Template Authoring

\*Notes

# Base Template w/ Analog Input

<deviceDefinition deviceType="ModbusWESC" desc="Modbus Shredder 8000" model="8000" eieType="ModbusEfm" cygNetVersion="8.1.3.0" category="4098" mfg="CygNet">

<dataGroups udcCat="~UDCALL" canSend="false" canRecv="true" uccSend="false" uccRecv="true" devDG="false" baseOrd="0" maxCnt="1" forceSave="false" udcDefFac="true">

<!--Analog Input-->  
 <AnalogIn niceName="Analog Input" canSend="false" uccSend="false">  
 <dgElements secLev="4" byteOrder="bigEndian">  
 <AI1 desc="Analog Input #1" type="r4" regNum="1000"/>  
 <AI2 desc="Analog Input #2" type="r4" regDef="1:2"/>  
 </dgElements>  
 <modbusReadBlocks regByteLen="2">  
 <block1 regCnt="4" regNum="1000" funcCode="4"/>  
 </modbusReadBlocks>  
 </AnalogIn>

</dataGroups>

<!-- Default Data Groups -->   
 <defDataGroups>  
 <AnalogIn/>  
 </defDataGroups>

</deviceDefinition>

\*Notes

# Status data group

## <!--Status-->

## <Status niceName="Status" canSend="true" uccSend="true">

## <dgElements secLev="4" byteOrder="bigEndian">

## <RawStatus desc="Raw Value" type="ui2" regDef="1:0" hidden="true"/>

## <VOpen desc="Valve Open" type="boolean" ref="RawStatus" bPos="0"/>

## <Failure desc="Failure Condition" type="boolean" ref="RawStatus" bPos="1"/>

## <RawVoltage desc="Raw Voltage" type="ui2" regDef="2:0" hidden="true" readOnly="true"/>

## <VoltageAdv desc="Voltage (Advanced)" type="r4" readOnly="true" isRef="1">

## <ref prec="0" refOp="opAssignId" deid="RawVoltage"/>

## <ref prec="1" refOp="opMult" value=".001"/>

## </VoltageAdv>

## <VoltageBsc desc="Voltage (Basic)" type="r4" readOnly="true" ref="RawVoltage" scaleFactor=".001"/>

## <VoltageCvF desc="Voltage (cvtF)" type="r4" readOnly="true" cvtF="Scale" sourceType="ui2" scaleFactor=".001" regNum="1001"/>

## </dgElements>

## <modbusReadBlocks regByteLen="2">

## <block1 regCnt="1" regNum="1000" funcCode="3"/>

## <block2 regCnt="1" regNum="1001" funcCode="3"/>

## </modbusReadBlocks>

## <modbusWriteBlocks regByteLen="2">

## <block1 regCnt="1" regNum="1000" funcCode="6"/>

## </modbusWriteBlocks>

## </Status>

\*Notes

# Meter Configuration

<MeterCfg niceName="Meter Configuration" dgCat="none" canSend="true" uccSend="true" baseOrd="1" maxCnt="4" >  
 <dgElements secLev="4" byteOrder="bigEndian">  
 <RawMtrType desc="Meter Type" type="r4" regDef="1:0" hidden="true"/>  
 <MtrType desc="Meter Type" type="string" ref="RawMtrType" mapVal="MtrTypes"/>  
 <ContractHr desc="Contract Hour" type="r4" regDef="1:2"/>  
 </dgElements>  
 <modbusReadBlocks regByteLen="2" ordIncrement="100">  
 <block1 regCnt="4" regNum="2000" funcCode="3"/>  
 </modbusReadBlocks>  
 <modbusWriteBlocks regByteLen="2" ordIncrement="100">  
 <block1 regCnt="4" regNum="2000" funcCode="16"/>  
 </modbusWriteBlocks>   
 </MeterCfg>

<!-- Global Enumerations -->  
 <enums>  
 <MtrTypes>  
 <e0 value="0:Orifice"/>  
 <e1 value="1:Turbine"/>  
 </MtrTypes>  
 </enums>

\*Notes

# Enron History

<HistIdx niceName="History Support (Index)">

<dgElements byteOrder="bigEndian" secLev="4" type="r4">  
 <HrlyIdx desc="Hourly History Index" regNum="7001"/>  
 </dgElements>

