

TECHNICAL DATA SHEET

DS0144 rev 9

# INTEGRA™ IT-9000



## DESCRIPTION

Part of the INTEGRA™ series, the IT-9000 is an embedded Internet of Things (IoT), BTL-listed BACnet® Building Controller (B-BC) that connects to the ABB Cylon® BACnet® field controllers. The IT-9000 is also capable of connection to and network management of a variety of diverse devices and subsystems using various protocols including, but not limited to, Modbus™ and LonWorks™.

When connected to an Ethernet or wireless LAN, the INTEGRA™ IT-9000 uses Internet connectivity and web-serving capability to provide integrated control, supervision, network management, scheduling, data logging, alarming, and rich graphical displays through a standard Web browser.

## APPLICATION

With simple configuration, tool-less installation, enhanced integration and high-powered performance, the INTEGRA™ IT-9000 controller provides ultimate flexibility in connecting and controlling buildings worldwide.

- Remote connectivity allows control, monitoring, and management of field controllers
- Scalable hardware and software make it suitable for installation in small building to large campus applications
- The INTEGRA-Supervisor software can connect multiple IT-9000 controllers and their data to provide aggregated information, such as archiving, master scheduling, real-time data, history, and alarms, to create a single, unified application.

The licensing model for the INTEGRA™ IT-9000 controller is scalable and features standard drivers along with optional I/O and field bus expansion modules for ultimate flexibility and expandability. The INTEGRA™ IT-9000 controller operates with Niagara Framework® for optimum performance.

Every INTEGRA™ IT-9000 is available with a Niagara 4.13 or higher software license and standard drivers. Purchase of a software maintenance agreement (SMA) is required with initial IT-9000 licensing. The initial SMA is for 18 months, with extended agreements of 3 years and 5 years available for discounted rates.

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NXP iMX8M+ Quad Core CPU

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2GB LPDDR4 RAM

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8GB onboard EMMC storage

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8GB micro-SD card (backup media)

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Wi-Fi (Client or WAP)

Wi-Fi 5 (802.11ac)  
 1x1 802.11 a/b/g/n/ac  
 Configurable radio (Off, WAP, or Client)  
 WPAPSK/WPA2PSK supported  
 Only available for wireless model

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USB type C connector

Debug port

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(2) isolated RS-485 with selectable bias and termination

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(2) 10/100/1000MB Ethernet ports

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Secure boot

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Supply requirements\*: 24 V AC rated at 24 VA minimum, or 24 V DC rated at 1A (24W) minimum

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Runs Niagara 4: 4.13 and later

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Real-time clock

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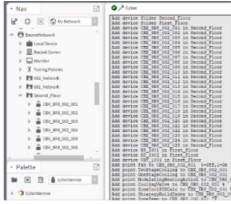
Battery less

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\*Niagara Enterprise Security requires four hours of standby power

# INTEGRA-ProPack

## IMPORT NETWORK DATA FROM CXpro<sup>HD</sup> TO AUTO-CREATE BACnet<sup>®</sup> NETWORK, DEVICES & POINTS



The IT-9000 uses the ABB Cylon<sup>®</sup> INTEGRA-ProPack service to reduce deployment time when connecting to the ABB Cylon<sup>®</sup> BACnet<sup>®</sup> field controllers. The INTEGRA-ProPack is a database import tool that automatically creates the BACnet<sup>®</sup> network, devices, and points in the IT-9000. This service helps to reduce programming time when deploying a new project to the IT-9000. The INTEGRA-ProPack quickly and easily exports network data from CXpro<sup>HD</sup> and imports it into the IT-9000, without the need to discover controllers and points.

## FULL UPLOAD/DOWNLOAD (FUD)

When using ProPack, and controllers are connected to the IT-9000, a copy of the CXpro<sup>HD</sup> controller strategy is stored in the station. This solution works with ABB Cylon<sup>®</sup> FLXeon Series controllers and ABB Cylon<sup>®</sup> CB series controllers on the RS485 ports of the IT-9000.

