

# RS2 Technologies Access It!® Universal.NET

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## 1 Document Versions

Version	Date	Name	Change
1.0	2017-01-23	AZ	Document Created.

## 2 Referenced Documents

Document	Version	Description
<b>Driver Project Requirements (DDK-PR)</b>	1.0	The RS2 Technologies Access It!® Universal.NET driver must conform to all the requirements detailed in this document.
<b>Driver Connection and Online States Requirements (DDK-DC)</b>	1.0	The RS2 Technologies Access It!® Universal.NET driver must conform to all requirements in this document detailed in the section: <a href="#">Device Connection and Online States</a>

### 3 Manufacturer

**Name** RS2 Technologies



**Website** <https://rs2tech.com/RS2WebApp/Products/Software/AccessItUniversalNET>

**Description** The Access It! Universal.NET features a smart and intuitive user interface that allows for cutting-edge configurations while maintaining ease of use. Advanced features allow for automatic scheduling, data management, web access, maps, DVR\NVR integrations, custom reporting, email alerts, biometrics, PSIA, and advanced site management and controls.

## 4 IPSecurityCenter Versions

The driver must be compatible with the following IPSecurityCenter versions:

IPSecurityCenter Version	Supported
5.1	<input checked="" type="checkbox"/>



## 5 Operating Systems

### 5.1 Client Side Functionality

Operating Systems	Supported
Windows 7 64 bit	<input checked="" type="checkbox"/>
Windows 8 64 bit	<input checked="" type="checkbox"/>

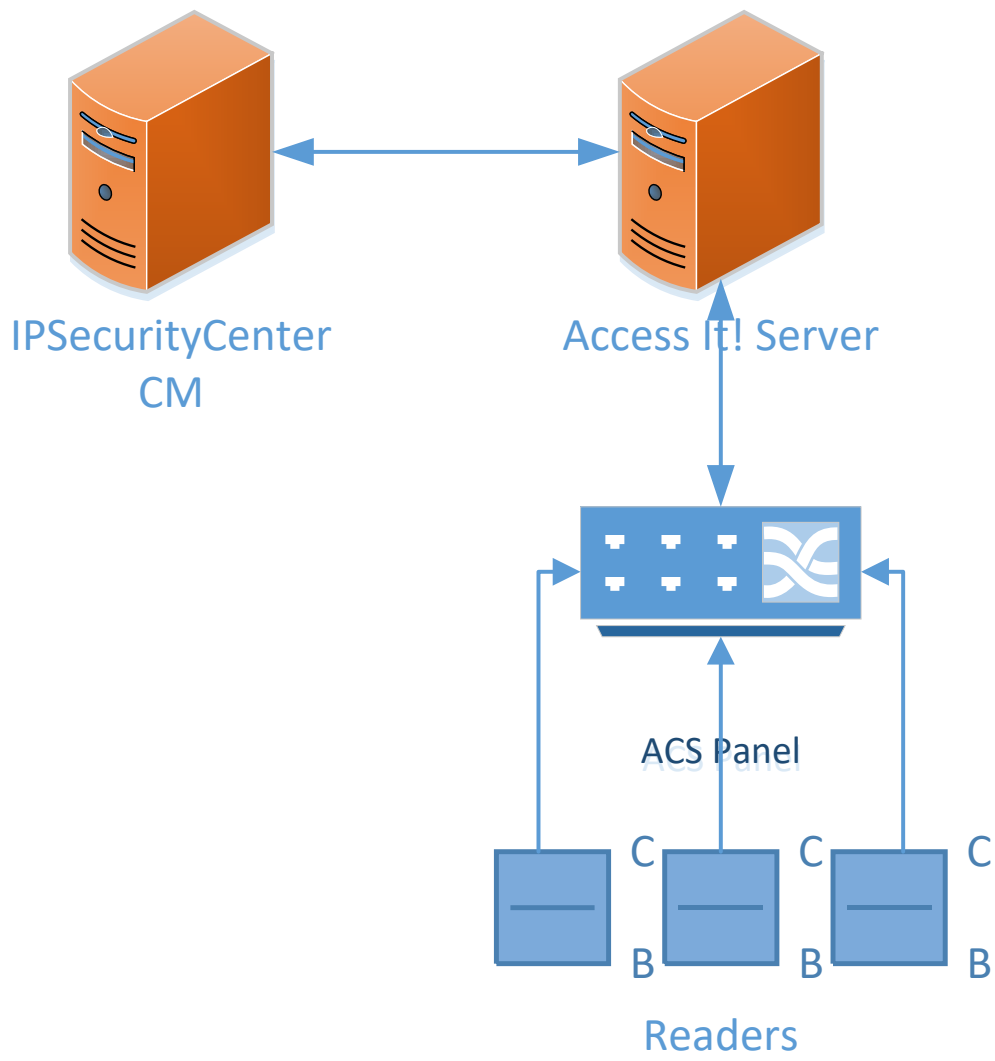
### 5.2 Server Side Functionality

Operating Systems	Supported
Windows Server 2008 R2	<input checked="" type="checkbox"/>
Windows Server 2012	<input checked="" type="checkbox"/>

