

# Beyond Biometrics

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# Smart Community and Beyond

I have to use more than half of this page to introduce i-Neighbour, our smart community solution because of the excitement it garnered during its development phase last year. When i-Neighbour first started around two years ago, it was merely a cloud residential visitor management system with innovative QR code as credential to verify pre-registered visitors. But interestingly, more amazing ideas ushered in afterward, and the solution evolved. None of our other products have such opportunity to break away from its initial boundary; only i-Neighbour evolves and changes, and eventually turns into a smart community solution with a variety of Internet-of-Things, IoT stuff attached to it.

Besides visitor management, i-Neighbour smart community system offers payment gateway, e-billing, e-polling, facility booking, panic button, event management, incident and defect reports, yard sale, and etc; its IoT stuff consists of smart barrier, smart alarm, smart reader, smart lock to smart lift system and etc., and all of the services, pieced together by using a single App at the user end and Web at the admin end.

It doesn't stop there. i-Neighbour, continues to evolve, crosses over the enclave, establishes an in-App link with another in-house developed App, i-Merchant, to connect the residents to the nearby merchants to get to know their offers and eventually places orders.

And it doesn't stop there. In our effort to reach the low-income group in high household density communities, we developed an advertisement platform, i-Ad hub, which they can use to offset their subscription fees.

And it doesn't stop there. Instead, it continues to evolve. TimeTec VMS for commercial buildings is a spin-off from i-Neighbour's residential system, with more IoT capabilities to turn turnstile and flap barrier into smart devices accessible via smartphones.

It doesn't stop there. TimeTec Access, another cloud platform for access control is in the making and it will be debuted anytime this year. We definitely wouldn't left our pillar, the access control system behind, cloudless. With the introduction of TimeTec Access would only our cloud solutions be full circle in meeting the demand of comprehensive access control requirements, connecting buildings from residential to commercials, integrating i-Neighbour from home to workplace.

"Explosive" is the best term to describe i-Neighbour sales. Yes, there are incessant inquiries pouring in, non-stop appointments and product demos to attend to. Town planners, consultants, housing developers, properties management companies, and resident associations, all eager to see with their own eyes our amazing solution. Price quoted. Deals sealed.

Of course, I won't forget to mention our workforce management system, especially TimeTec TA, the cloud-based time & attendance application that is starting to generate steady income since last year. More features were added in 2017, NFC, GPS and Time Beacon are offered as clocking methods. The counterpart, TimeTec Leave, a solution that handles employee leave management, has been launched to complete the workforce management solution recently. We expect the one-plus-one-equal-to-three formula would apply in our offering of workforce management and this year, TimeTec Hire for talent acquisition will make its debut; another big leap for us in this workforce area of expertise.

And for our vertical niche market solution, TimeTec Patrol, a partly workforce management and a partly security system, since it launching has been gaining its momentum amongst security guard companies with more and more sign ups.

Our long time partners might ask, "What role would FingerTec play in the cloud future? Retire and pass the baton to TimeTec or revitalize and sing along with TimeTec?" My answer to that was, "Definitely the latter." The push technology as intermediary of IoT for our existing biometric and card products would further be transformed into truly IoT products; and all mobile access, as their fundamental.

Our customers can expect more new IoT hardware from us in these two years. Some of them will still carry the same name, FingerTec, where fingerprint and biometrics technology are applied; some of them will straightaway be branded as TimeTec when App and Bluetooth are involved without biometrics. In these two IoT product lines, either we offer it as standalone products, or go together with our cloud applications as some core and optional components.

One question that enlightened us when designing IoT hardware was, when smartphones came loaded with strong computing power are used for credential authentication, why shouldn't we lower the computing power in the access controllers or readers? So that we can design and produce much cost-effective and simplified new breed of hardware. Yes, the once lingering idea now becoming our new direction to unlock the treasure of our future.

For sure, the ecosystem we built for FingerTec such as warranty, training, support system and etc, would continue to be the core components for our IoT platform, with widening Big Data and artificial intelligence capabilities at the same time to benefit larger customer base.

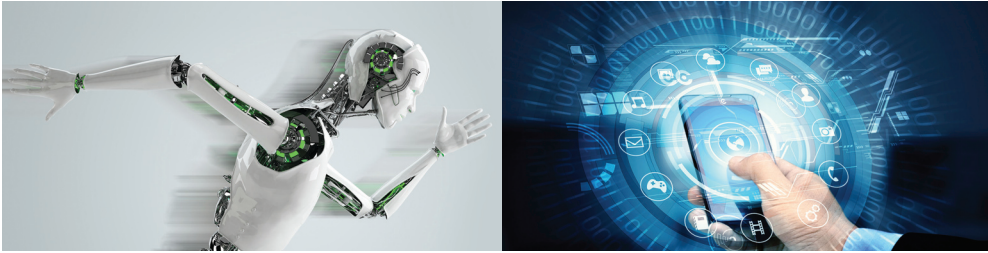
We will continue singing the same theme song for a very long time.



Teh Hon Seng  
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# Beyond Biometrics

# 2017 Milestones

TimeTec's cloud journey takes center stage in 2017 when the entire organization's focus was shifted into the new line of cloud products as new sources of revenue for the Group. Various business activities and developments are spotlighted around cloud solutions as we journey across 2017 with Biometrics business FingerTec going strong as our pillar product.



## TimeTec Business Seminar Let's Take Your Business to the Cloud

With the launching of TimeTec TA into the market, the brand is ready to build its reseller network nationwide and overseas. On 22 February 2017, TimeTec organized a business seminar at Shaftsbury Asteria, Cyberjaya to introduce TimeTec's new solutions to the current as well as potential resellers in the country and to invite them to be apart of TimeTec cloud solutions distribution channel. During the event, our CEO touched on the importance of IT integration in business, and manufacturing 4.0. According to Mr. Teh, companies that are going to be valuable are those which transform themselves into IT companies; and cater an "ecosystem" to customers. Instead of creating systems for admin use only, developers will need to create systems that are wholesome for the entire organization as well as involving multilevel access hierarchy in order for both managers and staffs to access a centralized system and communicate directly. Creating an understanding and strategy to selling cloud solutions is the first step into building a successful cloud business.



## TimeTec TA Gets An Upgrade

The company's time attendance and workforce solution, TimeTec TA is getting more traction from various sectors around the world and by taking customer's feedbacks and comments into consideration, TimeTec TA has been further enriched with more useful features and functions in order to cater to wider market segments. On top of the biometrics clocking method, the system has also deployed GPS, Beacon and NFC Tag in terms of using TimeTec TA App for clocking purposes. Additionally, improvements were made on the UI to provide users with efficiency and convenience at an affordable price.

## A'Design Award and Competition 2017

TimeTec bagged an iron award at A'Design Award and Competition 2017 in Italy for our Completely Responsive Website [www.timetecta.com](http://www.timetecta.com). TimeTec has always been about providing conveniences to the customers and in designing the website, we incorporate every information necessary for customers and resellers to know more about our solutions, to subscribe instantaneously with the availability of payment gateway, and for resellers to sign-up as our agents.



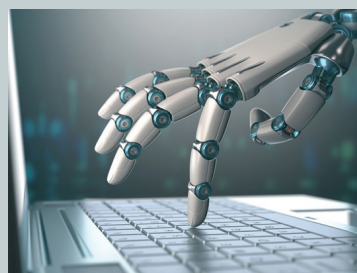
## Launching of i-Neighbour

i-Neighbour, the Smart Community Cloud Solution for high-rise residential and gated-guarded housing areas was launched at Hilton Sentral, Kuala Lumpur in April in front of the members of the media. i-Neighbour features in three key areas: Visitor Management, Security Management and Residential Management suitable for the lifestyle of modern residents.



## TimeTec Leave Takes Off

The launch of TimeTec Leave was officiated in December 2017. TimeTec Leave facilitates all leave proceedings which encompass everything from leave applications to approvals and record keeping online. For proficiency even on the go, employers and employees can handle the requested leave application respectively straight from the smartphone. TimeTec Leave is the next generation solution towards better leave management thus providing companies with the opportunity to save precious time and reduce any unnecessary cost in managing the growing workforce.



## TimeTec Filed for More Patents

In 2017, TimeTec filed for two patents: Mobile Based Access Control System and an Alarm System comprises a plurality of alarm 5 sensors using Bluetooth connectivity. TimeTec also has been awarded with 2 patents, a System and Method for Transferring Electronic Information and a Time Attendance Tracking Method and System.

## TimeTec Pursuing ISO 27001



The company is pursuing ISO 27001 certification and is expected to get accreditation by early 2018. ISO 27001 is a security management standard that specifies security management best practices and comprehensive security controls following the ISO 27001 best practice guidance. The basis of this certification is the development and implementation of a rigorous security program, which includes the development and implementation of an Information Security Management System (ISMS) which defines how TimeTec perpetually manages security in a holistic, comprehensive manner.



# 2018 Product Highlights

**timeTec** TA

Time & Attendance  
www.timetecta.com



## Modern Day Solution to Cope with Business's Growing Workforce



Time is an essence and it rings especially true when you are running a business organization. Workforce's problems are real and universal, impacting companies of all sizes, across various industries. The problem is, tardiness in the workplace has become normalized in many parts of the world. However, this counterproductive behavior does not come without consequences. Lateness has cost the USA, USD3 billion annually in lost productivity and in many countries for example in Malaysia, workers are accustomed to arrive 15 minutes or up to 45 minutes late to work with various excuses. Another popular counterproductive behavior reported by businesses which has cost businesses to lose their potential earnings is time stealing. Some employees do not even realize that they are stealing the company's time when they engage in unproductive activities like chatting away, or coming back from their lunch break 15 minutes late every other day.



*Running late always come with excuses*

Apart from the problems caused by employees, the administrators are also not free from delays, errors and mistakes when dealing with attendance data such as errors in data entry, imprecise overtime calculation, inaccurate payroll calculations, and many more that cost an organization inefficiency and lost in revenue.



## The Solution is On Cloud

Over the years, there were many time attendance solutions available in the market such as punch card system, smart card system, and also biometric system to tackle issues in workforce's attendance. Many failed to comprehend that cards system or biometric devices are simply the tools to collect attendance data and the crucial part here besides from data collection is the management of the data itself. The difference between all the other systems and cloud solution is its data centralization and accessibility. With cloud,





centralized. In short, the data needs to be dynamic in order to cater to the requirements of today's workforce.

Compiling years of experience in the time attendance industry, TimeTec Computing ventured into the cloud-based attendance solution with TimeTec TA with the objective to provide a comprehensive yet convenient system for any companies to use across all types of industries.

TimeTec TA offers more ways of collecting attendance data than the previously offered methods whereby the system accepts not only biometrics, cards and passwords; it also reads the data from Beacon, NFC Tag and GPS signal via mobile application.



The various ways of data collection, provide users with the options to be flexible without affecting the overall productivity. A sales representative can go for a meeting outside of the office and straight from home and clock-in using GPS method. Thus, detailing out the location of the meeting in the attendance record. The upside of this, is that the staff doesn't have to make a stop at the office just for the purpose of attendance clocking before going to meet the client. That alone has saved the company's lost time in traveling.

Businesses who want to deploy TimeTec TA can also choose a mix of hardware to suit their operation's requirements and reduce the deployment cost in addition to receiving the same effective solution all throughout.

### Schedule it Right!

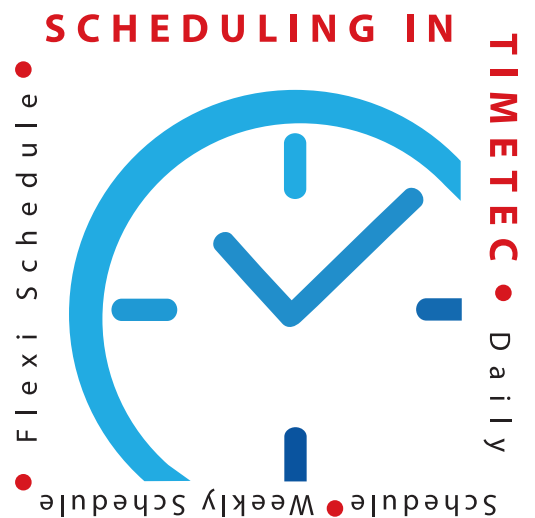
In managing dynamic workforce, the crucial part in any attendance system is its scheduling section. Could a system handles a range of business's requirements and covers from the complex schedule to the simpler ones? The good news is, TimeTec TA absolutely can.

