Specifications

Conditions of Sale

STANDARD: The seller's standard conditions of sale set forth in Price Sheets 150 and 181 apply, except as modified by the "Special Warranty Provisions" and "Warranty Qualifications" sections on pages 3 and 4.

SPECIAL TO THIS PRODUCT AND ASSOCIATED SERVICES:

INCLUSIONS: The IntelliNode Interface Module enables intelligent electronic devices not of S&C manufacture to function as team members in an IntelliTeam® SG Automatic Restoration System.

The IntelliNode Interface Module includes IntelliTeam SG system Bronze Level Software. When furnished with optional IntelliTeam SG system Silver Level software, the IntelliNode Interface Module is additionally suitable for basic closed-loop applications. When furnished with optional IntelliTeam SG system Gold Level software, IntelliNode Interface Modules are additionally suitable for basic closed-loop applications and applications on systems with three or more sources. IntelliTeam® Designer configuration and license management software is required to activate IntelliTeam SG system software. Refer to Specification Bulletin 1044-31 for information about the IntelliTeam SG system and IntelliTeam Designer software.

The panel-mounted version fits into most IED enclosures. The rack-mounted version installs in standard 19-inch (483-mm) relay racks. Each device communicates with its associated IED using DNP 3.0 protocol. It sends IED status and analog data to other team members, and also allows the IntelliTeam SG Automatic Restoration System to send commands to the IED when performing service restoration. Fault-interrupting and protective functions remain under control of the IED. Control software, setpoints, and logged data (including alarms and team status) are stored in the permanent non-volatile memory of the module.

Approved communication devices permit configuration of an IntelliNode Interface Module and remote access to IED status information using optional IntelliLink® Setup Software. Refer to Specification Bulletin 1032-31. To fully integrate non-S&C-manufactured devices with IntelliTeam SG Automatic Restoration Systems, the communication system must use IntelliTeam SG system-compatible communication systems.

IntelliNode Interface Modules support the following control devices:

- SEL 351A, SEL 351S, and SEL 351R Overcurrent Relays
- SEL 651R Recloser Control
- Nu-Lec CAPM-5 Recloser Controls
- Cooper Form 6 Recloser Controls
- GE F60 Feeder Management Relays
- ABB Ref 550 Protection Relays
- ABB DPU2000R Relay (after 2005)
- Areva MiCOM

For applicability to other control devices, refer to the nearest S&C Sales Office.

Services-Only Packages

Services-only packages are also available for IntelliNode Interface Modules, as listed in Table 5 on page 9. Offerings include:

- Communication site survey
- Overcurrent protective device coordination studies
- IntelliTeam SG system device settings determination
- IntelliTeam SG system factory acceptance testing
- IntelliTeam SG system training
- IntelliTeam SG system commissioning
- IntelliTeam SG system SCADA integration
- IntelliTeam SG system monitoring
- System maintenance
- Project and construction management

Communication Site Survey

A communication site survey is required for new IntelliTeam SG system applications and is critical to ensure acceptable signal strength between the IntelliNode Interface Modules in the team and the head-end SCADA radio, if applicable. A site survey includes:

- An engineering review of selected team member sites which considers distance, topological constraints, and other factors that can affect signal strength
- An on-site survey of team-member sites to confirm feasibility and, if necessary, determination of alternative sites that will provide better signal strength

- A detailed report defining the GPS coordinates of all team and repeater radios
- Establishment of baseline communication statistics for monitoring communication system performance

The user will need to supply a line truck and the engineer/technician responsible for the project.

The site survey ensures optimal communication when the system is commissioned. However, building construction, relocation of lines, vegetation growth, and other factors can degrade communication over time. A subsequent "tune-up" site survey may be desirable.

Overcurrent Protective Device Coordination Study

A coordination study is used to select appropriately rated protective devices and their settings, including those of the devices connected to the IntelliNode Interface Modules. Proper protective-device coordination minimizes the impact of short-circuits by isolating faults as quickly as possible while maintaining power to the rest of the system.

