



Collect

Connect

Control

iDAC™

The first component of iControl's "Collect/Connect/Control" methodology, iDACs, or Internet Data Acquisition and Control units collect data from remote fixed or mobile assets, such as cargo containers, environmental sensors, and energy production equipment. iDACs use compact, low-power electronics ideally suited for monitoring equipment in harsh environments. iDACs may be used in standalone applications or networked using wireless or wired embedded modems. The modular design provides both a turnkey solution for new installations, as well as a cost-effective solution for web-enabling legacy systems.



Remote Control and Data Acquisition via the Internet



Features

- Access your data via the Internet, pagers and emails
- May be networked for wide area coverage
- Scalable architecture provides easy migration to more data points
- Standard interfaces integrate seamlessly with customer hardware
- OEM modules available for proprietary protocols
- Low-power sleep mode conserves power
- Real-time clock and calendar supports task scheduling
- Watchdog timer provides fault tolerance
- Flash memory stores application software
- Network modules support variety of standard protocols

Industrial Applications (wireless)

Shipping Security

- ◆ GPS tracking
- ◆ 24/7/365 security monitoring capability
- ◆ Protection against losses due to theft or other forms of in transit tampering

Energy Industry

- ◆ Pump and motor monitoring
- ◆ NG Compressor monitoring
- ◆ Electronic Flow Measurement
- ◆ Tank level alarms
- ◆ Pressure, temperature, vibration monitoring

Facilities Management

- ◆ Security
- ◆ Power management
- ◆ Lighting, access control

Environmental Monitoring

- ◆ Quality control
- ◆ Tank level alarms



Vehicle Tracking

- ◆ GPS tracking
- ◆ Fleet management
- ◆ Inventory control

Industrial Applications (wired)

Remote Monitoring and Supervisory Control for:

Factory Floor Automation

- ◆ Equipment monitoring
- ◆ Real-time production management

Semiconductor Manufacturing

- ◆ Embedded controllers
- ◆ Real-time vendor management
- ◆ Remote technical support

Facilities Automation

- ◆ Environmental control
- ◆ Real-time alerts

How It Works

iDAC is part of a complete iControl solution that web enables remote physical systems. Other solution components include iGATE™ and iVIEW™. Networked iDACs transmit the collected data to an iGATE using either a wireless or wired connection. The iGATE is a Wide-Area-Network version of the iDAC and provides a bridge between the iDACs and iVIEW. iVIEW manages user information, displays data in text and graphical formats, generates reports and provides paging when user-defined thresholds are exceeded. iVIEW is also used to issue commands to the iDACs in the field.

Technical Specifications

| Category | wired | | wireless | |
|------------------------------|-----------------------|---|---------------------------------------|---|
| | Component Description | Specification | Component Description | Specification |
| Memory | Data Logging | 512K Flash Remote re-programmability | Data Logging | 512K Flash Remote re-programmability |
| Power | Voltage | 5 to 20 V | Input Voltage Current Requirements | 8.5 to 18 VDC 75 to 500 mA (receive/transmit) |
| | Current | 20 to 175 mA | | |
| | Power Modes | Sleep/Normal/Charge | | |
| Onboard I/O (motherboard) | Serial Interfaces | 4 channels (each 115 kbps) | Serial Interfaces | 4 channels (up to 115 kbps) |
| | Discrete Interface | 24 channels | Discrete Interface | 24 channels |
| | Analog to | 8 channels (12 bit) | Analog to | 8 channels (VDC or 4-20 mamp) (12 bit) |
| | Digital Conversion | | Digital Conversion | |
| Communication | Ethernet IEEE 485 | | LAN Radio | 2.4 GHz (5 km range) 900 MHz (40 km range) 433 MHz (2 km range) |
| Environmental | Operating Temperature | -40°C = > 85°C Non-condensing | Operating Temperature | -40°C = > 85°C Non-condensing |
| | Humidity | | Humidity | |



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