

G-TH BATTERY MONITORING SYSTEM



ADVANTAGES



**REAL-TIME &
ONLINE MONITORING**



**COMPREHENSIVE
FEATURES**

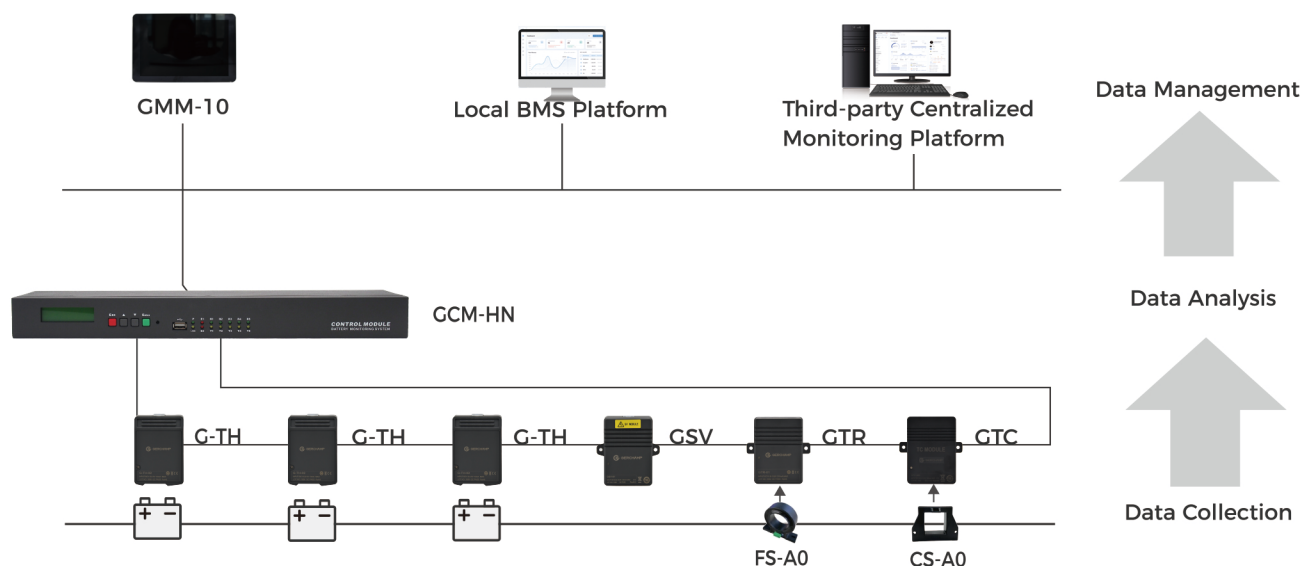


**DISTRIBUTED
ARCHITECTURE**



**INTELLIGENT
ANALYSIS**

TOPOLOGY



FEATURES & BENEFITS

Thermal runaway Intelligent Analysis and Early Warning	Adopt intelligent analysis on the thermal runaway trend of the battery and issue early warning in time to prevent the battery from thermal runaway and to protect the battery strings. The thermal runaway phenomenon can be predicted in advance by tracking the float charging current curve, and intelligent calculation of battery internal temperature and ambient temperature.
High-accuracy SOC/SOH	Own online parameter identification, self-correction of charging, no jump, which renders SOC error of all working conditions no more than 5%, and hence improves battery utilization ratio and operational safety. Refer to the advantages of various algorithms such as Kalman filter, multi-dimensional, fuzzy network neural, and open circuit voltage method. Provide high accuracy SOC estimation, improving the SOC accuracy of traditional BMS from $\pm 20\%$ to $\pm 5\%$.
Advanced low power consumption design	Adopt advanced power consumption management method and improved circuit to render the G-TH module working current no more than 3 mA, which is far below the industry average.
intelligent analysis	Apply intelligent analyses to detect low effective battery, monitor the safe operating environment help cell selection, and export analysis report clear and easy to understand. Adopt new collection mechanism to realize the fast data updates, ensure the data accuracy and reduce delay, which makes the data collection more precise and reliable.

MONITORED PARAMETERS

Cell Internal Resistance	Cell Voltage	Cell Temperature	Ambient Temperature
Charge/Discharge Current	Float Current	String Voltage	Intelligent Balance

SPECIFICATIONS

Item	Name		Parameter	
Environment	Operating temperature		-20~+60℃ (0~2000mASL)	
	Relative humidity		5~95%	
	Atmospheric pressure		80~110kPa	
Reliability	Automatic restarttrigger		Built-in WDT	
	MTBF		100,000 hours	
Certification	EMC		EN 55032:2015+A11:2020 EN55035:2017+A11:2020 EN 61000-3-3:2013+A1:2019 ENIEC 61000-3-2:2019	
	Safety		EN61010-1:2010	
	CE, REACH and TTL certification			
Performance	Up to manage6 strings, a total of 600 cells			
Communications Interfaces	RS485, LAN, dry contact SupportMODBUS/RTU, TCP and SNMP protocols			
Index	Status (● Normal ● Early Alarm ● Alarm)			
Thermal Runaway	●	●	●	
SOC	●	●	●	
SOH	●	●	●	

Item	Name	Parameter		
Power Requirements & Consumption	Model	Powered By	Current	Consumption
	G-TH-1V2 G-TH-02	Battery	7mA (≤13mA)	<30mW
	G-TH-06		3mA (≤7mA)	<50mW
	G-TH-12			<80mW
	GTC	CM module or external power 10.8~13.8VDC	≤210mA	<2W
	GTR	CM module or external power 10.8~13.8VDC	≤210mA	<2W
GCM-HN	100~240VAC(rated) 90~264VAC(max)	≤0.4A	<15W	
Measuring Range & Accuracy	Measuring Content	Range	Accuracy	Resolution
	String Voltage	20~800V	±0.5%	0.1V
	Cell Voltage	1.2V, 2V, 6V, 12V	±0.1%	0.001V
	Cell Internal Resistance	50~65535 μΩ	±2% (repetitive accuracy)	1μΩ
	Temperature	-5~+99.9℃	±1℃	0.1℃
	Charge/Discharge Current	±1500A	±1%	0.1A
SOC/SOH	—	±5%	1%	

North America

+140 1257 9992
 info@gerchamp.com
 Suite 802, 440 Cobia Drive, Katy, Texas 77494

India

+91 9819 9454 57
 ved.kartik@gerchamp.com
 Office no 1205, 145 Business bay, 145, Vallabh Baug Ln, Railway Police Colony, Ghatkopar East, Mumbai, Maharashtra 400075, India

Other Area

+86 153 9808 0718
 sales@gerchamp.com
 2nd & 3rd Floor of No.3 Building, No.1418-50 Moganshan Road, Hangzhou, China