The system has been designed to handle 3 types of major schedule from the most commonly used Weekly schedule to the Daily schedule right up to the most flexible clocking schedule, known as Flexi Schedule. Businesses that operate using Weekly schedule can simply define the work days, the rest days, overtime calculations, and etc in TimeTec TA settings. Companies also can apply rules and restrictions to the schedules on time range, on time calculation formulas, on leeways and etc in order to ensure that the staffs adhere to the company's policies through TimeTec TA effortlessly. These clocking schedules then can be assigned to the staffs and the system will then monitor and control time attendance data automatically. This flexibility in scheduling is key because more often than not, one organization consists of many departments having different working schedules. Case in point, in

a hospital, administrative employees have different schedules than the nurses while doctors have different kind of schedules than the rest of them. In a factory for example, the factory workers have to adhere to the shift while the administrative staffs will stick to a Weekly schedule type. TimeTec TA's flexibility in scheduling, permits companies to be flexible in their operations and also be assured that their staffs follow the attendance rules, regulations and policies without fail.

A reliable workforce management solution also has to be able to provide the company with data audit trail and most importantly, reliable and integratable reports in both the web and on App. TimeTec TA does that excellently with the availability of audit trail on each attendance activity as well as a terminal data audit list to trace the instances of disconnectivity within each connected terminal. Data in TimeTec TA can't simply be manipulated without leaving any trace in the system.

There are a total of 31 reports available in TimeTec TA, printable and can be downloaded in various formats thus making administrative work easy and effective. Even each staff can personally download and view their own attendance report for their own reference. Therefore, promoting transparency and better communication between employers and employees.



Times have changed and workforce has become more dynamic than ever before with organizations having employees who are mobile, work from home, have flexible work hours, and companies having to cope with businesses' demands for employees to work longer hours, to work in different shifts, to take extended shifts, and many more. While other attendance systems do provide solutions to the problem, nothing works as efficiently as a cloud system that enables the company to collect the data seamlessly, process it efficiently, store it securely and provide access to the data freely yet safely. For companies who are ready to change attendance solution, the choice is clearly cloud like TimeTec TA.



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LEAVE Solution  
www.timetecleave.com



## Improve Employee Engagement & Satisfaction Through TimeTec Leave

It's a fact that employee engagement is paramount in the success of any organization. Employee engagement does not mean happy employees because you could be surrounded by happy employees who do not engage. So, what is employee engagement exactly? Employee engagement translates to emotional commitment that the employee has to the company and its objectives. When the employees are willing to do anything in their power to make sure that the company's objectives are met, your organization is in good hands, for sure.

The reason is simple. Engaged employees lead to better quality products, better services and increased productivity and that would make many other matters fall into places for an organiza-

tion. So, the question is, what does employee engagement have to do with employee leave management? The answer is: Everything.

### Employee Leave is Key to Employee Engagement

Leave is an important aspect for every staff, right from the CEO down to the clerk level and lower level employees. Have you ever heard an employee say, "I don't need a leave, ever". It never happens. Leave is in fact an employee entitlement by law and companies need to manage it carefully, efficiently and tactfully. By managing employee leave better, companies can gain improved employee engagement effortlessly.



### Issues in Leave

Now, if we are talking about leave, more often than not, employees in a company are not informed about their current leave balances or that the information is not easily accessible to the employees. In addition, employees are also seldom updated about the company's policy and even if they are informed, the details are usually not available for reference. Even though the HR Department is available, to get the information from the department would require waiting time on the employee's part. The bet is, the larger the company, the slower the response would be. And by having HR personnel to be constantly checking the leave balances of employees, it keeps the HR away from focusing more on core business activities that mattered the most. On the employee's side, when information cannot be obtained in the shortest amount of time possible, it will relay a sense of dissatisfaction that would build up to a depleted employee engagement.

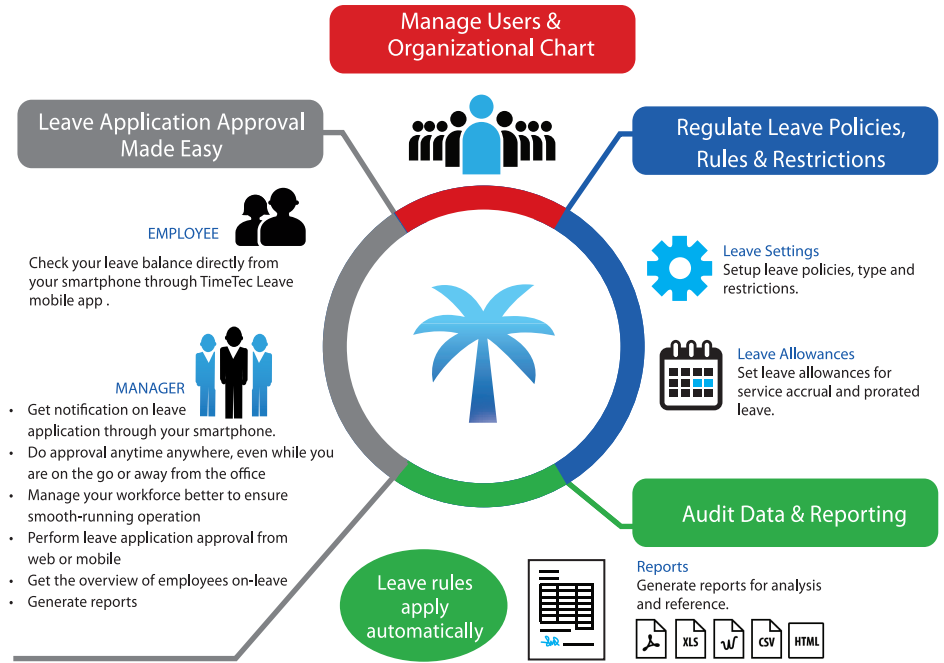
Another matter of concern when it comes to leave management is the approval process whereby managers are not able to manage their team members' leave



properly or make informed decisions before approving any leaves. It is crucial that the leaves approved will not affect the company's operations. Hence, before approving any leaves, the managers will need to know the leave requests pattern of certain employees, get insights about the availability of the team members in a specific time-period, as well as communicate with other line managers affected by the leave application.

The last but not least is how a company deals with undocumented leave transactions that affect a company's bottom line. Leaves except Unpaid Leave is a paid off time from work which means that the company pays when the employee is not working. If there are undocumented leave transactions that are unaccounted for in payroll, it means bad news to the company's financial. Manual leave management can cause excessive financial leakages in leaves, attendances, and expense related transactions, and it can also lead to legal matters if an employee decides to take the company for non-compliance.

## TimeTec Leave Application for Workforce Management



## Take Leave Management to the Cloud

This is where TimeTec Leave comes into the picture. This cloud solution for leave management is designed to overcome the current challenges through its web and mobile applications. With TimeTec Leave, companies can set up leave and company policy into the system easily. They can load and manage employees' leave entitlement, manage approval levels and the leave accruals based on years of service that is compliant with the law. Once every detail of employee leave and leave policy has been set up properly in the system, employees can then access the system through their own smartphones installed with TimeTec Leave App to manage their own leave privilege.

From TimeTec Leave App, they can check their leave balances, apply for leaves, manage approvals for their staffs (applicable for managers only), check calendar to view employees on leave on any particular days, receive notification when an employee applies for leave and view staff contacts, all in one App. What's more, all information obtained from the application is current and updated. Hence, there is no need for any employees to check with HR regarding their leave balances and accruals when the correct information is at their fingertips at all times. Employees can apply for their entitled leaves straight from the Mobile App and their managers/supervisors will receive notification about their applications almost instantly and

this speeds up the approval process like never before. Employees do not have to worry that their superiors are not available at the office when they apply for a leave because their superiors can access to the App from anywhere in the world, and attend to the application right away.

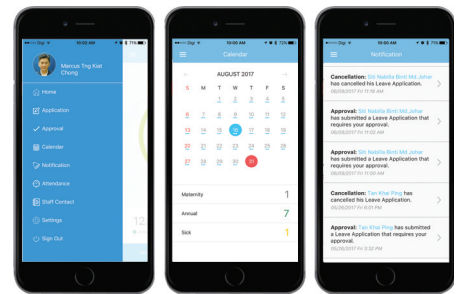
The approval module in TimeTec Leave consists of several layers whereby a company can choose to have a single layer approval where a manager approves his/her staffs. Other types of approval offered by TimeTec Leave are Random and Consequential. Random requires any number of approvers from the list regardless of sequence and Consequential requires one approver to approve first before the next approver can proceed. TimeTec Leave also offers discreet communication between the approvers in order for them to communicate and make informed decision about certain leave applications. A two-way and a rather transparent communication between employees and their superiors improves the processes and speeds up the application and the approval process in leave management because everything is done via a Mobile App, and all data and details will be intact.

## Saves Time, Accurate

TimeTec Leave is an application that regulates your organization's employee leave management smoothly and accurately. Service accrual calculation will be done automatically based on employees' years of service, leave balances will be counted accurately by taking into account full day, partial day, leave cancellation applications and etc without leaving anything behind, and prorated leave count will also be done automatically by the system. Various reports are also available in this application for the management to save and print.

By using TimeTec Leave, HR Department can be assured that all leave entitlements and approvals abide by the rules and company policies, while the employees can take comfort knowing that their leave privileges are taken care of effectively. When everything falls into place within the leave department, employee engagement will soon increase and it will definitely benefit the company in the long run.

So, next time if you are having trouble with your company's leave management solution or that your clients often complain about leave management, look for TimeTec Leave. It is indeed an affordable and effective solution for leave management as your organization steps into the future. Effective time out, productive time in with TimeTec Leave.





## Marching into the Future Confidently

TimeTec Patrol is the cloud-based guard patrol system designed with the latest technology to manage security guards during their patrol duties. By using TimeTec Patrol, security companies can manage all their clients' different sites in one solution and manage data centralization from one place through various gadgets such as from laptops as well as from NFC infused smartphones. TimeTec Patrol lets the administrators set up patrol routes, determine the time frame of each route tour, assign the routes to relevant guards, and monitor the guards whereabouts in real time effortlessly.

Promoting a two-way communication, TimeTec Patrol requires guards to carry a smartphone installed with TimeTec Patrol App during their patrol round whereby they have to use the phone to tap on the NFC Tag at each patrol checkpoint along their route to confirm their duty, and the data will be uploaded to the server in real time, making

monitoring easy and effective. TimeTec Patrol prevents the 'black box' situation from happening during patrol duty since the solution records every step of the guards in the server as audit trail for future references. In addition to reporting at every checkpoint, guards also can report incidents that happen during the tour immediately as well as sending in photos and the time that it happened via the App. TimeTec Patrol App also comes equipped with an S.O.S function that can trigger an alarm sound when pressed during emergency while at the same time, it will send out a distress signal to the emergency contacts as well as take photos of the incident to be uploaded instantly to the server for possible shred of evidence.

TimeTec Patrol is a security solution that every modern security company should consider investing in because it is designed with the latest technology that incorporates the cloud technology's effectiveness and NFC technology's convenience and affordability. This Patrol solution also promotes a two-way communication between the superiors and their patrolling guards to achieve better communication and operation. No matter where the data is collected from or from which gadget the data is collected, all information will be precise, safe and secure within the cloud server.

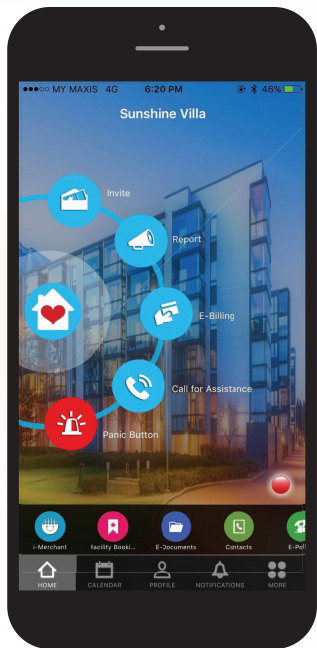
Because TimeTec Patrol solution is developed as a cloud-based system without versioning limitation like other Windows-based solutions, TimeTec Computing's development plan is continuous and always takes into consideration of the market feedbacks as well as the industry's future requirements. It is the goal of this product to deliver to the clients accurate and crucial data at all times and at a very reasonable monthly subscription fee.

