, NCA1044/57, NCA1462)
LIN transceiver (NCA1021S)
Digital isolator (NSI822x)

Protection & reference & others

Voltage supervisor (NSR7808)
Reference (NSREF30xx, NSREF31xx)

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Automotive LED Driver Solution

Rear Light System

MCU

MCU (NS300K116, NSUC1700)

Power management

Buck (NSR114xx)
LDO (NSR31xxx, NSR33xxx, NSR35xxx)
Supervisor (NSR7808)
SBC (NSR926x)

Interface & digital isolation

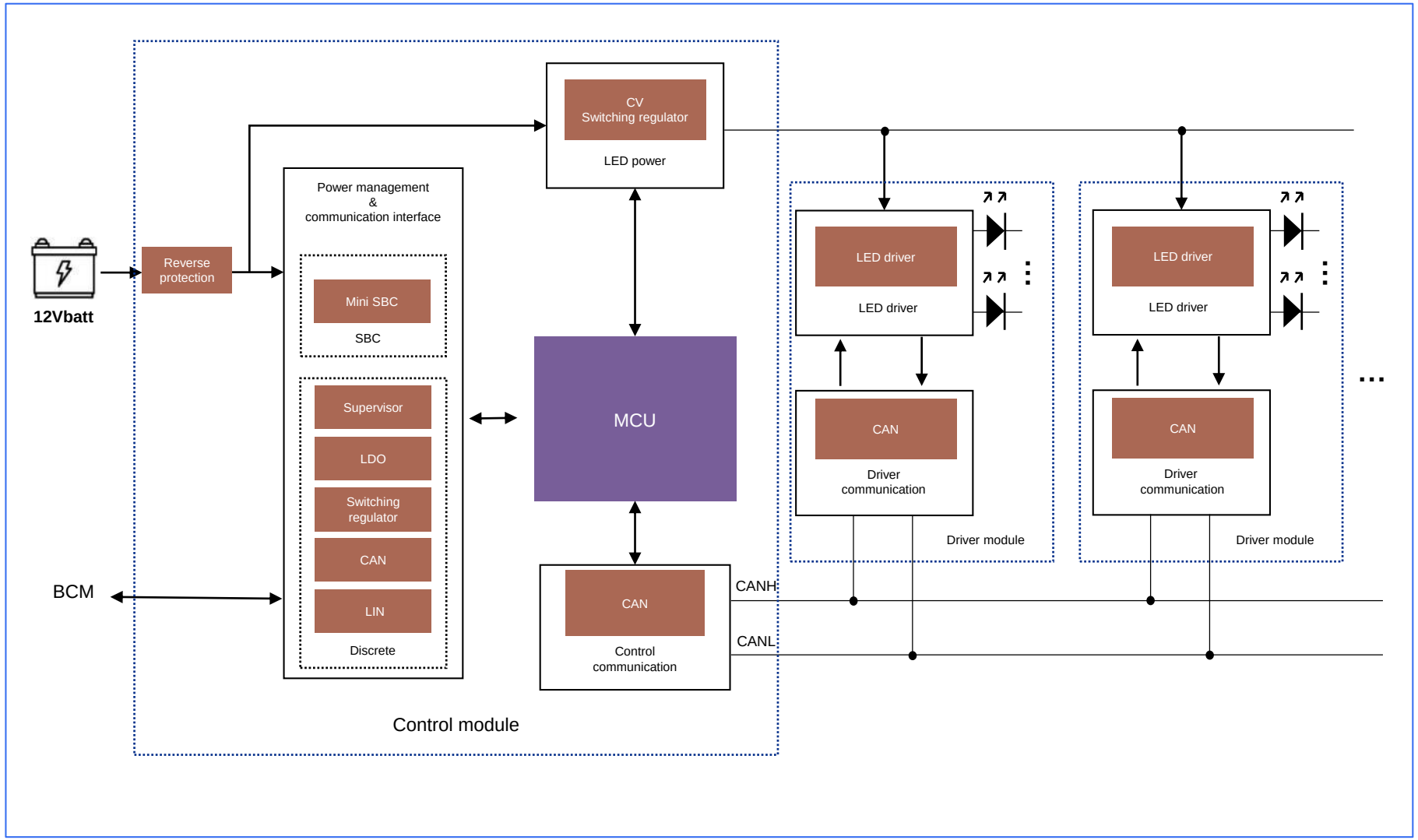
CAN transceiver (NCA1043(B), NCA1042B/NCA1044, NCA1145, NCA1169)
LIN (NCA1021S)
Mini SBC (NCA1169)

LED driver

LED driver (NSL2161x, NSL2163x, NSL21912, NSL23916, NSL23924, NSL23716x)

Protection

Reverse protection (NSE14700, NSE14500)



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Headlight System

MCU

MCU (NS800RT5039)

Motor driver

Stepper motor driver (NSD8381)

Power management

LDO (NSR31xxx, NSR33xxx, NSR35xxx)
SBC (NSR926x)

