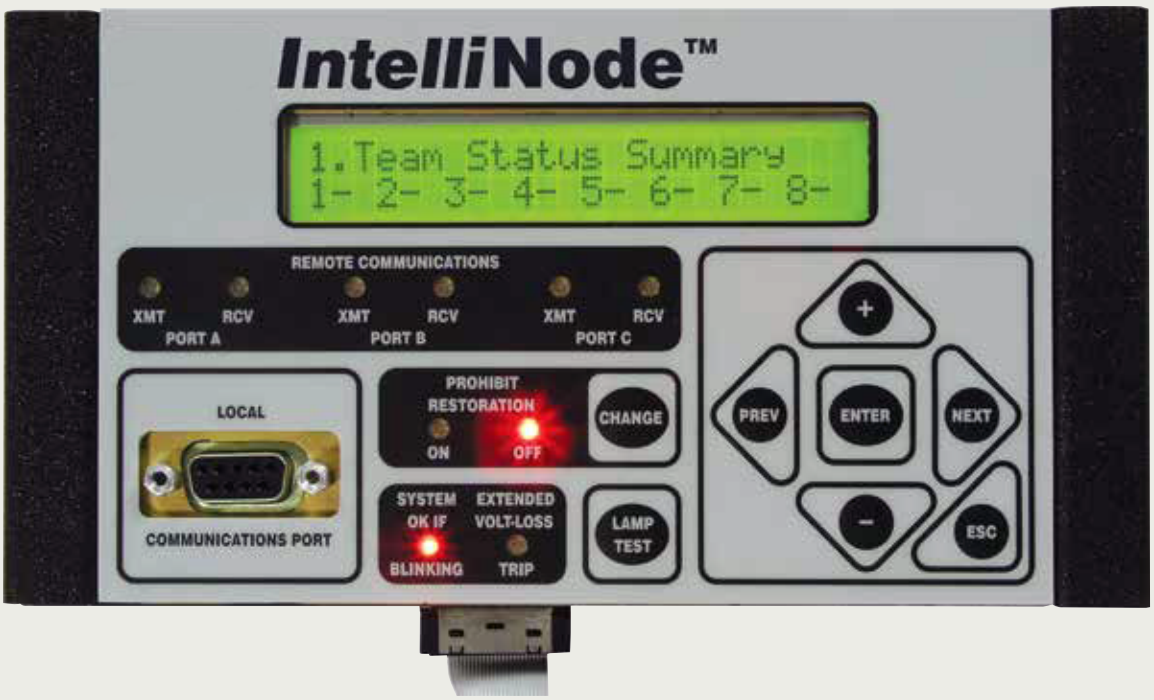

Panel-mounted interface module

Rack-mounted interface module

IntelliNode™ Interface Module

Featuring IntelliTeam® SG Automatic Restoration System

IntelliTeam SG Automation

Using peer-to-peer communication with distributed intelligence, Our IntelliTeam SG Automatic Restoration System tracks system conditions on your overhead and underground distribution system and quickly initiates service restoration in response to an outage or fault. Our IntelliRupter® PulseCloser® Fault Interrupters, Scada-Mate® and Scada-Mate CX™ Switches, Remote Supervisory Vista® Underground Distribution Switchgear, and/or Remote Supervisory Pad-Mounted Gear work together as an autonomous team to transfer loads and minimize customer outage time.

The IntelliTeam SG system improves service reliability for critical areas of your distribution system, and it can be readily expanded to serve entire regions of the system.

Other Manufacturers' Controls Can Join the Team

Our IntelliNode Interface Module enables intelligent electronic devices (IEDs) not of manufacture to function as team members in an IntelliTeam SG Automatic Restoration System. The module does not add new features to its host IED; it enables the host device to communicate with other team members and implement IntelliTeam SG restoration decisions. Fault interrupting and protective functions remain under control of the host IED.

With the module connected to the protective relay or recloser control, the IntelliTeam SG system can acquire status information and analog data from the IED, and the IED can implement IntelliTeam SG commands. Operating software, set points, and logged data—including alarms and team status—are stored in the permanent nonvolatile memory of the module. As new features become available for the module, you'll be able to add them using IntelliLink® Setup Software.

