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Access Easy Control System
Selection Guide

BOSCH
Invented for life

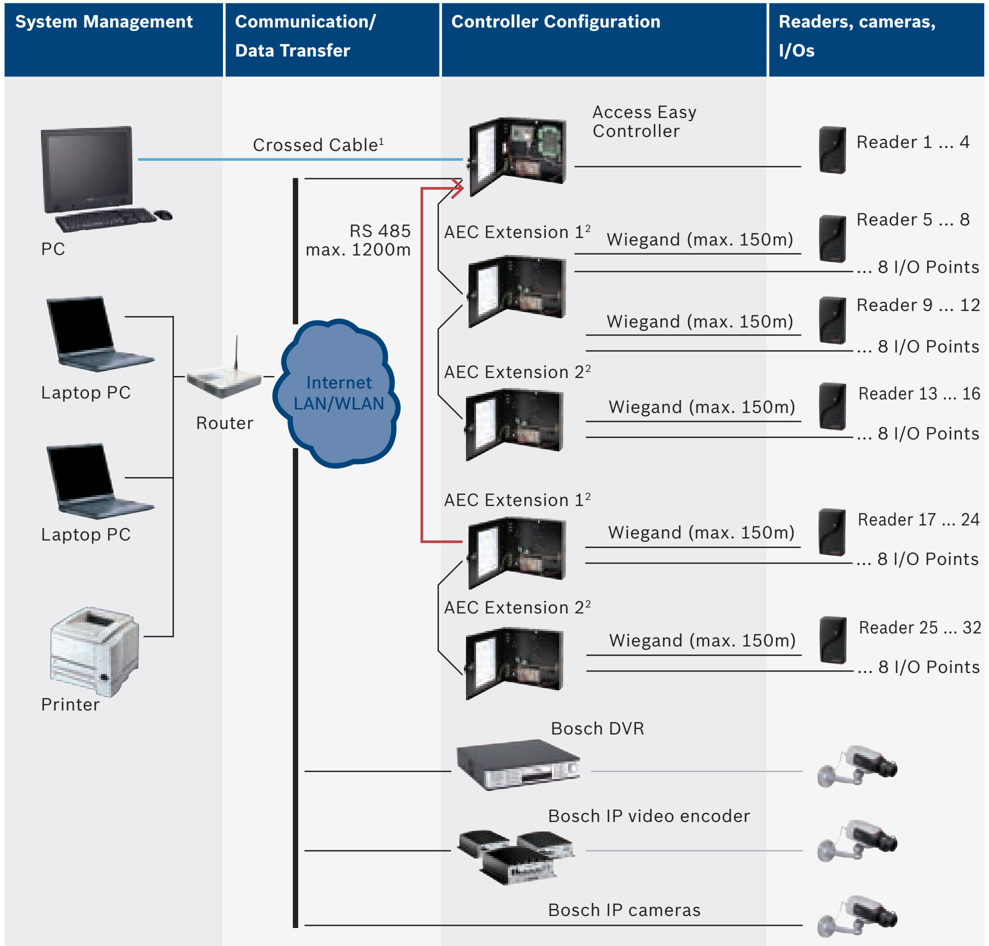
Contents

System Overview

The Access Easy Controller (AEC) from Bosch is an intuitive user-friendly web-based access control system designed especially for small to medium scale applications. It provides the user the ability to control all aspects of their access control system through a simple and familiar Internet browser connection. The Access Easy Controller will assist in monitoring movement through the facility, managing and controlling doors with the ability to open doors with the push of a button, set up and manage all access readers, receive alarms and monitor past events. There is no software to install which provides the user the flexibility of using a computer with a standard Web Browser and Internet connection to manage and monitor their facility. This computer can access the controller regardless of physical location or operating system installed.

Wiegand Interface Hardware

Bosch designed the Access Easy Controller to support all standard Wiegand readers and card technologies which are widely available in the industry.



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[1] Instead of connection via corporate LAN/WAN or Internet a workstation can also be connected directly to an AEC panel using a network cross cable. However, please note that panel does not support both connection types simultaneously.

[2] The AEC extensions provide two slots each allowing any mixture of reader and I/O boards to meet exactly the individual requirements within an installation.

Configuring the Access Easy Controller

Follow the 3 quick and easy steps below to configure the system.

Step 1: Choose Size of System Desired in Installation

- Select the row based on the required amount of readers
- Select the column based on the required maximum amount of input and output points
- Take note of the matching letter for your desired system
- Select the matching letter for your desired system from table 1 first.

