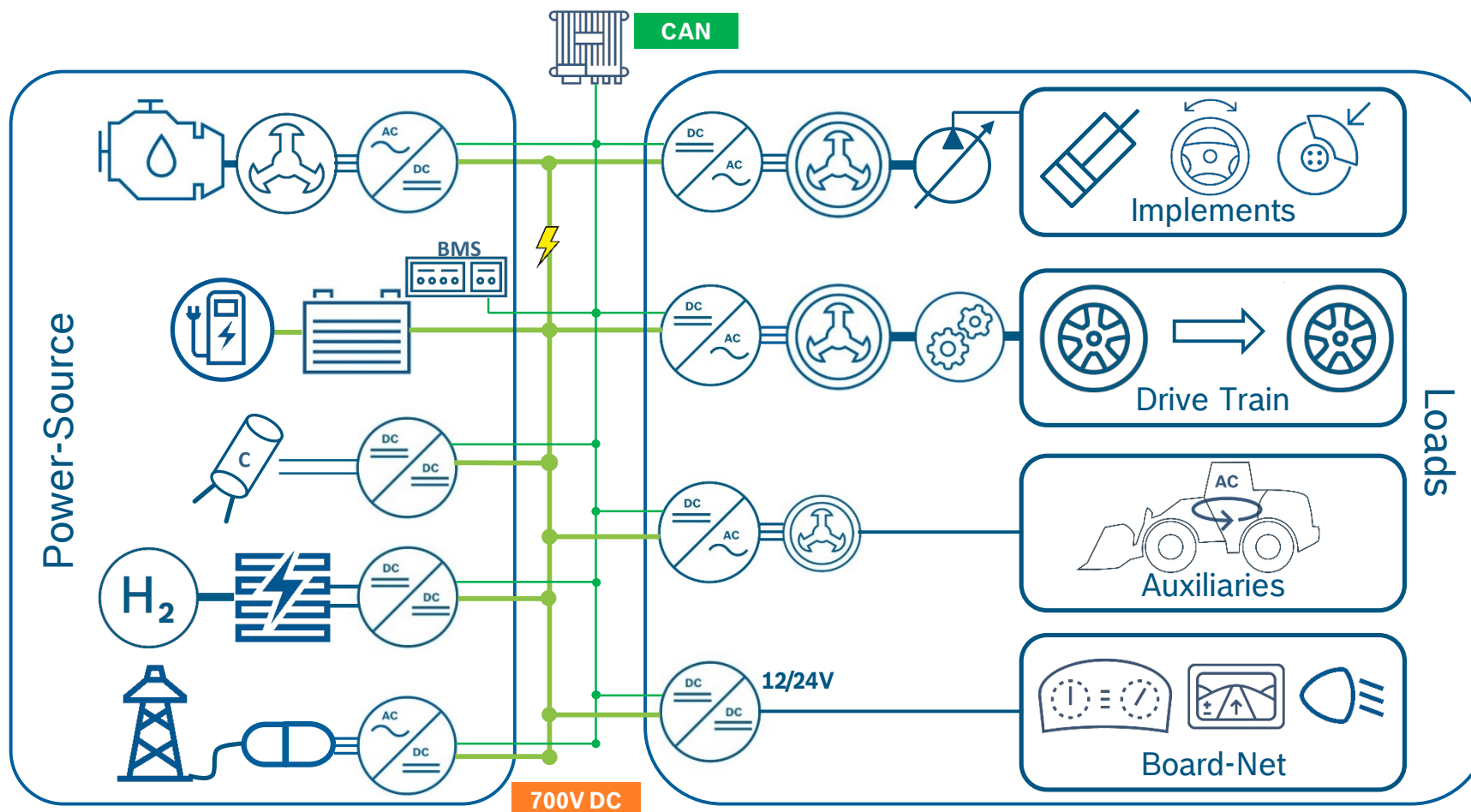




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OFF-HIGHWAY ELECTRIFICATION

# ELECTRIFIED SYSTEM – OVERVIEW



Please choose!

**HOME  
OVERVIEW  
CUSTOMER BENEFITS  
COMPONENTS**

Inverter EDS1H series

700V Electric motor and generator  
EMS1H-13

700V Electric motor and generator  
EMS1H-20

Motors and generators scalability

ROTATRAC eGFT 8000

ROTATRAC eGFZ 9100/H

ROTATRAC eGFZ 9200

Software functions

## OFF-HIGHWAY ELECTRIFICATION

# CUSTOMER BENEFITS



*Please choose!*

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ROTATRAC eGFZ 9200

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# OFF-HIGHWAY ELECTRIFICATION COMPONENTS

Please  
choose



Inverter  
EDS1H series



Electric motor / generator  
EMS1H-13



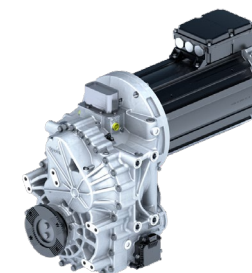
Electric motor / generator  
EMS1H-20



eGFT 8000



eGFZ 9100/H



eGFZ 9200

Please choose!

