

OVAL



Itech Control and Engineering Ltd.

Process Industry Telemetry System Applications

In many medium to large scale process industry sites there are several suitable applications that radio telemetry can be applied to. Due to the many interfaces available on the AD2000 this product can be applied to many of these applications. It might be a simple tank level application for storage of water, product or waste etc. where trench cables will cost significant sums of money and disturb the day to day operation of the process. Utilising the radio interface and in-built 4-20mA analog interface of the AD2000 such a system can be installed in a very short period of time and for minimum cost. Perhaps the process industry site has several isolated operations that utilise PLCs or dedicated controllers. Currently the processes are checked manually on a regular basis. This requires manual labour and the results may be open to error or omission. The process plant may have electrical power sub-stations that need to have their power output monitored. Install an AD2000 and either connect the physical interface to the transducers to monitor digital and analog devices or, if the process device is an intelligent device with an on-board communications interface then connect to the AD2000 in-built RS232 port. The AD2000 supports many popular industrial protocols to read the data. Go further than this and connect the AD2000s in a network to bring back remote data to a Human Machine Interface (HMI) PC and make the data available via easy to view graphical representations of the plant. This can provide real time monitoring of the process data.

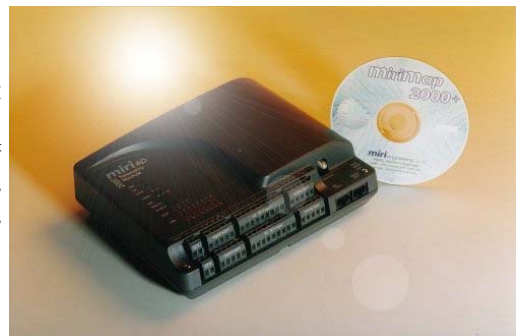


There is also a combined capability in the AD2000 for real time data to be sent via the in-built wireless radio modem as well as being logged into EEPROM memory at the local site. This ensures minimal data loss and improves on data security and ensures data backup. Battery backup is readily achieved as is solar power. At each site the local DC voltage is monitored via a local analog to digital converter input (the AD2000 has 8 analog inputs available for such monitoring). The digital status of connected equipment such as pumps, motors, and other process plant can be monitored remotely. The in-built logic allows the inputs to be used to accumulate pulses for metering purposes. There are 16 digital inputs on the AD2000 unit and models that allow input voltages of 10 to 50V DC or AC are available as are higher voltage inputs to monitor up to 110V AC or DC..

The control of plant, whether from the plant control system or locally via manual operator action, can be controlled by the logic internal to the AD2000. This Ladder Diagram functionality is enabled via the OvalMap2000+ software package which provides an easy to use graphical interface that runs on any Microsoft Windows platform PC (e.g. Windows 95, 98, ME, NT, 2000 and XP). You may know Ladder Diagram by its other name Relay Ladder Logic or RLL, common in the PLC market. A full range of maths functions (including floating point), timers, counters, data shift, data move, normal Boolean logic as well as the addition of special function blocks allows medium task control logic to be achieved. Powerful cut and pasting features allow logic to be copied across the system

The radio system utilises the internal digital data radio that is integral to the AD2000 facilitating radio diagnostics and secure data transfer at baud rates up to 4.8k. A variety of radio solution options are available to accommodate systems requiring high speed data transfer rates. The diagram over the page illustrates a possible system layout.

For further detail & information contact Oval.





telemetry + control solutions