Now is the time for security companies to start thinking about the future and what it might hold, and by trying a solution that incorporates the latest technologies like TimeTec Patrol, your company can march into the future confidently.





The Next  
Big "Things" for  
Smart  
Community



i-Neighbour, promotes the concept of Smart Community and is designed to ease the visitor management system for any high-rise residential and gated guarded neighbourhood communities. i-Neighbour is a Smart Community System that integrates Visitor Management System and Residential Management System all in one cloud platform. Built by TimeTec development team that has vast experience in security and biometric products, what makes our solution stands out from the others all comes down to the fact that i-Neighbour has the capability to be implemented with an array of Internet of Things (IoT) Smart Security Series.

## IoT Security

The Internet of Things is an ecosystem whereby physical objects are connected and are accessible through the Internet. Basically, the "Things" in IoT are objects that have been assigned with an IP address in which it can then collect and transfer data over a network without any manual help or human-to-computer interaction. Seeing how the concept of IoT can be put into practical use and help improved the residential privacy & security, we've designed the system to be expandable by tapping on the Bluetooth Low Energy (BLE) technology and to widely include every element that we think is necessary to improve the lifestyles of the residents. As such, i-Neighbour can be installed with Smart Siren Kit, EpiCamera, Smart Lift, Smart Lock, Smart Barrier and many more. With this comprehensive list of devices, we guarantee that residents will be able to enjoy that special moment together with their family members with peace of mind.

One unique feature in i-Neighbour is the Panic Button. A user can add in family, friends or neighbours in his/her emergency contact list and whenever the Panic Button is triggered in the event of an emergency inside the residential compound, not only will those emergency contacts be notified of the emergency but also the Smart Siren Kit installed at the guardhouse will be activated automatically specifying the unit number of the resident, making it easier for security guards on duty to send help. Panic Button feature also works when residents are outside of the compound but it will only alert those emergency contact list with details of GPS coordinates. In addition, whenever the Panic Button is triggered, the smartphone will automatically capture 4 photos from the front camera to be uploaded directly to the server for future reference. All in all, this is only one

feature that is being described within i-Neighbour. Just imagine the possibilities and conveniences that you could experience with the other amazing features included.

Simple as it seems, i-Neighbour remains as the only system that utilizes IoT devices to this extent and still, we continue to expand this unique aspect day by day. Despite i-Neighbour being this expansive, our Smart Community System is designed elegantly whereby the operation is carried out entirely on the cloud, making it accessible by anyone having an Internet connection. The System is available but not necessarily visible, the best kind of system there is.

At the same time, i-Neighbour is built to safeguard the personal information of the residents. Unlike the traditional logbook, our system security measures include ISO 27001 certification, what this means is that our smart solution is accessible only to individuals having the rightful permission to do so. Security investments are very costly and not many companies are will-

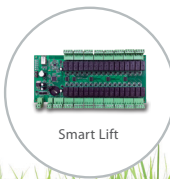
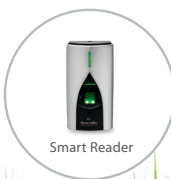
ing to go to great length for it but that does not stop TimeTec from overcoming the arduous challenge. To us, the idea of losing one's personal information is not something that we take lightly of. Therefore, i-Neighbour adopts a series of stringent privacy policies for all of its modules (Admin, Guard, Visitor, Resident) as well as complies with international standards of consumer privacy.

Adoption of i-Neighbour system in any modern neighbourhood brings various advantages to developer, house owners and residents alike. By placing the importance of user experience at the forefront, we believe that this is what makes a product praiseworthy and practical. This is why with the integration of the Internet of Things (IoT), we believe that i-Neighbour, a product fully-developed in Malaysia has the potential to be the next big thing or in this case the next big "Things" for Smart Community and the industry that we are operating in.

This is why, we are proud to present our latest Smart Community System: i-Neighbour.



**A comprehensive i-Neighbour Web and App solution,**  
fully integrated with mobile access IoT devices.



**timeTec**  
ACCESS  
www.timetecaccess.com



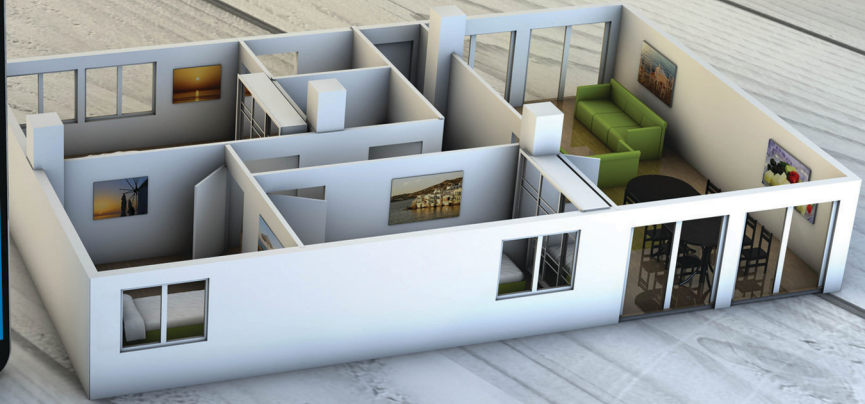
## Cloud-Based Physical Access Control System for Businesses

TimeTec Access is a comprehensive ACaaS, or Access Control as a Service, offering customers the latest way of managing access control of your business environment. TimeTec Access shifts credential management for physical access to a smartphone and mobile application, and keeping every detail safe on a cloud server.

TimeTec Access does not only apply on doors, the application is also suitable for various IoT products including smart controllers, smart elevators, smart barrier, smart turnstile, smart lock, smart alarm, smart siren, IP cameras and many more integrations in the future.

Deployment of TimeTec Access in an office provides users with secure data, remote management, real time control, secure communication, scalability and low deployment budget incomparable to other solutions. The system offers greater reliability, far better flexibility and better security a low total cost of ownership. Via TimeTec Access, the management of all these access control hardware is centralized and simplified, setting the future of access control management literally in the palm of your hand.





Smart Lock ML-10B



Smart Lock DL-30B



Smart Lock SL-70B



Smart Lock TL-40B



Smart Camera E16S



Smart Camera E17S

# Security Elevated via IoT

TimeTec Security is a series of mobile-centric IoT security devices designed for mass consumers or office users to enhance the security of their premises via smartphone.

Users can manage and control all the devices just by connecting TimeTec Security App to the smart lock, smart camera and smart wireless alarm. With the combination of BLE technology, Amazon AWS IoT platform and mobile technology, the phenomenon has taken individual premises and small office security to another level of sophistication as well as provides the much-needed conveniences required by today's modern lifestyle. Once connected to TimeTec Security via BLE, users can also unlock connected doors, arm/disarm alarm in addition to accessing the cameras straight from their smartphone and even share temporary keys with authorized individuals. What's more, all the records are kept intact within the server and made accessible in the application.

TimeTec Security totally redefines the management of physical security for consumers by tapping on the most ubiquitous gadget around, the smartphone.



## Keeping Your Team Together

**timeTec**  
PROFILE  
[www.timetecprofile.com](http://www.timetecprofile.com)

Employee's personal and employment information is most of the time private and has to be kept confidential by the Human Resource department. Information such as staff's remuneration packages and other sensitive information need to be safely guarded by the HR personnel to avoid office crisis and complication. Nevertheless, how do they (HR) obtain and keep that information, as well as how accessible and updated is the information.



Traditionally, when a candidate comes for an interview, the person needs to fill up a form, bring their certificates and credentials, etc, and the HR personnel will file all the information and documents for future reference. While that has worked in the past, it doesn't mean it could be left that way to stay relevant. Times have changed and many modern companies are indeed looking for a simpler way to manage employee information and that some information needs to be made accessible to other people apart from the HR personnel to achieve corporate efficiency and better teamwork.

TimeTec Profile has been created to centralize all your team members profiles into one place making it easier for authorized personnel to access into relevant information when required. TimeTec Profile offers employee data online, data intact, data correct and updated at all times.

With TimeTec Profile, all employee details can be keyed into the system straight from the interview phase and the information can be directly assimilated into the company's profile during onboarding process. No more manual data entry required when TimeTec Profile saves all the information on cloud, online, complete with soft copies of certificates and credentials.

Create your company's own organizational uniqueness by creating relevant fields to your employee's profile. Get all the relevant details in your system and manage the organizational hierarchy easily through this single solution. No man is an island, and with

TimeTec Profile, you can connect your team members effectively and efficiently. Don't worry about confidentiality or information leak because the admin can determine the access levels of employees to safeguard your company's confidential information and let different personnel to view different areas.



Through TimeTec Profile also, the company can subscribe to other useful workforce solutions such as TimeTec TA for workforce time attendance and scheduling as well as TimeTec Leave for leave management, and all the solutions can be managed from one place to avoid confusion and mismanagement.

By having everything integrated and accessible through different access levels, TimeTec Profile safeguards all your employee's information so you can build your organizational structure and keep your team together effectively and affordably.



**FINGERTEC**  
www.fingertec.com

## Biometrics Technology Continues to Promote Accuracy

Nothing works better than biometrics technology in promoting accuracy within identity verification because biometrics is the measurement and statistical analysis of people's physical and behavioral characteristics. No two fingerprints are the same and by comparing a fingerprint template against the real fingerprint, it is a reliable way to confirm an identity. Fingerprint technology has been used for time attendance and access control system for more than two decades and it is leading the way because of its convenience, affordability and unobtrusiveness. A few years later, facial recognition technology was introduced with a few other added advantages such as contactless-ness and its photo capturing ability.

FingerTec has been one of the leading biometrics global brands for nearly 20 years and the demand of the technologies in various industries remains strong in many parts of the world. The reason is simple, biometrics promotes accuracy. While corporations around the world strive to control their operating costs, they can't be dealing with a system that provides them with uncertainty in terms of feasibility. Deployment of biometrics solution in monitoring workforce's activities will definitely give companies the answers they require because all activities are recorded by the devices and the data can be analysed through the processed data obtained from FingerTec bundled software, TCMS V3 or Ingress, and most importantly, the data can be pushed to cloud solutions like TimeTec TA while at the same time, running parallel with data for door access in Ingress.

In 2017, the demand for Face ID 2 has increased tremendously because the market is looking for a more advanced solution that they can assimilate with their current existing fingerprint solutions. Face ID 2 offers two kinds of biometrics methods, facial recognition and fingerprint on one system plus a few other credentials such as card and password. Face ID 2 boasts 1200 face templates with 10,000 fingerprint templates as well as a whopping 200,000 transaction logs at any given time, more than suitable for SMEs. And for fingerprint technology, TA100C is still leading the way because of its stability, cost and the availability of push technology for cloud integration.

Biometrics is definitely going to be here for years to come because there is no other technologies better suited to confirm one's identity apart from the science of one's identity itself. Soon, FingerTec is going to upgrade some terminal's specifications to make our products even better suited for a larger deployment i.e. upgrade memory and CPU capacity. And we will also introduce new key locks that utilizes the convenient BLE technology to open doors through smartphone App. In 2018, FingerTec will continue to strengthen our presence in the security biometrics market, offering our focused solutions for time attendance and door access industries all over the world.



# MCST is Ahead of Time in Tracking Workforce Attendance

The Malta Council for Science and Technology (MCST) is a public body established by the Malta central government for almost 30 years ago with the mandate of advising the government on science and technology policy. Located in the city of Kalkara Malta, this establishment employs more than 100 workforces working in different departments throughout the buildings.

In view of its growing workforce, the council's management took a proactive measure and deploy a more advanced cloud-based attendance solution. The system must be able to monitor its employees, easy to use, affordable in the long run and most importantly highly reliable.

## TimeTec TA , The Obvious Choice

Having employees spread throughout various buildings and departments, MCST obviously needs an online attendance system, accessible to both admins and users from different locations yet the data centralized in real time. TimeTec's esteemed reseller in Malta, AIS Technology Ltd proposed the council with TimeTec TA, the time attendance cloud-solution that is available on the web and comes with a Mobile App.

