

GPRS Remote Data Acquisition Controller (ReDAC)

By NetLynx Technology Pte Ltd

Introduction

ReDAC is a robust industrial grade controller that provides remote data acquisition and control over GPRS network.

At the heart of the ReDAC is a dedicated embedded controller that interfaces with IO / Serial interfaces on board, and uses a GPRS modem for connectivity with the host.

Because it is GPRS, the control between the host and the ReDAC is fast, secure, and provides true feedback (versus other means such as sms).



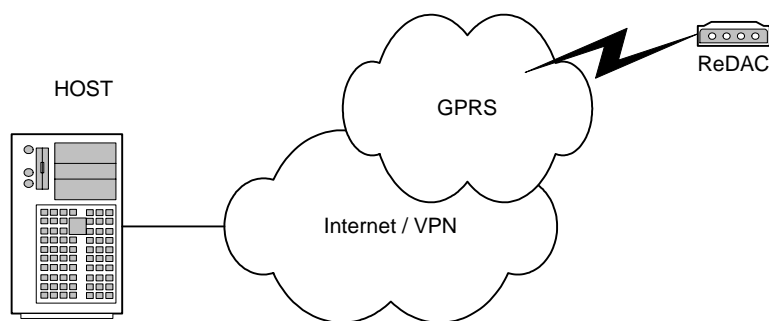
Applications

Some applications that can be used are:

- Remote monitoring of alarms
- Remote activation of equipment
- Data collection

How It works

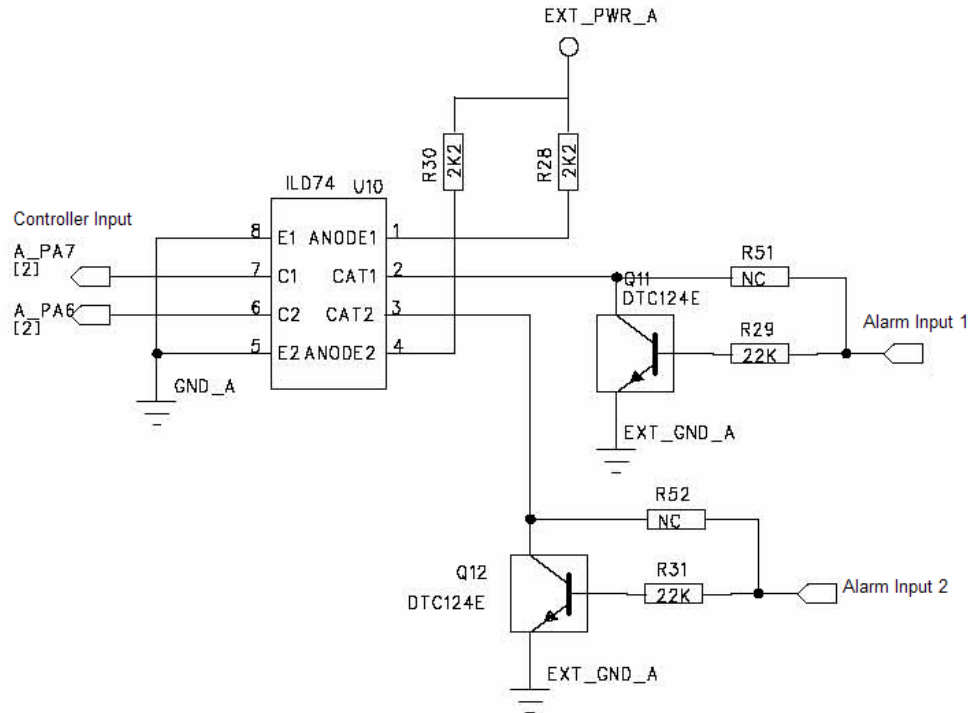
ReDAC uses GPRS to send data via the Internet (or private VPN provided by some Telcos). It uses sockets to communicate between the host application. APIs for the host is provided. Via the API, the host application is able to receive Input signals from the ReDAC, and able to control the ReDAC's output via the API also.



Features

- 8 Opto Isolated Inputs
- 2 Digital Outputs
- 1 Relay output
- API for application development
- Tri-Band GPRS Class 10

Input Circuit



GPRS Module

iWOW TR-800 GPRS Module

- Tri-band GSM / GPRS
- EGSM900 / DCS1800 / PCS1900
- GPRS Module Class B Multislot Class 10
- Compliant to GSM Phase 2+

Relay Output

The relay output is Normally Closed. ReDAC will open the relay contact when one of the conditions occur:

- The GPRS network is inaccessible (the GPRS modem is unable to connect to the Telco network)
- The ReDAC host is unreachable

The Relay will switch back to N.C. state when the GPRS network is accessible and ReDAC is able to communicate with the ReDAC host.

Communications

Both the ReDAC and the host performs checks to each other on a regular basis. At regular interval, ReDAC will send its current input status to the host, and expect the Host to acknowledge.

Similarly, the Host will send a "Request" to the remote ReDAC and expects ReDAC to respond back.

If it is unable to send, or if the remote site is no acknowledgement, an error condition is considered to have occurred.

For the Host side, it will send a "POLL Fail" error code to the CSM console.
For the ReDAC side, it will trigger the relay (see Relay Output).