

## Specifications

<b>Pump Controller</b>	
<b>Pumps Supported</b>	1, 2, or 3 (lead, lag, standby)
<b>Level Control</b>	Level sensor or float switch-based
<b>Level Transducer Signal Input</b>	4-20mA, 0-20mA, 1-5V
<b>Control Modes</b>	Pump-down (Lift Station), pump-up (Reservoir)
<b>Pump Alternation</b>	Automatic or fixed
<b>SMS and E-mail</b>	Alarm reporting and acknowledgement (requires optional GPRS modem)
<b>Event Logs</b>	Operator, Event Type, Time and Date of event
<b>Alarms</b>	Logging and assignable alarm priorities
<b>Serial Ports</b>	3, for connection to SCADA Radios, local smart sensors and auxiliary devices such as motor protection relays or remote I/O
<b>Ethernet Port</b>	1, 10/100BaseT for web-browser access to local Vision 221 touch screen, laptop or Ethernet radio to corporate WAN
<b>Communication Protocols</b>	SCADA-ready with Modbus and Modbus/TCP
<b>GPRS Modem</b>	1, optional
<b>BlackBerry Interface</b>	BlackBerry Bold hand-held browser for basic viewing and alarm acknowledgement (GPRS modem required)
<b>Web/LAN Security</b>	User logon authentication, and friendly IP list
<b>USB Memory Stick</b>	FlowStation auto-configuration, event and alarm log recording
<b>Commissioning</b>	I/O simulation and test modes
<b>Flush Valve Operation</b>	Support for automatic or controller-based
<b>Setpoints</b>	Pump Down/Up, configurable in 3 groups for operation during wet/dry season, or minimization of peak power consumption
<b>Lift Station Maintenance</b>	Fat-ring reduction and pump-down sludge removal algorithms to reduce frequency of wet well cleaning
<b>Control and Alarm Trigger Point Hysteresis</b>	Configurable
<b>Pump Performance Monitoring</b>	Pump start statistics, run time accumulations and history logs; pump current monitoring (optional)
<b>ClearSCADA Enhanced Integration</b>	ClearSCADA host software provides pre-configured lift station templates for rapid rollout of new installations
<b>Options</b>	
<b>Kit A</b>	Wiring diagram and suggested panel layout Vision 221 - 7" color touch screen with cable (6 ft, cross-over) GPRS cellular modem (includes power cable) Modem Cable DE15P - RJ45, 3ft. long Antenna, cabinet mount with integrated cable Single phase current transformer Power Supply 24V, 100W, DIN (for backup during power failure or backup generator switchover) Battery Charger 2 Batteries - 12V Gel Cell, 8.5A-Hr (2 required per system)
<b>Kit B</b>	Wiring diagram and suggested panel layout Vision 221 - 7" color touch screen with cable (6 ft, cross over) GPRS Cellular Modem (includes power cable) Modem Cable DE15P - RJ45, 3ft. long Antenna, cabinet mount with integrated cable
<b>Kit C</b>	Wiring diagram and suggested panel layout Vision 221 - 7" color touch screen with Cable (6 ft, cross-over)
<b>Customization</b>	TelePACE ladder logic, C++ programming, additional alarm and event configuration

## Model Code

**F110-1A0N-AB00-A** represents a sample code for a FlowStation 110, Modbus protocol emulation, no analog outputs, no integrated radio and kit "A"

Model	Controller
<b>F110</b>	FlowStation110 comes with 8 Analog I/P, 18 Digital I/P, 1 Counter I/P and 10 Digital O/P, USB plug-in memory port
Code	Communication Ports
<b>1</b>	5 Communication Ports: 2 RS232/RS485 (RJ45), 1 RS232 (RJ45), 1 Ethernet (RJ45), 1 USB (programming/diags)
Code	Future Options
<b>A</b>	None
Code	Protocol Option
<b>0</b>	Modbus protocol emulation
Code	Select: Programming Environment
<b>N</b>	None (Non-programmable FlowStation)
<b>0</b>	TelePACE Ladder Logic and C Language firmware loaded (Programming Tools sold separately)
<b>1</b>	C++ Language firmware loaded (Programming Tools sold separately)
Code	Analog Inputs
<b>A</b>	8 selectable as 0-20, 4-20mA, 0-5V or 0-10V (default 4-20mA)
Code	Digital Inputs/Outputs
<b>B</b>	18 Digital Inputs (12/24V), 1 Counter Input and 10 Dry Contact Relay outputs
Code	Select: Analog Outputs
<b>0</b>	None
<b>1</b>	2-channel analog output option, 0 - 20mA
Code	Select: Integrated Communication Interfaces
<b>0</b>	None
FreeWave & MDS Radios (requires one RS-232 port)	
<b>1</b>	900MHz FreeWave Spread Spectrum Radio
<b>2</b>	2.4GHz FreeWave Spread Spectrum Radio
<b>A</b>	900MHz MDS Spread Spectrum Radio
Trio Radio (requires one RS-232 port)	
<b>B</b>	900MHz Trio K-Series Spread Spectrum Radio with encryption, 902-928MHz (FCC / IC)
Code	Select: Kit Contents
<b>A</b>	Kit A (see specifications for contents)
<b>B</b>	Kit B (see specifications for contents)
<b>C</b>	Kit C (see specifications for contents)

\*Note: Stand-alone Trio J-Series Ethernet and K-Series Serial radios are also available in 900MHz spread spectrum.