

VARCHEA Company Profile

Zhejiang Huaqu Technology Co., LTD

www.varchea-emobility.com



Company profile



Company

Zhejiang Huaqu Technology Co., LTD



Main Business

Based on the latest technology of MCU from VOTOL. Varchea developed the intelligent electric power train solution for the E mobility industry. Our products line includes hub motors, PMSM IPM motors , Batteries, controllers, Speedometers.



Company Orientation

To provide the most reliable and endurable power delivery for E mobility industry with our fine designed and integrated components.



Company Culture

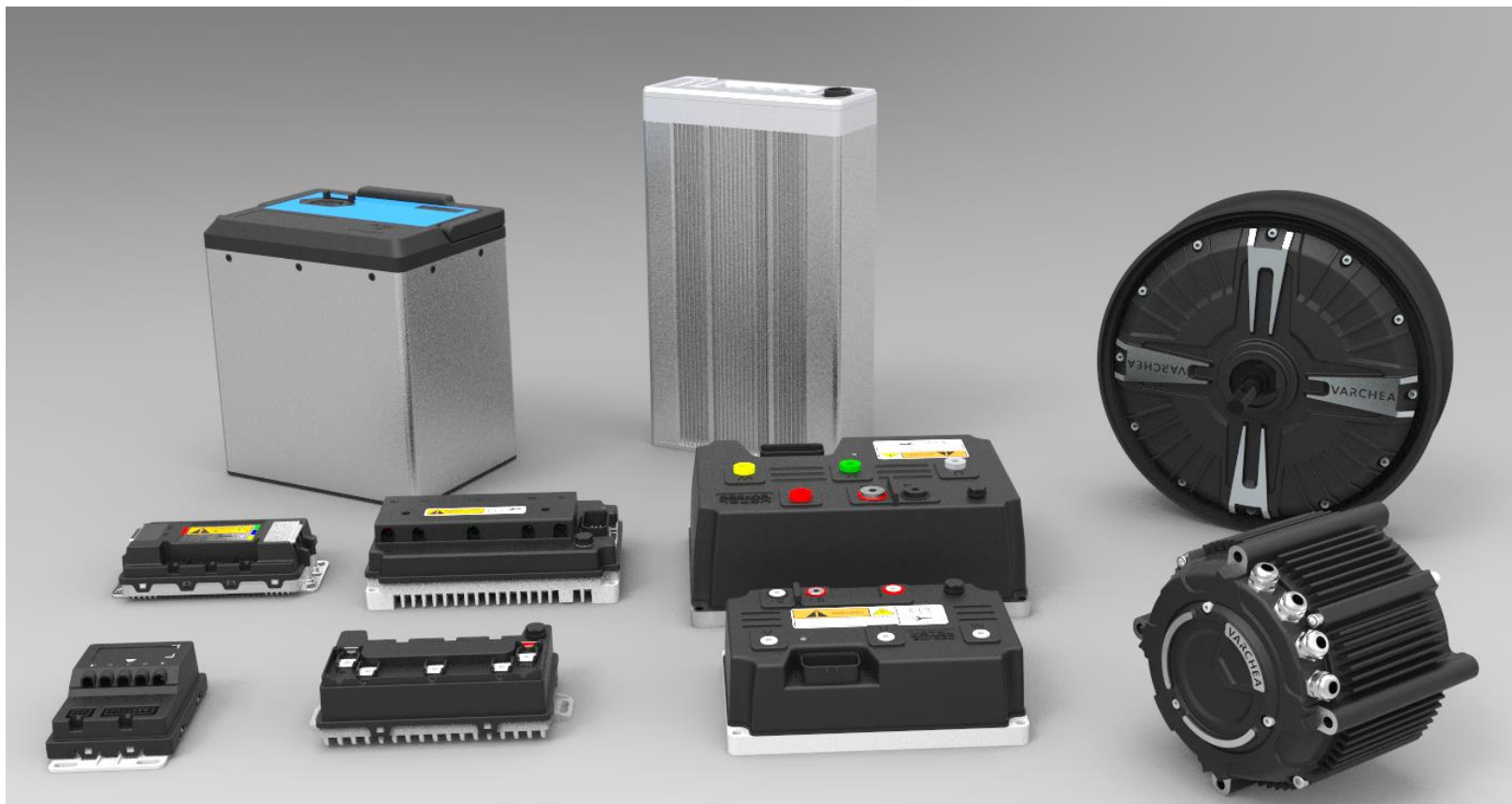
Innovation drives revolution

Production Line

MCU

Batteries

Motors





Power Solutions



**12 INCH 90km/h
VARCHEA POWER**

4.5s
0-50km/h

90km/h
SPORT MODE

3000W
RATED POWER

4500W
PEAK POWER

187 N.M
MAX TORQUE

120 km
AUTONOMY

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Battery type	VCE7224
Nominal voltage	72 V
Nominal capacity	24 Ah*2
nominal current	48 A*2
Max. current	70 A*2
Total Energy	1728 Wh*2
communication	CAN