IntelliTeam SG System Device Settings Determination

Appropriate device settings are essential to the successful implementation of IntelliTeam SG Automatic Restoration Systems. These settings must be documented prior to factory acceptance testing and commissioning of an IntelliTeam SG system.

IntelliTeam SG System Factory Acceptance Testing

Factory acceptance testing ensures that all information required for a successful IntelliTeam SG system implementation is gathered and understood prior to commissioning, and it is strongly recommended if there are any unusual system characteristics or loading limitations. It provides significant insight on how the IntelliTeam SG system will work on the user's specific system protection settings, available fault currents, connected loads, etc. To perform this testing, the user must furnish the following:

- Substation breaker data, including overcurrent pickup levels and relay timer settings
- Available fault current at the location of each protective device connected to a IntelliNode Interface Module or—if S&C is providing an overcurrent protective device coordination study and/or determination of IntelliTeam SG system device settings—information which will allow S&C to calculate these values
- Any substation capacity limitations, conductor loading limitations, or system operating rule limitations
- A written description of the desired system functionality
- A single-line diagram of the circuits on which the IntelliTeam SG system will be applied
- Completed IntelliTeam SG system settings sheets (Determination of device settings is the customer's responsibility, or S&C can provide it.)

Factory acceptance testing is performed at S&C's IntelliLab facility in Chicago. S&C will provide a detailed test plan. After testing has been completed, the user will receive a CD-ROM containing the results of each simulation, which they can use for training.

IntelliTeam SG System Training

IntelliTeam SG system training is conducted on-site and ensures the user's personnel fully understand IntelliTeam SG system functioning. Both operations and engineering sessions are provided.

Operations training is designed for persons who will encounter the equipment in the field, dispatch personnel, or create switching orders. A typical agenda includes:

- IntelliTeam SG Automatic Restoration System—what it is, how it works, and examples
- Operation of IntelliNode Interface Modules in an IntelliTeam SG system
- Real-world examples of IntelliTeam SG system operation using IntelliTeam Designer in **Instant Replay** mode

Engineering training is designed for engineers and technicians who will configure the controls and radios. A typical agenda includes:

- A detailed look at how an IntelliTeam SG Automatic Restoration System works
- Explanation of all control settings
- Software screens useful for troubleshooting
- Configuration of the radios
- Creation of a DNP search table

IntelliTeam SG System Commissioning

IntelliTeam SG system commissioning ensures the IntelliNode Interface Modules in the team have been set up correctly and are ready to be put into service. These services include:

- Assistance with configuring the IntelliNode Interface Modules (Determination of device settings is the customer's responsibility, or S&C can provide it.)
- Verification of acceptable peer-to-peer communication
- Verification of acceptable communication with the SCADA system

- Checking each IntelliNode Interface Module for conformance with installation recommendations
- Verification that each team is capable of achieving **Ready** status (Upon user request, the teams will be disabled after verification.)

IntelliTeam SG System SCADA Integration

If the IntelliTeam SG system is to communicate with a SCADA system, integration services may be desirable. These services include:

- Working with the SCADA supplier
- Designing and installing the communication infrastructure linking the IntelliTeam SG Automatic Restoration System with the user's LAN
- Developing the protocol conversion necessary to change DNP into the native language of the SCADA master
- Developing optimal SCADA settings and polling sequence

IntelliTeam SG System Monitoring

Ongoing remote system monitoring ensures IntelliTeam SG system operation meets agreed-upon service levels. Requires a SpeedGate™ Radio Interface System with a wireless telephone modem. If wireless telephone service is not available, a telephone modem and user-supplied telephone line must be installed at the SpeedGate Radio Interface.

System monitoring allows S&C's engineers to assist with any required troubleshooting, update configurations, and provide weekly "health reports" on the status of the system. Such reports can include:

- Team-ready status
- IntelliTeam SG system operational status
- Battery system status
- Active trouble conditions or alarms

The scope and format of the reports can be customized to meet specific user needs.