		Select the number of Auxiliary Inputs and Outputs needed								
		0	**1-8**	**9-16**	**17-24**	**25-32**	**33-40**	**41-48**	**49-56**	**57-64**
Select the number of readers needed for your system	**1-4**	A	E	I	M	Q	U	Y	C1	G1
	5-8	B	F	J	N	R	V	Z	D1	H1
	9-12	C	G	K	O	S	W	A1	E1	I1
	13-16	D	H	L	P	T	X	B1	F1	J1
	17-20	K1	O1	S1	W1	A2	E2	I2	M2	Q2
	21-24	L1	P1	T1	X1	B2	F2	J2	N2	R2
	25-28	M1	Q1	U1	Y1	C2	G2	K2	O2	S2
	29-32	N1	R1	V1	Z1	D2	H2	L2	P2	T2

- Example: A system needing 18 readers and 19 auxiliary inputs would result in a W1

Step 2: Define Quantity of Products Needed

- ▶ Locate the corresponding letter from previous step in the tables below to obtain the necessary parts for your system
- ▶ In the column below the letter shows you the exact number of each of the basic AEC components you need for your installation. The corresponding order items you can find in the first column

Number of Products Needed to Configure System

Part Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
APC-AEC21-UPS1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AEC-AEC21-EXT1	-	1	1	2	1	1	2	2	1	2	2	3	2	2	3	3	2	3	3	4
API-AEC21-4WR	-	1	2	3	-	1	2	3	-	1	2	3	-	1	2	3	-	1	2	3
API-AEC21-8I8O	-	-	-	-	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4
AIM-AEC21-CVT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Part Number	U	V	W	X	Y	Z	A1	B1	C1	D1	E1	F1	G1	H1	I1	J1	K1	L1	M1	N1
APC-AEC21-UPS1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AEC-AEC21-EXT1	3	4	4	5	3	4	4	5	4	5	5	6	4	5	5	6	3	3	4	4
API-AEC21-4WR	-	1	2	3	-	1	2	3	-	1	2	3	-	1	2	3	4	5	6	7
API-AEC21-8I8O	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	-	-	-	-
AIM-AEC21-CVT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Part Number	O1	P1	Q1	R1	S1	T1	U1	V1	W1	X1	Y1	Z1	A2	B2	C2	D2	E2	F2	G2	H2
APC-AEC21-UPS1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AEC-AEC21-EXT1	3	3	4	4	4	4	5	5	4	4	5	5	5	5	6	6	5	6	6	7
API-AEC21-4WR	4	5	6	7	4	5	6	7	4	5	6	7	4	5	6	7	4	5	6	7
API-AEC21-8I8O	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
AIM-AEC21-CVT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Part Number	I2	J2	K2	L2	M2	N2	O2	P2	Q2	R2	S2	T2
APC-AEC21-UPS1	1	1	1	1	1	1	1	1	1	1	1	1
AEC-AEC21-EXT1	6	6	7	7	6	7	7	8	7	7	8	8
API-AEC21-4WR	4	5	6	7	4	5	6	7	4	5	6	7
API-AEC21-8I8O	6	6	6	6	7	7	7	7	8	8	8	8
AIM-AEC21-CVT	1	1	1	1	1	1	1	1	1	1	1	1

▶ Example results from above
1x APC-AEC21-UPS1
4x AEC21-EXT1
4x API-AEC21-4WR
3x API-AEC21-8I8O
1x AIM-AEC-CVT

APC-AEC21-UPS1: AEC Controller with one four-reader-interface, which can support 4 Wiegand readers, 8 input 8 output points and a RS485 port for connection to AEC Extension unit.

AEC-AEC21-EXT1: AEC Extension enabling the AEC System to be extended to up to 32 readers and 64 input and 64 output points via the RS485 port.

API-AEC21-4WR: AEC 4-reader interface board enabling the use of up to four card readers and providing wiring termination points for readers, door strikes or magnetic locks, door contacts and “Request-to-Exit” devices.

API-AEC21-8I8O: 8 Input 8 Output card which can monitor 8-alarm type (non-reader) inputs and control up to eight external devices, such as bells, fans, lights etc.

AIM-AEC21-CVT: AEC Reader & Input-Output extension module to enable the AEC System to extend additional 16 readers and 32 input 32 output points

Step 3: Select the reader technology

The card technology influences the type of reader to be used in the system. For new installations, the card technology can be freely chosen depending on a variety of factors. We encourage you to discuss these options with the local Bosch representative. In existing installations where only part of the system is changed, selecting the existing card technology can be beneficial to save money and time.