Protection

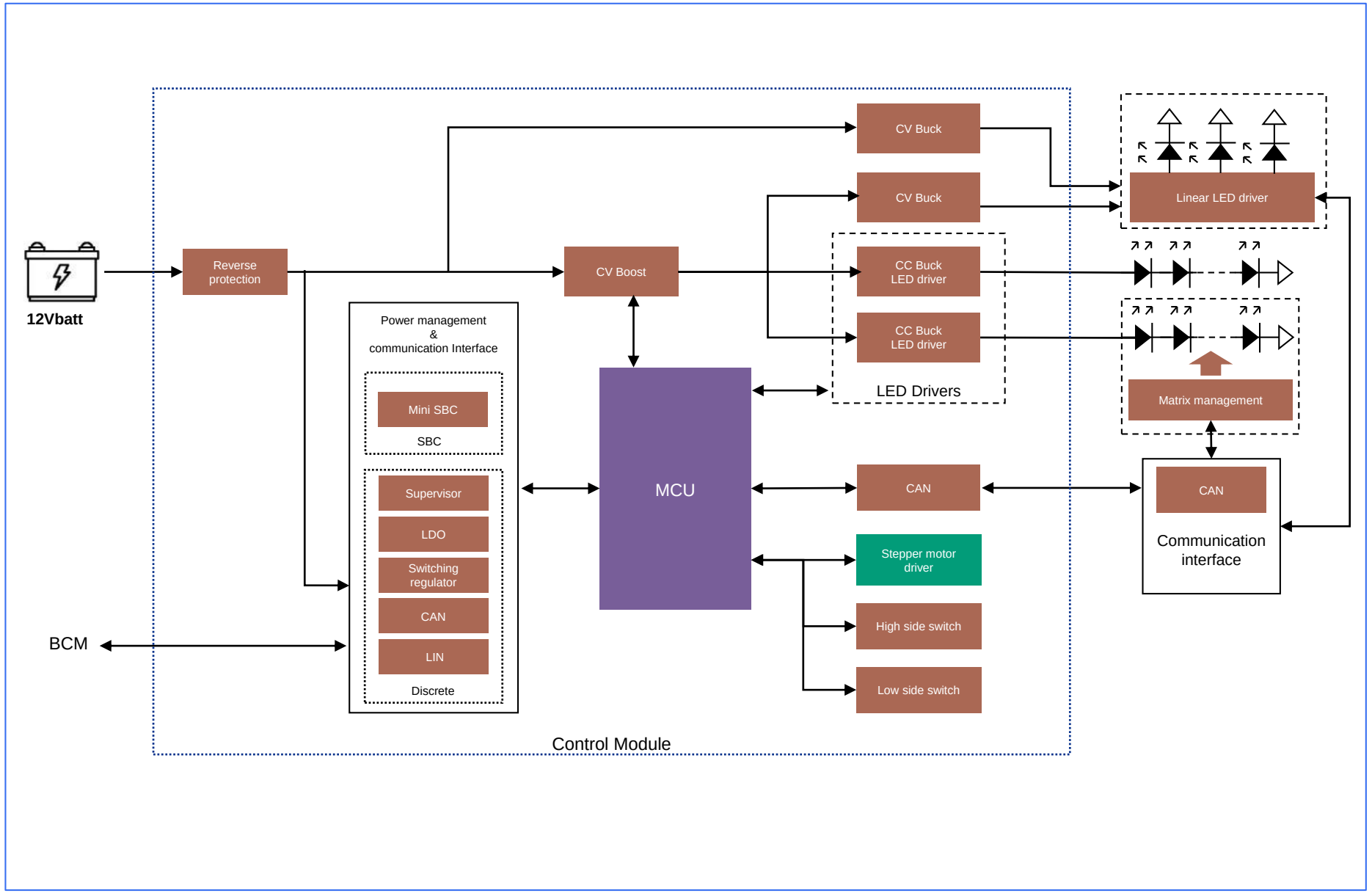
High side switch (NSE34xxx, NSE35xxx)
Low side switch (NSE11409, NSD12409, NSD11/2416)
Reverse protection (NSE14700, NSE14500)

Interface & digital isolation

CAN transceiver (NCA1043(B), NCA1042B/NCA1044, NCA1145, NCA1169)
LIN (NCA1021S)
Mini SBC (NCA1169)

LED driver

LED driver CC Buck (NSL31520)
CV Boost (NSL31682)
LED driver (NSL2161x, NSL2163x, NSL21912, NSL23916, NSL23924, NSL23716x)



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Ambient Light System (Single RGB)

MCU

MCU (NS800RTxx)

Automotive MCU+

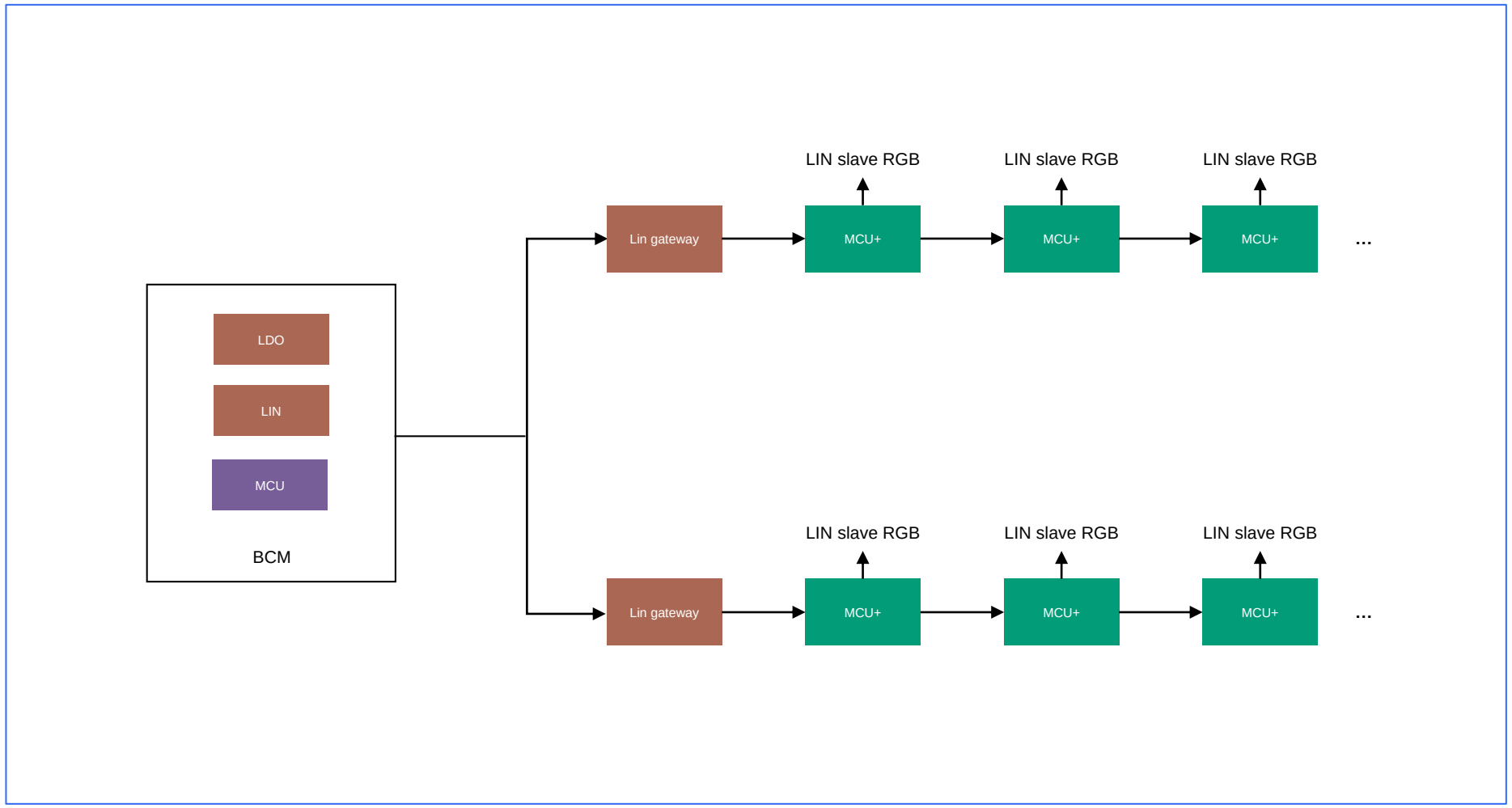
MCU+Lighting (NSUC1500)

Power management

LDO (NSR31xxx)

Interface

LIN transceiver (NCA1021S)



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Ambient Light System (Multi RGBs)

MCU

MCU (NS800RTxx)