TimeTec TA provides MCST with multiple options to collect clocking data such as through FingerTec biometrics device as well as various clocking options provided by the mobile App including NFC Tag, Time Beacon and GPS tagging. TimeTec TA also offers the organization a flexible way to set the data to comply with the organization's policy and the country's labor law.

Scheduling and shift management is another important feature of TimeTec TA; applicable to MCST employees. TimeTec TA provides daily, weekly, and flexible clocking schedules to support normal, overnight and multiple shifts configuration. The solution offers 31 pre-configured printable format reports which can also be saved in various formats.

In organization like MCST, it is imperative that data integrity and security is taken care of when dealing with a cloud solution provider. The fact that TimeTec TA runs on the Amazon

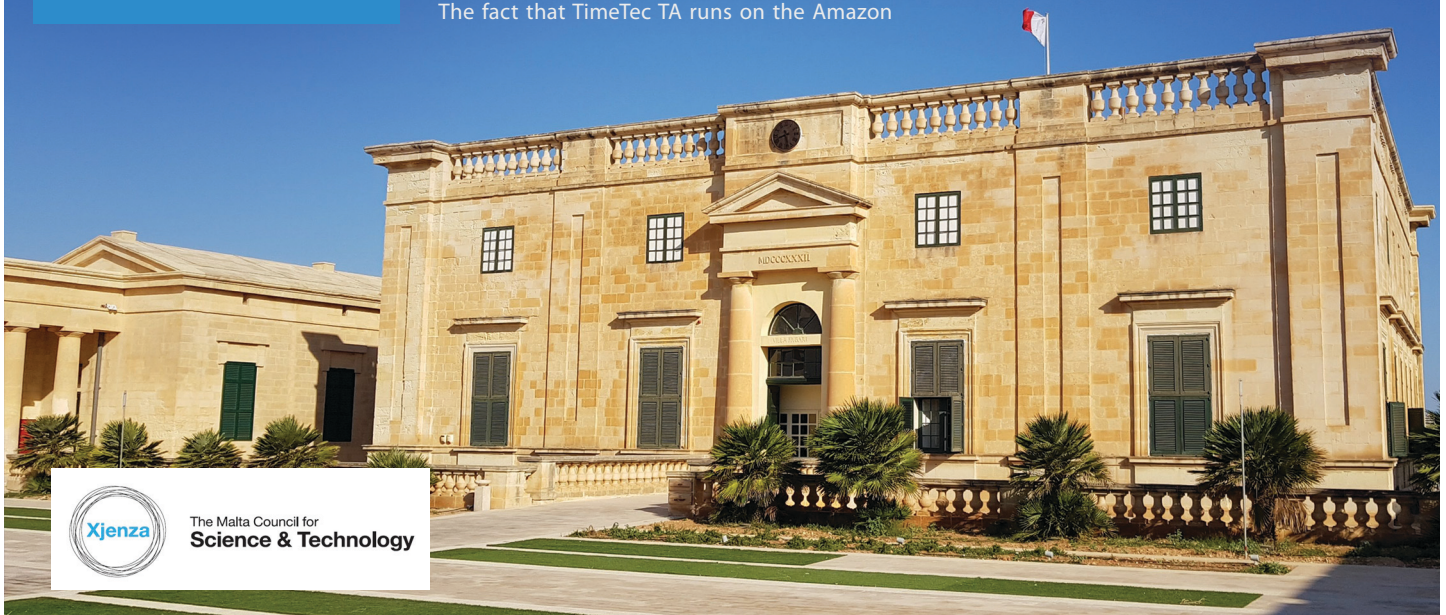


**timeTec**  
Workforce Solution Provider  
Optimizing HR Via Cloud  
www.timeTECcloud.com

EC2 platform and uses block level storage volumes by Amazon Elastic Block Store (Amazon EBS) to ensure safety, security and reliability of your stored data is another plus point for MCST to choose the brand to handle their attendance management.

TimeTec TA deploys multi level access to control data relevancy to different authority level and this gives the users of the system flexibility to access the system at anytime from anywhere through any web browser or mobile app without jeopardizing any security aspects of the system. With TimeTec TA subscription also, MCST can scale their purchase to fit their ongoing requirement and add more licenses as they grow and vice versa.

The implementation of TimeTec TA provides MCST with a better overview of their complex workforce's activities and they are able to identify anomalies in the organization before any of them escalates further. Data accuracy, data monitoring and data processing of the MCST's workforce has been improving significantly with TimeTec TA and now management their growing workforce is no longer an issue moving forward into the future.



The Malta Council for  
**Science & Technology**



IRAQ



# Security Gets Strengthened at Oxygen Gym with Face ID 2

Oxygen Gym is a famous gymnasium and physical fitness center in the Middle East. In Iraq, it is located in a prestigious area in the capital of Baghdad. Oxygen Gym has been dubbed as one of the most popular fitness chains in the country because this gym is frequented by many famous local athletes. In their effort to keep the pristine image of this fitness establishment, the management was looking for a way to upgrade the security level, and simultaneously the system was expected to monitor each membership status, whereby the system must only permit access to members who have settled the amount of their membership fee. In addition, the system also needs to cater to the growth of the business for many years to come.

For their requirements, biometrics solution unquestionably became the top option because biometrics technology promotes honesty with data accuracy and it automatically eliminates the sporadic problems such as swapping of membership cards between members to access the gym. An even better choice for the gym was facial recognition system for access and attendance because it is designed contactless and easy to use.

Ain-AI Zulal, FingerTec's distributor in Iraq took care of the project and installed Face ID 2 to cater to Oxygen Gym's specific requirements. Installation of Face ID 2 provides the gym management with the much needed audit trails of the members' movement in and out of the club. The other use of the Face ID 2 also is to provide an exclusive access for the elite athletes and members for certain part of the gymnasium, adding value to the place. The combination of Face ID 2 and its bundled management software, Ingress, has made it possible for Ain Al-Zulal to manage the system settings to match the client's request lists. Face ID 2 has the capacity to operate with 1200 face templates, 10,000 templates of fingerprints, cards and passwords, more than sufficient to sustain the gym membership's growth projection.

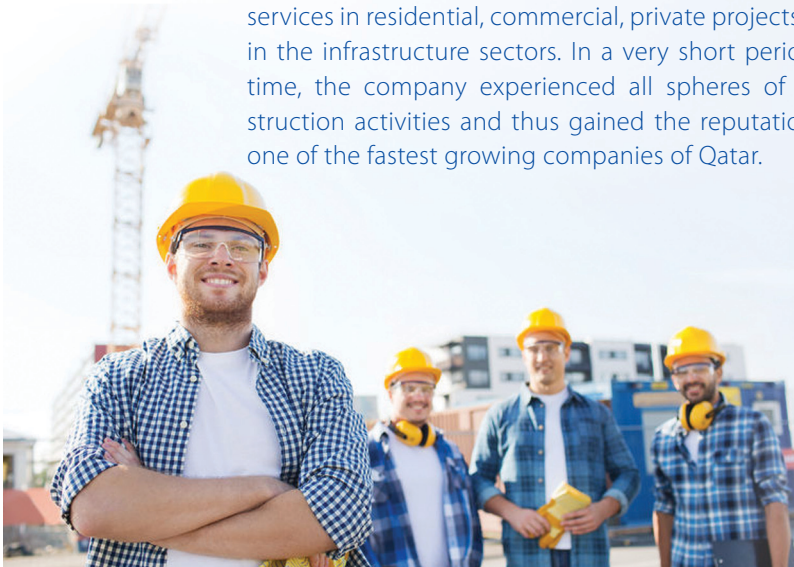
"The success of Face ID 2 deployment in Oxygen Gym has encouraged other gymnasium chains to apply the same method to control the memberships' access to the facility", Eng Sinan, the Managing Director of Ain AI Zulal informed Beyond Biometrics. This installation has made it possible for them to approach other fitness establishments that have similar requirements. Ain AI Zulal is no stranger to the security industry in the country as they also distribute CCTV, access control, attendance solutions and many more at affordable price and excellent service which makes the existing customers always come back for more. Ain AI Zulal has been with FingerTec brand close to 8 years to date and they have dealt with thousands of biometrics installation nationwide, focusing on Face ID 2.





## Brick Stone Deploys TimeTec TA for Better Workforce Management

Brick Stone Trading & Contracting W.L.L is a company registered in Qatar that provides engineering, procurement, construction (EPC), maintenance use for development projects in the country and project management services in residential, commercial, private projects and in the infrastructure sectors. In a very short period of time, the company experienced all spheres of construction activities and thus gained the reputation as one of the fastest growing companies of Qatar.



QATAR

In their mission to deliver reliable, high quality solutions for their esteemed clients, Brick Stone also realized that they would need to improve their internal workforce management to increase efficiency of the company's workforce. Through TimeTec's reseller in Qatar, Intelligent Project, Brick Stone settles with TimeTec TA.

TimeTec TA is a cloud-based solution that brings workforce management to a whole new level and is the next preventive step for tardiness, absenteeism, and other counterproductive work behaviour. With TimeTec TA, companies will now be able to tackle any workforce issues such as monitoring and tracking staff's attendance and whereabouts, create and manage effective scheduling by using multiple scheduling templates, and generate reports automatically. What's more, TimeTec's features can also be accessed through mobile application, which is readily available to be downloaded and installed for both IOS and Android.

The company subscribes the solution for its employees and at the same time, the company integrates the data from Face ID 2 into the same solution. Apart from the biometric terminals, TimeTec TA also supports other clocking methods such as Web Clocking, Time Beacon, NFC Tag and GPS Clocking for its attendance clocking.



## Springmount Supervising Attendance with TimeTec TA



AUSTRALIA

Springmount Services Pty. Ltd. is a Quality Endorsed multi-award winning company with eco-Clean Certification that was founded in 2002 by Managing Director Martin Stack. Mr. Stack is still actively involved in the business today, which is solely owned by the Stack Family Trust. Hence, Springmount Service's senior management team offers well over 100 years of combined industry experience in specialist areas such as industrial relations, operations, floor maintenance, workplace health and safety, quality assurance and environmental management.

With over 800 employees on sites across Sydney, Brisbane and Melbourne, the company has developed excellent systems and resources to enable them to provide a superior level of cleaning service no matter the location. As such, State and Regional offices provide a first rate support network as well as the ability to respond quickly and efficiently to client requests. Therefore, in their devotion to maintain their current top quality service, Springmount decided to seek out our Australia reseller, BioAccSys Australia for a solution that could help boost their services in which they soon set their eyes upon our cloud solution, TimeTec TA.

TimeTec TA is a powerful cloud-based solution for automating Time & Attendance to suit most businesses, regardless of their size. Our cloud solution is designed to help organizations reduce their administrative overhead by eliminating the time spent on manual time card calculations, decrease overall labor costs, and to shrink the gap between payroll policy and actual practice. What's more, TimeTec TA is also eco-friendly as it helps reduce paper usage during collection of

attendance data and generation of reports since our solution operates on the cloud. Thus, it is perfectly suitable for companies with ecoClean Certification such as Springmount Services Pty. Ltd.

Other than subscribing to TimeTec TA, Springmount also utilized Face ID 2 to further ease the collection of attendance data with biometrics facial recognition technology. With these installations in place, Springmount can expect higher productivity in the long run as well as a higher ROI.





USA

Excel Property Management, Inc or (Excel) is a North Carolina-based company specializing in affordable housing, licensed in North Carolina, South Carolina and Virginia and currently managing properties in North Carolina and Virginia. Located in Raleigh, North Carolina, Excel provides comprehensive Property Management services and solutions for owners of multifamily rental properties.

## Excel is Excelling Alongside TimeTec TA

With its increasing list of rental properties situated in both North Carolina and Virginia together with a workforce of over 100 individuals to manage, the company decided that it was time for a more efficient approach in handling day-to-day office activities such as attendance, management reports, schedules and etc. This is where TimeTec TA comes into the picture.

