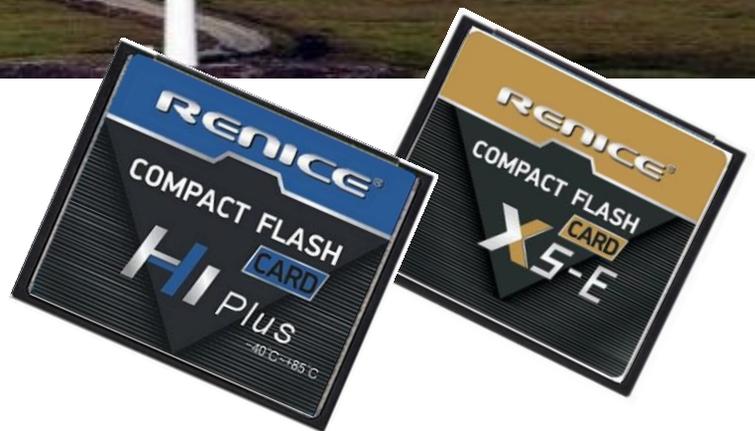


Renice Compact Flash Card in Wind Turbines Main Control System application



Background - Main Control System of Wind Turbines

Wind power stations are usually located on the windward coast, coastal shallow sea area, the inland of plains or hills, sparsely populated environment, their maintenance is more difficult, therefore, the main control system must have the following requirements:



1. High resistance to High and Low temperature (-30 to 70° C), Humidity, Sand, Salt Corrosion etc..
2. The designed lifetime of wind turbines is up to 20 years, so other components also need longer life expectancy
3. Execute data acquisition in real-time operating status, high data reliability.
4. Remote management and intelligent control, convenience in debugging and maintenance.
5. Complete grounding protection: working grounding, grounding protection, lightning protection grounding, anti-static grounding, shielding grounding.

CF card in Wind Turbines main control system

1. As a OS drive, collecting and controlling all parameters of the data, then the data is transmitted to the central control room in real time.
2. Store a small amount of fault information data, approx. 100MB/year.
3. Requires industrial wide temperature, power-off protection, when considering the 4K Random Read and Write speed, some customers might use mSATA or other interface SSD.
4. Generally kilowatts or megawatt class and above wind turbines will use CF card or Solid State Drives.

CF card advantages:



- Solid-state storage device with excellent shock and shock resistance, high stability and durability.
- Power-off protection ensures data security, preventing data crash or drive corruption.
- Adopted SLC NAND flash, longer life expectancy.
- Compact size, perfect design for embedded system.
- Renice H1 Plus series CF card shows incredible 4K Read/Write performance.

Product Name	H1 Plus series Compact Flash Card	
Interface	50Pin PATA	
Capacity	MLC:4GB~ 512GB, SLC: 1GB~64GB	
Performance	95MB/ 75MB/s	
Dimension	42.8x36.4x3.3mm	
Environment	Vibration	10Hz-2000Hz, 16.4 G (X, Y, Z axis, 1 hour /axis)
	Shock	1,500 G, 0.5ms(Half-sine wave, $\pm X, \pm Y, \pm Z$ axis, 1 time/axis)
	Humidity	5% ~95%
	Operation Temp.	-40° C to +85° C
Power	Input Voltage	3.3V ($\pm 5\%$)
	Power Consumption	Work:0.365W, Idle: 0.018W
Advanced Features	SMART Support	YES
	Power Failure Protection	YES
	Over Voltage & Inrush protection	YES
	AES Encryption	YES
Fixed BOM & Long Term Availability	YES	