



# XetaWave Data Concentrator

The XetaWave Data Concentrator (XetaDC) is an application that is built within XetaWave's software defined technology (SDR) platform and is offered as part of XetaWave's IO offering at no additional cost.

*XetaWave's wireless IO offering is the most robust within the industry – it supports Ethernet, serial and Seamless Serial™ (integration of serial and Ethernet data within a single wireless network); provides unmatched speed and distance; and is available for the widest selection of frequencies including 900 MHz dual band ISM/MAS, 200MHz, 400MHz, 700MHz, and 2.4GHz.*

## XetaWave Data Concentrator Simplifies SCADA Communications

Natural gas compressors and batteries are common points where communication networks converge in oil and gas. A back-haul (up-link) network connects the gas compressor or battery to the SCADA polling system. A field (down-link) network connects the compressor or battery to field equipment. For each compressor or battery there can be a 100+ pieces of field equipment including IO radios, PLC's, RTU's, flow meters, and various sensors that must be monitored.

A XetaWave DC located at the compressor simplifies SCADA communications by acting as a proxy for field devices. The XetaDC collects important data from field devices over wired or wireless links by Ethernet, serial or both. The XetaDC organizes the data and distributes it to the SCADA polling host.

The SCADA polling system must only connect to the XetaDC, resulting in less network traffic and dramatically simpler SCADA polling system configuration. It is no longer necessary for the SCADA polling system to query every device individually by IP address, TCP/UDP port, terminal server, serial port, and/or Modbus address. The field crew can also install and configure the XetaDC with a standard template, freeing the SCADA system administrator to focus on other optimizations.

## Automate Old Well Sites with Minimum Cost and Network Impact

Many producing wells have little or no automation nor communication. In reaction to environmental concerns, governments can require old wells to be monitored and controlled. Production companies need to quickly connect these old wells to existing communication networks. The most basic automation is to monitoring on/off status (Digital Input) and the ability to stop the well by sending a kill signal (Digital Output). Original network designs do not allow for every old well to participate in the same communication network and IP subnet. Also, there is little budget to retrofit old wells with a full suite of networking equipment.

A XetaDC that supports simultaneous Ethernet and serial communications is the lowest cost solution with the smallest impact to existing IP subnets that can connect old producing wells to new Ethernet communication networks. The XetaDC communicates with the SCADA polling system over Ethernet, and polls downlink devices in the field over serial and/or Ethernet.

**Additional Information** Refer to the XetaWave EIO/SIO data sheet on the XetaWave web site at [www.xetawave.com](http://www.xetawave.com).

## Standardize Modbus Maps with Re-Mapping

The XetaDC holds on to data polled from field devices and presents a single, unified Modbus map to the SCADA polling system. XetaDCs allow users to create a static concentrated Modbus map, using re-mapping. The user tells the XetaDC where in the concentrated Modbus map to store data from field equipment. If one type of field device is polled by a XetaDC in one installation, but that device is not used in another installation, the same concentrated Modbus map can still be used for both XetaDCs with re-mapping.

## Add Ethernet Management to Networks for Serial PLCs/RTUs

Legacy equipment relies on serial RS 232, 422 or 485. They are still commonly used in the field because they work! The XetaDC adds serial communication interfaces via Seamless Serial and provides IP and Ethernet communications for management.