

iGuard™ Server

Version 2

iServer
User Guide

This manual was written for use with the iServer version 2.

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1. Introduction

1.1 System Requirement

- Windows 98/ME/NT 4.0 or above/XP. For Windows 98, ODBC driver should be updated from the latest patch.
- iServer Software can connect to iGuard™ via modem, local area network or Internet type network connection.

1.2 Quick Start Guide

This quick start guide would guide you to run the iServer program and receive transactions from iGuard™. This would use the default setting of the iServer and the following setting will be made:

- Create a default version of Access database (.mdb) file.
- Use default iGuard™ configuration.
- Ready to receive access logs.

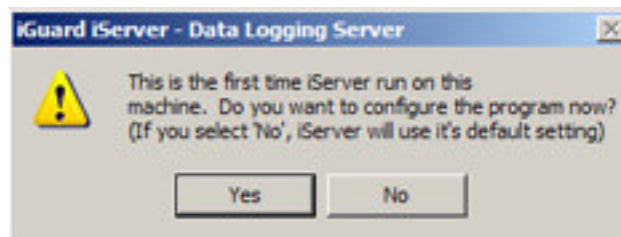
Please follows the steps below and you would be able to connect your iGuard™ to the iServer and store the transaction in the database.

1.2.1 Installation

When the iServer is installed to the designated folder, the following steps would appear after the iServer launched.

1. iServer can create a sample database. Please choose “Yes” if it is first time running. This would create a database (acclog.mdb) using by iServer. If you want to use a database other than MS Access, please refer to the Database Connection section in this manual.
2. In the Create Sample Database Dialog, you can use the default setting and click OK. For detail about “Save In/Out Status as”, please see the iServer Setting section 3.3.4.
3. iServer would create a default Data Source Name (DSN). Please use default setting with the DSN iServer and click “OK”.
4. Please use default setting and click “NO” of the following screen shot. It

means not to prompt for configuration dialogue.

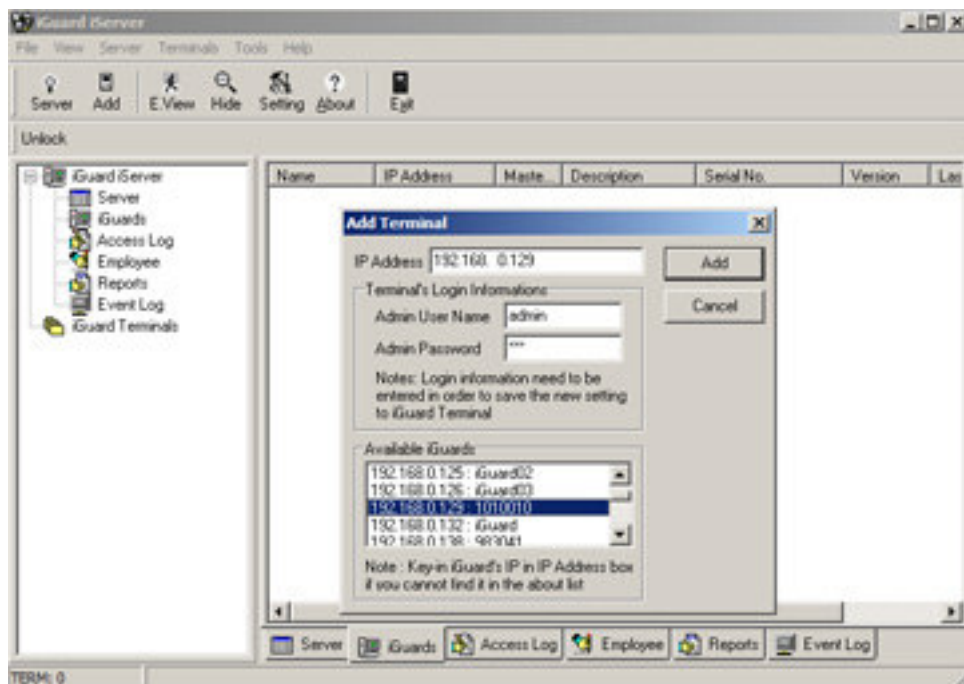


Picture 1. Please click "NO" to use the default setting.