<modbusReadBlocks>  
 <block1 funcCode="3" regNum="7001" regCnt="1" regByteLen="2"/>  
 </modbusReadBlocks>

</HistIdx>

<HistHry niceName="History - Hourly" dgCat="enronHistory" baseOrd="1" maxCnt="4" recordMinutes="60" queueSize="840">

<supportDg>  
 <HistIdx deidIndex="HrlyIdx"/>  
 </supportDg>

<dgElements byteOrder="bigEndian" secLev="4" type="r4">  
 <HistDate desc="Date MMDDYY" off="0" hidden="true"/>  
 <HistTime desc="Time HHMMSS" off="4" hidden="true"/>  
 <DateTime desc="DateTime" type="r8"/>  
 <Gas desc="Total Gas Flow" off="8" units="MCF"/>  
 <Energy desc="Total Energy Flow" off="12" units="MMBTU"/>  
 <DP desc="Average DP" off="16" units="inH2O"/>  
 <SP desc="Average SP" off="20" units="psig"/>  
 <Temp desc="Average Temp" off="24" units="F"/>  
 <SqRt desc="Average Sq Root Ext" off="28"/>  
 <FlowTime desc="Flow Time" off="32" units="min"/>  
 <Index desc="Record Index" type="i4" hidden="true"/>  
 </dgElements>

<uccRecvParms>  
 <SDate required="false" desc="Start Date" type="string"/>  
 <EDate required="false" desc="End Date" type="string"/>  
 <Cnt required="false" desc="Max Records to Read" type="ui2"/>  
 <GetLatest desc="Get Latest?" type="boolean" required="false"/>  
 </uccRecvParms>

<modbusReadBlocks regByteLen="4">  
 <block1 funcCode="3" regNum="790" ordIncrement="1" regCnt="1"/>  
 </modbusReadBlocks>

</HistHry>

\*Notes

# Enron Events

<EnrEvents niceName="Enron Events">

<dgElements byteOrder="bigEndian" secLev="4">  
 <EvtFlags desc="Event Flags" type="ui2" off="0" dMask="0x%04.4x"/>  
 <CfgChg desc="Cfg Change" ref="EvtFlags" type="boolean" bPos="9"/>  
 <EvtReg desc="Event Register" type="ui2" off="2"/>  
 <HistTime desc="Time" type="r4" off="4" hidden="true"/>  
 <HistDate desc="Date" type="r4" off="8" hidden="true"/>  
 <DateTime desc="DateTime" type="r8"/>  
 <AsFound desc="As Found" type="r4" off="12"/>  
 <AsLeft desc="As Left" type="r4" off="16"/>  
 </dgElements>

<uccRecvParms>  
 <Ack required="false" desc="Acknowledge/Clear Events" type="boolean"/>  
 </uccRecvParms>

</EnrEvents>

\*Notes

# RTU Configuration

<RTUConfig niceName="RTU Config">  
 <dgElements byteOrder="bigEndian" secLev="4" type="r4">  
 <Version desc="Version" regNum="9001"/>  
 <Model desc="Model" regNum="9003" type="string" len="16" byteOrder="littleEndian"/>  
 <ModelBE16 desc="Model BE 16" regNum="9003" type="string" len="16"/>  
 <ModelBE12 desc="Model BE 12" regNum="9003" type="string" len="12"/>  
 </dgElements>

<modbusReadBlocks>  
 <block1 funcCode="3" regNum="9001" regCnt="2" regByteLen="2"/>  
 <block2 funcCode="3" regNum="9003" regCnt="8" regByteLen="2"/>  
 </modbusReadBlocks>  
 </RTUConfig>

\*Notes

# Composite Data Group

<AnlgStat niceName="Analog Input and Status" dgCat="composite" canSend="false" dgProtocol="Internal">  
 <supportDg>  
 <AnalogIn required="true"/>  
 <Status required="true"/>  
 </supportDg>  
 <dgElements secLev="4" type="ui2">  
 <AI1 desc="Analog Input #1" type="r4" sourceDg="AnalogIn" sourceDeid="AI1"/>  
 <Failure desc="Failure Condition" type="boolean" sourceDg="Status" sourceDeid="Failure"/>  
 </dgElements>  
 </AnlgStat>