BOSCH

Invented for life

Access Easy Controller 2.1

- ▸ **4 readers expandable to 32 readers**
- ▸ **Supports up to 20,480 card holders and 100,000 transactions**
- ▸ **Classify cardholders based on 254 access groups**
- ▸ **255 time schedules, 32 regular and 32 special holidays**
- ▸ **Anti-passback (APB) capabilities**
- ▸ **8 Alarm Zones and attendance capture**
- ▸ **Intrusion monitoring up to 64 input and control points**
- ▸ **E-mail or SMS Alert for critical events**
- ▸ **CCTV Integration, Live view, archive retrieval, event verification and in window PTZ**
- ▸ **Support for multiple languages**

Access Easy Controller 2.1, (AEC2.1) is a new generation IP web based access controller which combines the unique features of an embedded web server, CCTV integration and a security system in one complete unit. The intuitive user interface is easy to navigate minimizing the learning curve and maximizing the customer's experience. The web browser provided with the computers operating system is all you need to command the power behind the AEC2.1. Run reports, manage cardholders, monitor your system for alarms and remotely unlock and lock doors from anywhere. The ease of installation and operation of the AEC2.1 is what makes it the solution of choice.

Functions

Web control Interface

AEC2.1 has a built-in web server that allows monitoring and programming of control parameters using any standard Web browser.

Network Ready

AEC2.1 is a network-ready system that connects easily to any TCP/IP network via an Ethernet port. Any computer on the network can access the AEC to manage the database, monitor activity or control devices.

Administration and User

- • 25 maximum user accounts
- • 128-bit SSL browser Login encryption
- • Case sensitive user IDs and passwords

Administrative Permissions

All user IDs and passwords are encrypted, providing access to only authorized users to monitor and manage the system parameters, transaction records, and activities.

Multiple Entry Access Mode

Three different access modes are available to cater to your own unique security requirements:

- • Card only
- • PIN only
- • Card & PIN

User-Definable Personal Identification Number (PIN)

Each cardholder is given the flexibility to choose his or her own 4 to 7 digit personal identification number.

Multi-Functional Card Assignment

The ability of a single card to perform multiple functions: A card can be programmed to function as

- • Normal access card
- • Attendance card
- • Arming/disarming card

Time Schedules

Up to 255 individual schedules can be programmed to provide access control functionality such as door locking or unlocking, PIN function activation or automatic arming/ disarming of an alarm point, sending an Email/SMS, automatic on/off of lights, aircon etc.. Within each schedule, four programmable time intervals can be set for each day of the week, special and regular holidays.

Storage and backup

All event transactions, cardholder data and system control parameters are stored in the panel onboard nonvolatile memory. All data will remain intact even if the system experiences a power failure.

CCTV Integration & Monitoring

AEC2.1 provides seamless integration with IP cameras, digital and network video recorders. The video integration allows the system to link certain events to cameras, to view live or playback video. Up to 3 live video cameras can be configured to each reader, input/output point and advance IO function block. The Live video window will pop up automatically when an alarm event is triggered. The event video clip can be downloaded to the PC for later investigation. The video verification function enables automatic live video display of the access point for comparison with cardholder's photo.

Note: The video recording is taken care of by the video device and not the AEC system.
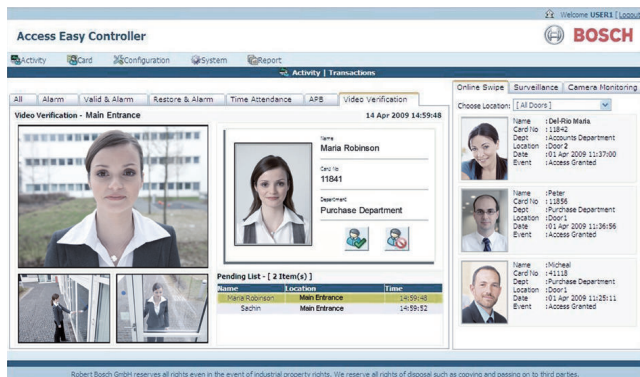
Intrusion Alarm Monitoring

Provides 2 or 4-state alarm monitoring on all inputs. An access reader can be programmed as an arming/disarming reader.