System Maintenance

System maintenance includes periodic field inspection and testing of the IntelliNode Interface Module and the device connected to it on a three-year interval. Services provided for each team member include:

- Visual inspection of the IntelliNode Interface Module and the connected device, antenna, grounding, arresters, and wiring connections
- Verification of IntelliNode Interface Module processor operation
- Downloading of a full report from the IntelliNode Interface Module, review of the data, and execution of any corrective actions necessary
- Replacement of the battery in the device connected to the IntelliNode Interface Module, as appropriate
- Operation of the connected device (if it can be bypassed): locally, manually, and from SCADA
- Inspection of the repeater radio and replacement of its battery
- Monitoring of communication statistics and comparison against the initial baseline
- Identification of recommended communication enhancements

All system maintenance is coordinated with the user's designee. To facilitate the inspection process and ensure consistent and accurate reporting, S&C will work with the designee to develop an inspection checklist and train inspection crews on its importance and use.

Project and Construction Management

S&C's highly trained, experienced staff will assist the user's automation team in the areas of project and construction management, working closely with them to assure on-time completion of the project. Services may include working with the user's contractor or crew to:

- Ensure proper installation of the IntelliNode Interface Modules and connected devices
- Supply the automation system as a complete turnkey project

EXCLUSIONS: IntelliNode Interface Modules do not include communication devices, connecting cable, antenna connections, or antennas.

Equipment/services packages and services-only packages do not include field installation or construction labor.

SPECIAL WARRANTY PROVISIONS: The standard warranty contained in the seller's standard conditions of sale, as set forth in Price Sheets 150 and 181, applies to IntelliNode Interface Modules, except that the first and second paragraphs of said warranty are replaced by the following:

(1) General: The seller warrants to the immediate purchaser or end user for a period of 10 years from the date of shipment that the equipment delivered will be of the kind and quality specified in the

contract description and will be free of defects of workmanship and material. Should any failure to conform to this warranty appear under proper and normal use within 10 years after the date of shipment the seller agrees, upon prompt notification thereof and confirmation that the equipment has been stored, installed, operated, and maintained in accordance with recommendations of the seller and standard industry practice, to correct the nonconformity either by repairing any damaged or defective parts of the equipment or (at the seller's option) by shipment of necessary replacement parts. The seller's warranty does not apply to any equipment that has been disassembled, repaired, or altered by anyone other than the seller. This limited warranty is granted only to the immediate purchaser or, if the equipment is purchased by a third party for installation in third-party equipment, the end user of the equipment. The seller's duty to perform under any warranty may be delayed, at the seller's sole option, until the seller has been paid in full for all goods purchased by the immediate purchaser. No such delay shall extend the warranty period.

The seller further warrants to the immediate purchaser or end user that for a period of two years from the date of shipment the software will perform substantially in accordance with the then-current release of specifications if properly used in accordance with the procedures described in seller's instructions. The seller's liability regarding any of the software is expressly limited to exercising its reasonable efforts in supplying or replacing any media found to be physically defective or in correcting defects in the software during the warranty period. The seller does not warrant the use of the software will be uninterrupted or error-free.

For equipment/services packages, the seller warrants, for a period of one year after commissioning, that the IntelliNode Interface Modules will provide automatic fault isolation and system reconfiguration per agreed upon service levels. The remedy shall be additional system analysis and reconfiguration of IntelliTeam SG system until the desired result is achieved.

WARRANTY QUALIFICATIONS: The standard warranty contained in the seller's standard conditions of sale, as set forth in Price Sheets 150 and 181, is contingent upon the installation, configuration, and use of the control or software in accordance with S&C's applicable instruction sheets. This warranty does not apply to major components not of S&C manufacture, such as batteries, communication devices, and remote terminal units. However, S&C will assign to the immediate purchaser or end user all manufacturers' warranties that apply to such major components.

Warranty of equipment/services packages is contingent upon receipt of adequate information on the user's distribution system, sufficiently detailed to prepare a technical analysis. The seller is not liable if an act of nature or parties beyond S&C's control negatively impact performance of equipment/services packages; for example, new construction which impedes radio communication, or changes to the distribution system that impact protection systems, available fault currents, or system loading characteristics.