TimeTec TA is a cloud-based solution that allows access to features like attendance monitoring, create/manage schedules and also the option to generate reports automatically, on cloud. Additionally, when smartphones are involved, the productivity achieved will be even greater as employers and employees will be able to access TimeTec TA App and its features on the go. Moreover, the employees will be able to clock-in their attendance or view their clocking history in order to remind themselves of their work performances. Clocking in TimeTec TA can be done through a variety of ways such as Time Beacon, NFC Tags, Biometric Terminals or even from your very own personal laptop and mobile as the App supports Geo Location clocking. Excel has been able to manage their workforce fuss free with TimeTec TA close to 2 years now.



PHILIPPINES

## Brother Industries Philippines (BIPH) Improves Access Security with FingerTec

Brother Industries (Philippines), Inc. was established in March 2012 as a subsidiary of Brother Industries, Ltd. to fulfill the increasing demands of the printing business. The company produces cartridge for inkjet printer, tape of label printer and printer main body. Brother Industries' factories are located at the First Philippine Industrial Park in Tanauan City, Batangas; housing more than 5000 employees.

In partnership with Fujitsu Philippines Inc., Calvelo Engineered Systems Corporation had delivered BIPH with an advanced access control system integrated with 35 units of FingerTec Q2i to provide the end users with the security system that complies with their corporate requirements. FingerTec Q2i's were installed at the turnstiles to control access of the premise efficiently.

According to Mr Jonathan Belo from Calvelo, "FingerTec Q2i reads fingerprint faster and speed is an essential quality we need for our operation because we have almost 5000

employees going in and out the doors each day. With the fast reading capability of Q2i, the movement of employees on secured door is smoother than ever".

The project was handled by Calvelo Engineered Systems Corporation, FingerTec distributor in the Philippines since 2010. Calvelo Engineered Systems is a company engaged in systems engineering work in the field of building automation & building electronic security systems since 2001. The deployment of FingerTec biometrics access control at BIPH has streamlined the workforce attendance and management of the corporation effectively.



brother at your side



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# Global Reseller Programs

Well-tailored program for resellers out there to start a business with TimeTec Group.

➔ Conclude Sales Fast ➔ Reduce Support Cost ➔ Get Recurring Profit

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# Welcome to the IoT era



The Internet of Things (IoT) is an ecosystem where physical objects are connected and accessible through the internet. It could be a runner's shoes with a chip in it or a person having a heart monitor i.e. the "thing" in IoT is the objects that have been assigned with an IP address and can collect and transfer data over a network without any manual help or human-to-computer interaction.

There are many practical applications of IoT technology across many industries today. IoT enables devices/objects to observe, identify and understand a situation or the surroundings without being dependent on human help.

IoT can connect devices embedded in various systems to the Internet, representing themselves digitally and can be controlled from anywhere. The connectivity allows

us to capture more data from various places, ensuring more ways of increasing efficiency and improving safety and IoT security. This is a transformational force that can help companies improve performance through IoT analytics and IoT Security to deliver better results. Businesses in the utilities, oil & gas, insurance, manufacturing, transportation, infrastructure and retail sectors can reap the benefits of IoT by making more informed decisions, aided by abundance of interactional and transactional data at their disposal.

By using IoT platforms, organizations can reduce cost through improved process efficiency, asset utilization and productivity. With improved tracking of devices/objects using sensors and connectivity, they can benefit from real-time insights and analytics, which would help them make smarter decisions. The growth and convergence of data, processes and things on the internet would make such connections more relevant and important, creating more opportunities for people, businesses and industries.





# Building Smart City Together

## i-Neighbour White Label Partner Program

Interested in having your own Cloud Based Smart City Solution? i-Neighbour got it covered thus you don't need to reinvent the wheel. As such, i-Neighbour White Label Program is ideal for housing developers and smart city developers!

With i-Neighbour White Label Partner program, you can now rebrand, resell and add value to your housing projects by re-branding our smart city solution together with your own brand name. Additionally, you can also embed our solution according to your own business plan while we take care of the development and technical support that you require. All in all, this program is great for housing developers or any businesses alike that will benefit from our web services under your own label.

### How to Get Started?

Contact us if you are interested in our White Label Partner program or also if you have any questions pertaining to this program. Please note that we need to be informed about the details of your requirements first in order to return to you with our proposal to match. Please email us at [info@i-neighbour.com](mailto:info@i-neighbour.com) detailing your requirements and we will take it from there to build a business with your company.

### How Does White Label Work?

Basically under this program, you will use i-Neighbour platform, iOS & Android Apps and contents in your own brand name. This service will be your own product that you can offer to your clientele according to your own marketing strategy and pricing structure. To participate in this program, you need to invest on setup fee, annual server-hosting fee as well as yearly maintenance fee and in return, our experts will provide you with the design, technology, platform, database and necessary supports & system maintenance. Subsequently, you will be given access to an Admin Page for your own management of distributors, dealers and end-users. In short, this program is providing a turnkey solution. Therefore, eliminating your development time, minimizing your costs plus maximizing your profits and added values to your projects!

### i-Neighbour White Label Program Price Structure

Under this program, investment is scalable according to your requirements. There are 4 charges as detailed below:

1. One-Time Initial Set Up Fee
2. Yearly Server Hosting Fee hosted by Amazon Web Services
3. Yearly constant software updates, support & maintenance cost
4. Yearly Subscription sales commitment

### Maintenance and Technical Supports Provided by This Program

#### Maintenance services:

- Server & database updates & configuration
- Storage & traffic
- Technical email support
- Debugging
- Bug fixes
- Error detection
- Log investigation
- Quick fixes

#### Technical supports:

- To provide technical support on platform architecture, design, modules and functionality.
- To provide instructions and help in urgent cases as well as to resolve blocking issues – i.e. help identify the nature of issues and propose a solution to your end-users.
- Support will be provided within 24 hours from the time of the request on business days.
- Comprehensive System Level Agreement coverage.

### Our Guarantees

1. We will integrate our Cloud Based Smart City Solution into your hardware and software, if required.
2. We guarantee that your Cloud Based Smart City Service would be using the highly reliable Amazon Cloud Platform thus providing you with peace of mind for your business.
3. We will be providing you with the maintenance service and technical support that we promise.
4. We will keep our technology and information updated in addition to regularly informing you of the new features that we introduce to i-Neighbour.
5. We will also integrate the payment gateway of the System to your bank account, which means you can deal directly with your clientele for all online payment transactions.





## Marketing Cloud Gets Personal & Exclusive

When we first ventured into the cloud business, the initial thought about marketing was that it would be easy, self-explanatory and automated. The target subscribers to cloud solutions were obviously those tech-savvy crowds who are familiar with the Internet and how things work. In fact, Software as a Service like TimeTec TA and TimeTec Leave have already been made simple to use with sufficient explanation presented on the software itself. Hence, the no-brainer strategy for us was to have content-rich, comprehensive and appealing websites for potential subscribers to visit and read up in their own time because all information has been provided in detail. And once they signed up for a trial account, that we could depend on automated scheduled mailers to seal the deal for us. We thought maybe that when they came across “Your trial account will be expiring in 3 days”, they will take immediate action to our favour. Oh boy, how wrong we were.

Definitely there is a stark contrast between cloud solution for individuals and cloud solution for organizations. For personal use, the decision

is more immediate and therefore the strategy mentioned above could be viable. For example, if I want to subscribe for an additional Google Drive storage or subscribe to Spotify, I could just pay the fee with my own credit card and be done with it in seconds. However, when selling cloud solutions to organizations like what TimeTec is offering, the challenge is definitely tougher. Don't expect like a moth to a flame phenomena whenever a cloud solution is launched, it's not gonna happen. Pushing clouds to businesses require a supplier/developer to put extra effort in its sales and marketing, if not more.

First and foremost, the products developed were already loaded with comprehensive features but still with general usage in mind. And as we penetrate the market further, there are many other features required by some companies that we haven't thought of because of the differences in organization's operation, culture and structure. In closing the deal, the question is always whether to be or not to be? To be, we need to spend an X amount of development time in getting the features done before the client's could commit with us and if we choose the latter, the client might drop us as those features are key to their operation. On top of the additional required features, to get started with subscription for a large number of employees would take a few layers of approvals that could take months to conclude. Then, there's also the issues of installation and support that need to be ironed out to ensure smooth deployment through and through.

In marketing cloud solution to organizations, the customers need reassurance on the features that they are buying because they can't just simply assume that the features are there by reading a fact sheet or watching some videos the developer places online. They also need reassurance on many other issues like pricing, possible integration, deployment, support, upgrade, and a lot of many other aspects before they can commit to your product for a long period of time.

As I see it, corporate cloud buyers expect exclusive treatment, they want to look the developer in the eyes and know that they are protected when they make this big purchase, this long term investment. Cloud subscription for a large organization is a sizable investment and even for a small company the amount is going to accumulate over a period of time. Hence, the demand on personal touch and exclusivity from potential clients is definitely apt. There's no shortcut to marketing cloud solutions to corporate clients, you have to get your hands dirty before they sign up with you.

On that note, TimeTec Teams are ready to provide an exclusive treatment to all our cloud corporate customers in 2018 and onwards.



**Norana Johar**  
Group Chief Operating Officer



## TimeTec Rides the Latest Cloud Technologies to Enhance Customer Experience

With rapid and innovative business models competing with the established companies in almost every industry, businesses that fail to embrace change and revamp their product offerings will find themselves in great risk. The technologies such as Internet of Things (IoT), robotics and automation have initiated the Digital Transformation process, which we often refer to as Industry 4.0. Come along with Industry 4.0; the big data analytics, deep learning in artificial intelligence (AI), rapid development of apps and mobile services often run on the Cloud Platform to provide end-to-end data digitisation and integration into digital business ecosystems.



**Daryl Choo**  
Chief Technology Officer

Cloud Platform has enabled businesses to innovate and grow more rapidly and efficiently with much lower capex cost. Unlimited computing resources can be spawned on demand and be scaled according to the application needs and traffic patterns. In TimeTec, we are leveraging the latest Cloud Technologies in all of our product offerings. Mobile App is a must for most of our TimeTec applications. It is always a challenge for us to improve and enrich the mobile app experience. It is our aim to make it more automated and seamless for all users. Most often than not, users tend to forget to clock-in. As such, we are currently working very hard in developing a mechanism for helping employees to carry out auto-clocking in terms of their attendance reporting, and this requires us to incorporate some intelligence logic within the app to achieve this kind of requirement.

For our mobile app development roadmap, we would be rolling out WIFI clocking features in the Year 2018 as well as further extending it to include auto-clocking method with WIFI Clocking or Beacon Clocking. Mobile app is also going to become one of the more important aspects as it can be turned into a virtual encrypted key for users to access their door lock/door access control system or even be used with more advanced features like remote door open. In our app development, we mostly develop native mobile apps for its fast and optimized app performance. Plus, it also offers better hardware integration or native API support in its respective phone operating system. To encourage reuse and having on codebase for maintenance, we are also working on hybrid mobile apps which are now in development using Xamarin Platform. Moreover, we have greatly benefited from using this particular model and manage to speed up our entire development schedule without compromising on the quality and features of the apps. The success of hybrid development is further achieved with our successful launch of TimeTec Leave in both Apple App Store and Google Play Store.

Cloud Platform is an open space for competition for all vendors and we believe every vendor has their own focus in their product offerings. It is our responsibility to leverage each cloud provider strengths and



consume its related web services rather than to develop it on our own. Our team is always focusing on developing our own core application features to fulfill all of our customers' requirements and requests. Currently, we are running primarily on Amazon Web Services but we are also evaluating other cloud offering by Microsoft Azure and Google Cloud Platform from time to time. At the moment, all of our language translation engine and mobile location services are running on Google Cloud Platform. Apart from that, we also have started to use Bing service on Azure platform to enrich all of our search results within TimeTec Portal.

IoT is also one of the areas we are focusing on in TimeTec. Subsequently, TimeTec Security which consists of smart lock, smart camera, smart alarm and mobile app are considered as one of the more important IoT related services in our offerings. Hence, it is a great product to be used within the smart neighbourhood community. Furthermore, we are developing a new Cloud Access Control System, which we called TimeTec Access. It comes with all the basic door access features as well as the advanced door access features like Global Anti-Passback, door interlock system, multi-card access and etc. On top of that, all the settings and interactions will be done via mobile app or web interface and it is secured by our Cloud Platform Door Access Engine. All the major hardware communication protocol with the mobile app will also be using Bluetooth 4.2 technology which is supported by Apple iOS and Google Android system.