5. iServer can start to receive access log. Please choose "Yes" to receive access log now.

1.2.2 Adding iGuard™

6. iServer is ready to add iGuard™ Master now. Please click "Add" icon button on the icon menu bar. Select the iGuard™ that you want to add or type in the IP Address if the iGuard™ does not shown in the list. Type the login name and password and the click "Add".



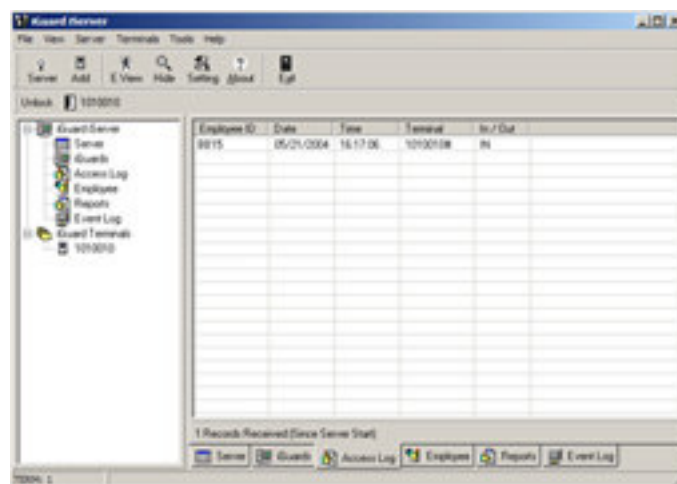
Picture 2. Add Terminal Dialog

7. If iGuard™ is found, please choose "Yes" to config the iGuard™. This action would register the iGuard™.
8. In the configuration dialogue, please use default setting and do not change

anything. Please click “Yes” and this would finish registering the iGuard™.

1.2.3 Ready to receive transaction

9. The iServer is ready to receive transactions from iGuard™ now. You can present your finger and see the Access Log viewer to view your data. This viewer is in text mode. The records would be accumulated once the iServer started. For detail about the viewer, please look at Viewer in the User Interface section.



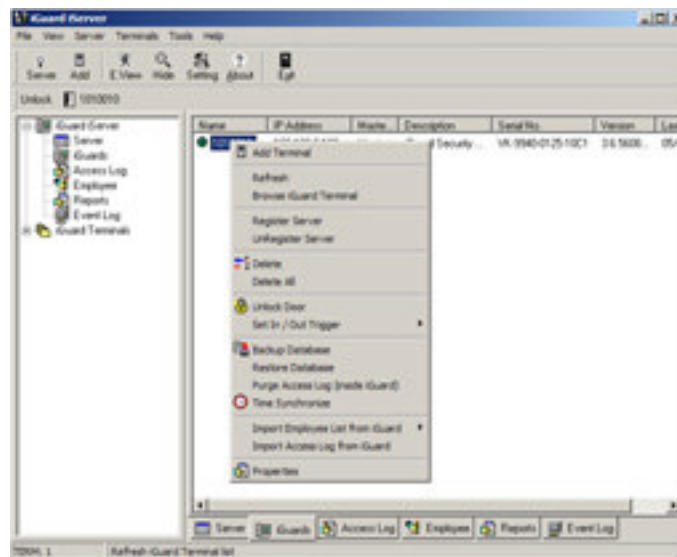
Picture 3. Access Log Viewer

2. Database

2.1 Transaction

You need to registered iGuard™ Master in the iServer in order to receive AccessLog from the iGuard™ Master to the PC database. Once the iServer is running, the log would transfer from iGuard™ to iServer and the iServer would store the log into the database. However, if the iServer is not running and the iGuard™ is still working, the log would not be sent to iServer again after it is started up. You may need to import the AccessLog from iGuard™ and please refer to Import from iGuard™ section for further detail.

The following picture shows how you can access the iGuard™ database and local database from iServer. Some of the functions described below can be referred to the pop-up menu below.



Picture 4. Pop-up menu by right-clicking to the iGuard™ icon.

