

U620 RTU

The DSA **U620** is a multi-protocol RTU (Remote Terminal Unit) with many modern features that make it one of the most user friendly RTU's available. It was designed to meet the EPRI requirements for a basic RTU model.

The **U620** can respond to a master station via a standard communication line, a local area network, or a wide area network. It can be dynamically configured over the host communication link (saving hours of travel time during installation, test and upgrades) or by directly connecting to the network port. It can be field reconfigured for a new type communication link as requirements of the network change. In the more advanced LAN

configurations, the basic software can be replaced using the File Transfer Protocol (FTP).

The **U620** network connection may be RS323 or Ethernet. The RS232 connection supports the DNP 3.0 byte oriented protocol, as well as other modern host protocols. The Ethernet connection can support DNP 3.0 embedded in TCP/IP or it may function as a web server allowing direct connection over a public or private network. Communication rates are independently field adjustable for both the host and local connections



The U620 operating in a network with a

modern data communication protocol offers the following capabilities:

- Supports Protocol Conversion.
- Responds to one or more clients.
- > Provides "data by exception" capability (both analog and digital input).
- Supports adjustable deadbands for Analog Values.
- > Provides accurate time stamps using a built in IRIG B Time Code interface.
- > Supports automatic, periodic accumulator freeze.

The **U620** configuration files are prepared using the **U1000** Host Simulator. The **U1000** incorporated with a laptop PC provides a modern, portable, easy to master configuration tool.

The **U620** incorporates modern technology and design techniques to provide an extremely versatile RTU with high reliability and superior maintainability.

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Features:

- Incorporates industry standard PC/104 architecture with pluggable processor and I/O modules.
- Extensive hardware and software configuration options available – assuring a cost effective solution for the required performance level.
- A suite of legacy Bit or Byte oriented data communication protocols are available.
- Suitable for harsh operating environments

Application:

- Suitable for applications requiring the transparent integration of legacy field devices into a modern data communication networks.
- Applications include electric power data acquisition and control systems, oil & gas pipelines, water/ waste water systems, air quality monitoring systems, etc.

Specifications:

- Industry standard PC/104 processor platform
 - o 32 bit 80586 processor
 - o 16MB SDRAM
 - (Optional: 32MB/ 64MB/ 128MB)
- Network data communication interfaces:
 - o 100/10Base-T
 - o RS232C
 - o RS485
- Real-time Operating System
- Operating temperature: -25°C to +70° C
- Enhanced Temperature (Optional): -40°C to +85° C
- Input Power: 110 or 220 VAC standard.
 12VDC, 24VDC, 48VDC, or 130VDC (Optional)
- Mounting:
 - o Enclosure
 - o 19" Rack mount
 - Panel mounted

RTU IO Capabilities:

Analog Input:

The U620 baseboard includes an A to D converter multiplexer that can select the 8 analog input circuits on the baseboard or any of the 7 (optional) analog expansion modules. Each baseboard can be expanded to accommodate 64 12-bit analog values. The Analog Input expansion module includes 8 analog inputs and the solid state multiplexer gates necessary for unique selection of the board's inputs. In summary:

• 8 differential analog input channels per expansion board with 12-bit resolution, programmable gain, range, and polarity on inputs.

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- Sampling rate may be changed in uploaded configuration file.
- o 64 total differential analog inputs expansion per baseboard

Digital Input

The U620 baseboard has addressing for the 8 Status Inputs on the baseboard and each of the 7 (optional) digital input expansion boards. The Status Inputs are optically isolated and require a standard 24-volt "wetting" voltage to sense customer supplied "dry" contacts. Baseboard and expansion boards may be ordered to use optional wetting voltages of 48 or 130 VDC.

- 8 digital inputs on baseboard
- 8 digital input per expansion board
- o 64 total digital input expansion per baseboard

Control Output

The addition of the SBO Control Card allows the selection of up to 16 relay boards with 8 relays per board. This allows a total expansion of 128 relays or 64 SBO controls per baseboard. The time of closure of the relay is settable per point when configuring the system.

- \circ 0 controls on baseboard.
- 8 controls per increment expansion with installation of an SBO Control Card
- o 64 total SBO controls expansion per baseboard

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