Another very important aspect in Cloud Technology perspective is data consolidation and centralization. For an organization, it is very important to have all the vital information stored together and securely. Therefore, we have launched our TimeTec Profile which allows for organizations to store all employee's information into the cloud and access it anytime and anywhere. Hence, it becomes a single point of reference to all employees. Besides containing employees' information, our built-in Library feature also plays a very important role in providing a secure and centralized storage for the organization. It is running on Amazon S3 services which offer a 99.99999999 durability for its file storage. To further encourage it to be more

widely use within the organization, we will be revamping its entire UI to make it simpler for use. In line with the revamping of UI, we are also planning to add the library feature as well in our upcoming mobile apps.

TimeTec Patrol, our first version only supports Near-Field Communication (NFC) in terms of checkpoint scanning. In order to provide more flexibility to the security guard company, we've also included the ability to use Time Beacon for checkpoint scanning during patrol. As of now, it is only running on Google Android OS and we will be supporting it soon on Apple iOS. The intention here is to enable more users to monitor the patrol guard activities regardless of their mobile operating system. Something worth mentioning here is that, we have revamped the entire application data flow to offer offline mode while performing patrol route. Thus, the security guards will now be able to perform their patrol effortlessly regardless of the Internet coverage at the supposed site.

Furthermore, we are integrating big data analytics into our TimeTec application. The analysis does not only help us understand our customer behaviours but it also serves as a platform to onboard customer and transform it to a successful cloud journey. The R&D involvement into the project thus has ensured that the correct tools and technologies are being used. In terms of the customer perspective, we are planning to implement it at a greater scale. Correspondingly, customers will be able to have a dashboard for their staffs working patterns and performances. It is also in our plan to produce an enhanced dashboard to provide more insight for the management to carry out resource planning and scheduling because it is fully integrated with our TimeTec TA, TimeTec Profile, TimeTec Leave and the entire TimeTec suite. Once again, this entire big data roadmap plays a very important role in ensuring that our TimeTec journey to the cloud is successful.

For our future cloud development, we are slowly migrating and developing our application into utilizing microservices and "serverless" concept. All these microservices will be deployed on AWS Lambda services and accessed via Amazon API Gateway. The AWS Lambda or Containers services such as Docker will be the

way for "Agile" and "DevOps" cloud's organization to transform and grow for the future. Going forward with the "serverless" concept, it also helps us to minimize the effort of infrastructure maintenance and focus more on our core development for product improvement. In addition, we are using NoSQL database namely Amazon DynamoDB to develop our upcoming TimeTec Access as it can offer very low latency and fast response time for very large data volumes grow. As a result, it is a perfect match for our smart door access product.

Application Programming Interface (API) plays a very important role in Cloud component as well. It serves as the information exchange point between different cloud application vendors. We are always improving on our API functions to cater to our partners' or third-party software vendors' request. Automation feature is very demanding on cloud application, we have just completed the terminal automation feature to help the system administrator in automating the terminal data upload and download process.

The Cloud Technologies won't be able to go too far without a proper governance or guideline. This has come to our concern and focus since we commercialize our TimeTec application. We have undergone CMMI certification in Year 2016 to ensure our software development process is in par with the International standard. In Year 2017, we have initiated our ISO 27001:2013 certification process within our R&D and IT operation department. The entire audit and certification process shall be completed by the beginning of 2018. To further enhance the authentication process, we have also introduced 2 factor authentication within the entire TimeTec suite as it has always been our promise to provide an organized and secure environment for all of our cloud offerings.

2018 will be another good and busy year for the entire R&D department. Many more new products will be launched along the way to enrich and improve the user experience of customers. Please do not hesitate to provide us with your valuable feedback for improvement. Lastly, we hope to get you onboard to join our Cloud Journey.

# IoT, the Waves have Arrived

So you've been hearing about the Internet-of-Things aka IoT so much for so many years. But what exactly is this "Internet of Things" and how is it going to impact on you? Let me sum up IoT, when you wake up, the light is automatically turned on, the radio started playing your favourite music, the television will be switched to your favorite channel, your coffee maker starts to brew your morning cuppa, the wardrobe is well aware of the weather and suggest you of what to wear, your car is noted on your appointments to deliver the best route for you; your oven, fridge, washing machines, air conditioner, mobile phones, smart watch, bicycle, car and almost anything else you can think of, has the knowledge of your next step hence is in the position to let you know what to go next. Sound scary? Because my friend, the IoT waves have finally arrived to sweep us away. However, there's no reason to be concerned. We need to keep calm and stay connected.



**Barry Chai**  
Chief Operating Officer

In fact, we are living in a digital forest and surrounded by these gadgets and appliances with Internet connectivity. It's not hard to see how and why the IoT is such a hot topic today. Cisco Chairman, John Chambers, is projecting a \$19 trillion dollar market for IoT industry over the next decade. The analyst firm Gartner says that by 2020 there will be over 26 billion connected devices worldwide and that's approximately four devices for every human being on Earth. The market is much larger than that Facebook and IoT is far bigger than anyone realizes.

With the improvement of the technologies such as Artificial Intelligent, Augmented Reality, Virtual Reality, self-driving car, robotic, drone technology, higher resolution, better computing power, matured cloud computing technology and the forthcoming Bluetooth 5.0 and 5th Generation mobile networks, things will definitely get connected faster, more stable, better in reliability, better in quality, prompt a quicker decision making and definitely is making life easier. NOW is the right time to ride the IoT waves! But, why so?

Because, for businesses, IoT helps to lower operating costs, increase productivity, improve decision making process, understand customers, expand markets, develop new products or create opportunity for new business. For example, if you are a business that relies on warehousing, manufacturing or storage, you probably use some scanners or barcode readers for your employee to scan and track the inventory item by item. With IoT and robotics, the warehouse robots can find the item for you in a jiffy, know your inventory quantity and able to help you restock just-in-time. Moreover, with the big data and the AI integrated, the system can tell you the sales trends and provide you with the real time statistic reports. What's more, IoT can work for you 24 hours a day without hassle and that's how Alibaba and Amazon manage their giant warehouse and inventory effectively.

Next up, how would a government adopt IoT? In general, governments are focused on increasing productivity, decreasing costs, improving public security and their citizens' quality of life. Presently, there are IoT sensors in-

stalled to monitor the sea level and weather; to prevent flood, landslide, earthquake, volcano eruption and etc. IoT also plays an important role in public safety. Developed country like United States has installed thousands of surveillance cameras and IoT sensors in their cities to detect dangerous persons, monitoring the city and fighting crimes. Face recognition is one of the common techniques being used in IoT. In short, IoT helps governments to develop better Smart Cities.

Fitness trackers such as Fitbit and Apple watch, in particular, are the leading consumer cases for wearables because most consumers use wearable devices to record their exercises, health statistics and progress. Hospitals, med-tech companies, pharmaceutical companies, and insurance companies have started to utilize these devices to monitor those chronic conditions patients as well as the inclusion of predictive analysis. Smart home is also one of the popular consumer IOT. Smart TV, streaming devices, home control devices for lighting, fans, air-conditioners, blinds, fridge and so on. These gadgets make our life better and look cooler than ever. For example, by using Google Home or Amazon Alexa using your voice control, you can check the football scores, schedule your appointments, book a restaurant, turn on or off your home alarm system or air-conditioners, call somebody and many more easily.

Internet-of-Things allows for virtually endless connections and opportunities to take place. At TimeTec, we are developing our IoT ecosystems to enable our existing products to be cloud ready and connected to our cloud solutions. We also have developed new IOT products along the way such as Siren-Kit, BLE Alarm system, BLE Lift, BLE Smart Lock, BLE Smart Barrier, BLE Autogate and so on. Our Smart Community Solution i-Neighbour can be integrated with TimeTec TA and TimeTec Leave for attendance and workforce management; or integrate with TimeTec Patrol for patrolling solution, linked with i-Merchant for shops nearby and i-Ad hub for advertising solutions. We are connecting to security at home via TimeTec Security, and building the one stop security and management solution known as i-Neighbour for residential area and TimeTec VMS for commercial environment. With TimeTec, you are secure at home, in your neighbourhood and in your workplace.



## The Existing Electronic Access Control

Principally, an electronic access control system consists of 3 parts. First is user credentials, second is hardware and third is software.

The credentials include password (something that you know), card (a token that you have) and biometric identity (something that you are). Thus far, biometric identity is regarded as the most secure credential and widely used by many manufacturers for years. Nevertheless, there are still some group of users who are not pleased with biometric credentials due to the possible biological changes and privacy concerns. Furthermore, amongst the major challenges faced by consumers in access control deployment are these 3: the type of credentials selected, the technical specifications required from the connecting hardwares and the software features. The credentials must be secured and non-transferable, the hardware specifications must be enough to sustain at least 3-8 years ahead and the software must be safe and user-friendly.

But if there is one solution that can overcome these 3 major challenges, the answer is mobile access application.

## The Smartphone and Mobile App

The smartphone these days is not simply a phone that is mobile. It is a mini personal computer complete with great computing power and it can be connected to the Internet at anytime for instant data transfer. We use instant messaging apps to send messages, pictures and voice notes every minute of the



day. The mobile app has made our communication contents richer, more informative and almost instant. The use of social life apps in smartphones have allowed individuals to share events in their lives on a daily basis. Smartphones have become our music player, mini cinema, and also e-wallet. And many people are relying on the navigation apps within the smartphone to survive on the road these days. In short, smartphone has become a necessity and not a luxury anymore. The smartphone has transformed our lifestyle completely and became an extension of ourselves. As such, we often secure the access to our smartphones by password, passcode, fingerprint, iris and face recognition.

## The Latest Electronic Access Control System Working Mechanism

The new working mechanism in access control system is utilizing cloud technology, whereby a cloud server is designed for admins to create user login accounts by using valid email addresses. At the cloud server, the admin can configure the list of access control devices that have already been installed at doors as well as configure their access rules by time, antipass back and etc. What's more, the admin can also assign users permission to access different doors with different access rules.

Another component in the system is the Bluetooth Device/door controller (BTD) which has been considered as a less powerful hardware because neither does it store any user information, nor that it's keeping any access rules. Instead, it only powers up the electronic door lock system and to keep the doors shut all the time. This new BTD component reduces hardware cost significantly and making installation simple. The BTD consists of a real-time clock module and a new matching algorithm, which work to validate the Bluetooth unlock command and data format before it unlock the electronic door lock system. In this new working mechanism, the system is running on Bluetooth MESH protocol, whereby the receptor will only respond if it receives the correct data.

Even though there are similar products in the market, there are differences that we need to highlight. The look might be similar but if the lock requires a power device/door controller to secure the doors, it means that the matching algorithms and access rules are still stored inside the device/door controller. Hence, when users sign into a mobile app, it turns the smartphone into an access card, thereby allowing the users to send the card ID to the device/door controller for verification through their smartphone. For this kind of design, the manufacturer is simply providing you with a new credential instead of providing you with a new solution.

## The Benefits and Security Concerns

On the other hand, mobile-based access control system such as TimeTec Security reduces deployment cost and improves user friendliness. Besides, the new system provides more flexibility than the regular electronic access control system, where the admin can manage user accessibility per door via a web portal or a mobile app. The admin can also create a temporary pass to allow visitor access on specific date and time. Through this method, the visitor is required to sign into the mobile app in order to receive the access rights. For example, a house owner can allow her niece to unlock her house's smartlock every Saturday from 10:00 am to 2:00 pm during her overseas business trip. She will have to send a temporary pass to the niece via the app and the niece will be able to access the house within the permitted time. Once she's back, she can cancel the pass immediately.

Other than that, users can only sign in on a single account at any one time via the mobile app. One account can't be accessed through two smartphones. In case a user signs into a new smartphone, the mobile app will request the user to insert a confirmation code. The cloud server will then send the confirmation code to the user's registered email address for confirmation and security.

The time checking mechanism in the Bluetooth door controller is also designed to check the user's smartphone date and time. This feature can prevent users from changing the smartphone's date and time because as the smartphone sends the unlock door command, it will also send the smartphone's date and time as well. The Bluetooth door control will reject the request if the real-time clock's date and time are different from the smartphone's date and time.