# SPECIFICATIONS

## CONNECTION

**Note:** Use Copper or Copper Clad Aluminum 70 °C conductors only.

Terminals	PCB mounted plug terminal connections
Conductor Area	Max: AWG 12 (3.31 mm <sup>2</sup> ) Min: AWG 22 (0.355 mm <sup>2</sup> )

## MAXIMUM EXPANSION MODULES SUPPORTED

IT8-NPB-LON	4
IT8-NPB-232	4
IT8-NPB-2X-485	2

**Note:** IT8 expansion modules are compatible with IT-9000 hardware

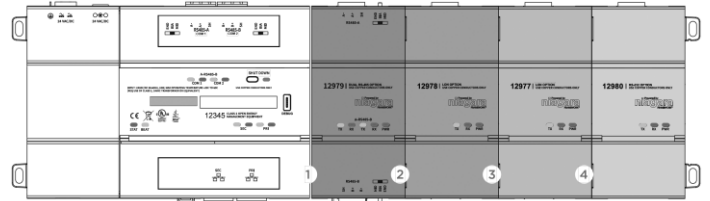
## AGENCY CERTIFICATIONS

UL 916  
CE EN 61326-1  
RCM  
FCC Part 15 Subpart B, Class B  
FCC Part 15 Subpart C  
C-UL listed to Canadian Standards Association (CSA) C22.2 No. 205-M1983  
"Signal Equipment"  
1999/5/EC R&TTE Directive  
CCC  
SRRC  
RSS  
RoHS

## I/O CONFIGURATION

### IT-9000 Maximum Combinations

EXPANSION 1	EXPANSION 2	EXPANSION 3	EXPANSION 4
RS-232 or LON	RS-232 or LON	RS-232 or LON	RS-232 or LON
(2) RS-485	RS-232 or LON	RS-232 or LON	RS-232 or LON
(2) RS-485	(2) RS-485	RS-232 or LON	
(2) RS-485	(2) RS-485		



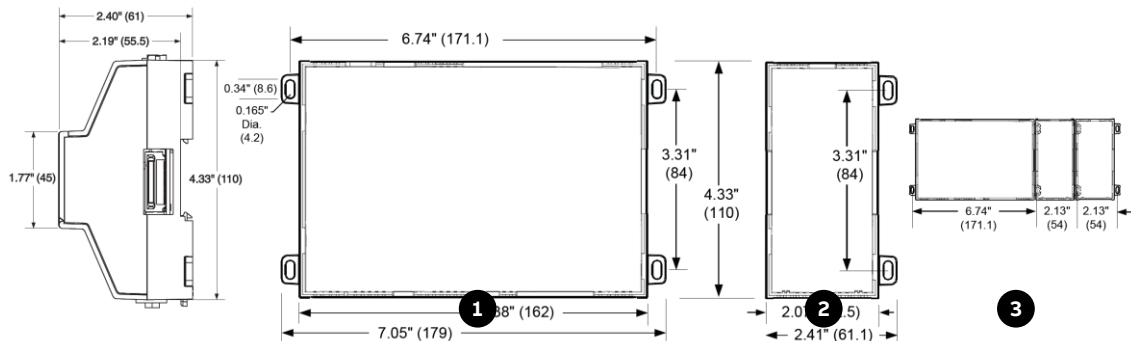
## ENVIRONMENT

**Note:** This equipment is intended for field installation within an enclosure.

Operating Temperature	-4 °F ... 140 °F [-20 °C ... 60 °C]
Storage Temperature	-40 °F ... 185 °F [-40 °C ... 85 °C]
Ambient Humidity	5% ... 95% RH non-condensing
Shipping & Vibration	ASTM D4169, Assurance Level II
MTTF	10 years +

