



Cell Voltage/Temperature Monitoring System

- Combi module for Voltage & Temperature Measurement
- CVM(cell voltage monitoring) configuration or CTM(cell temperature monitoring) configuration available
- Battery Pack Potential /Temperature Measurement
- Corrosion Potential Measurement
- Cell Voltage Monitoring Of Electrolyzers Or Other Electrochemical Multicells
- Environmental Monitoring
- Modular, Low Profile Mechanical Design
- Independent Monitoring System With PC Via LAN (USB option)
- Max 128 signal input per system is available



Multichannel Voltage/Temperature Monitoring System

The cXM is a flexible systems to monitor voltage and/or temperature, suitable for use in a wide variety of applications.

The system can equip max 128 input signal (voltage or temperature) channels. You can order 8ch temperature input with 16channel voltage input combi module or 32channel voltage or temperature input module.

eg.)

1) 4 set of 32 channel voltage input:

Total 128ch voltage monitoring

2) 2set of 32 channel voltage input and 2set of 32 channel temperature input:

64ch voltage and 64 channel temperature monitoring

3) 4 set of combi module:

32channel temperature and 64channel voltage monitoring

For safety purposes, when it detects that the operating voltage/temperature is out of the defined range, alarm will be activated.

Voltage Monitoring

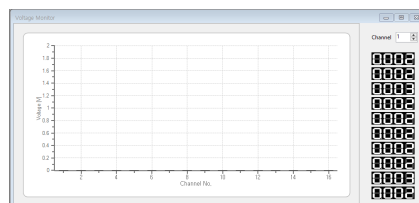
- Voltage range : $\pm 10V$ or $\pm 5V$ for each channel
- Voltage range in common mode : $\pm 275V$ for all channel
- Resolution : 14 bit (16 bit option)
- Sampling time : 100ms per channel
- Input impedance
 - differential : 800kOhm
 - common mode : 200kOhm
- 10/100 Ethernet PC direct (Full speed USB 2.0 interface, option)

Temperature Monitoring

- Sensor type : insulation K-type thermocouple
- Resolution : 14bit, $0.25^{\circ}C$
- Detects thermocouple shorts to GND or VCC
- Sampling rate : max. 100 samples/sec
- 8channel in combi module or 32ch in temperature module (32ch module's connector is Dsub)

cX Software

- Works with PC application software
- LAN communication (USB option)
- Sampling start/stop function
- Alarm safety & cut-off condition
- Supply .ini files to control cX software(option)



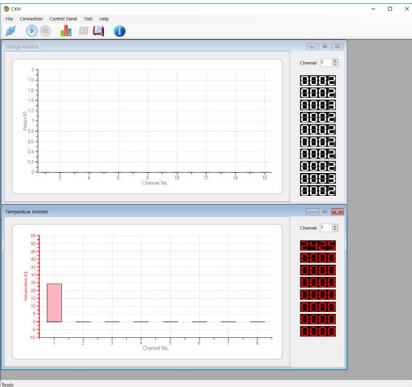
Cell Voltage Monitor



Temperature Monitor

cX Software

○ Main Screen



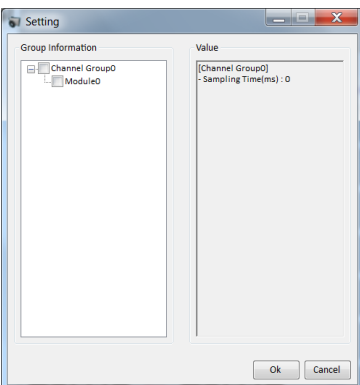
- Admin mode : enables parameter setting
- Ext Mode : external control mode. enables to work in conjunction with ZIVE SM SmartManager program.

○ Monitor Group



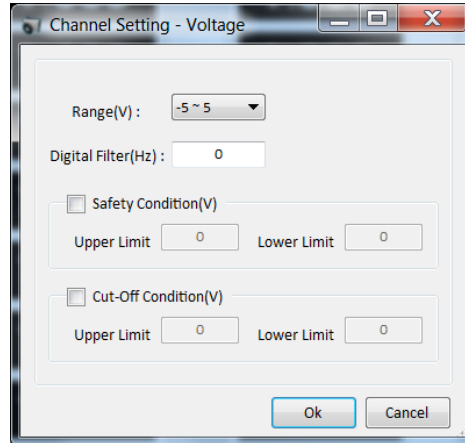
- displays real time voltage & temperature measurement information of unit cells
- each voltage/temperature availability is selectable.
- user can set voltage/temperature value of chosen channel.

○ Channel Group Setting



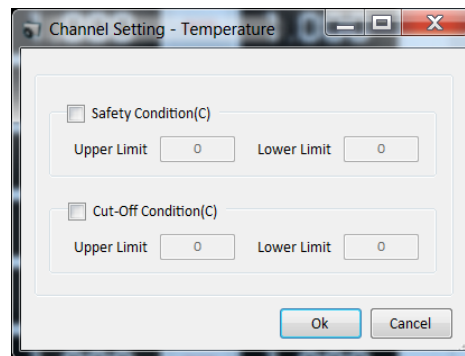
- left side of the window shows group information while right side shows setting value.
- by double-clicking each AVx/ATx, user can set values.
- by selecting the checkbox on the left side of each AVx/ATx, voltage/temperature can be selected subject to the availability.

○ Channel Setting - Voltage



- measurement range : -5V ~ 5V, standard
- digital filter : 5Hz, standard
- safety condition : if the measured value exceeds configured limit values, the system will be stopped.
- cut-off condition : if the measured value exceeds configured limit values, the current experiment will be stopped and then move on the the next step.

○ Channel Setting - Temperature



- safety condition : if the measured value exceeds configured limit values, the system will be stopped.
- cut-off condition : if the measured value exceeds configured limit values, the current experiment will be stopped and then move on the the next step.

○ Data Viewer