2.2 Import from iGuard™

2.2.1 AccessLog

This function would import all the records in the AccessLog to the local database. You can choose to skip the duplicated records or overwrite the duplicated records.

2.2.2 Employee

There are internal and Smart Card database for FPS series and internal database for LM series. But some models of FPS have the Internal database

only and you can only import Employee from internal database. This function would import EmployeeID, LastName, FirstName, OtherName, Department and EmpStatus to the local database. Double byte characters, Chinese for instance, would not be imported to the local database in this version of iServer.

2.3 Backup and Restore from iGuard™

2.3.1 Backup

This function would backup the iGuard™ database (AccessLog and Employee) to .ldb file.

2.3.2 Restore

This function would restore the .ldb database file to the iGuard™.

2.4 Purge AccessLog from iGuards

This function would delete the AccessLog from iGuard™ permanently.

2.5 Purge Logs from Local Database (ODBC)

2.5.1 AccessLog

This function would delete the AccessLog from the local database permanently.

2.6 Backup and Compact Database (ODBC)

If you have deleted the records in the database, there would have some spaces that cannot be deleted. Packing the database (ODBC) would clear all the spaces left behind and the .mdb size would become smaller. This function would allow you to backup your current database (ODBC).

2.7 Create Empty Database (ODBC)

iServer can create an empty database and it will be linked up with iServer and ready to store transactions after this function is performed.

2.8 Start Log Insert Test

This function would create some testing accesslogs.

3. iServer Setting

3.1 System Setting

3.1.1 Network Setting

- Server IP
- Server Port
- Subnet Mask

3.1.2 Misc. Setting

You can choose to keep AccessLog in Database (ODBC) or Text file or Both. If you choose to keep in Database (ODBC), the transaction received would have kept in the database only. If you choose to keep in Both, the transaction received would have kept in both Database (ODBC) and Text file that specified in the File box. For the PC which do not have ODBC updated driver like Windows 98, iServer would have only kept the transaction received in the text file.

3.2 ODBC Setting

The default database created would not have parameters specified in the parameter box. However, for some ODBC compatible database, you may need the login user name and password in order to access the database. You then need to specify the parameter in the parameter box. The parameter is like:

DSN=iServer

UID=sa

PWD=1

Please refer to the Database Connection Section for further detail if you are using the database other than MS Access.

3.2.1 Table in Database

This just shows the list of tables created in the database that iServer used.

3.3 Database Setting

3.3.1 AccessLog

The combo box shows the transaction logs name used by iServer. You can also choose to show all logs in the Database or show only most recent 200 logs on the AccessLog Viewer. Show all logs in the Database would affect the performance of the iServer depending on the size of the database. “Show only most recent 200 logs” is recommended and it would not affect the performance of the iServer.

3.3.2 Use Employee Table

Unchecked this could eliminate the Employee Viewer on the Interface. Save in separated file is recommended and worked on this version of iServer. Save in Database would not perform in this version.

3.3.3 Other Options

“Show Emp Info in Acc Log” would only work when “Show all logs in Database” is activated. This would show the Employee’s FirstName, LastName, OtherName and Department as well for every transaction in the AccessLog viewer.

3.3.4 Advanced

This shows the format of the insertion query of AccessLog. In the default setting, Raw Integer Value” would be used and the query would be like,

```
INSERT INTO %s (employeeid, logdate, logtime, terminalid, inout)
VALUES ('%s', '%s', '%s', '%s', %s)
```

When the iServer is installing, it would prompt you to choose to save the In/Out Status as *Raw Integer Value* or *Text Value*.

If you choose Raw Integer Value :

The In/Out Status will be save as 0 or 1 and you cannot switch to save it as Text Value like “IN” or “OUT”.

If you choose Text Status :

The In/Out Status will be save as “IN” or “OUT”. The Advance Setting can let you to save it as “0” or “1” by enabling the Raw Integer Value in the “Save In/Out Status as”. The query showing in the SQL Command would have a little bit different. Like,

```
INSERT INTO %s (employeeid, logdate, logtime, terminalid, inout)
VALUES ('%s', '%s', '%s', '%s', '%s') ← single quote will be used in
the last parameter.
```

Please DO NOT change the setting if you are not sure what the query is. If your database has used either raw integer or text of the In/Out status, you would not be able to change the database format.

