



UMOS® (UTILITIES MANAGEMENT OPERATING SYSTEM)

The Utilities Management Operating System (UMOS®) is a graphical, Windows® NT-based operating environment with many applications in electrical power management, water, and sewage systems administration.

ADVANTAGES

- Easy to use, easy to install, software package for electric, water, sewage, gas and steam plant management.
- Integrates communications for most Intelligent Electronic Devices (IEDs).
- Compatible with a wide range of RTUs and PLCs.
- Built-in PLC network communications.
- Full-featured, mouse-driven Graphical User Interface (GUI).
- Built-in remote computer access to all operating features via modem or network.

APPLICATIONS

UMOS® can be used to implement master stations for SCADA, Load Management, and Distribution Automation systems. The UMOS® software can also be used to implement very smart and flexible PC-based remote terminal units (RTUs) for large scale SCADA systems. UMOS® Version 6.0 applications include:

- Substation Automation Systems
- Distribution Automation Systems
- SCADA and EMS communications controllers (Gateways)
- Automatic feedback load control systems
- Departmental billing allocation systems
- Emergency power control systems with single or multiple diesel generators
- Meter checking systems
- Peak shaving load control systems using diesel or hydraulic generators
- Power delivery quality control systems
- Remote disconnect / connect systems
- Utility remote meter reading systems
- Small and medium size SCADA systems
- Power plant automation systems
- Water and sewage automated monitoring and control systems

ADDITIONAL INFORMATION

UMOS® USER'S MANUAL

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BASIC FEATURES

GRAPHICAL USER INTERFACE (GUI)

UMOS® features a mouse-driven, graphical user interface (GUI) that incorporates the following:

- Interactive real time monitor and control displays
- Complete 300 point alarm panel
- Full featured event log (routine, critical, single point)
- Tagging procedures and logs
- Strip charts, short term load forecast
- Energy utilization reports
- On-line graphics editor to create, modify, or delete graphic screen displays
- User-defined graphic symbols library
- Windows® NT compatibility

DATA ACQUISITION AND CONTROL

UMOS® includes a structured database and field device handlers for 60,000 operating points:

- 200 electrical meters (Volts, Amps, kW, kvar, kWh — 10,000 points)
- 10,000 single-valued analog input points (temperature, flow, etc.)
- 10,000 status and alarm input points
- 10,000 control output points
- 10,000 single-valued analog output points
- Field device handlers for Basler Electric's TNP (Transducer Network Protocol), plus Modbus™ and many more IED devices

TRENDING

- The UMOS® package includes 500 user-defined strip chart recordings. Each strip chart can be rolled back up to 365 days (1 year). Each increment of the strip chart corresponds to the user-defined billing interval.
- Data is readily available for easy viewing by the reports subsystem. The reports provide a tabular representation of the data and valuable information, including automatically computed maximums and minimums.

PROGRAMMABLE CONTROLS

- Next generation ladder logic event-driven control programming language permits a UMOS® operating node to supervise and control critical equipment.
- Multiple set point, computed point, and manually activated controls.
- Full Modbus™ data highway implementation.

SCADA/LOAD MANAGEMENT/AGC

Automatic feedback load control is built into UMOS®. Load Management is regulated by a proven 2-hour real time demand predictor. Load Management features include proportional and incremental load control, as well as time scheduled controls.

COMPUTED POINTS

The UMOS® database accepts 300 user-defined computed points. These computations can be algebraic, trigonometric, and/or Boolean. The FORMULA processor supports a complete mathematics library. Mathematical formulae are interpreted in real time by the UMOS® application.

NETWORK COMMUNICATIONS GATEWAY

- UMOS® operates as a gateway to large scale SCADA and EMS systems.
- UMOS® operating nodes may be connected permanently or by using dial-up business lines for occasional access to the database.
- Each UMOS® operating node supports up to 16 remote UMOS® nodes.

SYSTEM REQUIREMENTS

Depending on the size of the utility using the UMOS® system and its requirements, one to several computer systems may be necessary. The *minimum* hardware requirement for each computer includes:

- Pentium CPU, 300MHz
- 128 Megabytes of RAM
- 2.0 Gigabyte hard drive
- SVGA monitor
- CD-ROM drive
- Microsoft® Bus mouse
- Windows® NT 4.0 Workstation

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