## The New Hardware Introduced

The new Bluetooth smart locks series permit users to enroll passwords, cards, and fingerprints as options. And an integration of these locks with a Bluetooth module allows users to use the mobile app to unlock the smart locks without enrolling and storing any credentials. This Bluetooth smart locks series are suitable for office and home use in combination with TimeTec Security Mobile App or TimeTec Access Mobile App.

The new Bluetooth door controller can be installed at any doors together with an electronic door lock system. It does not require any slave readers to capture credentials and it only responds to TimeTec Security Mobile App via Bluetooth connection. The Bluetooth door controller is suitable to be used in offices that require a more secure door lock system, for example electromagnetic lock, dropbolt, turnstile, barrier gate and etc. And it can support rechargeable backup battery, which can keep the door shut

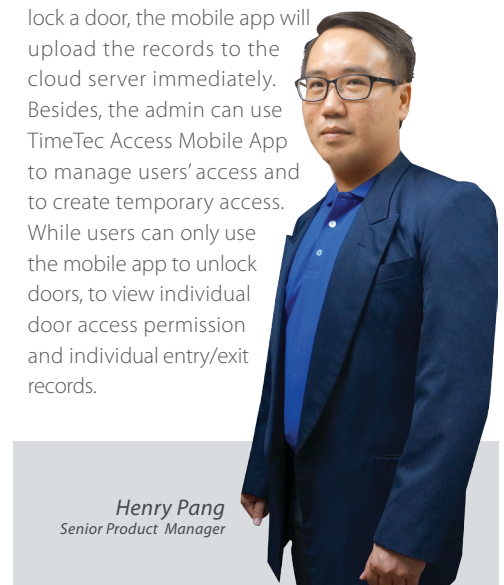
in the event of a power failure. This new door controller can work well with TimeTec Access Mobile App.

## TimeTec Security and TimeTec Access Mobile App



TimeTec Security Mobile App is the most basic system aimed for homes and small offices. The lock's owner or the admin is not required to use a web portal to configure and manage the locks and users because everything can be set within the mobile app (from the lock setup to assigning users to access group). TimeTec Security however, only supports access time zone management, but not high-end access rules, which include anti pass-back, interlocking and etc. All users' entry/exit records will be uploaded to the cloud server immediately, and the admin or the lock's owner will receive notification regarding who is using the smart locks.

TimeTec Access is a complete solution aimed for companies with multiple doors at different locations where the admin can setup/configure doors, access rules and users in the web portal. It also supports a full range of access rules from time zone to global anti passback. The admin can also use the web portal to monitor all doors activities and users' movements because whenever the user uses his/her mobile app to unlock a door, the mobile app will upload the records to the cloud server immediately. Besides, the admin can use TimeTec Access Mobile App to manage users' access and to create temporary access. While users can only use the mobile app to unlock doors, to view individual door access permission and individual entry/exit records.



**Henry Pang**  
Senior Product Manager

# In Achieving A Cloud Experience

**Nattalina Zainal**  
Senior Marketing  
Manager

In my imagination, living on clouds would be all white, fluffy, comfy and some unicorns would peek in once in awhile. Well, using a good cloud solution literally will give you the same vibe; feeling at ease, comfortable and safe, a few clicks here, a few clicks there, and you are done with all data intact and reports accurate and retrievable at all times. The main reason why cloud solution offerings have become more acceptable for businesses these days is because they can streamline all organizations' data and processes, provides visibility, lower IT complexity, and of course, reduce the overall cost. Who wouldn't want something effective, would we?

But simply offering cloud solutions to the market doesn't mean that the market is going to respond positively and with glee. The struggle is real and cloud solution developers are still fighting the uphill battle to present the market with cloud solutions that are appealing, easy to use, affordable, dynamic and the list goes on. TimeTec's years of experience in the cloud business has provided us with valuable knowledge of what the market actually wants. We might think of certain useful features but the truth can only be revealed when the product meets the customers.

## The Power of the UX & UI

There is nothing trivial not even a small little button when developing a cloud solution, and definitely cannot be neglected is the UI and the UX. The UI is positively correlated to the UX and if the developers get this mix wrong, the result could be disastrous, and rectifying it could take ages to the development time and will definitely bloat the cost to the management's nightmare. The overall feel of where the action buttons are and how to access certain things on the web and on the App will conclude the user experience or the UX, which will determine the longevity of the customer's subscription. The significant of UI design has taken the life of its own in cloud solution development. At TimeTec, when it comes to the UI, discussions could prolong for hours and even then, we sometimes miss the target.

## Centralization Key

Another important element in cloud solution is centralization. The scope of centralization is not limited to only having all the data in one space/server. When we talk about centralization, all operations from top down and vice versa must be carried out from one solution, and the data of all operations kept in one server even though activities recorded from different locations and through various gadgets. Cloud solution must let all users across organizations to be able to use the application without any risks, promoting a two-way communication and some level of transparency. And security must be guaranteed at all times when all of these happen.

## Available on Various Platforms

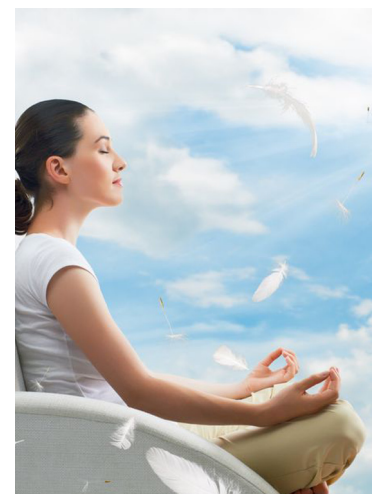
Cloud developers cannot take comfort in the fact that you have done well on your web application because if you haven't done your solution on the App on various platforms, you are not there yet. Laptops and computers have become a secondary choice when smartphones comes with amazing computing power and easy-to-use applications. There is no such thing as an option to develop an App because people need to access to information right away and smartphone is the gateway to "right away". All TimeTec solutions are offered with their matching Mobile Applications,

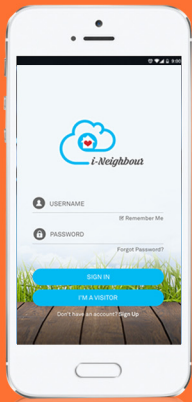
which needs to fit the requirements of various platforms and smartphones available in the market, and the challenge is never-ending, and on top of that some of the Apps are linkable to achieve greater UX to the customers.

## Flexibility in Integration

Moving into the future, cloud developers are required to provide flexibility in integration without hesitation. SDK, data export and import, for example must be offered to customers. It's not a special requirement anymore, it's a standard specification already. Taking it to another level, we at TimeTec also offers multiple applications that can be integrated with a single sign-on process; like TimeTec TA, TimeTec Leave and TimeTec Patrol, so you can login and switch applications as needed. Cloud developers also needs to incorporate dynamic design in their solutions to suit different organization's requirement and future improvements. No more static pages that can do one or two actions like the Windows-based software. A cloud solution must be able to smartly link related subjects and concerns together, and provide that smooth UX to the customers on any platform of their choosing.

The demand of cloud solutions is definitely growing as we speak and each day every IT graduate tries to make it out there as a cloud developer on their own. This rat race will only be championed by those who can provide the customers with their requirements in the most effortless way as possible, in short, offering the customers with the "Cloud 9 Experience" all throughout. If we can achieve that goal, the solutions will sell themselves.





# The Rise of Smart Living



Connect is the mantra of people living in the modern era and people connect not only through the Internet at work but this connectivity is also extended to the entire lifestyle of smart living, which means living life fully through smart connected homes. The rise in demand for smart living has sparked the development of i-Neighbour. It is one of the many products of TimeTec Group, designed with the objective to serve the people by providing security and convenience in a system for a neighbourhood.

Let's explore i-Neighbour and how this solution relates to smart living in a community.

i-Neighbour is a cloud-based residential and visitor management system, integrated with a series of IoT (Internet of Things) Smart Security for modern residential such as high rise apartments and gated guarded neighbourhoods. The solution offers Mobile and Web Application, as well as an array of IoT hardware to promote smart living starting from the security post right to the individual homes.



## Security Right from the Start

Security guards have always been playing a vital role in maintaining the overall security within any gated-guarded neighbourhood but technology always argues with the vulnerability of this old fashion security system because it involves humans and their imperfections. In tackling various neighbourhood's security issues, i-Neighbour application offers wide-ranging features to be used in gated communities.

First and foremost, i-Neighbour aims to improve the safety and management of neighbourhoods through a better Visitor Management System (VMS) and incorporation of IoT security devices such as barrier gate control and IP Cameras. The Visitor Management System in i-Neighbour is able to record and save visitors' information received from various locations in one centralized cloud server. By using this VMS, visitors can carry out pre-registration and this can save visitors a lot of check in time and indirectly provides a warm welcome to guests when the visitation process is smooth and welcoming.

In addition, when any incidents happen such as house break-in, theft, kidnapping, and etc, the system can produce the required data of the people available in that enclave during that particular period of time. The incorporation of IP Camera or CCTV in i-Neighbour enables the security team to monitor live movements within a neighbourhood throughout the day to not only minimize the crime rate but it also offers records for every incident that occurred. i-Neighbour presents three options of Barrier Gate Control to manage and control the Ins and Outs of permitted residents via vehicles, which include TimeTec BLE-2, Long Range RFID and License Plate Recognition (LPR). In short, i-Neighbour integrates the security aspect in one system, making it easier for a neighbourhood's management.



## Managing Property Effectively with i-Neighbour

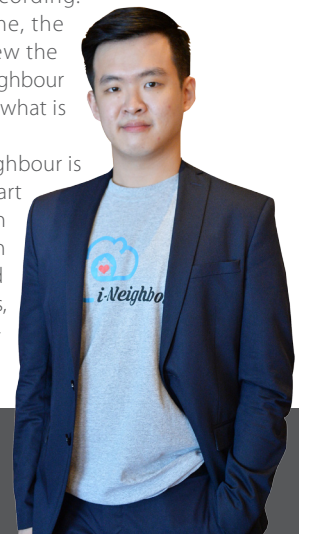
It is quite common for neighbourhoods in Malaysia for example to be using WhatsApp group or Facebook page to gather residents together in a platform. Even though these groups exist, more often than not they are not the formal channels to deliver information or complaints to the authorized persons or the management thus resulting in ineffectual communication and disappointment amongst residents. In achieving effective communication between the management and the residents, i-Neighbour offers various features on its Mobile App such as bulletin board for announcements and notifications, incident/defect reports that go straight to the management and a simple online payment method to pay maintenance fees and such. Through the App, the management can publish important announcements, share documents, photos, videos and contacts effortlessly. With this, the management can stop the ineffective disbursement of information such as pasting information on physical bulletin board or on the elevator walls that are repetitive and wasting resources. i-Neighbour also provides an online payment platform that has been integrated with an accounting software to reduce complicated processes. On lodging complaints and feedbacks, i-Neighbour allows residents to attach photos and videos as well as indicate locations of the incident/defect to be reported. As such, the management can manage all the complaints by updating their progress statuses straight to the residents.



## i-Neighbour Offers Smart Home Security

i-Neighbour completes its smart living concept with the addition of IoT devices such as Smart Door Lock, IP Camera and Wireless Alarm System. Smart Door Lock can be installed at individual homes whereby it offers multiple access credentials, such as i-Neighbour Mobile App, fingerprint, Smart card (RFID), passcode and mechanical key. By using IoT devices such as this, wall hacking and cabling are not required anymore because the smart door lock uses AA batteries, which could last for about a year with normal usage. Next, home security are also enhanced with IP Camera and Wireless Alarm System that consists of sensors and alarms. And i-Neighbour's sensor is perfect to be used within individual homes. When the sensor detects a motion, it will triggered an alarm and the IP Camera will start recording. And at the same time, the house owner can view the CCTV footage in i-Neighbour Mobile App to know what is happening.

In a nutshell, i-Neighbour is a comprehensive smart community solution that provides both convenience and security to all residents, and it comes affordable too.