Controller type	EM100
Nominal voltage	72 V
nominal current	100 A
Peak current (Busbar)	110 A
Peak current (phase line)	280 A
Peak power	7920 W
communication	CAN

Motor type	VCM6540
Nominal voltage	72 V
Rated speed	680rpm
Peak speed	830rpm
Peak torque	191N.m
Rated power	4000 W
signal	Hall
Wheel size	12-2.75 13-3.5

Battery 7255

Model	VB7255
Nominal voltage (V)	72
Nominal capacity (Ah)	55
Nominal current (A)	106
Max. current (A)	159
Total energy (Wh)	3960
Communication	CAN
IP grade	IP67



3 packs parallel capable
2 years warranty
Global liability covered

Battery

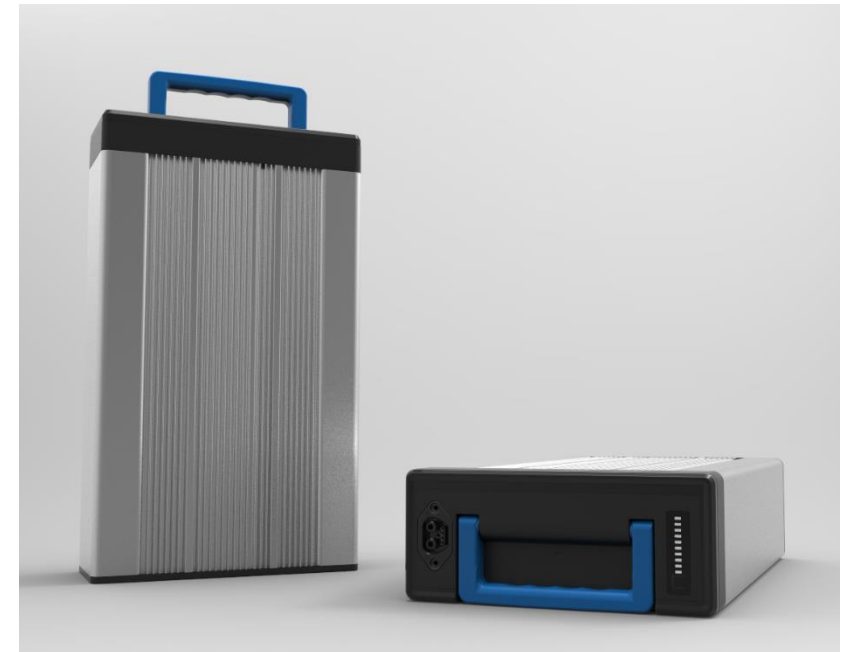
Model	VB6055
Nominal voltage (V)	60
Nominal capacity (Ah)	55
Nominal current (A)	106
Max. current (A)	159
Total energy (Wh)	3300
Communication	CAN
IP grade	IP67



3 packs parallel capable
2 years warranty
Global liability covered

Battery

Model	VB7224
Nominal voltage (V)	72
Nominal capacity (Ah)	24
Nominal current (A)	48
Max. current (A)	70
Total energy (Wh)	1728
Communication	CAN



3 packs parallel capable
2 years warranty
Global liability covered

Motor



Model (IPM)	VCM01
Rated Speed (rpm)	2800
Max.Torque (Nm)	47~70
Nominal voltage (V)	60/72
Nominal current (A)	35~50
Rated power (W)	2500~3500
Max.Speed (rpm)	6000



Model (in wheel)	VCM06
Rated Speed (rpm)	490
Max.Torque (Nm)	144
Nominal voltage (V)	72
Nominal current (A)	35
Rated power (W)	1500~3000
Max.Speed (rpm)	510



Model 12"	VCM02
Rated Speed (rpm)	730
Max.Torque (Nm)	188
Nominal voltage (V)	72
Nominal current (A)	80
Rated power (W)	1500~4000
Max.Speed (rpm)	872



Model 12" ,13"	VCM03
Rated Speed (rpm)	837
Max.Torque (Nm)	182
Nominal voltage (V)	72
Nominal current (A)	80
Rated power (W)	3000~5000
Max.Speed (rpm)	852



