

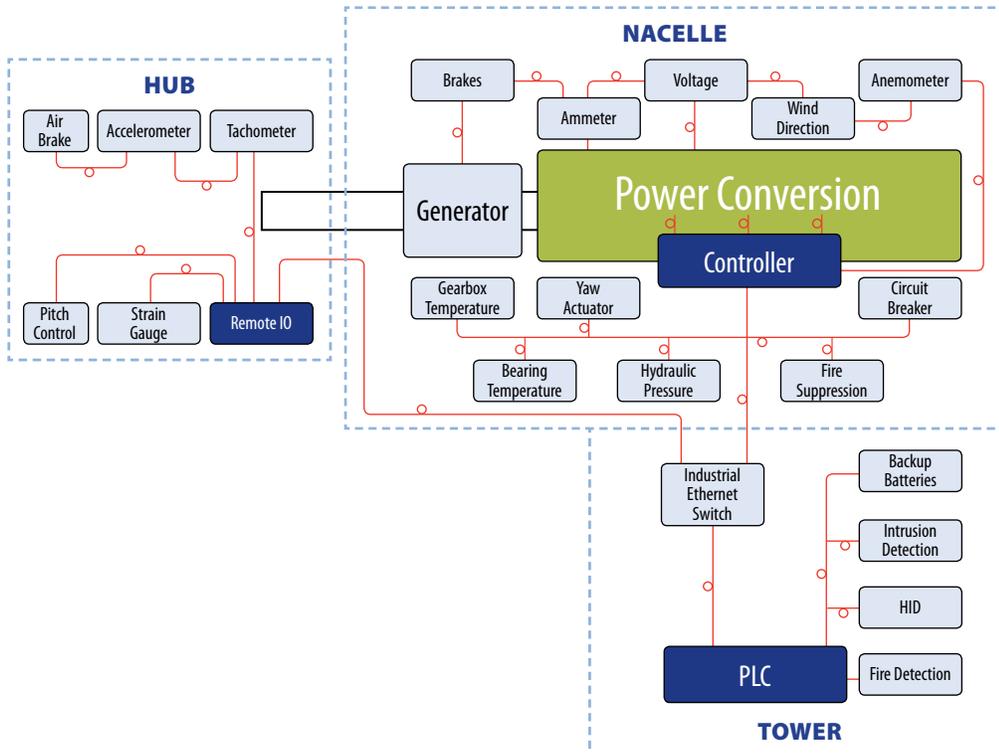
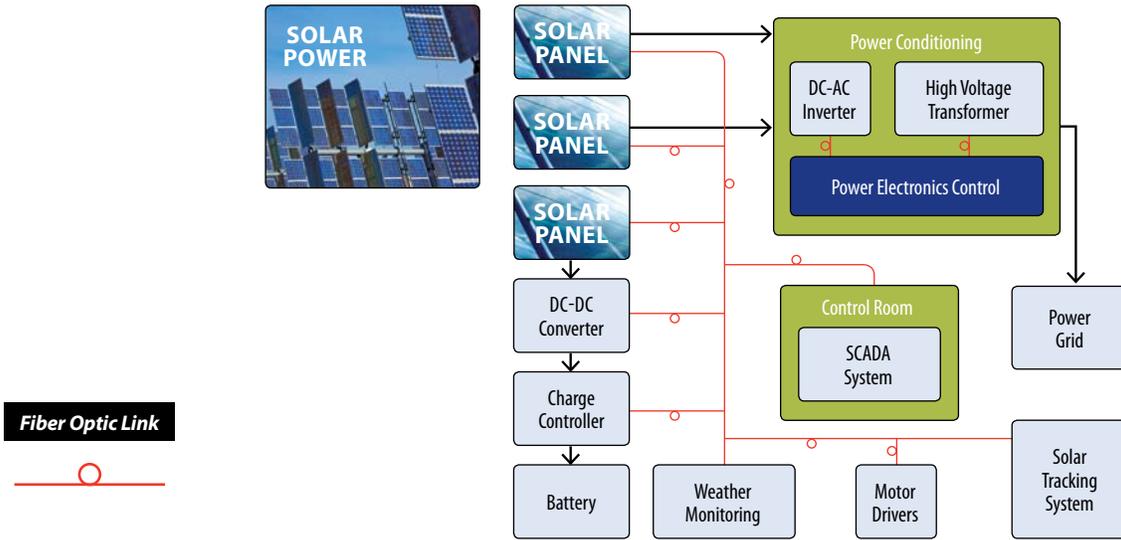
SOLUTIONS .

for **RENEWABLE ENERGY**



Optimized Renewable Energy Solutions

Firecomms fiber optic solutions deliver on the harsh demands of the wind and solar power industry, ensuring that the integrity of processed data not be compromised by rugged environments and extreme climates. Firecomms has developed our light sources and communications ICs with the deep understanding of the stresses and strains placed on renewable energy applications. Our light sources use Resonant Cavity LED (RCLED) technology to ensure the strongest optical output at the lowest currents while preserving stability after decades of operation. Our robust receiver topologies guarantee error-free reception in high EMI fields.