Automotive MCU+

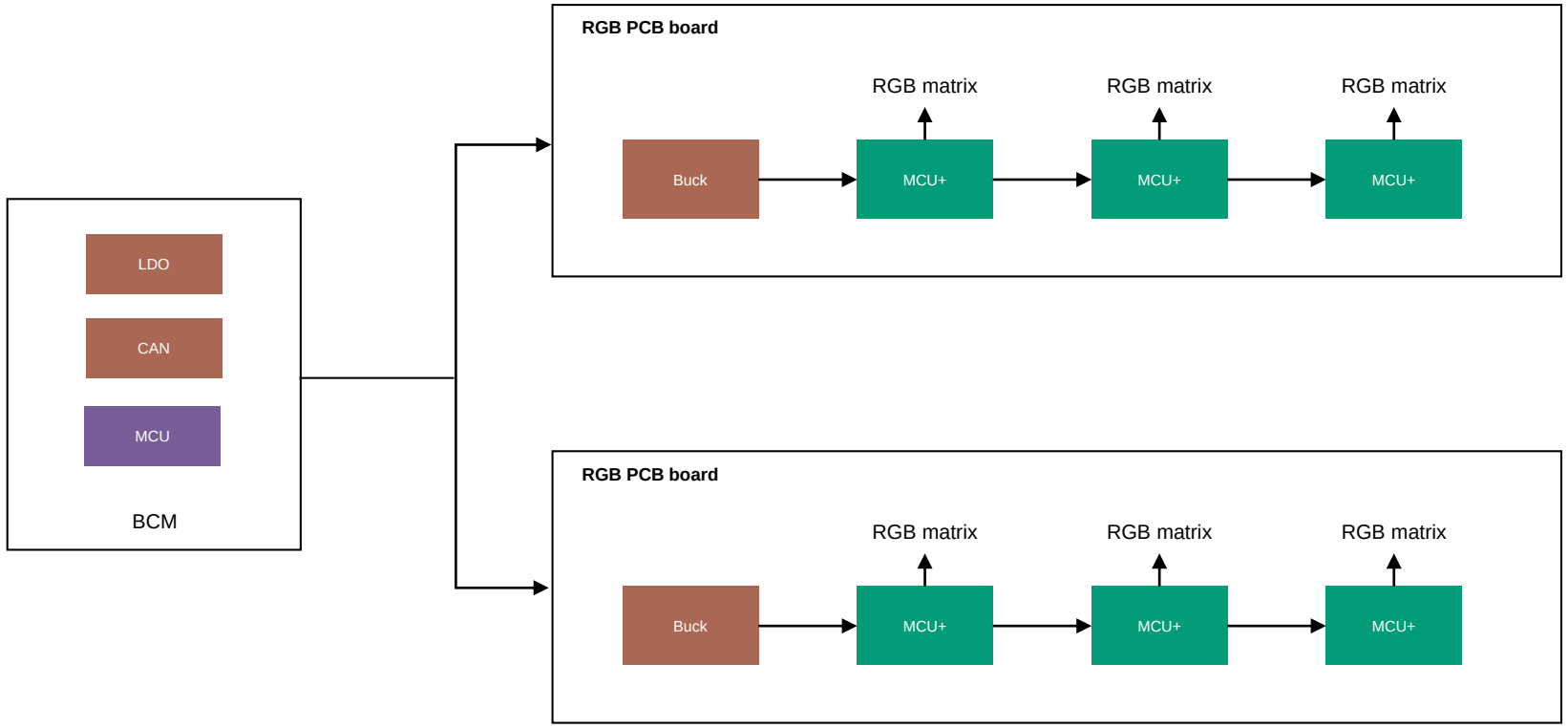
MCU+Lighting (NSUC1527)

Power management

LDO (NSR31xxx)
Buck (NSR114xx)

Interface

CAN transceiver (NCA1044)



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Automotive Chassis Control System

Suspension System (Air Spring + CDC)

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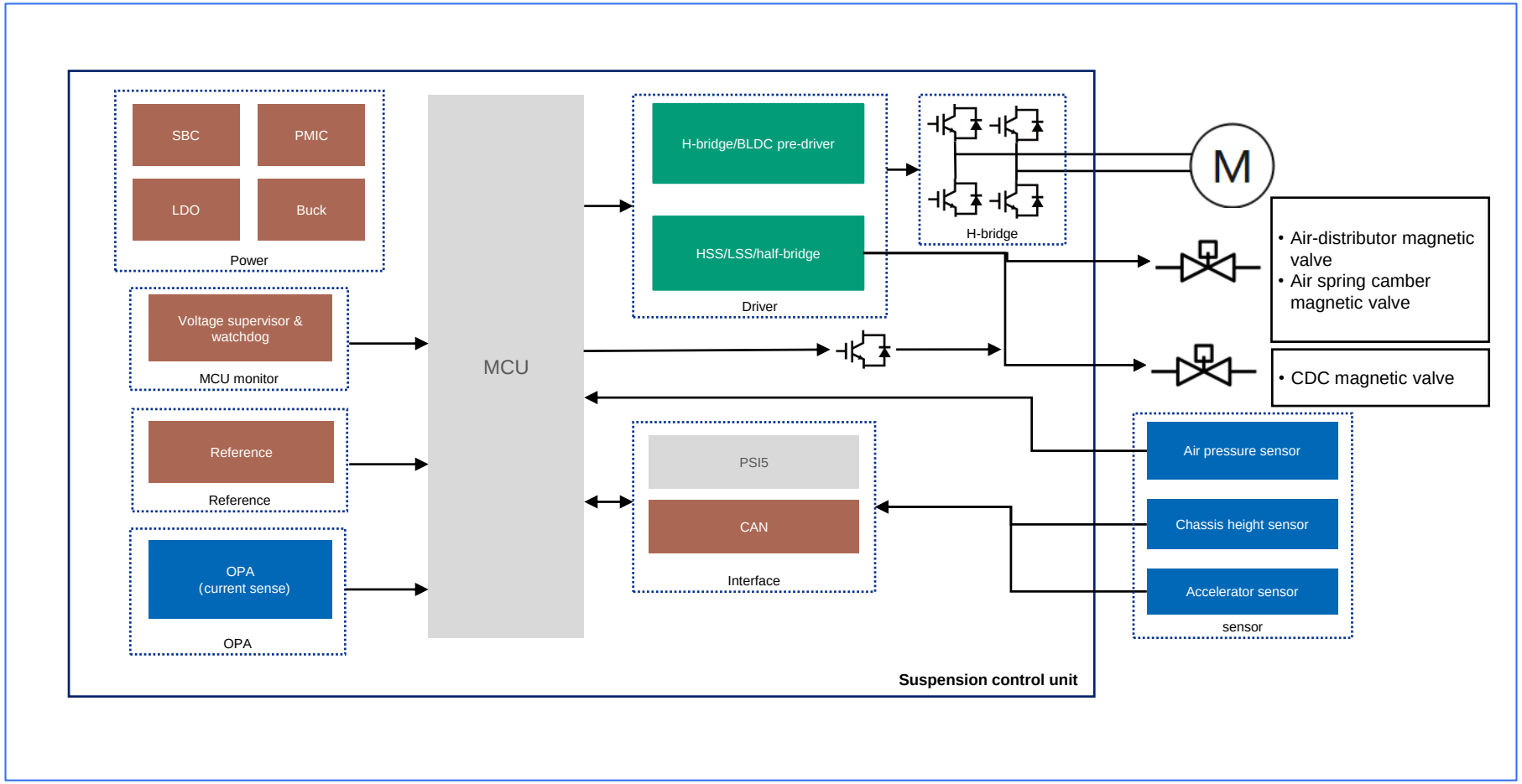
Current & pressure & position sensing