## 6 Models / Firmware Versions

Model	Versions	SDK
<b>Universal .Net version 5.4</b>		

## 7 Hardware Configurations



## 8 Driver Package

The driver package is named: CNL.IPSecurityCenter.Driver.RS2.AccessIt.[BUILD-VERSION].ipsc

## 9 Driver Features

### 9.1 Access It!® Universal.NET

#### 9.1.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
<b>DC1.0 Device Online Status</b>	None
<b>DC2.0 Authentication</b>	None

## 9.1.2 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

Name	Type	Description	Default Value & Ranges
<b>Database Server</b>	string	Required to populate IPSecurity Center with ACS devices. Enter the IP/Domain name and Server instance, followed by the port. Format; <server>,<port>	Default: Min: Max:
<b>Database Username</b>	string	Required to populate IPSecurity Center with ACS devices.	Default: Min: Max:
<b>Database Password</b>	string	Required to populate IPSecurity Center with ACS devices.	Default: Min: Max:

### 9.1.3 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

#### 9.1.3.1 *Get Credential Cardholder*

Request Credential holder detail based on the credential holder ID or credential ID. Will return multiple results with the same token ID.

Returns bool.

#### Performance

The method must complete within 2 seconds.

#### Parameters

Name	Type	Description	Default Value and Ranges
<b>Card Number</b>	int	The number of the card.	Default: Min: Max:
<b>Cardholder ID</b>	string	The GUID of the Cardholder	Default: Min: Max:
<b>Token ID</b>	string	Token to link request with responses. Will raise CredentialHolderInfo.	Default: Min: Max:

## 9.1.4 Events

General requirements for events can be found in [Driver Project Requirements](#).

### 9.1.4.1 Credential Holder Info

Raised as a response to a credential holder information request

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
Token ID	string	The token passed in to the function
ID	string	ID of the Credential Holder
Name	string	Name of the Credential Holder. Format: Last Name, First Name
Description	string	Description
UUID	string	Unique ID used in the system
State	string	Available States: Active / Inactive
Given Name	string	Given Name
Surname	string	Surname
Active Till	DateTime	Active Until
Disability	bool	True / False
Card Number	int	The Number of the Card.

### 9.1.4.2 Unknown

Any Event Matching an Explicit type or an existing device.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
Device ID	int	PSIA ID of the device raising the event.
Information	string	Additional information about the event.



## 9.2 RS2 AccessIt! Input

### 9.2.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
<b>DC1.0 Device Online Status</b>	None
<b>DC2.0 Authentication</b>	None

## 9.2.2 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

### 9.2.3 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

## 9.2.4 Events

General requirements for events can be found in [Driver Project Requirements](#).

### 9.2.4.1 Input State

Raised when the state of an input is changed.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
State	string	Normal, Active, Other, Unknown
Information	string	Additional information about the event

### 9.2.4.2 Tamper

Raised when the tamper state changes for an input.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
State	string	OK / Other / Failed / Low Battery / Unknown.
Information	string	Additional information about the event.

### 9.2.4.3 Supervision

Raised when the supervision state changes.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
State	string	OK / Other / Cut / Short / Unknown
Information	string	Additional information about the event.

### 9.2.4.4 Masked

Raised when the masking state changes for an input.

#### Performance

The driver must be able to handle 4000 events per hour.

### Event Properties

Name	Type	Description
<b>State</b>	string	Other / Masked / Monitored / Unknown
<b>Information</b>	string	Additional information about the event.

## 9.3 RS2 AccessIt! Output

### 9.3.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
<b>DC1.0 Device Online Status</b>	None
<b>DC2.0 Authentication</b>	None

### 9.3.2 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

### 9.3.3 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

#### 9.3.3.1 *Activate*

Changes output to be active

This method is exposed as an operator action.

Returns bool.

#### **Performance**

The method must complete within 2 seconds.

#### **Parameters**

Name	Type	Description	Default Value and Ranges
------	------	-------------	--------------------------

#### 9.3.3.2 *Deactivate*

Changes output to be inactive

This method is exposed as an operator action.

Returns bool.