END USER LICENSE AGREEMENT: The end user is granted a nontransferable, non-sublicensable, nonexclusive license to use the IntelliLink Setup Software, IntelliTeam SG Automatic Restoration System Software, and/or other software furnished with IntelliNode Interface Modules only upon acceptance of all the terms and conditions of the seller's end user license agreement set forth in Price Sheet 155.

How to Order an IntelliNode Interface Module

Complete the following steps to build an IntelliNode Interface Module catalog number. Included with the steps are fill-in boxes to help keep track of the various components of the final catalog number.

Note: Pay strict attention to the various footnotes, which identify constraints and considerations regarding the selection of the various options.

STEP 1. Obtain the catalog number for the desired module from Table 1.

Catalog Number: ☐☐☐–☐☐☐☐☐☐–☐☐

STEP 2. (Optional) Obtain the catalog number for the software from Table 2.

Catalog Number: ☐☐☐–☐☐☐☐☐☐–☐☐

STEP 3. (Optional) Select a communication device, antenna connection, and any other options from Table 3 on pages 6 and 7.

Suffix(es): ☐☐☐☐

STEP 4. (Optional) Obtain the catalog numbers for any desired accessories from Table 4 on page 8.

Catalog Number: ☐☐☐–☐☐☐☐☐☐–☐☐

STEP 5. (Optional) Obtain the catalog number for any desired IntelliNode module services-only packages from Table 5 on page 9.

Catalog Number: ☐☐☐☐☐

Example: The catalog number for a rack-mounted IntelliNode Interface Module with a GPS module and a 900-MHz 5-dB GPS antenna with a 5-foot cable connector is:

9 0 8 – 0 0 0 9 8 1 – 0 2 – R 3 5 2

T 2 S 2

Table 1. IntelliNode Interface Modules

Item	Catalog Number
Panel-mounted interface module 9-30 Vdc,12 Vdc nominal	908-000980-01
Rack-mounted interface module 12 Vdc, 24 Vdc, 48 Vdc, 125 Vdc, 250 Vdc, 120 Vac, or 240 Vac	908-000981-01
Panel-mounted interface module with GPS module①② 9-30 Vdc,12 Vdc nominal	908-000980-02
Rack-mounted interface module with GPS module①② 12 Vdc, 24 Vdc, 48 Vdc, 125 Vdc, 250 Vdc, 120 Vac, or 240 Vac	908-000981-02

① Includes internal GPS module. Requires a GPS antenna kit. Select one from the Table 4 on page 8.

② The GPS module cannot be field retrofitted. The preferred option includes the GPS module and is required for IntelliTeam SG system Site Automation Testing, In-Field Instant Replay, and 1-ms time stamping accuracy. Refer to the nearest S&C Sales Office for more information.

Table 2. Optional Software

Software	Catalog Number
IntelliTeam® II Automatic Restoration System Software License. Use this license for IntelliNode Interface Modules operating in an IntelliTeam II system with IntelliRupter® PulseCloser® Fault Interrupters, IntelliNode Interface Modules, 5800 Series Automatic Switch Controls, 6800 Series Automatic Switch Controls, 6801M Automatic Switch Operators, and Universal Interface Modules. This license includes an IntelliTeam Designer Slot at no charge that must be entered as a separate line item. The slot allows an easy upgrade to IntelliTeam SG Automatic Restoration System at a later date. Requires an IntelliTeam II system-qualified communication device from Table 3 on page 6	008-007106-04●
IntelliTeam Designer Slot. Included in above license	008-007006-03

● The 008-007106-04 license should not to be confused with IntelliTeam SG Automatic Restoration System operating in **IntelliTeam II** mode. IntelliTeam SG Automatic Restoration Systems operating in **IntelliTeam II** mode requires an IntelliTeam SG system-qualified communication device.