Hall sensor (NSM201x, NSM211x, NSM204x)
Amplifier (NSOPA9xxx, NSOPA8xxx, LM29xx)
Current sense amplifier (NSCSA24x, NSCSA21x)
Comparator (NSCMP302x, LM29xx, NSCMP302x)
Pressure sensor conditioning IC (NSA926x, NSC926x)
Chassis height sensor (NSM3219)
Hall switch (MT83xx, MT89xx, MT72xx, MT73xx)
Isolated amplifier (NSI1300, NSI1400, NSI36(C)0x(R))

Motor & magnetic valve driver

Multi-channel pre-driver (NSD360x)
High side switch (NSE34xxx, NSE35xxx)
Low side switch (NSE11409, NSD1x4xx, NSD56008)
Half-bridge driver (NSD7315)



Power management

LDO (NSR30xxx, NSR31xxx, NSR33xxx, NSR35xxx)
Buck (NSR104xx, NSR106xx, NSR114xx, NSR110xx)
SBC (NSR926x, NCA1169)

Interface

CAN transceiver (NCA104x, NCA1057, NCA1462, NCA1145B)
LIN transceiver (NCA102x)

Protection & reference & others

Tracking LDO (NSE425x)
Supervisor (NSR7808)
Watchdog (NSR7850)
Reference (NSREF30xx, NSREF31xx)
I/O expander (NCA9539)
Reverse protection (NSE14700, NSE14500)

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Electric Power Steering (EPS) System

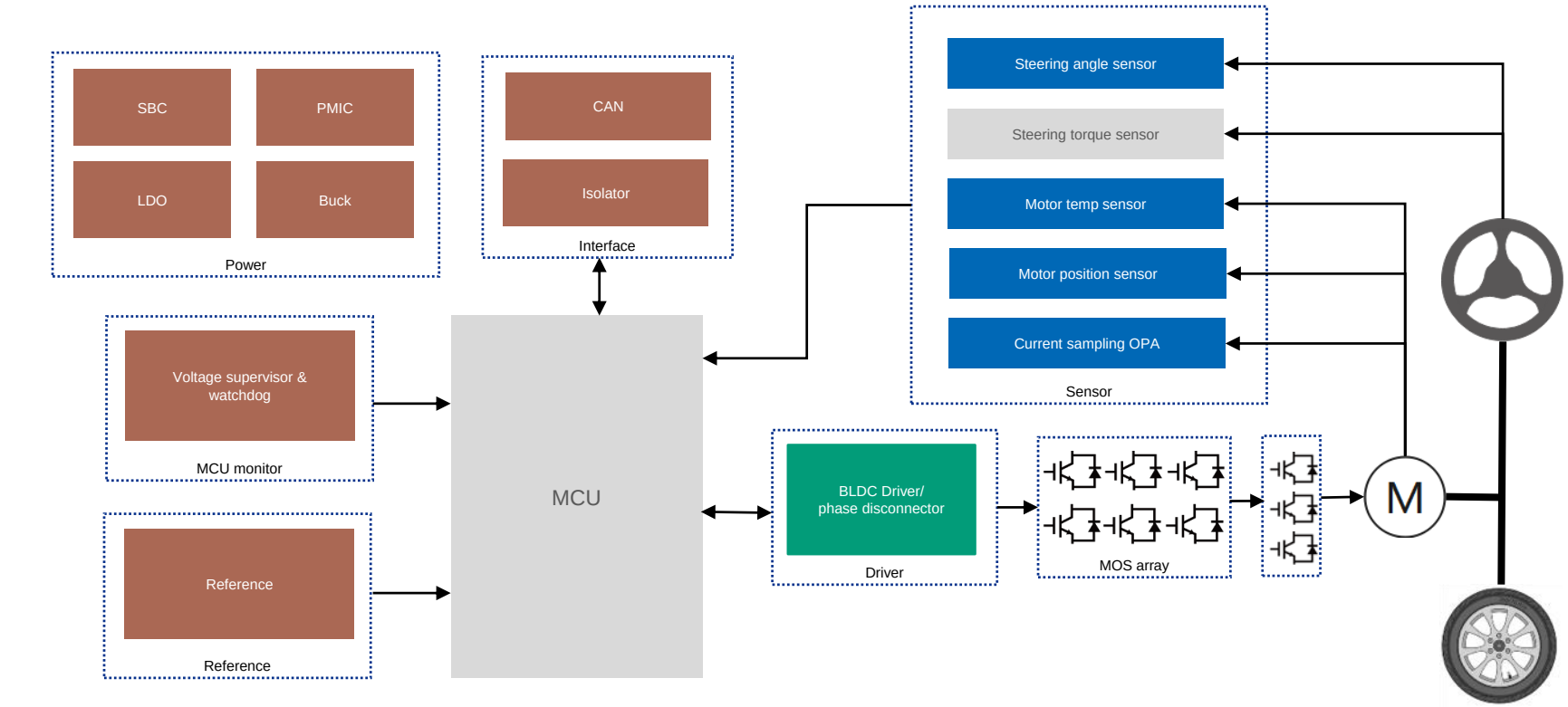
NOVOSENSE

Current & position sensing

Hall sensor (NSM201x, NSM2040)
Amplifier (NSOPA9xxx, NSOPA8xxx, LM29xx)
Current sense amplifier (NSCSA24x, NSCSA21x)
Comparator (NSCMP302x, LM29xx, NSCMP302x)
Motor position sensor (MT6511)
Steering angle sensor (MT6501/11/21)
Temperature sensor(NST175/235, NST86/60)
Hall switch (MT83xx, MT89xx, MT72xx, MT73xx)

Motor driver

Phase disconnector (NSD3661/2)



Note: Redundant EPS may use double quantity components per need.