#### **Performance**

The method must complete within 2 seconds.

#### **Parameters**

Name	Type	Description	Default Value and Ranges
------	------	-------------	--------------------------



### 9.3.4 Events

General requirements for events can be found in [Driver Project Requirements](#).

#### 9.3.4.1 Output State

Raised when the output state is changed.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
State	string	Off / On / Other / Unknown
Information	string	Additional information about the event.

## 9.4 RS2 AccessIt! Reader

### 9.4.1 Device Connection and Online States

The full requirements for these features can be found in the [Device Connection and Online States Requirements](#)

Feature	
<b>DC1.0 Device Online Status</b>	None
<b>DC2.0 Authentication</b>	None

## 9.4.2 Properties

General requirements for properties can be found in [Driver Project Requirements](#).

### 9.4.3 Methods

General requirements for methods can be found in [Driver Project Requirements](#).

#### 9.4.3.1 Lock

Sets the reader to normal state.

This method is exposed as an operator action.

Returns bool.

##### Performance

The method must complete within 2 seconds.

##### Parameters

Name	Type	Description	Default Value and Ranges
------	------	-------------	--------------------------

#### 9.4.3.2 Unlock

Permanently unlocks the door

This method is exposed as an operator action.

Returns bool.

##### Performance

The method must complete within 2 seconds.

##### Parameters

Name	Type	Description	Default Value and Ranges
------	------	-------------	--------------------------

#### 9.4.3.3 Grant Access

Temporarily unlocks the door to allow one entry

This method is exposed as an operator action.

Returns bool.

##### Performance

The method must complete within 2 seconds.

##### Parameters

Name	Type	Description	Default Value and Ranges
------	------	-------------	--------------------------

#### 9.4.4 Events

General requirements for events can be found in [Driver Project Requirements](#).

##### 9.4.4.1 Latch

Raised when Latch State changes

##### Performance

The driver must be able to handle 4000 events per hour.

##### Event Properties

Name	Type	Description
State	string	Latched / Unlatched / Other / Unknown
Information	string	Additional information about the event.

##### 9.4.4.2 Open

Raised when the Open state changes for a reader door.

##### Performance

The driver must be able to handle 4000 events per hour.

##### Event Properties

Name	Type	Description
State	string	Other / Open / Closed / Unknown
Information	string	Additional information about the event.

##### 9.4.4.3 Forced

Raised when a door forced state changes.

##### Performance

The driver must be able to handle 4000 events per hour.

##### Event Properties

Name	Type	Description
State	string	OK / Other / Forced / Unknown
Information	string	Additional information about the event

##### 9.4.4.4 Held

Raised when a door held state changes.

##### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
State	string	OK / Other / Held / Unknown
Information	string	Additional information about the event.

#### 9.4.4.5 Alarm

Raised when the alarm state changes for a reader.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
State	string	OK / Other / Alarm / Unknown
Information	string	Additional information about the event.

#### 9.4.4.6 Override

Raised when the override state changes.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
State	string	Normal / Other / Overridden / Unknown
Information	string	Additional information about the event.

#### 9.4.4.7 Mask

Raised when the masking changes for a reader.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
------	------	-------------

<b>State</b>	string	Masked / Other / Monitored / Unknown
<b>Information</b>	string	Additional information about the event.

#### 9.4.4.8 *Tamper*

Raised when the tamper state changes.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
<b>State</b>	string	OK / Other / Tamper / Unknown
<b>Information</b>	string	Additional information about the event.

#### 9.4.4.9 *Access Granted*

Raised when access is granted at a reader.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
<b>Reason</b>	string	OK / Other / Duress
<b>Information</b>	string	Additional information about the event
<b>Credential ID</b>	int	ID of the credential used. Same as Card Number.
<b>Credential Name</b>	string	Name on the Credential.
<b>Credential Description</b>	string	Credential Description.
<b>Credential Assigned To ID</b>	string	Cardholder Id.
<b>Credential State</b>	string	Active/Inactive
<b>Credential Valid From</b>	DateTime	Valid from.
<b>Credential Type</b>	string	Credential Type. Ex. PIN
<b>Credential Value</b>	string	Credential Value.
<b>Credential Value Encoding</b>	string	Credential Value Encoding.



#### 9.4.4.10 Access Denied

Raised when access request has been denied.

#### Performance

The driver must be able to handle 4000 events per hour.