Table 3. Options

Item		Suffix to Be Added to Switch Control Catalog Number
Foreign language front panel, and screens①	Spanish	-L51
	Portuguese	-L52
	French	-L53
	Chinese	-L54
	Arabic	-L55
IntelliTeam SG, IntelliTeam II, and SCADA communication device (furnished by S&C and installed by customer)	Factory-installed and wired for iS5 - iES6-Slim Comm Inc. with 2-SFP 100-Mbps multi-mode LC transceiver 550 m, 850 nm, low-voltage 9-36 Vdc	-R287
	Factory-installed and wired for iS5 - iES6-Slim Comm Inc. with 2-SFP 100-Mbps multi-mode LC transceiver 2 km, 1310 nm, low-voltage 9-36 Vdc	-R288
	Factory-installed and wired for iS5 - iES6 Slim Comm Inc. with 2-SFP 100-Mbps single-mode LC transceiver 10 km, 1310 nm, low-voltage 9-36 Vdc	-R289
	Factory-installed and wired for iS5 - iES6-Slim Comm Inc. with 2-SFP 100-Mbps single-mode LC transceiver 30 km, 1310 nm, low-voltage 9-36 Vdc	-R290
	Factory-installed and wired for iS5 - iES6 -Slim Comm Inc. with 2-SFP 100-Mbps single-mode LC transceiver 60 km, 1310 nm, low-voltage 9-36 Vdc	-R291
	Factory-installed and wired for iS5 - iES6 -Slim Comm Inc. with 2-SFP 120-Mbps single-mode LC transceiver 100 km, 1550 nm, low-voltage 9-36 Vdc	-R292
	Factory-installed and wired for iS5 - iES6-Slim Comm Inc. with 2-SFP 100-Mbps single-mode LC transceiver 120 km, 1550 nm, low-voltage 9-36 Vdc	-R293
IntelliTeam SG, IntelliTeam II, and SCADA communication device ready (furnished and installed by customer)	Provision only for Itron Bridge 5 (Gen 5) radio - Customer must provide/install Itron Bridge 5 radio	-R401
IntelliTeam II and SCADA communication device (furnished by S&C and installed by customer)	H&L Model 570 Single-Mode ST Connectors②	-R181
SCADA communication device (furnished by S&C and installed by customer)	SpeedNet™ Cell Edge Gateway 4G LTE Cellular Modem with removable SIM card for USA and Canada (shipped without SIM card)③	-R352
Gateway communication device (furnished by S&C and installed by customer)	Telemetric DNP-RTMII-FLX Transceiver	-XR61
	MDS SD9 Remote Radio	●
Antenna connections (multiple types may be specified)	N-Type female connector with 5-foot (152-cm) cable	-S2
	PolyPhaser® Surge Suppressor with N-Type female connector and 4-foot (122-cm) cable	-S3
	PolyPhaser Surge Suppressor for GPS antenna with 4-foot (122-cm) cable	-S9
	PolyPhaser Surge Suppressor for LTE with N-Type Female connector (698 - 2700 MHz)	-S14

Footnotes for this table are on page 7.

TABLE CONTINUED ▶

Table 3. Options—Continued

	Item	Suffix to Be Added to Switch Control Catalog Number
Antenna	900-MHz 5-dB gain antenna, N-Type male connector	-T2
	LoPro transit antenna	-T5
	Antenna, High Efficiency MLPV LTE (698-2700 MHz), Permanent mount, 3dB gain, no ground Plane,	-T25
Panel mount ribbon cable (used between front panel and processor chassis—must be specified for Panel-Mounted IntelliNode Interface Module)	3-foot (91-cm) cable	-G3
	6-foot (183-cm) cable	-G6
	9-foot (274-cm) cable	-G9
Communication cable (to communication device)④⑤	Null-modem serial cable, DB9M, 6-foot (183-cm)	-UC1
	Ethernet cable, 6-foot (183-cm)	-UC2
	Crossover Ethernet cable, 6-foot (183-cm)	-UC3
	Null-modem serial cable, DB9M, 15-foot (457-cm)	-UC4
	Ethernet cable, 15-foot (457-cm)	-UC5
	Crossover Ethernet cable, 15-foot (457-cm)	-UC6
Communication cable (to host device)④	Serial cable for SEL 351-R1, 351-R2, and 351-S Overcurrent Relay, 6-foot (183-cm)	-UH1
	Serial cable for Nu-Lec CAPM-5 Control, 6-foot (183-cm)	-UH2
	Serial cable for Cooper Form 6 Control, 6-foot (183-cm)	-UH3
	Serial cable for GE F60 Feeder Management Relay, 6-foot (183-cm)	-UH4
	Serial cable for ABB Ref 550 Protection Relay, 6-foot (183-cm)	-UH5