4. Terminal Setting

4.1 Add, Register and Un-register iGuard

iServer can add, register and un-register iGuard™ Master. However, slave can also be added to iServer but it would not be registered since iServer would not receive any transaction log from slave.

4.2 IN / OUT Status

iGuard™ can be triggered to In/Out status immediately by the function on the pop-up menu.

4.3 Time Synchronization

This function would synchronize the time between iServer and iGuard™.

4.4 Status Change

- Green light - the iGuard™ is online and iServer receive online event from the iGuard™.
- Yellow light – the iGuard™ has not been registered.
- Red light – the iGuard™ is offline and iServer has no online event received from iGuard™.
- Off – Unknown

5. iServer Interface

5.1 Viewer

5.1.1 Server

Information showing:

- *iServer Program Version*
- *Number of iGuards*
- *Total Access Logs Received*

5.1.2 iGuards

Information showing:

- *Name*
- *IP Address*
- *Master/Slave*
- *Description*
- *Serial No.*
- *Version*
- *Last Access*

5.1.3 Access Log

Information Showing:

- *EmployeeID,*
- *LogDateTime (for MS Access and MS SQL Server only, otherwise, it will be separated into LogDate and LogTime),*
- *TerminalID,*
- *InOut (0 – In, 1 – Out, 2 – F1, 3 – F2, 4 – F3, 5 – F4)*

Mode of AccessLog viewer:

- *Text mode* (Showing most recent 200 logs, Last-In-First-Out mechanism will perform afterwards). This mode pursues fast performance of the iServer.
- *DB mode* (Showing all access logs in the database and this mode would affect the performance of the iServer depends on the size of the database)

Setting:

Include employee detail in the Access Log when DB mode is activated by enabling the “Show Emp Info in Acc Log” in the Database Setting.

Show Photo of the employee who has just clock-in :

By enabling the "Employee Detail for AccessLog".

Purge AccessLog:

By right-clicking on the AccessLog. Delete the whole AccessLog (ODBC).

Export AccessLog:

By right-clicking on the AccessLog. Format: .log, .txt and .xls Excel.

The format of Log and Text are the same.

Sorting:

By right-clicking on the AccessLog.

5.1.4 Employee

Information Showing:

- *EmployeeID,*
- *LastName, (No double-byte character)*
- *FirstName, (No double-byte character)*
- *OtherName, (No double-byte character)*
- *Password, (Not in use)*
- *EmpStatus,*
- *NumMinutiae1, (Not in use)*
- *NumMinutiae2, (Not in use)*
- *PhotoFile, (Store the file name)*
- *Minutiae1, (Not in use)*
- *Minutiae2, (Not in use)*
- *Photo, (Not in use)*
- *Department*

Add / Change Photo:

Jpeg photo supported. Filename is stored in the PhotoFile field in the database.

Remove Photo:

Purge Employee List:

Delete all employees in the database (ODBC)

Export to CSV:

5.1.5 Reports

Information Showing:

- *RCDID*

- *EmployeeID*
- *LogDate*
- *LogTime*
- *TerminalID*
- *InOut*

Sort By:

- *EmployeeID*
- *In/Out*
- *Date/Time*

Save as:

- *CSV format*

5.1.6 Event Log

Information Showing:

- *Time*
- *Events*

Clear Event Log:

5.2 Menu

5.2.1 Employee Viewer

A window floating on top of the screen that shows the employee details by clicking on an employee in the Employee Viewer tab.

5.2.2 Employee Detail for AccessLog

A panel showing the last accesslog record details with employee's photo.

6. Database Connection

iServer default use Microsoft Access. If you decide to use MS Access, no supplement changes have to be made. If you want to use other ODBC compatible database, you have to do the following things in order to get the iServer connected to the database. The syntax is subjected to the database you have.