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OFF-HIGHWAY ELECTRIFICATION

# INVERTER EDS1H SERIES

**SAFETY  
ON  
BOARD**



## Technical data

Voltage level	400 ... 700 VDC
Nominal current	30 ... 300 A
Maximal current	75 ... 750 A
Nominal power	15 ... 250 kW
Maximal power	40 ... 720 kW

## Features

- Efficiency up to **98 %**
- Compact and modular design for power scaling
- Designed for Off-Highway:
  - Ambient temperature up to **-40 / +85 °C**
  - Ingress protection class **IP67**
  - Mechanical resist. up to **Shock 40 g, Vibration 7 g**
- Control voltage **12 V** and **24 V**
- Integrated controller for modular vehicle software and power management
- Integrated **ISO 13849** safety functions
- High voltage Interlock plugs
- Liquid cooling
- CAN Communication
- Data source for IoT

Please choose!

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OFF-HIGHWAY ELECTRIFICATION

# 700V ELECTRIC MOTOR AND GENERATOR EMS1H-13



## Technical data

Outer diameter	260 mm
Nominal power	up to 90 / 180 kW
Maximum power	up to 180 / 360 kW
Nominal torque	up to 290 Nm
Maximum torque	up to 630 Nm
Maximal speed	6000 / 10000 rpm

## Features

- Permanent Magnet Synchronous Motor with high reluctance torque content
- Efficiency up to 97 %
- Designed for Off-Highway
  - Ambient temperature up to **-40 / +105 °C**
  - Ingress protection class up to **IP69K**
  - Mechanical resist. up to **Shock 50 g, vibration 10 g**
- Broad portfolio scalable **in power and torque**
- Low- & high-speed versions available
- Liquid cooling
- External or internal teeth shaft design

Please choose!

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EMS1H-20

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OFF-HIGHWAY ELECTRIFICATION

# 700V ELECTRIC MOTOR AND GENERATOR EMS1H-20



## Technical data

Outer diameter	400 mm
Nominal power	55 ... 275 kW
Maximum power	110 ... 550 kW
Nominal torque	520 ... 1050 Nm
Maximum torque	1200 ... 2400 Nm
Maximal speed	4000 rpm

## Features

- Permanent Magnet Synchronous Motor with high reluctance torque content
- Efficiency up to 97 %
- Designed for Off-Highway
  - Ambient temperature up to **-40 / +105 °C**
  - Ingress Protection Class up to **IP69K**
  - Mechanical resist. up to **Shock 50 g, vibration 10 g**
- Broad portfolio scalable **in power and torque**
- Liquid cooling
- External or internal teeth shaft design

Please choose!