① Contact the nearest S&C Sales Office for front panel and screen availability.

② H&L Model 570 Single-Mode Fiber-Optic Transceiver can be used for IntelliTeam II system applications that do not include IntelliRupter PulseCloser Fault Interrupters. Refer to the nearest S&C Sales Office for more information.

③ See S&C Specification Bulletin 1076-31 for SpeedNet Cell Edge Gateway antenna options.

④ This cable is required, and must be specified.

⑤ Include cable for gateway communication device, if specified.

● Specify the appropriate catalog number suffix based on the frequency band range and application for the radio, from the following table. For example, for a 928- to 960-MHz MDS SD9 Radio for Ethernet and serial application, specify catalog number suffix "-XR216CL."

Frequency Band Range, MHz	Application	Suffix to be Added to Catalog Number
820 to 870	Serial	-XR216AK
928 to 960		-XR216CK
928 to 960, 50-kHz Channel		-XR216DK
880 to 915		-XR216EK
880 to 915, 50-kHz Channel		-XR216FK
850 to 860 / 926 to 936, Transmit Low		-XR216GK
850 to 860 / 926 to 936, Transmit High		-XR216HK
820 to 870	Ethernet and Serial	-XR216AL
928 to 960		-XR216CL
928 to 960, 50-kHz Channel		-XR216DL
880 to 915		-XR216EL
880 to 915, 50-kHz Channel		-XR216FL
850 to 860 / 926 to 936, Transmit Low		-XR216GL
850 to 860 / 926 to 936, Transmit High		-XR216HL
820 to 870	9710 Emulation	-XR216AM
928 to 960		-XR216CM
928 to 960, 50-kHz Channel		-XR216DM
880 to 915		-XR216EM
880 to 915, 50-kHz Channel		-XR216FM
850 to 860 / 926 to 936, Transmit Low		-XR216GM
850 to 860 / 926 to 936, Transmit High		-XR216HM

Table 4. Accessories

Description	Catalog Number
Substation antenna kit. Includes 6-dBd omnidirectional pole-mounted antenna, 80-foot (2438-cm) LMR600 coax cable with connectors on both ends, surge protector, and grounding kit (pole and mounting parts supplied by others)	903-002322-01
Substation GPS antenna kit. Includes 80-foot (2438-cm) cable, mounting bracket, and antenna. Custom cable length can be quoted	903-002347-01
Pole-mounted GPS antenna kit. Includes 25-foot (762-cm) cable, mounting bracket, and antenna. Custom cable length can be quoted	903-002344-01
GPS antenna kit for field installation on enclosure top, includes cable and antenna (for use with panel-mounted interface module)	007-001615-01
Detailed instruction manual. Binder containing printed copies of all IntelliNode Interface Module instruction sheets	003-001161-00
Two-port GPS signal-splitter kit, with one GPS210 splitter and two 7-foot (213-cm) SMA M/M coaxial cables①②	903-002396-01
Four-port GPS signal-splitter kit, with one GPS410 splitter and four 7-foot (213-cm) SMA M/M coaxial cables①②	903-002396-02
Eight-port GPS signal-splitter kit, with one GPS810 splitter and eight 7-foot (213-cm) SMA M/M coaxial cables①②	903-002396-03
iS5-iES6-Slim industrial Ethernet switch (fully enclosed), comes with panel mount bracket, low-voltage 9-36 Vdc, LC connector	110-003800-01
SFP 100-Mbps multimode LC transceiver 550 m, 850 nm	110-003774-01
SFP 100-Mbps multimode LC transceiver 2 km, 1310 nm	110-003774-02
SFP 100-Mbps single-mode LC transceiver 10 km, 1310 nm	110-003774-04
SFP 100-Mbps single-mode LC transceiver 30 km, 1310 nm	110-003774-05
SFP 100-Mbps single-mode LC transceiver 60 km, 1310 nm	110-003774-06
SFP 100-Mbps single-mode LC transceiver 100 km, 1550 nm	110-003774-07
SFP 100-Mbps single-mode LC transceiver 120 km, 1550 nm	110-003774-08