Prox	iClass	Mifare	EM

Choose your Credentials

Step 4 (Optional): Select Video Devices

With the integration of video into the Access Easy Controller, true verification and identification of cardholders can be carried out. Live images can directly be checked against the database and allow the operators to decide whether to grant an access or not. Live or alarm video as well as archived video from past events around a door can easily be retrieved from connected DVRs.

Please note that when enabling the video functions, a PC with Windows operating system is necessary.

Basic Video Functionality	Application Desired	Recommended Bosch Products
Live video	ID camera for video verification or surveillance camera for use with video and/or alarm verification	▶ Dinion IP ▶ FlexiDome IP ▶ AutoDome IP ▶ Videojet X10* ▶ VIP-X* ▶ VIP10*
Archiving[3]	Video storage to archive images over a defined period of time or past alarm verification. Retrieve video archives associated with an event on the log of the Access Easy Controller	▶ Vidos NVR ▶ DiBos DVR ▶ Divar XF DVR ▶ Bosch 700 Series ▶ iSCSI or USB device in conjunction with one of the above VIP or Videojet devices

* just the IP encoder, additional analogue camera(s) needed for those devices

Image frame rate (quality) and system storage capacity will vary according to the products chosen. For details and recommendations on video devices, please contact your local Bosch Security representative.

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[3] Archiving and live video display functionality can be combined or set independently from each other. The identifier just recommends what video devices are necessary for what feature. It is necessary however that the record video functionality is enabled to use the playback feature.

Application example: Office Buildings

Challenge

Small and medium sized companies with security sensitive products and areas are looking for an easy and affordable way to protect their assets. Easy to install and use, the Access Easy Control System integrates a host of security features such as video verification and intrusion monitoring without sacrificing simplicity and intuitive control. In fact, it’s easy in every sense: preloaded software for quick installation and configuration, a built-in web server for easy networking, and easy to maintain and upgrade with downloadable firmware to flash memory.

System functionality

The software is already pre-installed into the controller which gives the flexibility of using a computer with standard Web Browser and Internet connection to manage and monitor the facility. This computer can access the controller regardless of physical location or operating system installed.

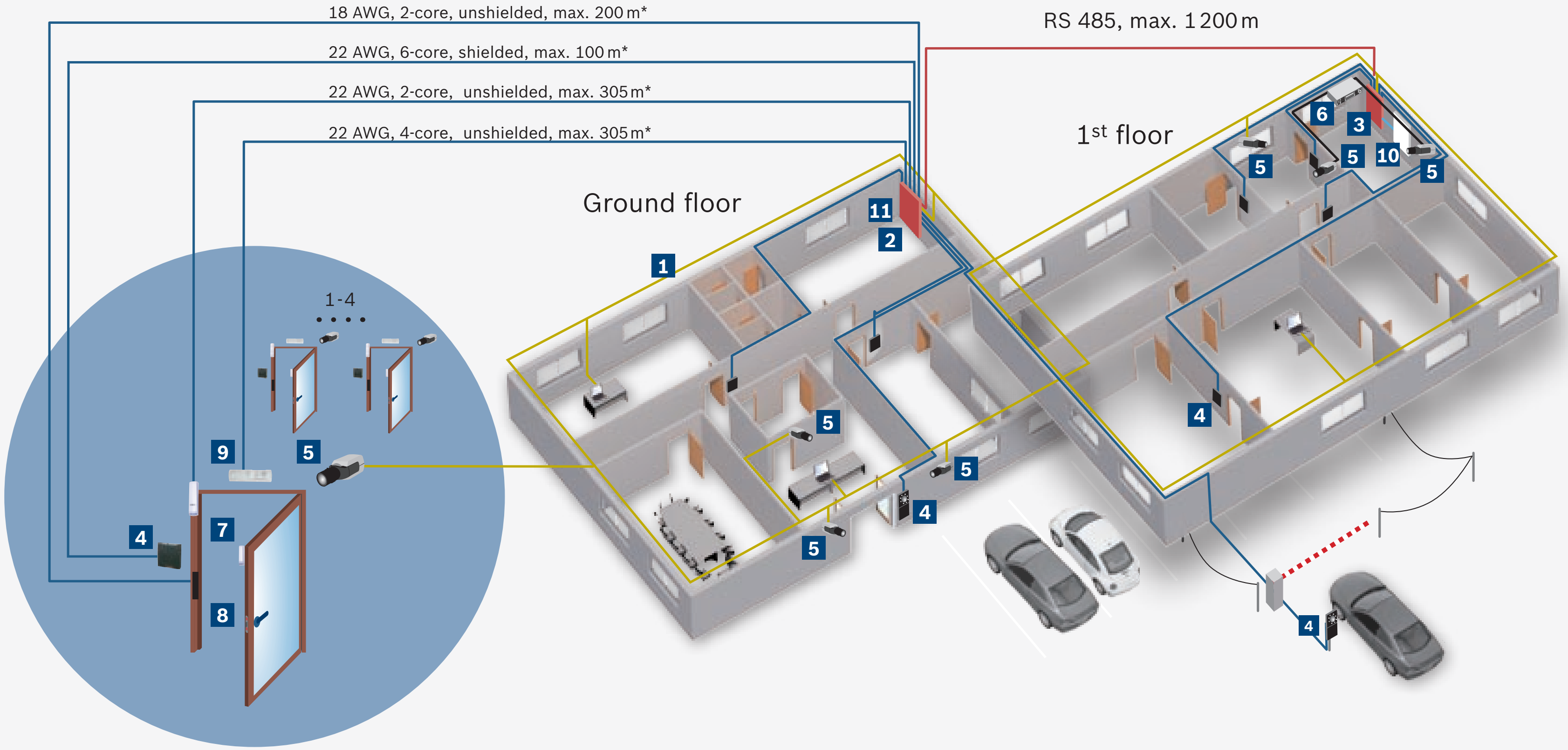
At the main entrance and on other doors that are securing assets, up to three cameras and several card readers can be connected for identifiying people that are willing to enter an authorized area.

