



Electromechanical & IoT Product Line

Motion Systems Group

Solutions for agricultural machinery

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.



Motion & Control Devices for the next generation of agricultural machinery

Parker's extensive knowledge of the agriculture industry and understanding of the challenges farmers face help to shape integrated products and services that simplify installation and equipment service, reduce noise and drive performance. Doing so enables farmers to improve efficiency, reduce operating costs and comply with industry regulations, so they can focus on their critical role in our society.

HMI Display Module



Touchscreen PRO displays
(ISOBUS Compliant)

Permanent Magnet Motors and Generators



GVM motors

Global Vehicle Inverter for mobile applications



GVI inverter



IP cameras



IQAN-SV Vision System Camera

Application Software Toolkit



IQAN Develop

IQAN Electronic Modules



IQAN devices family

System Gateway Module

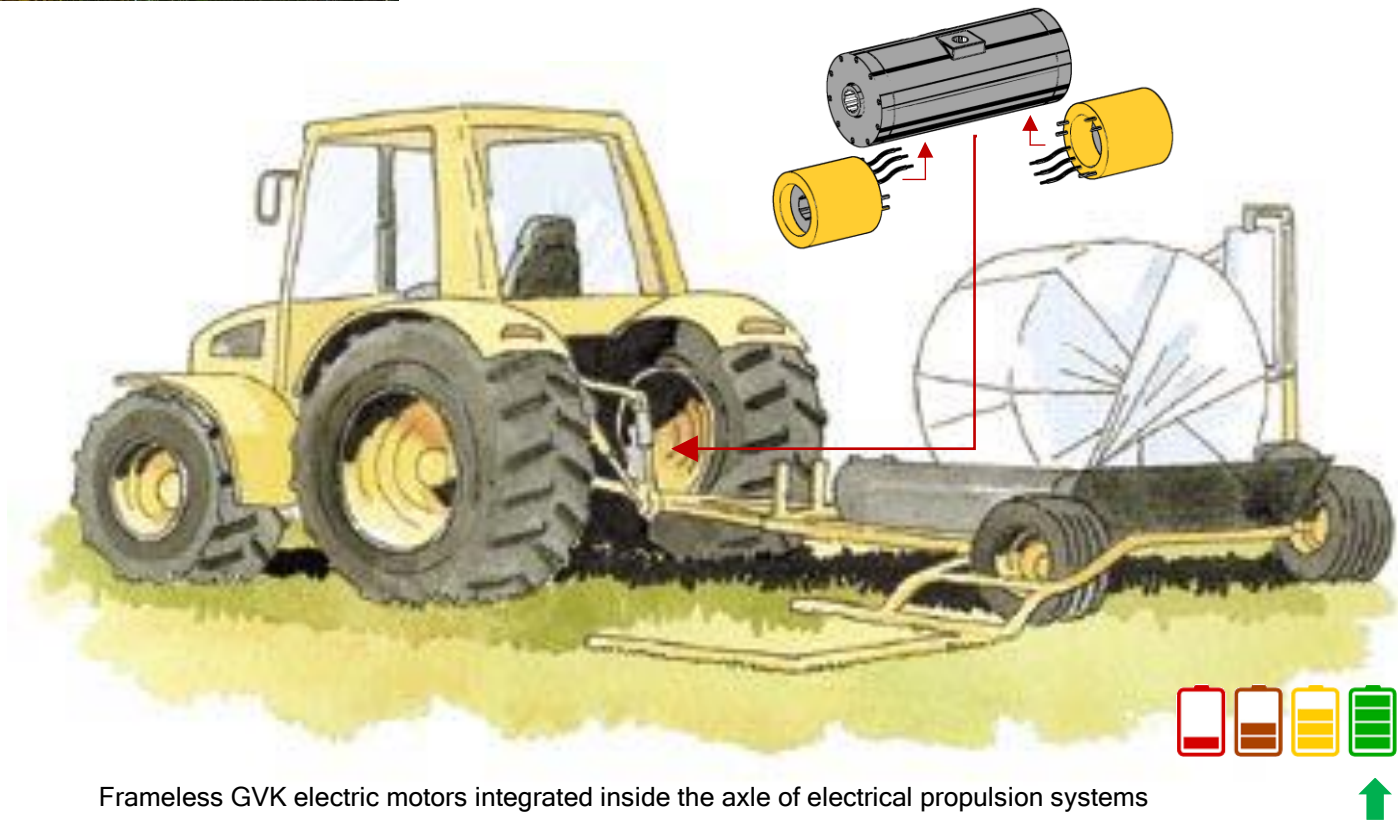


PVSG Gateway



Dedicated solutions for both hybrid and full electric machines

Whether it is a tractor or a farm truck, a harvester or a mower, Parker has the products for all your agricultural applications. With over 500,000 electrotechnical, hydraulic and pneumatic parts, and thanks to our worldwide distribution, we can be considered as the primary source supplier for the motion & control technology of the next generation of agricultural machines.



