

# Technical Reference

## Capstone Remote Monitoring System (User Edition)

This document presents the control and monitoring features for the User Edition Capstone Remote Monitoring System (CRMS) software.

### Chapter 13: Remote Dispatch Overview

This chapter presents remote dispatch information. Remote monitoring can be conducted through a modem or via TCP/IP connection. CRMS can monitor up to 100 MicroTurbines. This action may be accomplished through TCP/IP connections, connection to a MultiPac System Controller, or through modem scheduled connections.

#### Modem Scheduled Connection

Each MicroTurbine Communication Settings Panel can be configured with Scheduled Connection. Thus, several MicroTurbines can be monitored in almost real-time with one modem connection. See Figure 13-1.

The dial-up scheduler automatically dials the remote MicroTurbine, then connects, obtains the current status of the MicroTurbine operation (including fault information), and then disconnects. If the auto email option is set on the Send panel, the program will send Email notification.

In the event two calls are scheduled at the same time, CRMS queries the events until the modem is available.

#### Ethernet Communication

The Capstone Protocol Converter (identified as the CPC-100) provides the ability for connection to a MicroTurbine over an Ethernet network (or via a TCP/IP connection). See Figure 13-2.

By using a network connection, the Operator can reliably communicate to any MicroTurbine equipped with a CPC.

There is almost no limitation to the number of MicroTurbines that may be connected through an Ethernet network.

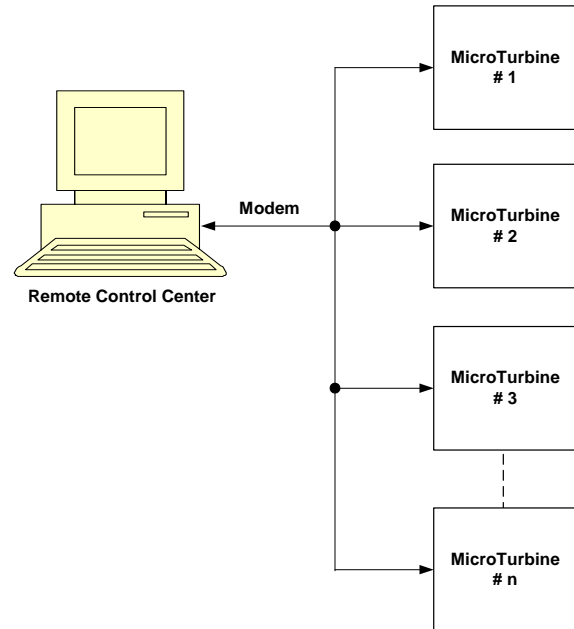


Figure 13-1. Remote Control Center

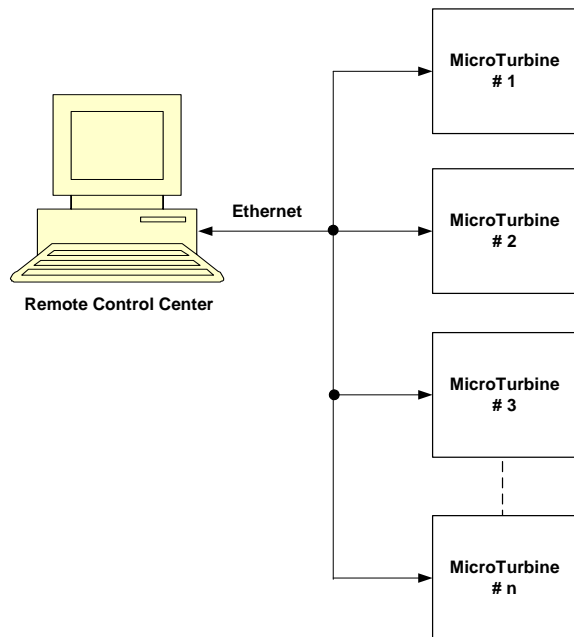


Figure 13-2. Network Connection

## MultiPac Communication

The MultiPac System allows communication with all of the MultiPac MicroTurbines through the MultiPac Controller (Master MicroTurbine or CPS controller).

The MultiPac Controller can be connected to CRMS either through a modem or via a network connection. See Figure 13-3.

Each MicroTurbine communicates with the MultiPac controller via a 10 Base-2 Ethernet connection. If any 10 Base-2 connection leg is broken or disconnected, communications will be lost.

The communications with any of the MicroTurbines can be conducted through the Command Line panel from the MultiPac Control panel (MultiPac Display Window), or by using the corresponding Command Line panel from the MicroTurbine Display Window.

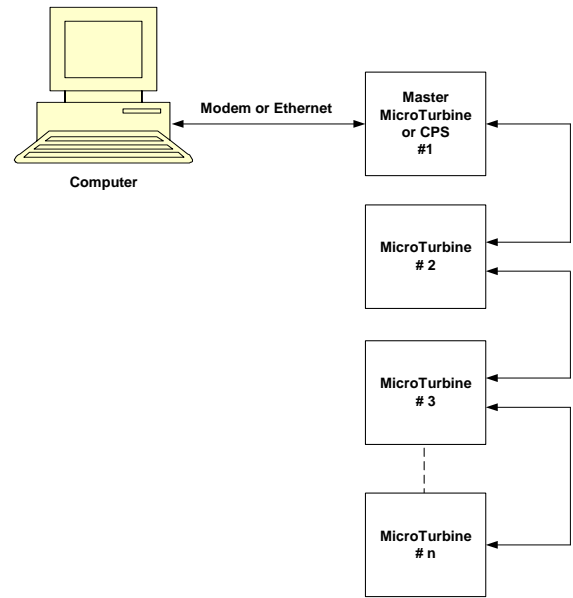


Figure 13-3. MultiPac Connection