Flexdata vs ECP

ECP

- Run one motor at a time. Stop the motor for measurements, and continue running the motor until the next measurement period. The ECP program (simple two-column program.csv file) can cause the number of cycles and the speed of the motor to be different each measurement period during the full program, i.e., run 10 cycles at 30 cycles per minute then measure, run 100 cycles at 60 cycles per minute then measure, run 2 cycles at 10 cycles per minute then measure, etc. The ECP program will stop the motor when the total count reaches the specified total count in the program.csv file. A program can be stopped by the operator but it cannot resume, a new test would have to start.

- Cause a single Hioki to make resistance measurements when the motor stops for a measurement. Measure up to 10 resistance channels every measurement period.

- A data.csv file records time of each measurement, the number of cycles for that measurement period, the speed of the motor during that measurement period, and all the resistance values at that measurement period.

Flexdata

- Run more than one motor at a time in completely independent separate tests. Stop each motor for measurements according to the program for that specific motor. The number of cycles per measurement period and the speed of the motor during that measurement period can be varied throughout each program. Each motor will stop when its count reaches the specified total count in the program for that motor. The program can be paused and resumed as desired by the operator. The program can be stopped based on calculations made on the data, for example, if a value exceeds a specified value.

- Cause meters to make measurements when the motor stops for a measurement. A Hioki resistance meter can be used, as with ECP. A Keithley data acquisition meter can be used which will allow measurements of resistance, voltage, temperature, and humidity. Up to 10 total channels, independently measuring any of the parameter types, are normally used.

- Cause cameras to take snapshots when the motor stops for a measurement. Typically the snapshot will be the sample under test. A camera can be used as a general video monitor to watch over the entire test setup.

- Tests are designed by dragging and dropping blocks to create an Algorithm, a block diagram of the entire test. Blocks can be the different pieces of equipment, loops to run measurement cycles, and logic to make events occur during the test. An engineer could design the test and then a technician could run the test.

- A Dashboard shows a table of data from the most recent measurement periods, graphs of data, the algorithm for the test, video from the cameras, and a list of equipment in use during the test with the current status of each.

- Data is stored in a Cloud and on the local computer running the test. The Cloud can be viewed in a browser where you can view the Dashboard, or graphs of data, or the table of measured

values, or the algorithm of the test, or meta data regarding the test. Each of the cameras can be viewed as live video. Only the snapshots during the measurement period are recorded. A person watching the live test on the Cloud can pause and resume the test, or stop the test. Only the local operator can start the test. For example, the operator can start a test then go home and monitor the test. Or the test design engineer could monitor the test from a remote location while the technician is running the test. Or other interested persons can monitor the test using the Cloud.

	ECP	Flexdata
Control Yuasa Motor	●	●
Programmed Steps	●	●
Hioki Meter	●	●
Measure Resistance	●	●
Ten Channel Measurements	●	●
Keithley DAQ		●
Multiple Meters		●
Multiple Channels on Multiple Meters		●
Measure Voltage		●
Measure Temperature		●
Measure Humidity		●
Smart Stop		●
Pause / Resume		●
Control Multiple Motors Simultaneously		●
Control Cameras		●
Store Data in Cloud		●
Monitor Test Remotely in Cloud		●
Live Camera Video in Cloud		●
Experiment Design with Block Diagram		●
Show Graph of Data		●
Partial Control of Test in Cloud Browser		●