IntelliNode Interface Module Features

- Panel-mounted version fits in most existing IED enclosures
- Rack-mounted version installs in standard 19-inch relay racks
- Uses DNP 3.0 communication for SCADA
- Faceplate communication port provides easy computer connection
- Prohibit Restoration "On/Off" Change switch on the faceplate
- Data logging for analysis of team operation
- Optional IntelliLink® Remote Setup Software provides device status remotely

Remote Communication

Remote configuration of the interface module, along with remote access to host device status information, are available through optional IntelliLink Remote Setup Software or WinMon® Graphical User Interface.

To fully integrate non-manufactured devices with the IntelliTeam SG system, you'll need to install SpeedNet™ Radios or other IntelliTeam SG-compatible communication devices.

Field-Proven Design

You have the security of field-proven microprocessor-based technology, manufactured in an ISO 9001 certified facility. Thousands of controls are in use by hundreds of utilities worldwide.

Our Power Systems Solutions division can provide design consultation for your IntelliTeam SG Automatic Restoration System project. The division's sophisticated feeder simulations can emulate and test any proposed system configuration.

Specifications

Panel-Mounted Version

- Painted aluminum enclosure
- Touch-switch faceplate with light-emitting diode status indicators and two-line liquid-crystal display
- Faceplate dimensions: 7.25-inch (18.4-cm) W × 3.75-inch (9.5-cm) H × 1.27-inch (3.23-cm) D
- Processor dimensions: 10.75-inch (27.3-cm) W × 7.37-inch (18.7-cm) H × 1.50-inch (3.81-cm) D
- Weight: 5 lbs. (2.27 kg)

Rack-Mounted Version

- Painted aluminum enclosure
- Touch-switch faceplate with light-emitting diode status indicators and two-line liquid-crystal display
- Dimensions with mounting brackets: 19.00-inch (48.26-mm) W × 4.97-inch (12.62-mm) H × 14.09-inch (35.79-mm) D (3 U rack mount)
- Weight: 10 lbs. (4.54 kg)

Electrical Operating Characteristics

- Control power options:
- Panel-mounted version: 12 Vdc (nominal); accepts 9 to 30 Vdc
- Rack-mounted version: 12 Vdc, 24 Vdc, 48 Vdc, 125 Vdc, 250 Vdc, 120 to 240 Vac 50-60 Hz
- Power dissipation: (ac or dc) 20 Watts
- Auxillary Radio Port: 12 Vdc, 10 Watts Maximun

Electrical Isolation and Protection

- Insulation withstand: 2.5 kV RMS
- Surge withstand: ANSI/IEEE C37.90.1-1989
- Power line surge withstand: ANSI/IEEE C62.41-1991
- ESD withstand: IEC 1000-4-2 and IEC 801-2
- Related emissions: FCC Part 15 Class B, EN55022B and ANSI C63.4
- Radiated susceptibility: IEEE C37.90.1 25-1000 MHz (at 35 V/m)

Environmental Operating Characteristics

- Temperature: -40°F (-40°C) to +158°F (+70°C) when powered from a dc source; -40°F (-40°C) to +122°F (+50°C) when powered from an ac source
- Humidity: 0 to 95% (non-condensing)

Memory

- Non-volatile RAM and compact flash RAM
- Does not require firmware change to upgrade software

Calendar

- Perpetual calendar—crystal controlled, temperature compensated, automatically adjusted for leap year
- User-enabled daylight savings time changeover
- Lithium 20-year life backup battery for clock
- SCADA time synchronization with DNP
- Optional internal GPS module for precise time reference

Communication Ports

- RS232 DB9 for DNP communication with IED
- RS232 DB9 for DNP communication with IntelliTeam members
- RS232 DB9 SCADA port
- Ethernet SCADA port
- RS232 DB9 faceplate connector for local monitoring and configuration using a personal computer

Communication Hardware and Protocol

- DNP 3.0 protocol

Host Devices Supported (Confirmed by Testing)

- SEL Series 351A, 351S, and 351R Overcurrent Relays
- Nu-Lec CAPM-5 Recloser Control
- Cooper Form 6 Recloser Control
- ABB REF 550 Overcurrent Relay
- ABB DPU2000R Relay (after 2005)
- GE F60 Feeder Management Relay
- Areva Micom

Quality

- Electronics manufactured in an ISO 9001-certified facility