Power management

LDO (NSR30xxx, NSR31xxx, NSR33xxx, NSR35xxx)
Buck (NSR104xx, NSR106xx, NSR114xx, NSR110xx)
SBC (NSR926x, NCA1169)

Interface

CAN transceiver (NCA104x, NCA1057, NCA1462, NCA1145B)
LIN transceiver (NCA102x)

Protection & reference & others

Supervisor (NSR7808)
Watchdog (NSR7850)
Reference (NSREF30xx, NSREF31xx)
Reverse protection (NSE14700, NSE14500)

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Steer-by-Wire (SBW) System

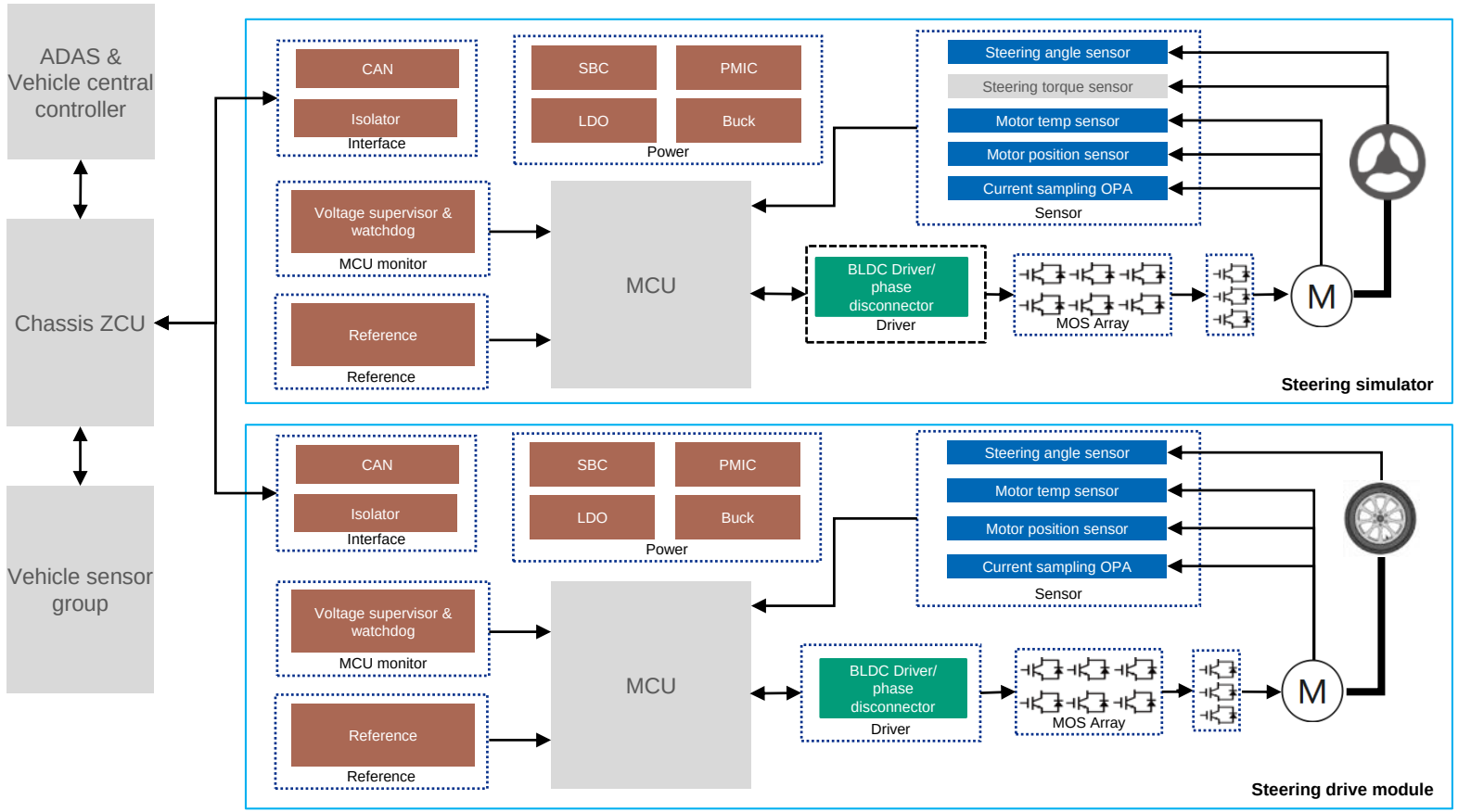
NOVOSENSE

Current & position & torque sensing

Hall sensor (NSM201x, NSM2040)
Amplifier (NSOPA9xxx, NSOPA8xxx)
Current sensing amplifier (NSCSA24x, NSCSA21x)
Comparator (NSCMP302x)
Motor position sensor (MT6511)
Steering angle sensor (MT6511, MT652x)
Temperature sensor (NST175/235, NST86/60)
Hall switch (MT83xx, MT89xx, MT72xx, MT73xx)

Motor driver

Phase disconnector (NSD3661/2)



Note: Due to functional safety requirements, the number of EE components may double as needed.

Power management

LDO (NSR30xxx, NSR31xxx, NSR33xxx, NSR35xxx)
Buck (NSR104xx, NSR106xx, NSR114xx, NSR110xx)
SBC (NSR926x, NCA1169)

Interface & digital isolation

CAN transceiver (NCA104x, NCA1057, NCA1462, NCA1145B)
LIN transceiver (NCA102x)
Digital Isolator (NSI824x, NSI83xx)

Protection & reference & others

Tracking LDO (NSE425x)
Supervisor (NSR7808)
Watchdog (NSR7850)
Reference (NSREF30xx, NSREF31xx)
I/O expander (NCA9539)
Reverse protection (NSE14700, NSE14500)

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Electro-Hydraulic Brake (EHB) System (Two-box)