① Requires GPS surface-mounted antenna catalog number 007-001615-01 or pole-mounted antenna kit for GPS catalog number 903-002344-01. May also be used with catalog number 904-002174-01.

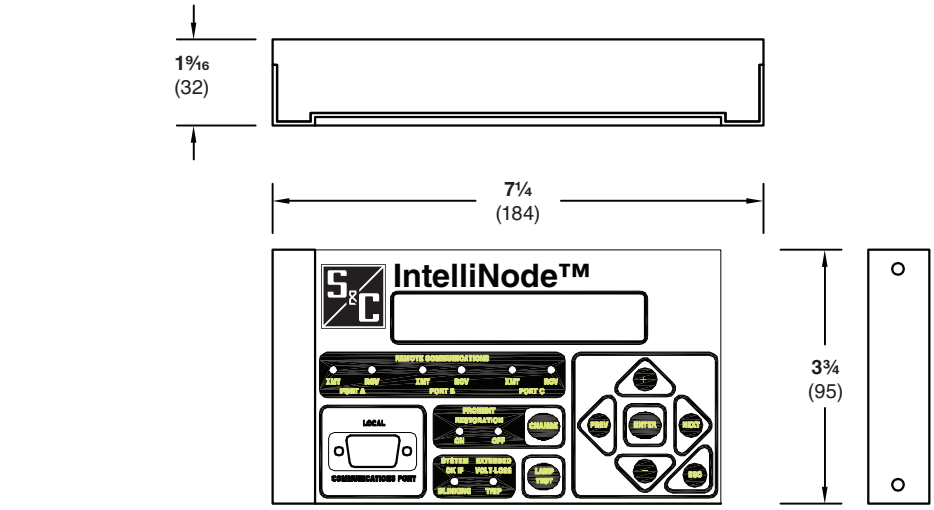
② Custom cable lengths can be quoted and may affect lead time.