Alarm Input and Relay Outputs Control

Up to 64 inputs and 64 outputs can be software-configured for door strike, sirens, alarm shunting, vehicle boom barrier controls and a host of other applications.

(64 inputs / outputs are available via the AEC extension.)

Advance IO Programming

Unique programming options are available for input and output linking based on logic programming. The advanced programming features include some predefined applications like monitoring and controlling emergency exit doors, tracking the counts of the card holder/event or interlocking operations of multiple doors in a building, etc. The values inputs and outputs are also not only restricted to I/O devices but can be derived from other sources as well. For example, the output of one functional block can be fed in the input of other making it an inteconnection (logic) link. With this sophisticated logical IO programming, the system is ready to handle automation in virtually any situation.

Anti-passback Capabilities (APB)

Anti-passback is a sophisticated security feature in access control to prevent fraudulent multiple-entry (e.g. a cardholder passing his/her card to another person and tailgating). Three types of APB are available, providing variable levels of security: Time based APB, Soft APB, and Full APB. Time based APB prevents the same card from entering the same door within a set time period (maximum 60 minutes). Full APB follows strict rules: it controls access by monitoring the sequence at defined APB entry and exit readers. Any violation of the sequencing will prevent access. Soft APB is similar to full APB except that it will allow exit via exit readers even if a corresponding entry has not been recorded. Transaction records in Soft APB will differ from normal transactions. 254 levels of APB are available to group related sets of APB entry and exit readers. Using APB configuration the system can provide the master list of the cardholders violating the APB settings in a zone or area.

Remote System Administration

This enables the user to dial into the AEC2.1 via telephone modem to perform remote administration. Once connected, access and control of the AEC2.1 can be carried out via the web browser.

Internet E-mail (SMTP) & Short Message Service (SMS) Support

AEC2.1 can send e-mail, based on triggered events or transactions under normal or alarm conditions. Each mail message consists of a full description of the event or alarm, its location, ID and a date/ time stamp. E-mail can be sent to multiple recipients or relayed as an SMS text message to mobile phone users via certified modems. This function provides unlimited, secure, fully-configurable information transfer to operators.

Note: Requires GSM modem for SMS

Easy Firmware Upgrade

AEC2.1 utilizes flash memory technology to store its firmware. Upgrades can be carried out by replacing the physical flash module or by firmware update.
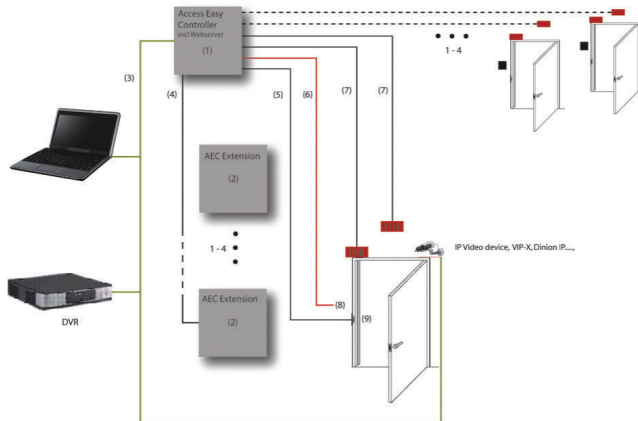
Certifications and Approvals

The AEC2.1 is designed to comply with the following certifications, approvals, and safety standards:

- CE
- FCC
- UL

Installation/Configuration Notes

Ethernet Installation (Diagram)

(1)   AEC Main Controller incl. Webserver

(2)   AEC Extension

(3)   100BaseT Ethernet, max 100 m*

(4)   22 AWG, 2-conductor, shielded, 1000 m*

(5)   18 AWG, 2-conductor, unshielded, 200 m*

(6)   22 AWG, 6-conductor, shielded, 100 m*

(7)   22 AWG, 2 or 4--conductor, unshielded, 305 m*

(8)   Reader

(9)   Door strike

(10)   Door contact

(11)   Exit device

(12)   IP Video Device, VIP-X, DinionIP

        * cable types are only examples

System Parameters

- 4 access readers expandable to 32 access readers
- 254 access groups
- 255 time schedules
- 32 regular holidays & 32 special holidays
- Anti-passback (APB) capabilities (Full, Soft, Time Based)
- 100,000 transactions history
- Audit log
- Real-time activities and status update
- Built-in reporting functions (transactions & system logs)