NOVOSENSE

Current sensing

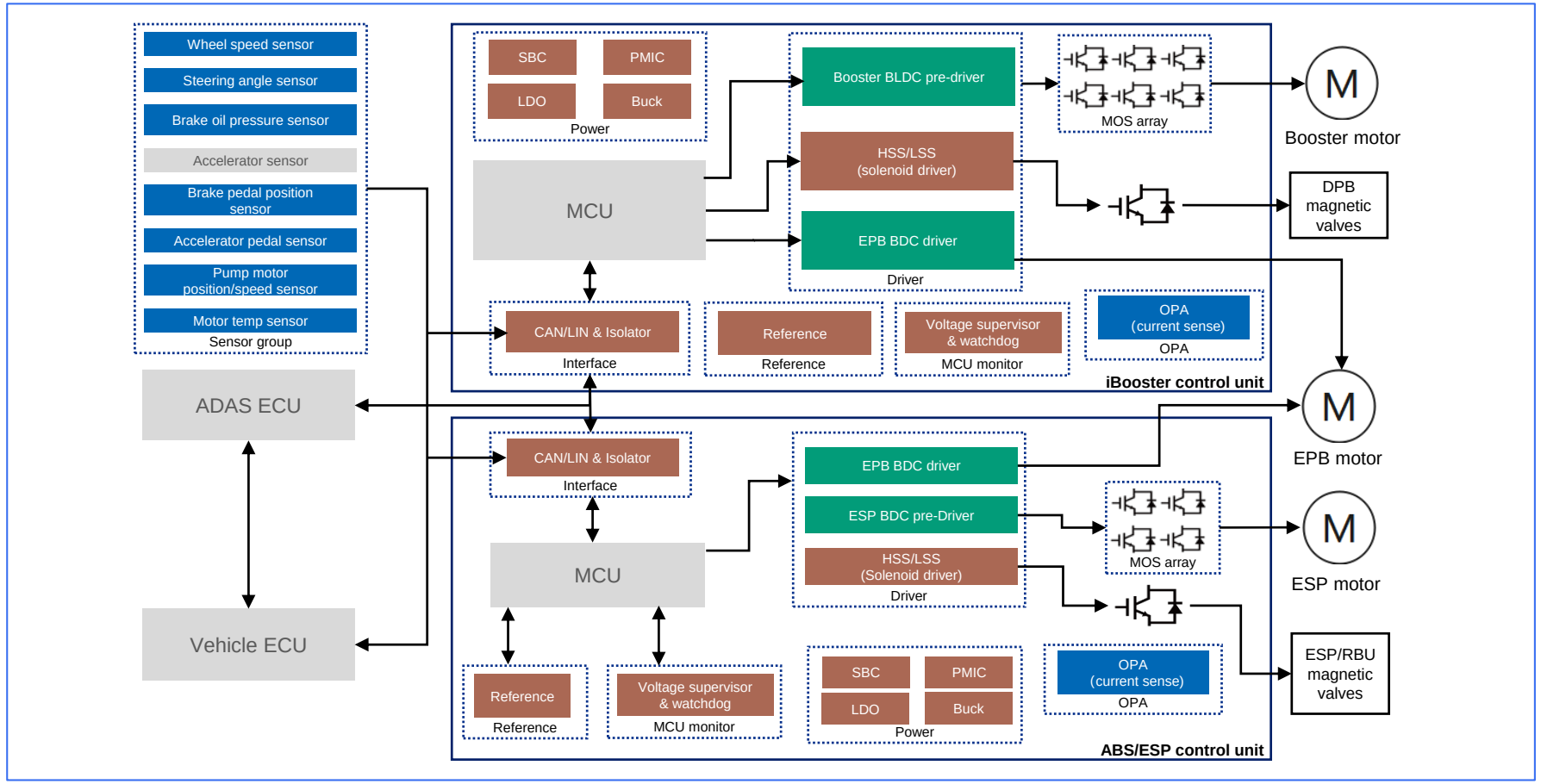
Hall sensor (NSM201x, NSM2040)
Amplifier (NSOPA9xxx, NSOPA8xxx)
Current sensing (NSCSA24x)
Comparator (NSCMP302x)

Sensor group

Wheel speed sensor (NSM41xx)
BLDC angle sensor (MT6511)
Brake oil pressure sensor (NSA9266)
Brake pedal position sensor (MT652x)
Accelerator pedal sensor (MT6511/2x)
Pump motor position sensor (MT6511)
Temperature sensor (NST175/235, NST86/60)

Driver

Half-bridge pre-driver (NSD3602/4)
Half-bridge driver (NSD7315)
High side switch (NSE34xxx, NSE35xxx)
Low side switch (NSE11409, NSD1x4xx, NSD56008)



Power management

LDO (NSR30xxx, NSR31xxx, NSR33xxx, NSR35xxx)
Buck (NSR104xx, NSR106xx, NSR114xx, NSR110xx)
SBC (NSR926x, NCA1169)

Interface & digital isolation

CAN transceiver (NCA104x, NCA1057, NCA1462, NCA1145B)
Isolator (NSI824x, NSI83xx)

Protection & reference & others

Tracking LDO (NSE425x)
Supervisor (NSR7808)
Watchdog (NSR7850)
Reference (NSREF30xx, NSREF31xx)
I/O expander (NCA9539)
Reverse protection (NSE14700, NSE14500)

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Electro-Hydraulic Brake (EHB) System (One-box)

NOVOSENSE

Current sensing

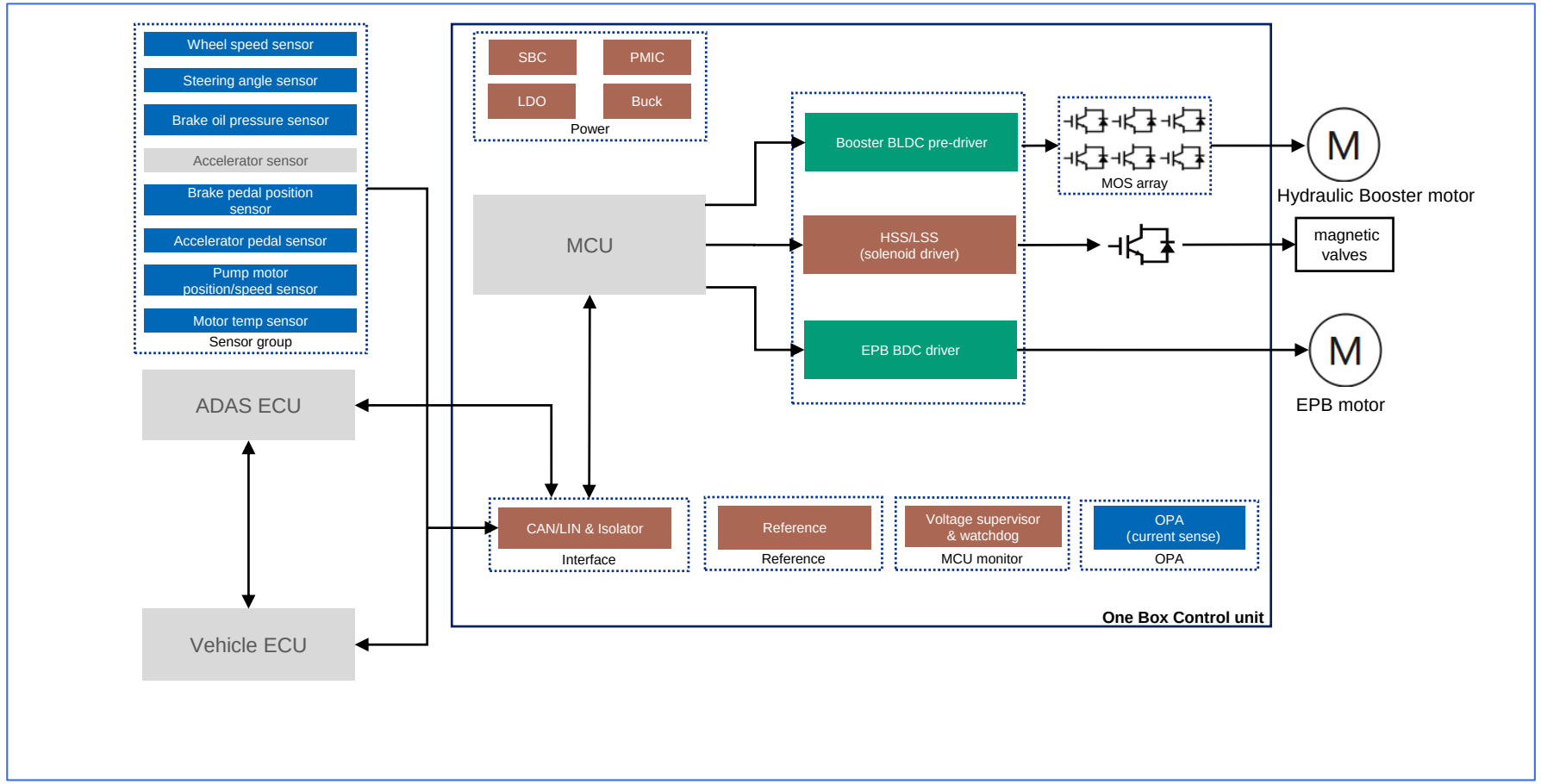
Hall sensor (NSM201x, NSM2040)
Amplifier (NSOPA9xxx, NSOPA8xxx)
Current sensing (NSCSA24x)
Comparator (NSCMP302x)