#### Event Properties

Name	Type	Description
Reason	string	Other/ Unknown Credential
Information	string	Additional information about the event
Credential ID	int	ID of the credential used. Same as Card Number.
Credential Name	string	Name on the Credential.
Credential Description	string	Credential Description.
Credential Assigned To ID	string	Cardholder Id.
Credential State	string	Active/Inactive
Credential Valid From	DateTime	Valid from.
Credential Type	string	Credential Type. Ex. PIN
Credential Value	string	Credential Value.
Credential Value Encoding	string	Credential Value Encoding.

## **10 Installation**

### **10.1 Prerequisites**

SDK is not Required

## 10.2 Driver Installation

- Start the IPSecurityCenter™ client and any supporting services
- Open the Device Driver Manager from the System Configuration
- Click the **Install** button
- Select the RS2 Technologies Access It!® Universal.NET Driver Package in the Open file dialog
- Wait for the driver to be uploaded

The driver packages should be listed in the Device Driver Manager.

Additional Installation Details

### 10.2.1.1 PSIA Integration

#### 10.2.1.1.1 Overview

Beginning in version 5.2, Access It! Universal.NET complies with the PSIA specification allowing the server machine to act as a PSIA host. By default the Access It! Universal.NET PSIA service will listen on TCP port 7777. Third party PSIA client requests can be made to the service allowing for the following:

- Reader change of states (Unlock / Lock / Grant Access)
- Input change of states (Enable / Disable)
- Output change of states (Activate / Deactivate / Pulse)
- Status monitoring for Readers / Inputs / Outputs
- Monitoring of system events and alarms
- Retrieval of system history

#### 10.2.1.1.2 Access It! Universal.NET Licensing

The following licensing option must be enabled within the Access It! Universal.NET dongle and is a system wide license.

- Encoder Support - Yes

#### 10.2.1.1.3 Requirements

- Access It! Universal.NET 5.4
- Access It! Universal.NET PSIA service

#### 10.2.1.1.4 Installation

To obtain a copy of the PSIA installation, contact RS2 Technical Support group.

1. Uninstall any previous version, if necessary.
2. Extract the contents of the AccessIt!UniversalPSIA.zip
3. Run Setup.exe
4. Click Next
5. Click I Agree
6. Click Next
7. Select installation directory
8. Click Next
9. Click Next

10. Click Close

### **10.3 Service Startup**

1. Navigate to the Microsoft Windows service snap in (Services.msc)
2. Select the Access It! Universal PSIA Service
3. Select Start from the left hand menu

### 10.3.1 Device Configuration

- Right click in a folder (e.g. Devices) in the System Configuration: **New** → **Device On** → **Server**
- Click **Next** on the introduction
- Select **RS2 Technologies** in the **Device Manufacturer** list
- Select **Access It!® Universal.NET** in the Available Devices list
- Click **Next** to enter the device details: Enter the RS2 Technologies Access It!® Universal.NET hostname or IP address, the port (use 0 to use the default port), and user name and password if integrated security is not being used.
- Click **Next** and **Finish** to add the device.
- Enable the device to bring it online.

Additional Configuration Details

#### 10.3.1.1 SQL User connection

Create User that has Access to RS2 AccessIt! Universal Database.

Using Microsoft SQL Server Management Studio, Map or grant viewing access (SELECT) to a user to the following Database:

- AIUniversal

This will allow the driver to retrieve PSIA ID's as well as Card and Cardholder information.

##### 10.3.1.1.1 Debugging

The PSIAID is a required argument when trying to control or request status of a device.

- Readers
  - Using Microsoft SQL Server Management Studio, or the Access It! Universal.NET Database Configuration Utility, run the following SQL statement:
  - `SELECT Readers.ReaderName, PSIAObjects.PSIAID FROM PSIAObjects INNER JOIN Readers ON dbo.PSIAObjects.ObjectID = dbo.Readers.ReaderID ORDER BY dbo.Readers.ReaderName`
- Inputs
  - Using Microsoft SQL Server Management Studio, or the Access It! Universal.NET Database Configuration Utility, run the following SQL statement:
  - `SELECT Inputs.InputName, PSIAObjects.PSIAID FROM PSIAObjects INNER JOIN Inputs ON dbo.PSIAObjects.ObjectID = dbo.Inputs.InputID ORDER BY dbo.Inputs.InputName`
- Outputs
  - Using Microsoft SQL Server Management Studio, or the Access It! Universal.NET Database Configuration Utility, run the following SQL statement:
  - `SELECT Outputs.OutputName, PSIAObjects.PSIAID FROM PSIAObjects INNER JOIN Outputs ON dbo.PSIAObjects.ObjectID = dbo.Outputs.OutputID ORDER BY dbo.Outputs.OutputName`

### 10.3.2 Driver Compatibility

The following devices are known to be incompatible with the RS2 Technologies Access It!® Universal.NET .

Model
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