In addition, not only the video verification is reliable and simple, but also arming and disarming of the integrated intrusion system is easy.

Typical applications

- Normal access, e.g. at main entrance
- Access to high-secure areas, e.g. computer center with entrance and exit reader, video verification and video surveillance with storage/retrieval
- Parking lot access with normal reader and video surveillance or video verification
- Arming/disarming intrusion system via keypad reader
- Video surveillance of back entrance, parking lot or other locations

Installation example



* cable types are only examples

1 IP-Network Cable
2 AEC access controller, for Wiegand
3 AEC extension
4 Access reader, e.g. ARD-AYK12 or ARD-R10
5 IP video device, e.g. Dinion IP camera

6 DVR (Digital Video Recorder), e.g. Divar XF
7 Door contact
8 Door strike
9 Request-to-exit detector
10 Intrusion Panel
11 Converter

Parts list - basic selection			
1	–	IP-Network Cable	Standard CAT5 network cable connecting devices like the AEC, IP cameras or computers to the corporate LAN/WAN
2	APC-AEC21-UPS1	AEC access controller	The main component, storing up to 20480 cardholders and the assigned access rights. This device is offline capable.
3	AEC-AEC21-EXT1	AEC extension	Extends the main controller with up to four additional readers and eight I/Os. A main controller supports up to three of these extensions connected via RS485 bus.
4	ARD-R10*	Access reader	A standard entrance and/or exit reader
5	LTC 0455/X*	IP video device, e.g. Dinion IP camera	For video verification
6	DHR-1600B-400A*	DVR (Digital Video Recorder), e.g. Divar XF	Continuous recording of strategic points
7	ISW-BMC1-S135X*	Door contact	Connected to AEC input, provides door status, is monitored and causes alarm when door is opened unauthorized or open time exceeds
8	Ask your local Bosch representative for further information	Door strike	Connected to AEC output, unlocks the door for a defined time if an authorized ID card is presented to the corresponding reader
9	DS150i*	Request-to-exit detector	Is placed on the secure side of a door and connected to an AEC input. When it detects motion in front the AEC will unlock the door. Alternatively a standard Request-to-Exit button can be installed instead.
10	Ask you local Bosch representative for further information	Intrusion Panel	Connected to AEC via defined in- and outputs, can be armed and disarmed via corresponding keypad access reader when presenting an authorized ID card and entering the correct PIN code for arming/disarming
11	AIM-AEC21-CVT	Converter	Ethernet IP to RS485 converter

* example from a wide range of Bosch products

Solutions and services

As each building has its own structure a site analysis is recommended to identify the vulnerabilities, the necessary security level at each point of interest and the amount of devices needed for a complete solution to meet the exact requirements.