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Inverter EDS1H series

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EMS1H-13

700V Electric motor and generator  
EMS1H-20

Motors and generators scalability

ROTATRAC eGFT 8000

ROTATRAC eGFZ 9100/H

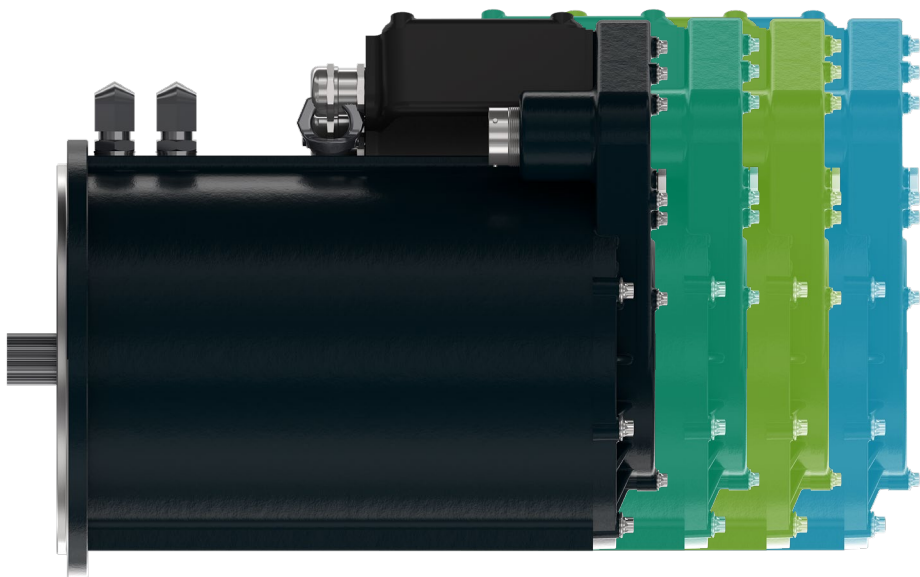
ROTATRAC eGFZ 9200

Software functions

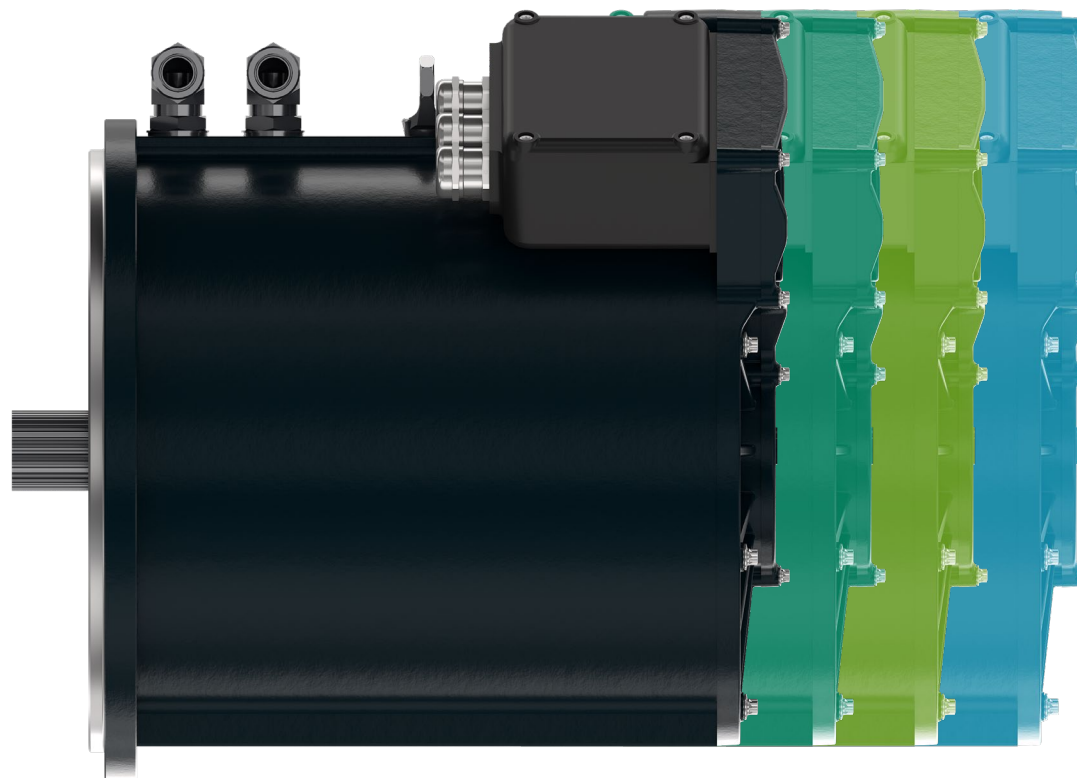
OFF-HIGHWAY ELECTRIFICATION

# MOTOR AND GENERATOR SCALABILITY

## EMS1H-13



## EMS1H-20



*Please choose!*



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OFF-HIGHWAY ELECTRIFICATION

# ROTATRAC eGFT 8000



Size	Output torque	Ratio
eGFT 8120	15000	59.4 / 75.2 / 81.8 / 100.3 / 113.9 / 122.4
eGFT 8130	20000	81.3 / 101.1 / 122.6 / 158.3
eGFT 8140	30000	283.1 / 321.7 / 376.9 / 429.1
eGFT 8150	42000	102.5 / 112.4 / 131.4 / 160.6

## Features

- Compact, **space-saving**, three- or four-stage planetary gearbox
- **Robust** design
- Integrated static, hydraulic operated parking brake
- Optional **mechanical disconnection**
- Optional **wheel studs**
- For **high speed** electric motors:  
Bosch Rexroth **EMS1H-13**, Bosch **SMG220**
- Different motor connections



Please choose!