Card Access Parameters

- 20,480 card capacity
- 16 programmable Wiegand card formats

- Multi-card function type: normal, attendance capture, arm/disarm
- Multi-operation method by
  - card only
  - card + user PIN code, 1-7 digits
  - reader's PIN code, 1- 7 digits
- Batch entry - card add/delete feature
- Card details - Card number, Facility code, Card format, User name, Department, 2 user definable fields, 2 definable acess groups
- Programmable card validation period - supports one-time access
- Supports Dual Card Entry (2 man rule)
- Supports card database Import and Export in CSV Format

Access Readers and Door Parameters

- Definable entry or exit reader, arm/disarm reader, or elevator reader
- Enable or disable keypad on the reader
- Keypad time-out, 0-255 sec
- Operation using reader's PIN only, 1-7 digits
- Lockout reader based on illegal attempts, 0-255
- Lockout duration, 0-255 sec
- Illegal event types include:
  - Access Denied, which can be due to APB, Timed APB, Wrong PIN
  - Invalid Event, which can be due to Schedule, Card, Start Date, End Date, First Card, Second Card
  - Duplication of First Card.
- Auto lock/unlock (schedule controlled)
- Lock/unlock of doors via access reader
- Lock/unlock/momentarily unlock of doors
- Door open timer, 0-255 sec
- Door strike timer, 0-255 sec
- Alarm delay duration for door forced open, 0-255 sec
- Pre-alarm warning before door held open, 0-10 sec

Video Parameters

- Supports up to 3 cameras per reader or alarm input
- 128 cameras
- View live and playback video
- Enables automatic live video display of the access point for comparison with cardholders photo
- AEC2.1 integrates with the following video devices
  - IP Cameras: AutoDome IP, Dinion IP, FlexiDome IP, NBC-255
  - Encoders: VideoJet X10 , VIP10, VIP-X
  - DVR: DiBos, DivarXF, Divar MR, 700series DVR

Note: Video integration features are available on Windows XP, Vista and Windows 7 operating systems only.

Alarm and IO Status Parameters

- Max. 64 input monitoring points
- Max. 64 outputs
- Automatic incoming power failure monitoring
- Real-time alarm transaction monitoring
- Instant & delay alarm monitoring for any input
- Programmable alarm point description
- All input monitoring supports 2 state non-supervised, 2 state supervised, and 4 state supervised
- Programmable arm/disarm of alarm zones
- Programmable arm/disarm status LEDs
- Programmable output control
- Programmable input-output linking

- Door held open/forced open alarm reporting
- Duress alarm (from PIN readers)
- Tamper alarm (enclosure opening)
- Common Alarm Output
- Advanced programmable IO features (guard tour, feed through, OR logic, AND logic, XOR logic, NAND logic, Interlock, up/down counter, exit door, one shot and intrusion)

E-mail/SMS Parameters

- SMTP- based Email
- E-mail upon triggered events
  (based on selectable events, devices and/or cardholders)
- Attendance capture transactions and lateness reporting
- Hardware failures auto reporting
- 8 programmable groups e-mail recipients with attached messages
- 8 programmable messages.
  Note: Requires GSM modem for SMS

Database Maintenance

- Automatic daily backup to compact flash memory
- Manual backup of systems database and/or Activity, audit log, and Attendance Capture Record to local client PC.

Technical Specifications

Dimensions

Enclosure (H x W x D)	400 x 400 x 94 mm (15,75 x 15,75 x 3,7 inch)

Environmental conditions

Relative Humidity	10% to 90% at 32 °C (+90 °F)
Temperature (Operating)	0 °C to +50 °C (32 °F to 120 °F)
Temperature (Storage)	0 °C to +55 °C (32 °F to 130 °F)

Ports

LAN Ports	Two RJ45 Ethernet
Serial Ports	Two RS-232
Extension port	One RS-485

Interface 4-Reader Board

Voltage Requirement	12 VDC from PSU
Number of Wiegand Readers supported	4
Number of Monitoring Points	8*
Number of Output Control Relays	8**

* Input Monitoring Points on the 4-Reader board consists of door contact input and request-to-exit inputs associated with reader controlled door.

