

# G-TIC-Z NICKEL-ZINC BATTERY MANAGEMENT SYSTEM



## INTRODUCTION

G-TIC-Z is designed for the comprehensive operation and intelligent maintenance of nickel-zinc batteries. It uses a distributed architecture for real-time monitoring of key parameters including voltage, internal resistance, temperature, busbar voltage of individual batteries and total voltage, charge/discharge current of battery strings. The system also features thermal runaway early warnings and integrates charging management.

## ADVANTAGES

### REAL-TIME MANAGEMENT

Provides accurate and reliable data and eliminates manual maintenance risks

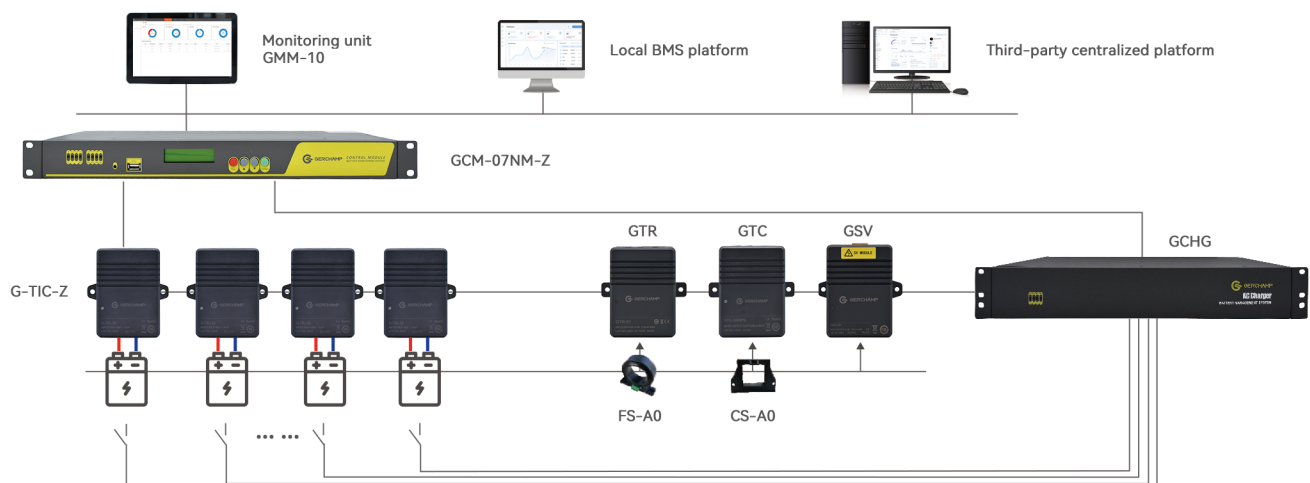
### COMPREHENSIVE MONITORING

Full monitoring key parameters of individual cells and battery strings

### INTELLIGENT ANALYSIS

Intelligent monitoring of battery performance and reports for actionable insights

## TOPOLOGY



## FEATURES & BENEFITS

Centralized & Intelligent Management	Support data collection, upload, storage and analysis as well as management of sub-modules via UART for system
Multi-level Alarms Support	Support alarm classification (up to four levels) and customized alarm configuration, as well as local sound and light alarm
Thermal Runaway Early Warning	Early warning of thermal runaway by accurately measuring changes in the float charge current of battery strings
Charging Performance	Charge 5 batteries at one time to realize the charging of the whole battery packs by switching the charging channel, ensuring the voltage difference is within the appropriate range

## SPECIFICATIONS

Items	Tech Specification		
Power Consumption	Module	Powered by	Current Consumption
	G-TIC-Z	Battery 5~16VDC (with reverse protection)	≤10mA
	GSV	CM module 10.8~13.8VDC (with revers protection)	≤35mA
	GTC		≤100mA
	GTR		≤100mA
	Module	Powered by	Rated Output Power
	GCHG	External power 100~240VDC	120W
	GCM-07NM-Z	External power 100~240VDC	15W
Environment	Operating temperature		-20~+60°C
	Relative humidity		5~95%RH
	Atmospheric pressure		80~110kPa
	Altitude (above sea level)		0~2000m
Functions	Support single cell voltage, internal resistance, negative terminal temperature collection, busbar voltage collection & battery string voltage measurement, current acquisition & thermal runaway warning & battery charging function.		
Other Functions	Alarm	Support alarm classification (up to four levels) and customized alarm configuration Support local sound and light alarm	
	Configuration	Provide built-in WEB parameter configuration function and built-in WEB data view and export function	
	Program upgrade	Support data export or program upgrade via USB	
	Protocols	Support MODBUS/SNMP/customized protocols and gain easy access to the third-party environment supervision system	
Communication Interfaces	4-channel digital inputs/4-channel output dry contacts/1-channel alarm dry contact/2-channel network ports/1-channel isolated RS485		
Storage	Built-in 8G storage capacity Storage period: More than 12 months Default storage interval: 60 seconds (adjustable)		
Installation	GCM/GCHG module: Fixed to 19-inch cabinet or battery rack		
	Collection module: Built on in battery surface or battery rack		
Performance	Each string in charge of 96 cells at maximum		

### North America

### India

### Other Area