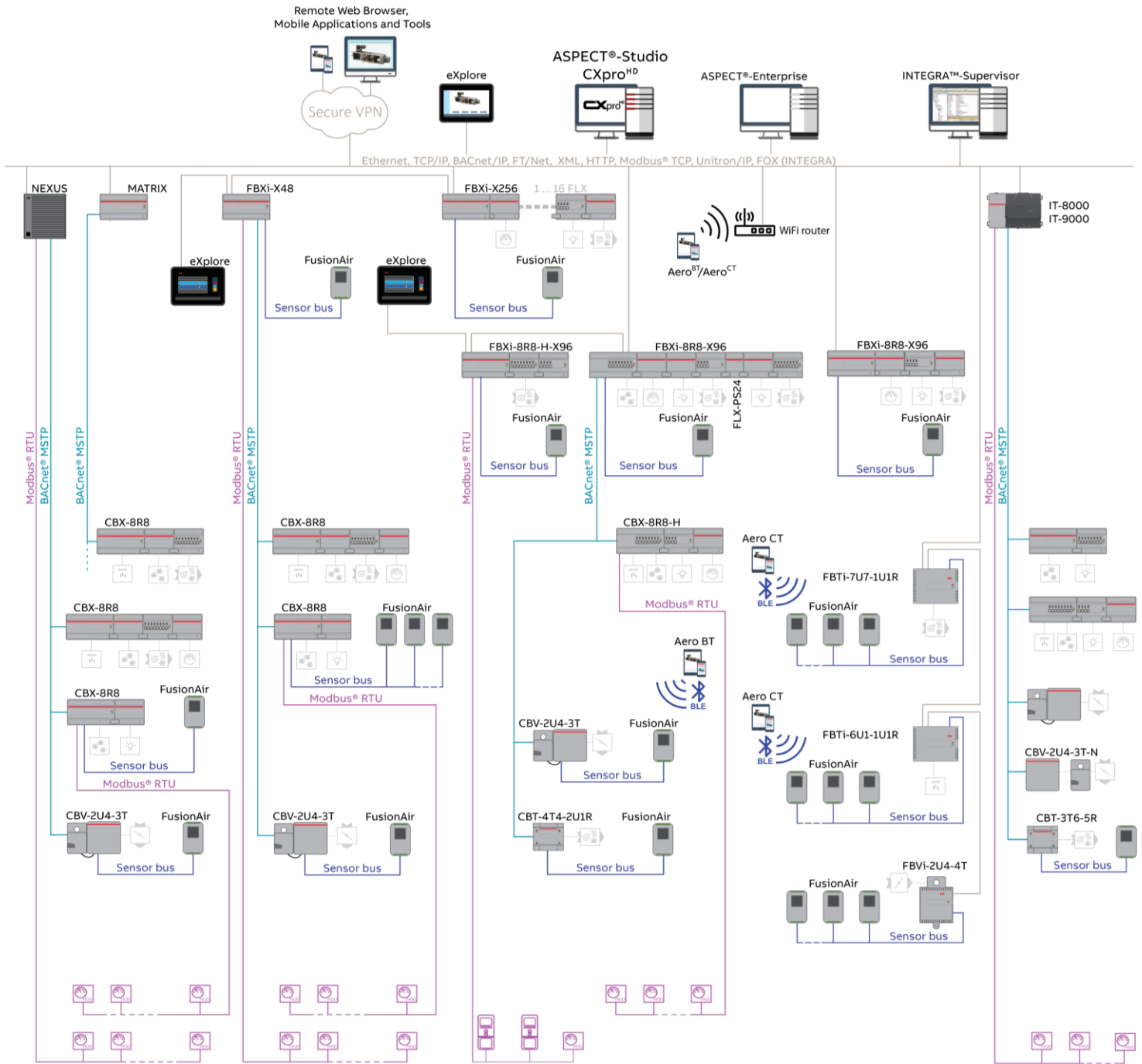
# DIMENSIONS AND WIRING

**Note:** Compatible with (DIN43880) enclosures. Suitable for mounting to a panel or to an EN50022 standard 35mm rail



- IT-9000 controller. Allow at least 1.5" (38mm) clearance around all sides and minimum 3" (76mm) at bottom for Wi-Fi antenna
- Expansion module. Up to four (4) may be used. See "Expansion Modules" and "I/O Configuration"
- Distances between center tabs from one unit to another unit