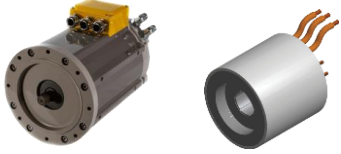
Frameless GVK electric motors integrated inside the axle of electrical propulsion systems

Efficient solution for hybrid and full electric propulsion systems

The engine is the heart of the traction system and, both in case of hybrid or fully electric propulsion, the efficient Parker **GVM/GVK** series allows customer an energy storage device size reduction leading to cleaner and more economic vehicles.

The torque density and speed capabilities of Parker Permanent Magnet AC motors (PMAC), combined with a voltage matched inverter, provide breakthrough performance in a variety of vehicle platforms.

Last but not least, the high efficiency of the GVM Permanent Magnet motors / generators results in a longer battery duration, increasing productivity and focusing the farmer on the things that really matter on his job.

Motor and Generator Type	
	GVM / GVK
Design	Standard and frameless kit
Magnet materials	Rare earth magnets
Number of poles	12
Battery voltage	24 to 800 VDC
Power range	up to 350 kW (continuous)
Torque range	up to 1430 Nm (peak)
Speed range	up to 10.200 rpm

Electro-Hydraulic Pump kit

The Electro-Hydraulic Pump (EHP) kits are designed to simplify hydraulic power availability in all hybrid and electric mobile applications (e.g.: electric power steering systems and auxiliary hydraulic systems).

EHP systems consist of an electric motor directly coupled to a hydraulic pump controlled by the high performance mobile GVI hardened drive.

Product benefits:

- Complete pre-engineered Electro-Hydraulic Pump solutions
- Easy product selection through pressure, flow and voltage values
- Reduced fuel consumption and emissions
- Instantly available hydraulic power thanks to the low inertia of components
- Quiet operations

Electro-Hydraulic Pump Type	
	Electro-Hydraulic Pump Kits
Description	Electro-Hydraulic Pump kits designed for hybrid electric and all electric mobile applications
Electric motor	GVM synchronous motor (PMAC)
Hydraulic pump	Vane pump (other types on request)
Input voltage	24 to 800 VDC
Output power	2 to 145 kW (hydraulic power)
Flow / Pressure	up to 300 lpm / 300 bar

Dedicated inverter for mobile applications

Global Vehicle Inverter (GVI) for mobile applications provides a motor control solution for battery systems up to 650V (nominal).

GVI inverter range aims to provide the highest efficiency in combination with the Parker GVM range of PMAC mobile motors while maintaining superior reliability in the most demanding applications.

Product features:

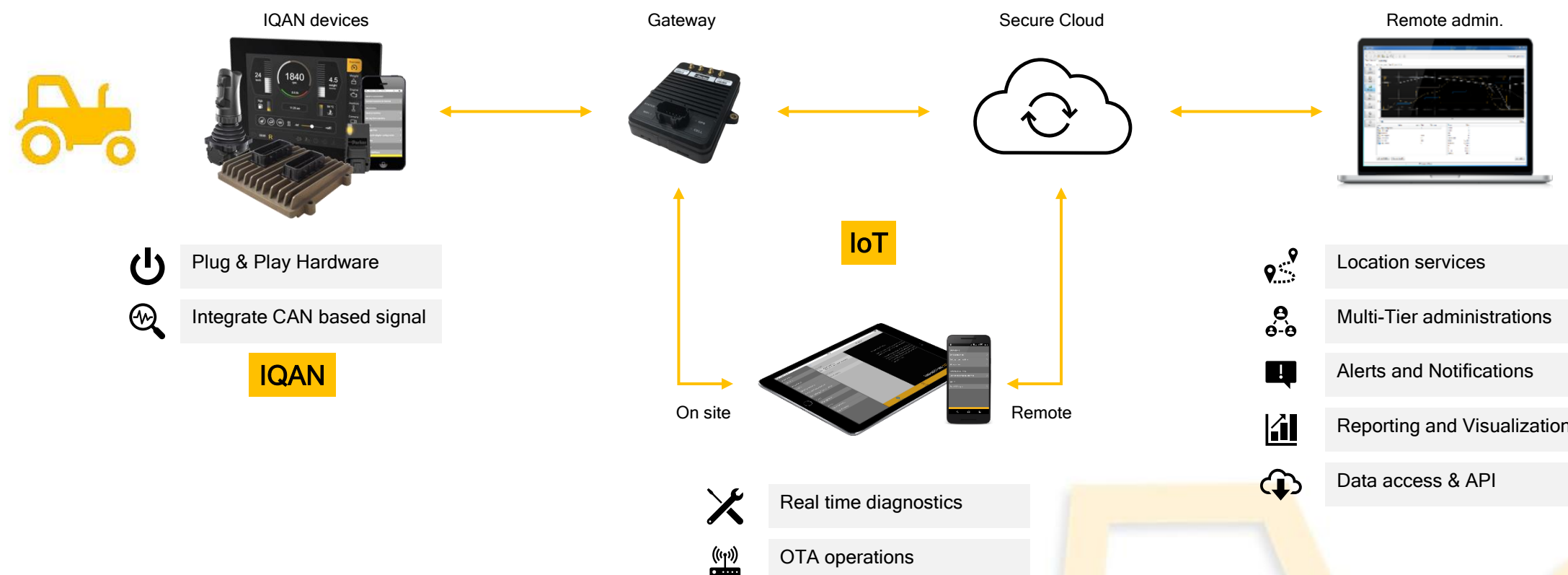
- Auto tuning
- High efficiency cold plate design
- up to IP6K9k protection class
- Motor temperature sensor input
- Sin/Cos and Resolver
- iQAN, J1939 and CanOpen communication protocols