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ROTATRAC eGFZ 9200

Software functions

OFF-HIGHWAY ELECTRIFICATION

# ROTATRAC eGFZ 9100/H



## Technical data

Maximum output torque	2400 Nm
Ratio	4
Cont. power	100 kW
Maximal input speed	16000 rpm
Weight (just gearbox)	~ 30 kg
Output flanges	1 or 2

## Features

- High **efficiency** up to 98 %
- For **high speed** electric motors: Bosch Rexroth **EMS1H-13**
- Equipped with **forced lubrication** system on demand
- **Compact** design and high **power** density
- **Reduced** installation **space**
- Weight **optimized**

Please choose!

## HOME OVERVIEW CUSTOMER BENEFITS COMPONENTS

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700V Electric motor and generator  
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Motors and generators scalability

ROTATRAC eGFT 8000

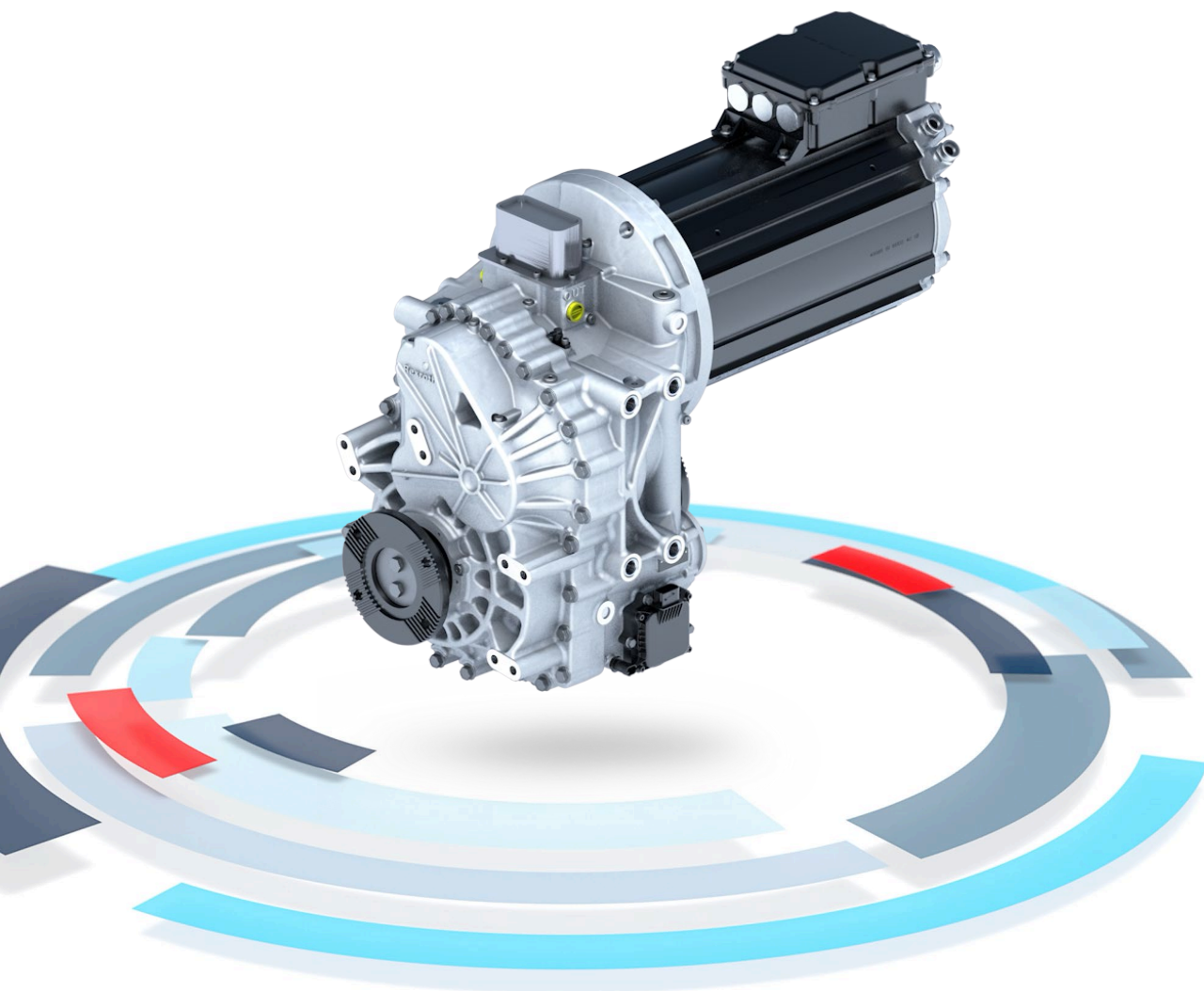
ROTATRAC eGFZ 9100/H

ROTATRAC eGFZ 9200

Software functions

OFF-HIGHWAY ELECTRIFICATION

# ROTATRAC eGFZ 9200



## Technical data

Maximum output torque	6800 Nm
Maximum input torque	630 Nm
Maximum output speed	2789 rpm
Maximal input speed	14000 rpm
Weight (just gearbox)	~ 94 kg
Output flanges	1 or 2

## Features

- High **efficiency** up to 97 %
- For **high speed** electric motors: Bosch Rexroth **EMS1H-13**
- Equipped with **forced lubrication** system on demand
- **Compact** design and high **power** density
- **Reduced** installation **space**

Please choose!