Model (Gearbox)	VCM04
Rated Speed (rpm)	680
Max.Torque (Nm)	226
Nominal voltage (V)	60/72
Nominal current (A)	80
Rated power (W)	2500~5000
Max.Speed (rpm)	820



Model (17")	VCM05
Rated Speed (rpm)	570
Max.Torque (Nm)	180
Nominal voltage (V)	72
Nominal current (A)	70
Rated power (W)	2500~5000
Max.Speed (rpm)	574

MCU



EM25	48V GTI	60V GTI
Rated Current	20A	20A
BOOST Current	35A	35A
Peak Current	65A	65A
Rated Power	1000W	1200W
Max.Power	1440W	1800W
Protocol	LIN	
Dimension	135x91x48mm	



EM50S	60V GTI	72V GTI
Rated Current	50A	50A
BOOST Current	55A	55A
Peak Current	190A	190A
Rated Power	2750W	3075W
Max.Power	3300W	3690W
Protocol	LIN/CAN/	
Dimension	199x107x64mm	



EM50-4	60V GTI	72V GTI	96V GTI
Rated Current	50A	50A	35A
BOOST Current	80A	80A	50A
Peak Current	195A	185A	165A
Rated Power	3000W	3600W	3360W
Max.Power	4800W	5760W	4500W
Protocol	LIN/CAN/		
Dimension	181x94x50mm		



EM80	60V GTI	72V GTI
Rated Current	55A	55A
BOOST Current	80A	85A
Peak Current	200A	180A
Rated Power	3300W	4000W
Max.Power	4800W	6000W
Protocol	LIN/CAN/485	
Dimension	180x95.5x55.6mm	



EM100-4	60V GTI	72V GTI	96V GTI
Rated Current	100A	100A	80A
BOOST Current	120A	120A	100A
Peak Current	300A	300A	250A
Rated Power	6000W	7200W	7680W
Max.Power	7200W	8640W	9600W
Protocol	LIN/CAN/		
Dimension	221x127x62mm		



EM150-2	60V GTI	72V GTI	96V GTI
Rated Current	150A	140A	100A
BOOST Current	270A	270A	250A
Peak Current	430A	470A	400A
Rated Power	9000W	10080W	9600W
Max.Power	16200W	19440W	24000W
Protocol	LIN/CAN/		
Dimension	223.12x134.02x70mm		



EM200-2	60V GTI	72V GTI	96V GTI
Rated Current	160A	150A	120A
BOOST Current	360A	360A	300A
Peak Current	510A	510A	430A
Rated Power	9600W	11250W	11520W
Max.Power	21600W	25920W	28800W
Protocol	LIN/CAN/		
Dimension	249x138x74mm		



EM260	60V GTI	72V GTI	96V GTI
Rated Current	190A	190A	170A
BOOST Current	450A	450A	400A
Peak Current	750A	760A	700A
Rated Power	11400W	13680W	16320W
Max.Power	27000W	32400W	38400W
Protocol	LIN/CAN/		
Dimension	226x149x78mm		

Power Train Specificaton



Vehicle type	Scooter/Moped				Motorcycle		UTV/ATV/Three wheeler	
Top speed	45kmph	60kmph	80kmph	100kmph	80kmph	100kmph	25kmph	50kmph
Rated power	1000W	1500W~2000W	2500w~3500w	4000w~5000W	2500w~4000w	4000w~5000W	1500w	4500w
Max Torque @100rpm	108N.M	115N.M	185N.M	240N.M	185N.M	240N.M	28N.M (Gear ratio 1:13)	85N.m (Gear ratio 1:10)
MCU	EM30	EM50-4	EM80	EM100	EM100	EM150	EM50S	EM150-2 EM200-2
Motor	12" Hub motor	12" Hub motor	12"13"14" hub motor	13";14" Hub motor	17"Hub motor & IPM motor	17" Hub motor & IPM motor	IPM motor	IPM motor
Battery	72V24ah	72v24ahX2	72v24ahX2	72v55ah	72v24ahX2	72v55ah	60v55ah	72v55ahX2

Speedometer -LCD



Model	061/DKD
Nominal voltage (V)	48-60 / 72
Interface Protocol	LIN/CAN/485
Display panel Type	LCD
Input plug type	Plug
Size	156*87*32mm
Features	Setting adjustable

Model	072
Nominal voltage (V)	48-60 / 72
Interface Protocol	LIN
Display panel Type	LCD
Input plug type	Plug
Size	157*75*36mm
Features	

Model	146-D
Nominal voltage (V)	48-60 / 72
Interface Protocol	LIN
Display panel Type	LCD
Input plug type	Plug
Size	171*75*68mm
Features	