Sensor group

Wheel speed sensor (NSM41xx)
BLDC angle sensor (MT6511)
Brake oil pressure sensor (NSA9266)
Brake pedal position sensor (MT652x)
Accelerator pedal sensor (MT6511/2x)
Pump motor position sensor (MT6511)
Temperature sensor (NST175/235, NST86/60)

Driver

Half-bridge pre-driver (NSD3602/4)
Half-bridge driver (NSD7315)
High side switch (NSE34xxx, NSE35xxx)
Low side switch (NSE11409, NSD1x4xx, NSD56008)



Power management

LDO (NSR30xxx, NSR31xxx, NSR33xxx, NSR35xxx)
Buck (NSR104xx, NSR106xx, NSR114xx, NSR110xx)
SBC (NSR926x, NCA1169)

Interface & digital isolation

CAN transceiver (NCA104x, NCA1057, NCA1462, NCA1145B)
Isolator (NSI824x, NSI83xx)

Protection & reference & others

Tracking LDO (NSE425x)
Supervisor (NSR7808)
Watchdog (NSR7850)
Reference (NSREF30xx, NSREF31xx)
I/O expander (NCA9539)
Reverse protection (NSE14700, NSE14500)

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Electro-Mechanical Brake (EMB) System

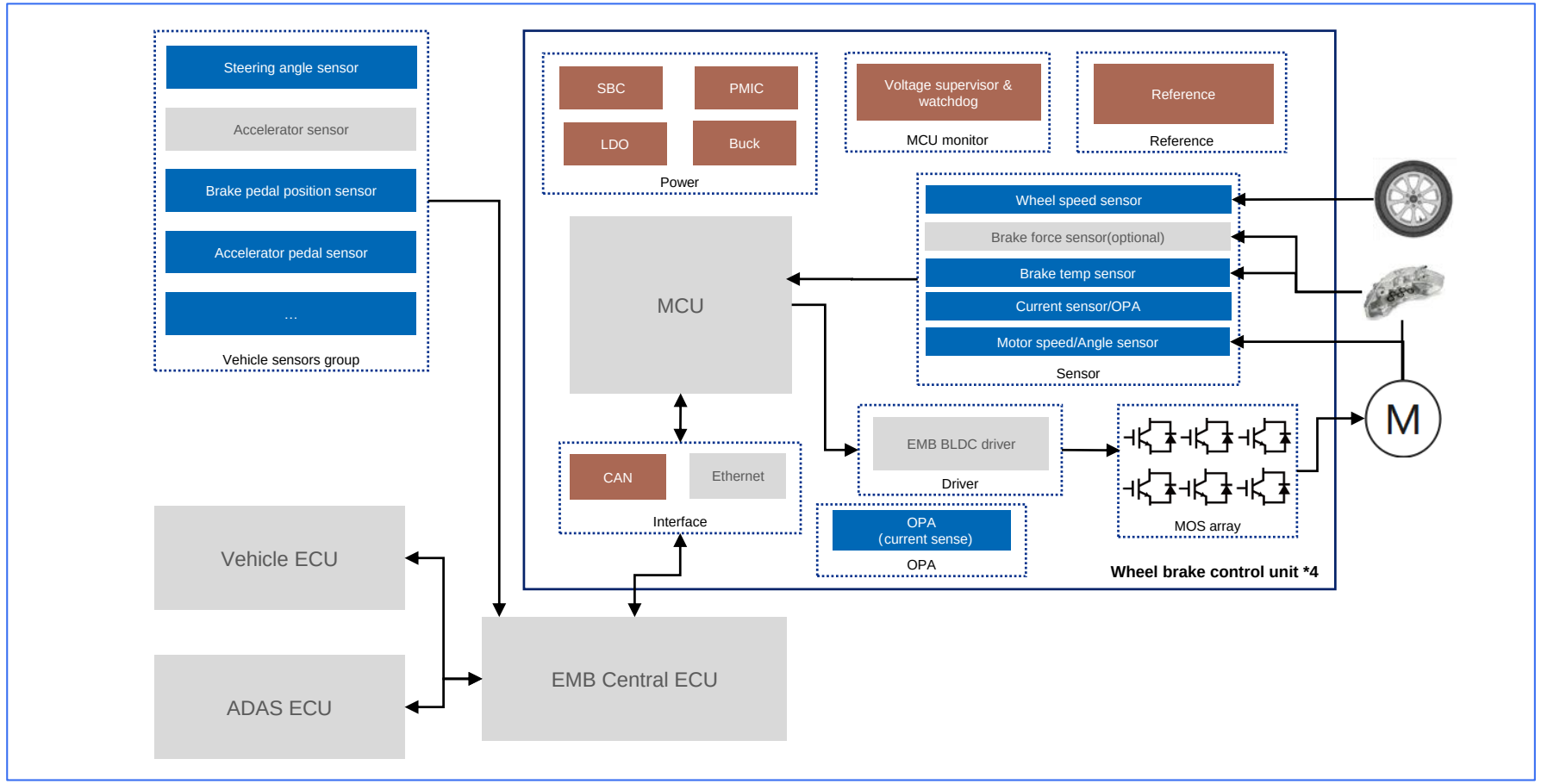
NOVOSENSE

Current sensing

Hall sensor (NSM201x, NSM2040)
Amplifier (NSOPA9xxx, NSOPA8xxx)
Current sensing amplifier (NSCSA24x, NSCSA21x)
Comparator (NSCMP302x)

Sensor group

Wheel speed sensor (NSM41xx)
Steering Angle sensor (MT6511, MT652x)
Brake oil pressure sensor (NSA9266)
Brake pedal position sensor (MT652x)
Accelerator pedal sensor (MT652x)
Motor position sensor (MT6511)
Temperature sensor (NST175/235, NST86/60)