** Output Control Relays on the 4-Reader board are the door strike/magnetic lock control relays for the reader-controlled doors.

Interface 8-Input/Output Board

Voltage Requirement	12 VDC from PSU
Number of Wiegand Readers supported	-
Number of Monitoring Points	8
Number of Output Control Relays	8

Types of Readers Supported

Wiegand

AEC2.1 Capacity

CPU	32 bit microprocessor – 500 MHz or higher
Memory	512 MB RAM or higher
Storage	CompactFlash 512 MB or higher
Concurrent Users	7 concurrently + 1 super-user
User licenses	Max. 25 user account, using (up to) 50 character alphanumeric, case sensitive user IDs and passwords
Events	100,000 transaction history, stamped with date and time
Database Integrity	Encryption used for user IDs and PINs
Number of Cards Supported	20, 480
Number of Access Groups	255
Number of Time Schedules	255
Interval per Time Schedules	Four interval per day, plus holidays support
Recommended Web Browser	Microsoft Internet Explorer version 7.0 and 8.0

Supported 4-Reader Board in a Full AEC2.1 Configuration

Max. Number of Interface board	8
Max. Number of Wiegand Reader	32
Max. Input	64 (Reserved for Door contact and request to exit)
Max. Output	64 (Reserved for Door strike)

Supported 8-Input/Output Board in a Full AEC2.1 Configuration

Max. Number of Interface board	8
Max. Number of Wiegand Reader	-
Max. Input	64 (Both normally opened and normally closed devices supported)
Max. Output	64 (Form-C PCB mounted output control relays, with Contact Rating: 1A@ 24 VCD)

Power Requirements

Primary Voltage Input (AC)	100 ~ 240 VAC
Secondary Voltage Input	+5 VDC for CPU board +12 VDC for 4-Reader an 8-I/O-boards
Backup Battery (Optional Backup Battery: Not included in standard package)	12 VDC, 7AH rechargeable battery

Ordering Information

AEC2.1 Main Enclosure, PSU1
Access Easy Controller 2.1 Enclosure with CPU Board, 4 Wiegand Reader Board, 100-240VAC Power Supply Unit, Compact Flash with software application, Quick Start Guide and CD-ROM containing software tools and manuals.
APC-AEC21-UPS1

AEC2.1 Extension Enclosure, PSU1
Access Easy Controller 2.1 Extension Enclosure with 100-240VAC Power Supply Unit
AEC-AEC21-EXT1

AEC2.1 4 Wiegand Reader Board
Access Easy Controller 2.1 4 Wiegand Reader with 8 Input-Output Board
API-AEC21-4WR

AEC2.1 8 Input-Output Board
Access Easy Controller 2.1 8 Input-Output Board
API-AEC21-8I8O

AEC2.1 Reader and Input-Output Extension Module
RS485 serial to Ethernet LAN converter
AIM-AEC21-CVT

AEC2.1 Main Enclosure, PSU1 (ZH)
Access Easy Controller 2.1 Enclosure with CPU Board, 4 Wiegand Reader Board, 100-240VAC Power Supply Unit, Compact Flash with software application, Quick Start Guide and CD-ROM containing software tools and manuals. (P. R. China only)
APC-AEC21-UPS1Z

AEC2.1 Extension Enclosure, PSU1 (ZH)
Access Easy Controller 2.1 Extension Enclosure with 100-240VAC Power Supply Unit (P. R. China only)
AEC-AEC21-EXT1Z

AEC2.1 4 Wiegand Reader Board (ZH)
Access Easy Controller 2.1 4 Wiegand Reader with 8 Input-Output Board (P. R. China only)
API-AEC21-4WRZ

AEC2.1 8 Input-Output Board (ZH)
Access Easy Controller 2.1 8 Input-Output Board (P. R. China only)
API-AEC21-8I8OZ

AEC2.1 Reader and Input-Output Extension Module
RS485 serial to Ethernet LAN converter (P.R. China only)
AIM-AEC21-CVTZ