Model	CR6
Nominal voltage (V)	48-60 / 72
Interface Protocol	LIN
Display panel Type	LCD
Input plug type	Plug
Size	φ99*48
Features	

Speedometer



Model	347
Nominal voltage (V)	48-60 / 72
Interface Protocol	ISDN
Display panel Type	LED
Input plug type	Harness
Size	165*94.7*27mm
Features	



Model	TFT-061
Nominal voltage (V)	48-60 / 72
Interface Protocol	ISDN/CAN/485
Display panel Type	TFT
Input plug type	Plug, Harness
Size	156.1*87.3*32.2mm
Features	



Model	TFT-T15
Nominal voltage (V)	48-60 / 72
Interface Protocol	ISDN/CAN/485
Display panel Type	TFT
Input plug type	Plug, Harness
Size	169.6*95.3*28.5mm
Features	

APP



Basic program writing

Modify the control mode by entering the base program from the cell phone

Self-learning

Automatically reading and matching motor parameters



Basic parameter writing

Modify the control mode by entering the base program from the cell phone

Sliding adjustment

Parameter module sliding adjustment



Dynamic parameter recording

Parameter recording during operation, real-time upload to the cloud

APP Functional Expansion



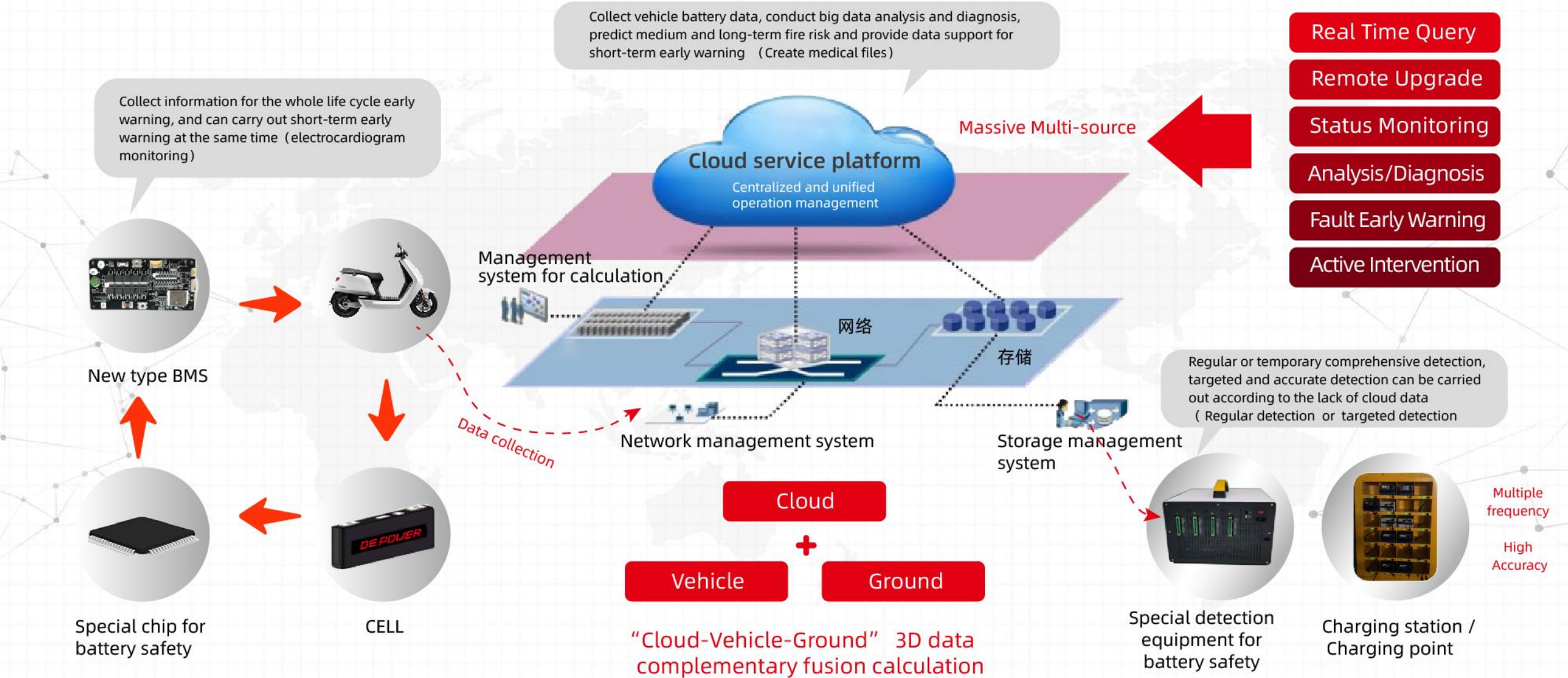
Functional Expansion

Adding user-side function based on user requirements.