## HOME OVERVIEW CUSTOMER BENEFITS COMPONENTS

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EMS1H-13

700V Electric motor and generator  
EMS1H-20

Motors and generators scalability

ROTATRAC eGFT 8000

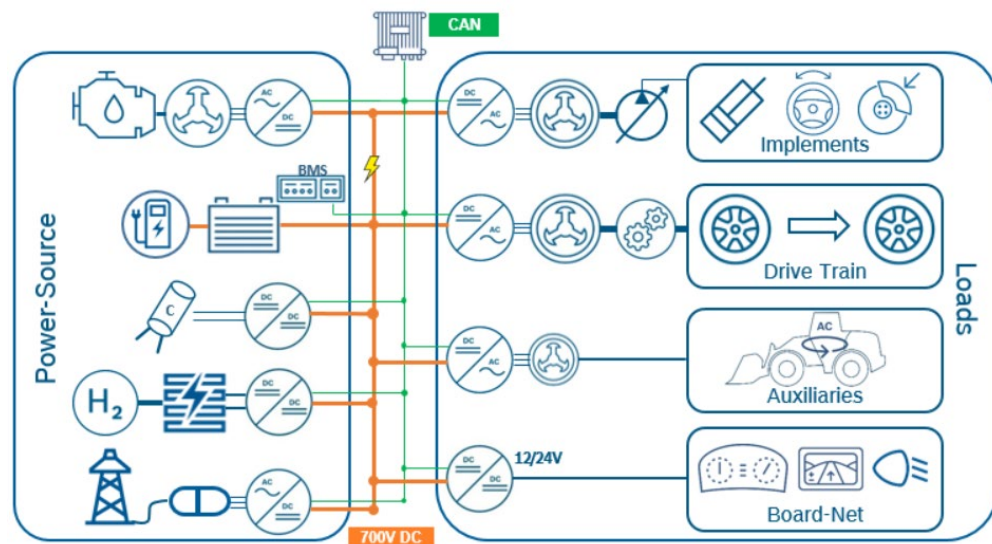
ROTATRAC eGFZ 9100/H

ROTATRAC eGFZ 9200

Software functions

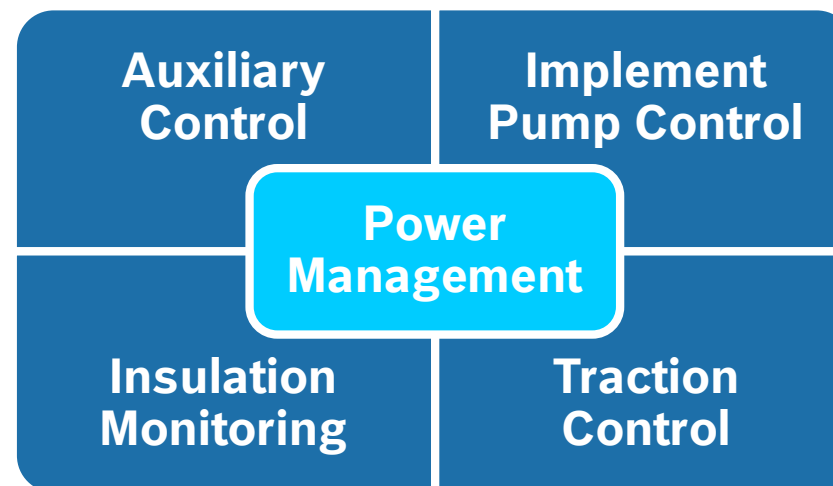
## OFF-HIGHWAY ELECTRIFICATION

# SOFTWARE FUNCTIONS



## MODULAR SOFTWARE

- Turns the electric components of the mobile machine into one coordinated electrical system
- Simplifies the component integration into the vehicle control architecture



## APPLICATION SPECIFIC FUNCTIONS

- Traction control including customized functions (e.g. cruise control, creeping)
- Implement pump control for efficient variable pump operation by intelligent coordination of pump displacement and speed
- Auxiliary control

Please choose!

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