Sense, Control, Communicate

In wind and solar power generation applications the building blocks of power conversion and transmission are extremely similar, even though actual power generation depends on the power source itself.

Spread across the wind and solar power generation platforms are an array of sensors that measure wind speed, blade pitch, battery status, and other critical system monitors. Typically processed on proprietary or standard communication protocols, such as RS232/485, SERCOS, PROFIBUS or CAN, Firecomms' RedLink DC-1 MBd and DC-5 MBd Plastic Optical Fiber (POF) transmitters and receivers are ideally suited for these applications.

Power conversion blocks are the core of solar and wind power applications. To prevent unwanted ground loops and electromagnetic interference where stringent IEC 61000 standards apply, high voltage IGBT/IGCT semiconductors used in

high power transformer or inverter circuits must be galvanically-isolated from control links. Firecomms' RedLink DC-5 MBd, DC-10 MBd or even DC-50 MBd and 125 Mbps transceivers are ideal choices for equipment designers in cases where additional control and data signals are serialized on the POF optical link.

Finally, for communication applications within the wind tower or across the solar/wind farm network, designers rely on industrial communication standards such as Fast or Gigabit Ethernet. For these high speed networking applications, Firecomms offers transceivers in an array of form factors, ranging in speeds from 10 Mbps up to Gbps for use on POF or on Plastic/Polymer Clad Silica (PCS) cables for extended distances.

Flexible Solutions from Firecomms

To ensure compatibility and versatility, Firecomms offers the widest choice of fiber optic solutions with our range of transmitter, receiver and transceiver products in three different connector configurations: OptoLock®, LC and RedLink (compatible with the Versatile Link product range from Avago Technologies):

- Industrial Ethernet Transceivers (100 Mbps-1 Gbps)
- Analog Transmitters & Receivers
- Industrial RedLink Transmitters & Receivers (DC-1/5/10/50 MBd)



OptoLock®



LC Connector



RedLink Connector



Fiber Optic Communications for Renewable Energy Applications

Firecomms products with Plastic Optical or Plastic Clad Fiber (POF/PCS) links offer many advantages in renewable energy applications:

EMI/RFI immunity ideal for industrial, harsh, noisy environments, such as high voltage DC inverters motor controllers, and frequency inverters

Galvanic isolation between transmitter and receiver, ideal for complying with, or extending creepage and clearance distance requirements

Visible spectrum operation enables eye-safe, fast troubleshooting

Low power consumption, transmitters capable of operation at 3-4mA

Durable, flexible and lightweight

Resilient to bending and vibrations

High reliability for extended machine uptime

Industrial temperature in range of -40 to +85° C

Reduced maintenance cycle time provides up to a 20-year lifecycle on transceivers and cables

Simplified field installation for easy termination of large core optical fibers in custom distances

GLOBAL TECHNOLOGY.

Firecomms is a global leader in the provision of fiber optic solutions and optical transceivers, skillfully combining state-of-the-art compound and silicon semiconductor technology with inventive small-scale integration. A global multinational company, Firecomms is jointly headquartered in Cork, Ireland and Tongxiang, China with additional facilities in the USA, Japan and Southeast Asia. Together with a far reaching network of representatives and distribution channels, Firecomms serves its global clients across a range of power and energy, industrial, transportation, medical and consumer markets.

Firecomms leverages its deep knowledge across our multi-disciplinary teams in developing the broadest range of fiber optic transmitters and receivers specifically suited to our target markets. With an emphasis on world class performance in reliability, Firecomms utilizes internally developed market leading Resonant

Cavity LED (RCLED) photonics with ultra low power CMOS drivers in our transmitters. Together with robust receiver IC architectures, Firecomms products enable ultra low power fiber optic links, from DC up to Gigabit data rates, to ensure extended lifetimes in the harshest of environments.

Ease of connectivity and installation in the field while maintaining robust, reliable interconnects across the industrial temperature range is at the forefront of Firecomms connectivity solutions. Our most popular product families are the patented OptoLock® for the quickest of terminations with bare Plastic Optical Fiber, the well recognized LC connector ratified by the IEC for use with POF and PCS cable assemblies, and our RedLink range of products, which are compatible with the universally known Versatile Link products from Avago Technologies.

Firecomms maximizes design freedom and production flexibility for customers through our Ireland based R&D Center of Excellence, with assembly at our world class production facility in Tongxiang, China. By maximizing the internal sources of ICs and photonics, coupled with internal production facilities, Firecomms maintains a highly competitive yet flexible supply chain to meet our customers' demanding needs.

With our long history in the fiber optic industry, Firecomms continues to meet and exceed the needs of our customers through our worldwide team of field application engineers who consistently provide local service and novel, innovative and price-conscious fiber optic solutions.

For details on Firecomms and our products, please visit our website at www.firecomms.com or contact us through any of our worldwide locations.



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