Inverter Type	
	GVI
Description	Mobile Inverters designed for Traction, Electro Hydraulic Pumps (EHP) and Auxiliary Systems
Battery voltage	24 to 650 VDC
Peak current	700 Arms
Peak power	400 kVA
Switching freq.	4, 8, 12, 16 kHz
Communications	CAN J1939, CAN Open



Electronic Controls for environmentally friendly productivity

Parker IoT (Internet of Things) is a digital ecosystem that enables Parker's smart hydraulic, electric and electronic products to easily connect and work together. Dedicated cloud service tools enable customers to remotely control the machine, update the software and configure alerts and alarms for an accurate preventive maintenance of the system. With Parker's IoT, the end user will be able to improve the efficiency while respecting the environment.

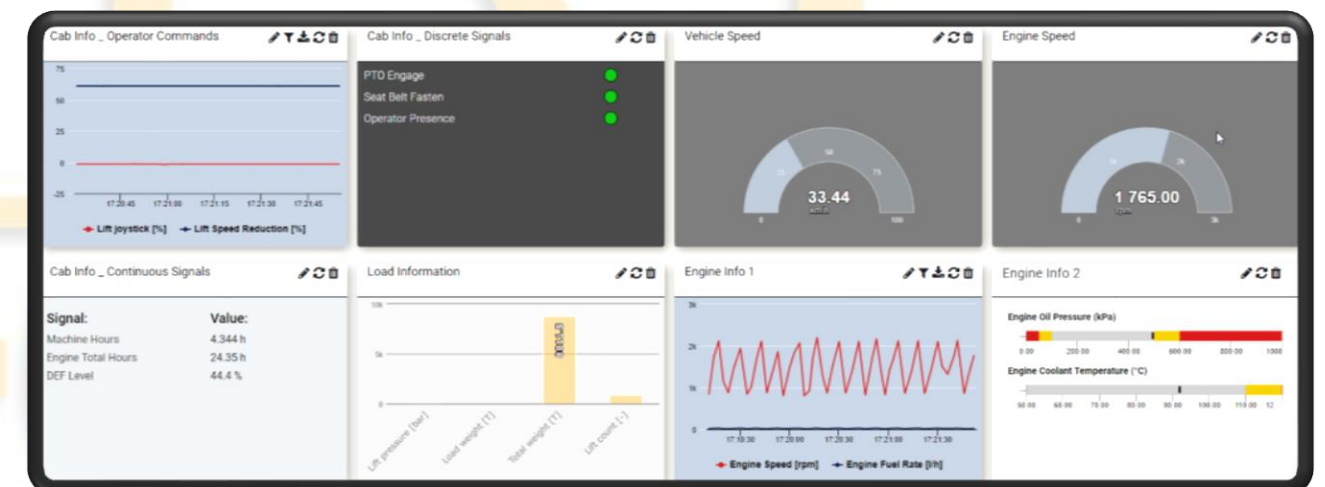


Mobile IoT is the state of the art of electro-hydraulic monitoring cloud-based solution specifically designed to provide sophisticated data, monitoring and performance control capabilities.

Mobile IoT makes it easy for off-road equipment OEMs and fleet managers to collect and analyze data to identify usage trends and field-based problems with unparalleled intellectual design and operational insight. We are taking telematics and simple location tracking to remote diagnostics and programming.

Most off-road equipment manufacturers or fleet managers have connected equipment with built-in telematics sensors, however, IoT solutions take it a step further with customized data to show recommendations to business operations on how to maximize performance and longevity.

In addition to the features of a traditional telematics solution and data insights, IoT solutions for heavy equipment offer remote diagnostics and programming, automated reports and frequency and duration use.



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