# SYSTEM ARCHITECTURE




# ORDERING INFORMATION

Note: Products for which the name ends with "-E" are for non-US markets only

## IT-9000 No-Wi-Fi BUNDLES

ABB2CQG150151R2011	IT-9200-NOWIFI-E	Bundled IT-9000 with WiFi DISABLED. Includes core license for 10000 points. Made up of IT-9000-NOWIFI + IT9-200-COR-E + IT9-200-SM0. [EMEA & FE only]
ABB2CQG150149R2011	IT-9025-NOWIFI-E	Bundled IT-9000 with WiFi DISABLED. Includes core license for 1250 points. Made up of IT-9000-NOWIFI + IT9-025-COR-E + IT9-025-SM0. [EMEA & FE only]
ABB2CQG150147R2011	IT-9005-NOWIFI-E	Bundled IT-9000 with WiFi DISABLED. Includes core license for 250 points. Made up of IT-9000-NOWIFI + IT9-005-COR-E + IT9-005-SM0. [EMEA & FE only]
ABB2CQG150148R2011	IT-9010-NOWIFI-E	Bundled IT-9000 with WiFi DISABLED. Includes core license for 500 points. Made up of IT-9000-NOWIFI + IT9-010-COR-E + IT9-010-SM0. [EMEA & FE only]
ABB2CQG150150R2011	IT-9100-NOWIFI-E	Bundled IT-9000 with WiFi DISABLED. Includes core license for 5000 points. Made up of IT-9000-NOWIFI + IT9-100-COR-E + IT9-100-SM0. [EMEA & FE only]

## IT-9000 CORE SOFTWARE LICENSE FILE

ABB2CQG150145S4061	IT9-010-COR	IT-9000 device core software license file. Adds support for up to 10 devices or 500 points. Requires IT-9000 & IT9-010-SM0. [North America only]
ABB2CQG150155S4061	IT9-100-COR	IT-9000 device core software license file. Adds support for up to 100 devices or 5,000 points. Requires IT-9000 & IT9-100-SM0 [North America only]
ABB2CQG150157S4061	IT9-200-COR	IT-9000 device core software license file. Adds support for up to 200 devices or 10,000 points. Requires IT-9000 & IT9-200-SM0 [North America only]
ABB2CQG150149S4061	IT9-025-COR	IT-9000 device core software license file. Adds support for up to 25 devices or 1,250 points. Requires IT-9000 & IT9-025-SM0. [North America only]
ABB2CQG150141S4061	IT9-005-COR	IT-9000 device core software license file. Adds support for up to 5 devices or 250 points. Requires IT-9000 & IT9-005-SM0. [North America only]
ABB2CQG150137S4061	IT9-000-ECOR	IT-9000 field capacity upgrade license. Purchased any time after initial core software purchase. Adds support for an additional 2,500 points to the core (IT9-XXX-COR-E). [North America only]
ABB2CQG150150S4061	ITH-025-DCU	IT-9000 field capacity upgrade license. Purchased any time after initial core software purchase. Adds support for an additional 25 devices or 1,250 points to the core (IT9-XXX-COR). [North America only]
ABB2CQG150152S4061	ITH-025-DCU-E	IT-9000 field capacity upgrade license. Purchased any time after initial core software purchase. Adds support for an additional 25 devices or 1,250 points to the core (IT9-XXX-COR). [EMEA & FE only]
ABB2CQG150153S4061	ITH-050-DCU	IT-9000 field capacity upgrade license. Purchased any time after initial core software purchase. Adds support for an additional 50 devices or 2,500 points to the core (IT9-XXX-COR). [North America only]
ABB2CQG150154S4061	ITH-050-DCU-E	IT-9000 field capacity upgrade license. Purchased any time after initial core software purchase. Adds support for an additional 50 devices or 2,500 points to the core (IT9-XXX-COR). [EMEA & FE only]
ABB2CQG150143S4061	IT9-005-COR-E	IT-9000 device core software license file. Adds support for up to 5 devices or 250 points. Requires IT-9000 & IT9-005-SM0. [EMEA & FE only]
ABB2CQG150151S4061	IT9-025-COR-E	IT-9000 device core software license file. Adds support for up to 25 devices or 1,250 points. Requires IT-9000 & IT9-025-SM0. [EMEA & FE only]
ABB2CQG150147S4061	IT9-010-COR-E	IT-9000 device core software license file. Adds support for up to 10 devices or 500 points. Requires IT-9000 & IT9-010-SM0. [EMEA & FE only]
ABB2CQG150156S4061	IT9-100-COR-E	IT-9000 device core software license file. Adds support for up to 100 devices or 5,000 points. Requires IT-9000 & IT9-100-SM0 [EMEA & FE only]
ABB2CQG150158S4061	IT9-200-COR-E	IT-9000 device core software license file. Adds support for up to 200 devices or 10,000 points. Requires IT-9000 & IT9-200-SM0 [EMEA & FE only]
ABB2CQG150138S4061	IT9-000-ECOR-E	IT-9000 field capacity upgrade license. Purchased any time after initial core software purchase. Adds support for an additional 2,500 points to the core (IT9-XXX-COR-E). [EMEA & FE only]