6.1 Connecting to Database other than MS Access

At first, you need to create database, secondly you need to create Data Source Name (DSN). There are 2 kinds of databases MS SQL and Oracle we have here for your reference.

6.1.1 Create Database:

You need to create a database, and create 2 tables. The Table Structure of the Default MS Access (ibonussrv.mdb):

MS Access

Table: AccessLog

RCDID Int AUTO_INCREMENT,
EmployeeID char(16),
LogDate char(10),
LogTime char(10),
TerminalID char(20),
InOut Int,
Primary Key(EmployeeID, LogDate, LogTime, TerminalID)

Table: Employee

EmployeeID char(16),
LastName char(40),
FirstName char(40),
OtherName char(40),
Password char(16),
EmpStatus Int,

NumMinutiae1 Int,
NumMinutiae2 Int,
PhotoFile char(40),
Minutiae1 image,
Minutiae2 image,
Photo image,
Department char(50),
Primary Key(EmployeeID)

There are some differences in the syntax of creating the table in other database like SQL Sever and Oracle. The following is for you reference.

SQL Server

Table: AccessLog

RCDID Int IDENTITY yes,
EmployeeID char(16),
LogDate char(10),
LogTime char(10),
TerminalID char(20),
InOut Int,
Primary Key(EmployeeID, LogDate, LogTime, TerminalID)

Table: Employee

The same syntax as MS Access

The database created in SQL Server need to have a login in order to access the tables. This can be done in the step of creating the DSN later.

Oracle

Table: AccessLog

RCDID Number(38) Not Null, <- Constraint – Auto Increment field
EmployeeID Char(16) Not Null,
LogDate Char(10) Not Null,
LogTime Char(10) Not Null,
TerminalID Char(20) Not Null,

InOut Number(38)

Table: Employee

EmployeeID Char(16) Not Null,
LastName Char(40),
FirstName Char(40),
OtherName Char(40),
Password Char(40),
EmpStatus Number(38),
NumMinutiae1 Number(38),
NumMinutiae2 Number(38),
PhotoFile Char(40),
Minutiae1 BLOB,
Minutiae2 BLOB,
Photo BLOB,
Department Varchar2(50)

It has many methods to create a table in Oracle and to do the auto increment field(RCIDID). The following method is the most common.

To create an Oracle table :

1. You can use the administration tools in Oracle for table manipulation if you use version which is 8 or later, or
2. You can use sql command to create table in sql plus or sql worksheet.

To create a field for auto increment (RCIDID):

1. To create a sequence and add a constraint to a field, or
2. Create a trigger to increment the field.

The same as SQL Server, you need to have a login for the database. You must make sure the username and password is correct and the username should have right access the AccessLog and Employee. You must aware that users in Oracle have their own right to access table. If you do not have username and password, you could not enter into the Oracle database. If your username does not have any right to access the table, you could not do anything to that table even you could log in to the Oracle database. After you have the login for the database, you can test it as the following.

Testing (Optional):

1. Use SQL Plus to login as the same username and password as in iServer.
2. Try select and insert statement to that table in SQL Plus.

6.1.2 Create Data Source Name (DSN)

In Control Panels -> Administrative tools -> ODBC -> System DSN -> Add

For SQL Server and Oracle database, the procedure is similar.

Please specify the Data Source Name to default "iServer".

For SQL Server database, you can use the login username, say "sa" which has a greatest privilege, and password to create the DSN.

For Oracle, you can try to choose driver "Orahome" if you have and this is the way from our customer success.

Finally, this is worked fine when you start iServer. When you are using the ODBC compatible database other than MS Access, DO NOT choose to create MS Access when it prompted you for the first run.

6.2 Notes when using MS SQL Server

There are some cautions when you are using MS SQL Server.

- Lock Exclusive of iServer in DB mode AccessLog Viewer
When you have two or more iServers using the same MS SQL Database, iServer would be locked up regarding the Transisolation level is Read Committed.
- Trusted Connection
Trusted Connection dialog is prompted by MS SQL Server. Once you are prompted to ask enabling Trusted Connection, enable it to use the Trusted Connection might get rid of the login prompt for every accesslog record when you import the AccessLog from iGuard™.