Power management

LDO (NSR30xxx, NSR31xxx, NSR33xxx, NSR35xxx)
Buck (NSR104xx, NSR106xx, NSR114xx, NSR110xx)
SBC (NSR926x, NCA1169)

Interface & digital isolation

CAN transceiver (NCA104x, NCA1057, NCA1462, NCA1145B)
Isolator (NSI824x, NSI83xx)

Protection & reference & others

Tracking LDO (NSE425x)
Supervisor (NSR7808)
Watchdog (NSR7850)
Reference (NSREF30xx, NSREF31xx)
I/O expander (NCA9539)
Reverse protection (NSE14700, NSE14500)

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Powertrain & Vehicle Safety System

Fuel Powertrain & Fuel Supply System

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1. Intake Manifold Pressure and Temperature Sensor
2. Super TMAP/EGR Pressure and Temperature Sensor
3. Canister Desorption Pressure Sensor
4. Barometric Pressure Sensor
5. Seat Massage Bladder Pressure Sensor
6. Mass Airflow Sensor (MAF)
- Pressure Sensor ICs: NSPAS1, NSPAS3N/3M, NSPAS5, NSPAD1N
- Pressure Sensor MEMS: NSP1630/1, NSP1632(Pt)
- Signal Conditioning ASICs: NSA9260X (Analog), NSA9268 (Analog)

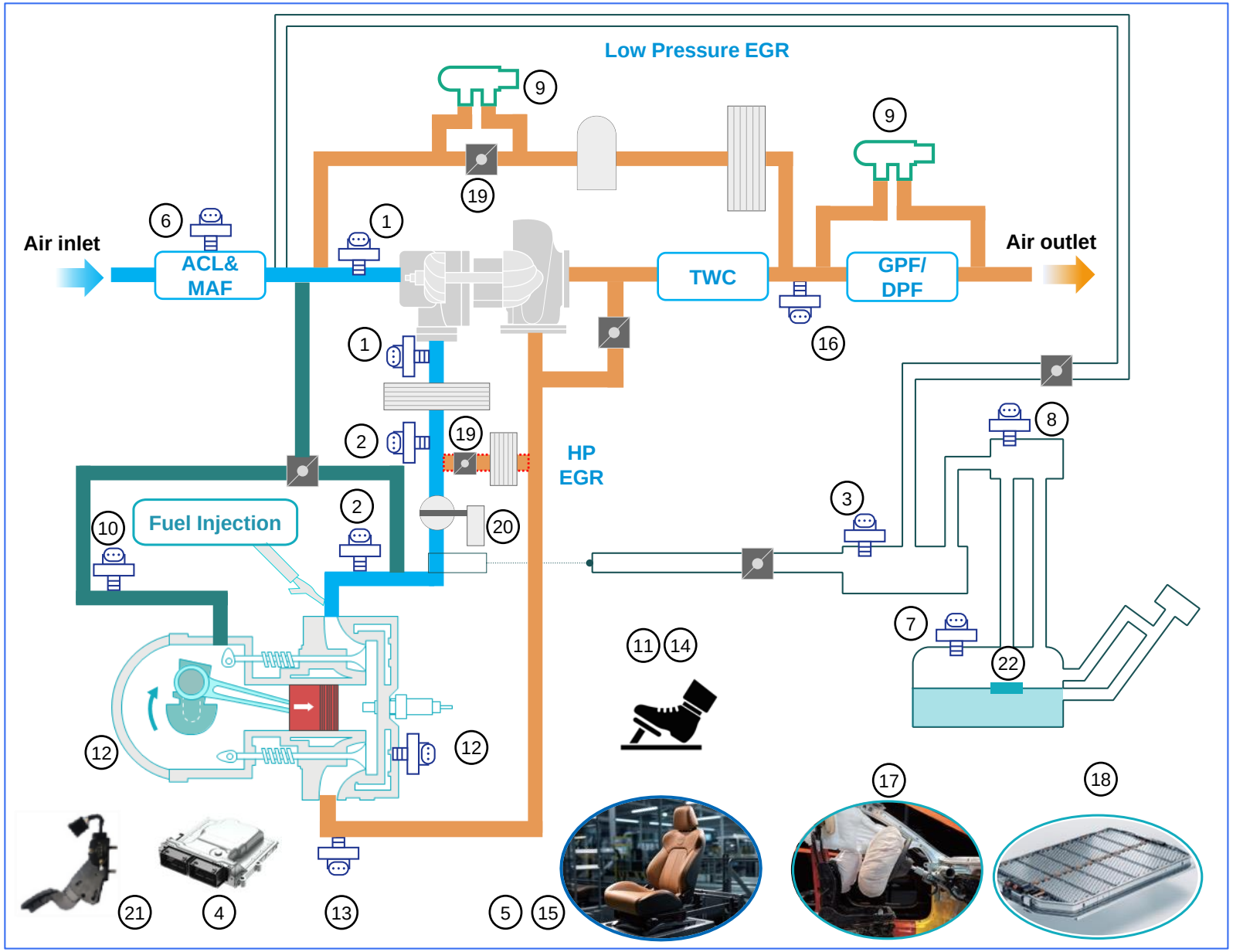
7. EVAP Fuel Vapor Pressure Sensor
8. Fuel Pump Output Pressure Sensor
9. GPF/DPF/EGR Differential Pressure Sensor
10. Crankcase Ventilation Pressure Sensor (PCV)
11. Vacuum Booster Pressure Sensor
- Pressure Sensor Modules: NSPGL1, NSPGL2
- Pressure Sensor MEMS: NSP1830/1, NSP1832(Pt), NSP2881/4
- Signal Conditioning ASICs: NSA9260X (Analog), NSA9268 (Analog)

12. Oil and Fuel Injection Pressure Sensor
13. Exhaust Back Pressure Sensor (EBP)
14. ABS & ESP Brake Pressure Sensor
15. Thermal Management System Pressure & Temperature Sensor
16. Urea Injection Pressure Sensor
- Signal Conditioning ASICs: NSA/C9260X (Analog), NSC9262 (LIN), NSA9268 (Analog), NSA9266 (SENT)
- Temperature & Humidity Sensors: NSHT30, NST60/86/235, NST175H

17. Side Impact Airbag Pressure Sensor
- Pressure Sensor IC: NSPAD9

18. Battery Pack Thermal Runaway Pressure Sensor (BPS)
- Pressure Sensor IC: NSPAD3N

19. EGR Valve Position Sensor
20. Throttle Position Sensor
21. Accelerator Pedal Position Sensor
22. Fuel Tank Level Sensor
- Magnetic Angle Sensor ICs: NSM3011/12, MT6501, MT6511, MT652x



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Application Solution

Application Note

Technical Video

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