## IT-9000 FIELD UPGRADE FOR DEVICE CAPACITY PACK

ABB2CQG150140S4061	ITH-001-DCU	IT-9000 device capacity upgrade license. Purchased any time after initial core software purchase. Adds support for an additional 1 device or 50 points to the core (IT9-XXX-COR). [North America only]
ABB2CQG150139S4061	ITH-001-DCU	IT-9000 device capacity upgrade license. Purchased any time after initial core software purchase. Adds support for an additional 1 device or 50 points to the core (IT9-XXX-COR). [North America only]
ABB2CQG150146S4061	ITH-010-DCU	IT-9000 device capacity upgrade license. Purchased any time after initial core software purchase. Adds support for an additional 10 devices or 500 points to the core (IT9-XXX-COR). [North America only]
ABB2CQG150142S4061	ITH-005-DCU	IT-9000 device capacity upgrade license. Purchased any time after initial core software purchase. Adds support for an additional 5 devices or 250 points to the core (IT9-XXX-COR). [North America only]
ABB2CQG150148S4061	ITH-010-DCU-E	IT-9000 device capacity upgrade license. Purchased any time after initial core software purchase. Adds support for an additional 10 devices or 500 points to the core (IT9-XXX-COR). [EMEA & FE only]
ABB2CQG150144S4061	ITH-005-DCU-E	IT-9000 device capacity upgrade license. Purchased any time after initial core software purchase. Adds support for an additional 5 devices or 250 points to the core (IT9-XXX-COR). [EMEA & FE only]

## IT-9000 SERVICE AND MAINTENANCE AGREEMENTS

ABB2CQG153650S4061	IT9-005-SM1	IT-9000 software maintenance agreement. 1 year software maintenance agreement for core software IT8-005-COR.
ABB2CQG153654S4061	IT9-010-SM1	IT-9000 software maintenance agreement. 1 year software maintenance agreement for core software IT8-010-COR.
ABB2CQG153658S4061	IT9-025-SM1	IT-9000 software maintenance agreement. 1 year software maintenance agreement for core software IT8-025-COR.
ABB2CQG153662S4061	IT9-100-SM1	IT-9000 software maintenance agreement. 1 year software maintenance agreement for core software IT8-100-COR.
ABB2CQG153666S4061	IT9-200-SM1	IT-9000 software maintenance agreement. 1 year software maintenance agreement for core software IT8-200-COR.
ABB2CQG153649S4061	IT9-005-SM0	IT-9000 software maintenance agreement. 18 month software maintenance agreement. Must be purchased in conjunction with initial core software IT8-005-COR. Optional 3 or 5 year maintenance may be substituted.
ABB2CQG153653S4061	IT9-010-SM0	IT-9000 software maintenance agreement. 18 month software maintenance agreement. Must be purchased in conjunction with initial core software IT8-010-COR. Optional 3 or 5 year maintenance may be substituted.
ABB2CQG153657S4061	IT9-025-SM0	IT-9000 software maintenance agreement. 18 month software maintenance agreement. Must be purchased in conjunction with initial core software IT8-025-COR. Optional 3 or 5 year maintenance may be substituted.
ABB2CQG153661S4061	IT9-100-SM0	IT-9000 software maintenance agreement. 18 month software maintenance agreement. Must be purchased in conjunction with initial core software IT8-100-COR. Optional 3 or 5 year maintenance may be substituted.
ABB2CQG153665S4061	IT9-200-SM0	IT-9000 software maintenance agreement. 18 month software maintenance agreement. Must be purchased in conjunction with initial core software IT8-200-COR. Optional 3 or 5 year maintenance may be substituted.
ABB2CQG153651S4061	IT9-005-SM3	IT-9000 software maintenance agreement. 3 year software maintenance agreement for core software IT8-005-COR.
ABB2CQG153655S4061	IT9-010-SM3	IT-9000 software maintenance agreement. 3 year software maintenance agreement for core software IT8-010-COR.
ABB2CQG153659S4061	IT9-025-SM3	IT-9000 software maintenance agreement. 3 year software maintenance agreement for core software IT8-025-COR.
ABB2CQG153663S4061	IT9-100-SM3	IT-9000 software maintenance agreement. 3 year software maintenance agreement for core software IT8-100-COR.
ABB2CQG153667S4061	IT9-200-SM3	IT-9000 software maintenance agreement. 3 year software maintenance agreement for core software IT8-200-COR.
ABB2CQG153652S4061	IT9-005-SM5	IT-9000 software maintenance agreement. 5 year software maintenance agreement for core software IT8-005-COR.
ABB2CQG153656S4061	IT9-010-SM5	IT-9000 software maintenance agreement. 5 year software maintenance agreement for core software IT8-010-COR.
ABB2CQG153660S4061	IT9-025-SM5	IT-9000 software maintenance agreement. 5 year software maintenance agreement for core software IT8-025-COR.
ABB2CQG153664S4061	IT9-100-SM5	IT-9000 software maintenance agreement. 5 year software maintenance agreement for core software IT8-100-COR.
ABB2CQG153668S4061	IT9-200-SM5	IT-9000 software maintenance agreement. 5 year software maintenance agreement for core software IT8-200-COR.