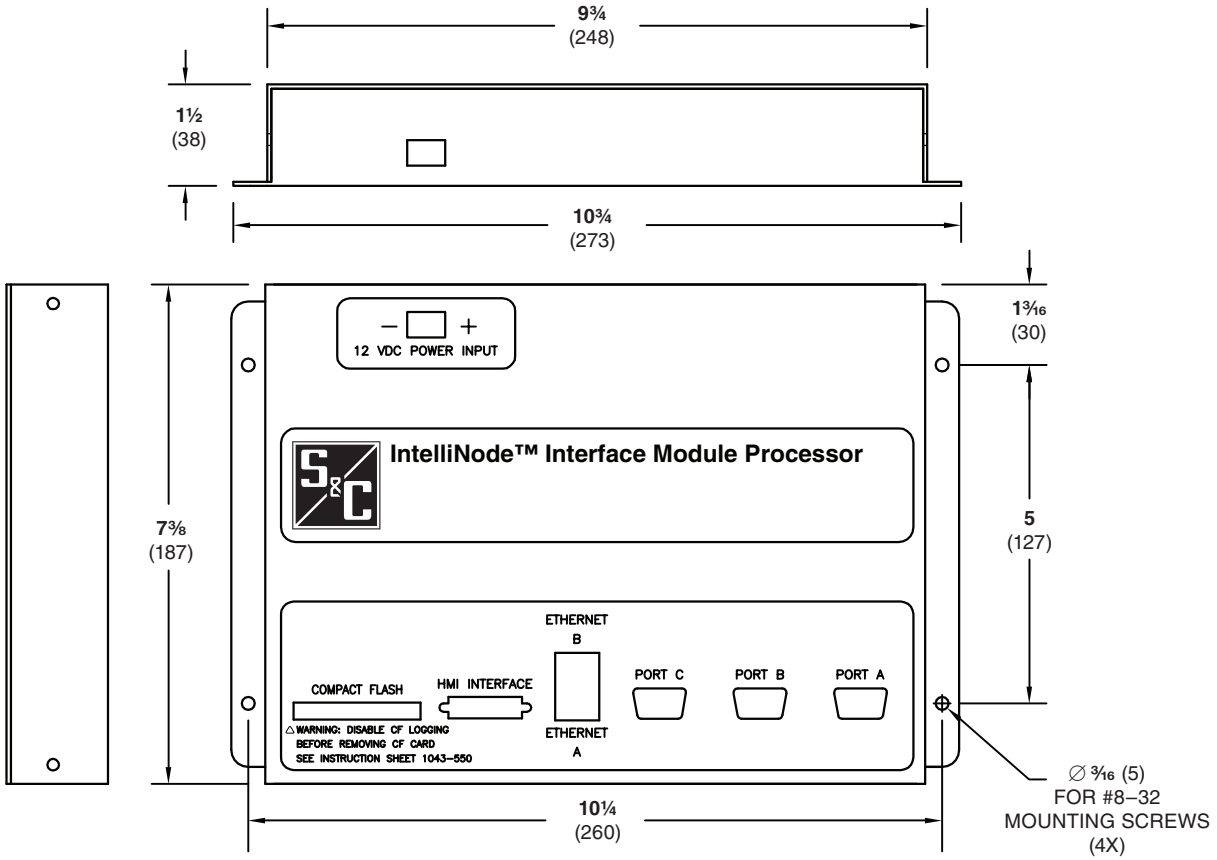
Table 5. IntelliNode Interface Module Services-Only Packages

Item	Catalog Number
Communication site survey. Field testing to confirm that user-proposed IntelliNode Interface Module locations will provide acceptable communication between team members and head-end SCADA radio, if applicable. User should make available their engineer/technician responsible for the project	AS100
Overcurrent protective device coordination study. Determination of appropriately rated protective devices and their settings, including those of devices connected to IntelliNode Interface Modules. Proper coordination minimizes the impact of short-circuits, by isolating faults as quickly as possible, while maintaining power to the rest of the system	AS108
IntelliTeam SG system device settings determination. Determination of these settings is essential to the successful implementation of IntelliTeam SG system, and must be documented prior to factory acceptance testing and commissioning	AS109
IntelliTeam SG system factory-acceptance testing. Factory testing ensures that all information required for successful IntelliTeam SG system implementation is gathered and understood prior to commissioning. Provides insight on how the IntelliTeam SG system will work on the user's system. User must travel to Chicago to witness the testing	AS104
IntelliTeam SG system training. On-site training on functioning of the IntelliTeam SG system. Includes operations and engineering training sessions	AS101
IntelliTeam SG system commissioning. Ensures that IntelliNode Interface Modules have been set up correctly and the IntelliTeam SG system is ready to be put into service	AS102
IntelliTeam SG system SCADA integration. Includes review of user's SCADA system, development of DNP points lists, coordination with the user's SCADA supplier, and review of SCADA database. Third-party costs resulting from information requests to SCADA supplier will be invoiced separately	AS103
IntelliTeam SG system monitoring. Ongoing remote monitoring ensures that IntelliTeam SG system operation meets agreed-upon service levels. Minimum monitoring period is six months	AS105
System maintenance. Includes inspection, testing, and battery replacement on a three-year interval	AS106
Project and construction management. Includes installation of IntelliNode Interface Modules and connected devices and construction	AS107

Panel-Mounted Version

Dimensions in inches (mm)





Rack-Mounted Version

Dimensions in inches (mm)