Standalone Data

Exclusive use of servers, no data conflicts.



PART 04

Customer Cases

□ Team □ Customer Cases □ Customer Distribution

Our Successes

With Varchea's high technology and system platform, jointly developed a high-speed electric motorcycle with Scutum logistic Inc, a Spanish new energy vehicle company, and we entered the supply system of Volkswagen Group Europe, producing electric motorcycle products under Siat New Energy.

Varchea power train is adopt by many worldwide OEMs

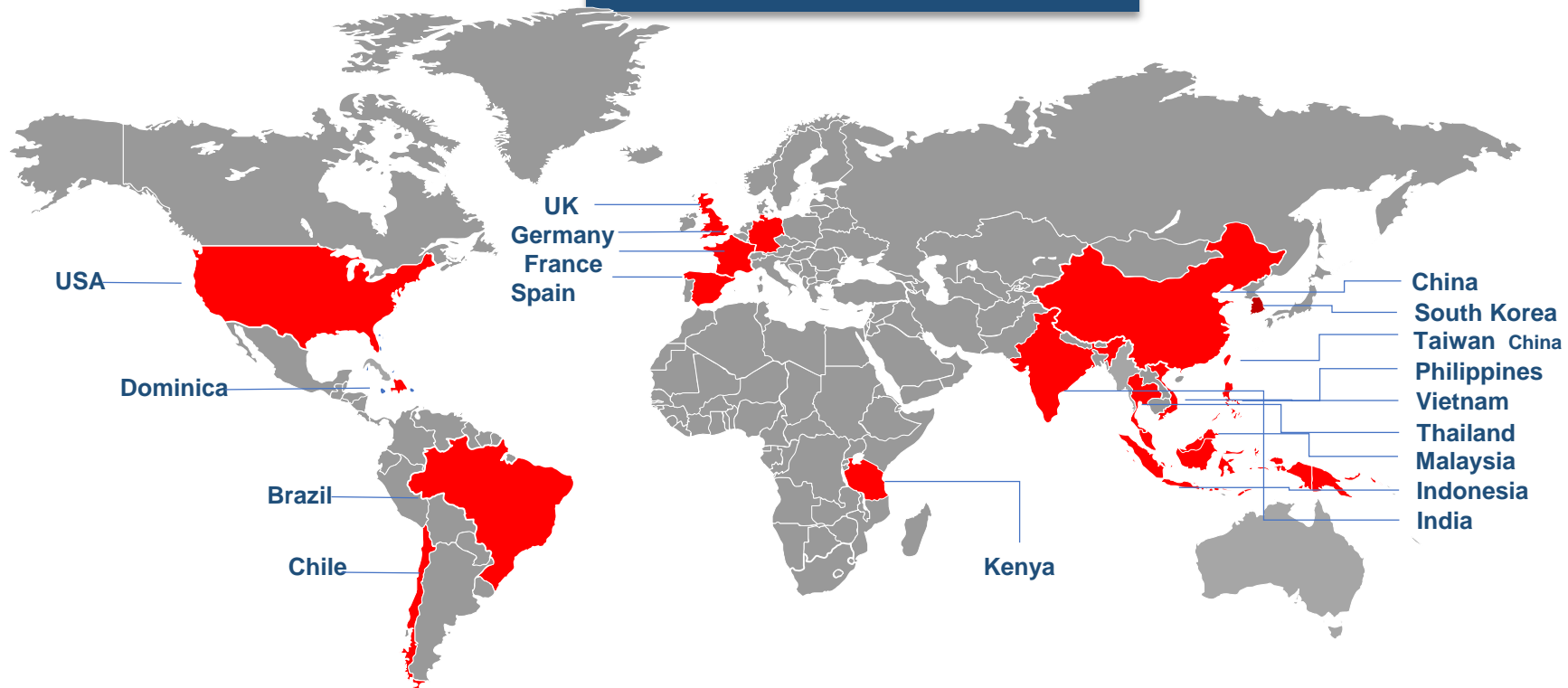


Our Successes

Matching electric control and electric drive system for overseas shared market of Taizhou Youmi Electric Vehicle Technology Co., we completed several sets of power system platforms for three- wheeled and four-wheeled vehicles. Recognized by overseas customers.



Our Customer Distribution



THANKS

Zhejiang Varchea International Trade Co., LTD