## IT-9000 DRIVERS

ABB2CQG150320S4061	ITH-DR-APHP	IT-9000 driver for American Auto-Matrix PHP over RS-232 or RS-485. Manufactured by 3rd party. Limited support.
ABB2CQG150321S4061	ITH-DR-APUP	IT-9000 driver for American Auto-Matrix PUP over RS-232 or RS-485. Manufactured by 3rd party. Limited support.
ABB2CQG150318S4061	ITH-DR-AC	IT-9000 driver for Andover Controls AC256 over RS-232 or RS-485. (Beta version only).
ABB2CQG150319S4061	ITH-DR-AINF	IT-9000 driver for Andover Controls Infinity.
ABB2CQG150322S4061	ITH-DR-CCN	IT-9000 driver for Carrier Comfort Network.
<b>Note:</b> CCN part is not available for IT-8000		
ABB2CQG150323S4061	ITH-DR-FLEX	IT-9000 driver for Flex over RS-232 or RS-485.
ABB2CQG150325S4061	ITH-DR-MCQUAY	IT-9000 driver for McQuay to OPM driver. For use with IT-9000 hardware.
ABB2CQG150326S4061	ITH-DR-MFID	IT-9000 driver for Micros Fidelio IP driver.
ABB2CQG150324S4061	ITH-DR-JSON	IT-9000 JSON Toolkit. Requires IT-9000 and valid Software Maintenance agreement.
ABB2CQG150327S4061	ITH-DR-SMSALM	IT-9000 SMS Alarm driver. Enables SMS alarms to be sent to any mobile phone via a GSM/GPRS modem connected to the RS-232 serial port driver. Supported in AX version 3.8U1 only. Not Available for N4.

## IT-9000 MISCELLANEOUS

ABB2CQG150144R2061	IT9-Demo	Includes IT 9000 controller, with Demo 500 device license microSD card, branding clip, 2 10/100/1000 Mb Ethernet ports, 2 RS-485 serial port and all available Tridium drivers. License will renew annually with the receipt of the annual support fee. Requires Niagara 4 release 4.13 or higher. Hardware Accessories are not included. See Hardware Options for Wall Power supply and expansion modules.
ABB2CQG153702S4061	LIC-CHG-LEG	License change fee to change an existing license at the request of the customer. Applies to all license changes for either IT-9000 or INTEGRA-Supervisor software, except when a driver, upgrade or other software is purchased.
ABB2CQG150146R2061	IT-9-SD-HW	Replacement 8GB JACE-9000 SD card only. Does not include software core/license.
ABB2CQG150145R2061	IT-9-HW	Replacement JACE-9000 Hardware only. Does not include microSD card or core software license. Includes branding clip if specifically requested.

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