

Communications & Electronics Engineers

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## **STI** Engineering

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## Environmental Monitoring Data Radio

There are a growing number of environmental and weather monitoring stations in use for industry to adhere to regulatory and social responsibility reporting requirements. STI Engineering data radios have been successfully used in many environmental systems for long distance wireless communications between remote monitoring stations and a central processing system.

Systems utilising STI Engineering data radios include dust, emission and moisture monitors, weather stations and environmental warning systems. The wireless systems are used to capture emission levels for reporting and compliance, to determine safe working conditions or to forecast local weather conditions.

STI Engineering range of data radios for licensed VHF and UHF and licence free LIPD and ISM bands offer wireless range capabilities from a few hundred meters to up to 40km to suit a range of wide area monitoring requirements. The radios also have a multitude of configurable options making them compatible with most environmental monitors, loggers and RTUs.

Configurable modes in the STI Engineering data radios include connection-based protocols such as transparent data driven, point-to-point and Hayes dialup (PSTN modem emulation), as well as packet-based modes including, point-to-multipoint, Modbus and DNP3.

Due to the nature of environmental and emissions monitoring it is often necessary to locate measurement stations away from other infrastructure, where power and communications facilities are not available. The data radios include beneficial features for these remote stations including low power consumption for solar applications and store-and-forward repeater modes for expanding areas of coverage

Also, given the remote locations for the monitoring systems it is impractical to visit sites regularly for maintenance and troubleshooting. Easy to use remote diagnostics and configuration utilising the radio channel gives the integrator peace of mind in administering the wireless network from a central point.

When the monitoring systems are also used for alarming or connection to SCADA warning systems, reliable communications channels are vital. STI Engineering radios are designed for industrial conditions and offers forward error correction and selectable retry capabilities as well as network routing options that can support redundant data paths for network reliability.