Wallace Khor  
Marketing Manager





## Fingerprint Time Attendance Model

FingerTec time attendance biometric models are ideal for most companies that are looking to track, monitor, and analyze staff attendance effectively. Sturdy in design, all the models come with a complimentary copy of the comprehensive attendance software, *TCMS V3*, or it can be used with the subscription-based applications, *FCC* or *TimeTec TA*, for more elaborate and extensive management features.



### SPECIFICATIONS

MODEL	TA500	TA700W	AC100C	TA100C	TA200 Plus
<b>SURFACE FINISHING</b>	Acrylonitrile butadiene styrene (ABS) & Polycarbonate (PC)	Acrylonitrile butadiene styrene (ABS) & Polycarbonate (PC)	Acrylonitrile butadiene styrene (ABS)	Acrylonitrile butadiene styrene (ABS)	Acrylonitrile butadiene styrene (ABS)
<b>TYPE OF SCANNER</b>	Non coated optical scanner	Non coated optical scanner	Non coated optical scanner	Non coated optical scanner	Non coated optical scanner
<b>MICROPROCESSOR</b>	360 MHz	180 MHz	800 MHz	800 MHz	800 MHz
<b>MEMORY</b>	128 MB flash memory & 16 MB SDRAM	8 MB flash memory & 16 MB SDRAM	256 MB flash memory & 128 MB SDRAM	256 MB flash memory & 128 MB SDRAM	256 MB flash memory & 32 MB SDRAM
<b>ALGORITHM</b>	BioBridge VX10.0	BioBridge VX10.0	BioBridge VX 9.0 / VX 10.0	BioBridge VX 9.0 / VX 10.0	BioBridge VX 9.0 / VX 10.0
<b>PUSH TECHNOLOGY</b>	✗	Yes	Yes	Yes	Yes
<b>DIMENSION (L X W X H), mm</b>	184 x 38 x 134	165 x 14 x 122	195 x 48 x 144	190 x 52 x 140	200 x 56 x 160
<b>STORAGE</b>					
Fingerprint templates	2000	1000	8000	8000	10000
Transactions	80000	50000	200000	200000	200000
<b>ENROLLMENT &amp; VERIFICATION</b>					
Methods	Fingerprint (1:1, 1:N) & password (Optional RFID Card)	Fingerprint (1:1, 1:N) & Password	Fingerprint (1:1, 1:N) & password	Fingerprint (1:1, 1:N) & password (Optional RFID Card)	Fingerprint (1:1, 1:N) card & password
Recommended fingerprint per user ID	2 <i>(Max 1000 user ID)</i>	2 <i>(Max 500 user ID)</i>	2	2	2
Fingerprint placement	Any angle	Any angle	Any angle	Any angle	Any angle
Verification time (sec)	< 1	< 1	< 1	< 1	< 1
FAR (%)	< 0.0001	< 0.01	< 0.0001	< 0.0001	< 0.0001
FRR (%)	< 1	< 0.1	< 1	< 1	< 1
<b>CARD TECHNOLOGY</b>					
RFID: 64-bit, 125kHz	Made to order	✗	✗	Yes (TA100C-R only)	Yes
MIFARE: MF1SS0/S70, 13.56MHz	Made to order	✗	✗	Made to order (TA100C-MF only)	Made to order
HID: HID 1325, 26-bit, 125kHz	✗	✗	✗	Made to order (TA100C-HID only)	Made to order
<b>COMMUNICATIONS</b>					
Method	TCP/IP, USB disk	WiFi, USB	TCP/IP, USB disk (Optional RS232 & RS485)	TCP/IP, USB disk (Optional RS232, RS485, WiFi & GPRS)	TCP/IP, USB disk (Optional RS232, RS485, POE & WiFi, 3G only applicable to non-POE devices)
Baud rates	✗	✗	9600~115200	9600~115200	9600~115200
<b>OPERATING ENVIRONMENT</b>					
Temperature (°C)	0 ~ 45	0 ~ 45	0 ~ 45	0 ~ 45	0 ~ 45
Humidity (%)	20 ~ 80	20 ~ 80	20 ~ 80	20 ~ 80	20 ~ 80
Power input	DC12V 1.5A	5VDC 0.8A	DC 5V 2A	DC 5V 2A	DC 12V 3A, DC 5V 2A (POE)
<b>TIME ATTENDANCE</b>					
Siren	Internal and external	✗	Internal	Internal and external	Internal (Optional external)
Work codes	Yes	Yes	Yes	Yes	Yes
<b>MULTIMEDIA</b>					
Voice	Yes	Yes	Yes	Yes	Yes
Display	2.8" 3k color TFT screen	2.8" 3k TFT color screen	3.0" 65k color TFT screen	3.0" 65k color TFT screen	3.5" 65k color TFT screen
Photo-ID	✗	✗	Yes	Yes	Yes
Short messaging	✗	✗	Yes	Yes	Yes
Music playback	✗	✗	✗	✗	✗
Movie playback	✗	✗	✗	✗	✗
Internal backup battery	Yes (2-hours working, 4-hours standby)	✗	✗	✗	✗



# Fingerprint and Card Access Control & Time Attendance Model

FingerTec access control devices are specifically made to manage door accessibilities at your work or home area. These access control models are able to support fingerprint, card, password, or any combination of the three methods as a means of controlling access in a secured area. All FingerTec access control and time attendance models come with a complimentary copy of the powerful *Ingress* software to implement a more advanced access control system. *Ingress* can also be substituted with the *TCMS V3* software for customers that mainly require time attendance functions.



SPECIFICATIONS						
MODEL	AC900	R2	R3	R2c (Slave)	H2i	Q2i
SURFACE FINISHING	Acrylonitrile butadiene styrene (ABS)	Acrylonitrile butadiene styrene (ABS)	In-mould labelling (IML), poly carbonate (PC) & (ABS)	Acrylonitrile butadiene styrene (ABS)	Acrylonitrile butadiene styrene (ABS)	Acrylonitrile butadiene styrene (ABS)
TYPE OF SCANNER	Non coated optical scanner		Non coated optical scanner		Non coated optical scanner	
MICROPROCESSOR	400 MHz	400 MHz	400 MHz	Managed by master	300 MHz	800 MHz
MEMORY	128 MB flash memory & 32 MB SDRAM	128 MB flash memory & 32 MB SDRAM	128 MB flash memory & 32 MB SDRAM	Managed by master Supports	256 MB flash memory & 32 MB SDRAM	256 MB flash memory & 64 MB SDRAM
ALGORITHM	BioBridge VX 9.0 / 10.0	BioBridge VX 9.0 / 10.0	BioBridge VX 10.0	BioBridge VX 10.0	BioBridge VX 9.0 / 10.0	BioBridge VX 9.0 / 10.0
PUSH TECHNOLOGY	Yes	Yes	Yes	X	X	Yes
DIMENSION (L X W X H), mm	91 x 40 x 190	94 x 50 x 189	78 x 32 x 190	64 x 42 x 135	78 x 50 x 150	200 x 56 x 160
STORAGE						
Fingerprint templates	3000	3000	3000	Storage in master terminal	1500	10000
Transactions	120000	120000	100000	Storage in master terminal	100000	200000
ENROLLMENT & VERIFICATION						
Methods	Fingerprint (1:1, 1:N) & password	Fingerprint (1:1, 1:N) card & password	Fingerprint (1:1, 1:N) card & password	Fingerprint (1:N) & card	Fingerprint & card	Fingerprint (1:1, 1:N), card & password
Recommended fingerprint per user ID	2	2	2	Managed by master	2	2
Fingerprint placement	Any angle	Any angle	Any angle	Any angle	Any angle	Any angle
Verification time (sec)	< 1	< 1	< 1	Managed by master	< 1	< 1
FAR (%)	< 0.0001	< 0.0001	< 0.0001	Managed by master	< 0.0001	< 0.0001
FRR (%)	< 1	< 1	< 1	Managed by master	< 1	< 1
CARD TECHNOLOGY						
RFID: 64-bit, 125kHz	X	Yes	Yes	Yes	Yes	Yes
MIFARE: MF1S50/S70, 13.56MHz	X	Made to order	Made to order	Made to order	Made to order	Made to order
HID: HID 1325, 26-bit, 125kHz	X	Made to order	X	X	Made to order	Made to order
COMMUNICATIONS						
Method	TCP/IP, RS232, RS485	TCP/IP, RS232, RS485, USB disk	TCP/IP, RS232, RS485, USB disk	RS485	TCP/IP, RS232, RS485, USB disk	TCP/IP, RS232, RS485, USB disk (Optional WiFi & 3G)
Baud rates	9600~115200	9600~115200	9600~115200	X	9600~115200	9600~115200
Wiegand	26-bit output	26-bit input/output	26-bit input/output	X	26-bit input/output	26-bit input/output
OPERATING ENVIRONMENT						
Temperature (°C)	0 ~ 45	0 ~ 45	0 ~ 45	0 ~ 45	0 ~ 45	0 ~ 45
Humidity (%)	20 ~ 80	20 ~ 80	20 ~ 80	20 ~ 80	20 ~ 80	20 ~ 80
Power input	DC 12V 3A	DC 12V 3A	DC 12V 3A	DC 12V 3A	DC 12V 3A	DC 12V 3A
TIME ATTENDANCE						
Siren	X	X	Internal	X	X	Internal
Work codes	Yes	Yes	Yes	X	X	Yes
MULTIMEDIA						
Voice	X	X	Yes	X	Yes	Yes
Display	Black and white	Black and white	2.4" 3k color LCD	X	X	3.5" 65k color TFT screen
Short messaging	X	Yes	Yes	X	X	Yes
Photo-ID	X	X	Yes	X	X	Yes
Music playback	X	X	X	X	X	X
Movie playback	X	X	X	X	X	X
Internal backup battery	X	X	X	X	X	X
ACCESS CONTROL						
EM lock driving output	DC 12V 3A / relay output	DC 12V 3A / relay output	DC 12V 3A / relay output	Managed by master	DC 12V 3A / relay output	DC 12V 3A / relay output
Alarm output	NO/NC	NO/NC	NO/NC	Managed by master	NO/NC	NO / NC
Anti passback	X	Yes	Yes	Managed by master	Yes	Yes



## Face Recognition Access Control & Time Attendance Model

FingerTec advanced face recognition technology offers a contactless mode of verification for time attendance and door access control with optional card technology as well. Scan a face to get accurate verification in split seconds. FingerTec access control and time attendance models come with a complimentary copy of the advanced access control software, *Ingress*, which can be substituted with *TCMS V3* software for customers that mainly require time attendance functions. Suitable for application in areas such as hospitals, labs, workshops, etc.



### SPECIFICATIONS

MODEL	Face ID 2 (FMM)	Face ID 3	Face ID 4	Face ID 4d
<b>SURFACE FINISHING</b>	Acrylonitrile butadiene styrene (ABS) & acrylic	Acrylonitrile butadiene styrene (ABS) & acrylic	Acrylonitrile butadiene styrene/ polycarbonate blend	Acrylonitrile butadiene styrene/ polycarbonate blend
<b>TYPE OF SCANNER</b>	Hi-res infrared camera & fingerprint scanner	High resolution infrared camera	High resolution infrared camera	High resolution infrared camera
<b>MICROPROCESSOR</b>	1.2GHz	800 MHz	800 MHz	800 MHz
<b>MEMORY</b>	128MB Nand flash & 64MB Nand flash	256 MB flash memory & 128 MB SDRAM	256 MB flash memory & 128 MB SDRAM	256 MB flash memory & 128 MB SDRAM
<b>ALGORITHM</b>	Face BioBridge VX 8.0, FP BioBridge VX9.0/10.0	Face BioBridge VX 8.0	Face BioBridge VX 8.0	Face BioBridge VX 8.0
<b>PUSH TECHNOLOGY</b>	Yes	Yes	Yes	Yes
<b>DIMENSION (L X W X H), mm</b>	194 x 110 x 145	86 x 62 x 218	148 x 148 x 122	148 x 148 x 122
<b>STORAGE</b>				
Fingerprint templates	10000	×	×	×
Face templates	1200	1500	800	800
Cards	10000	10000	10000	10000
Transaction logs	200000	100000	100000	100000
<b>ENROLLMENT &amp; VERIFICATION</b>				
Methods	Face (1:1, 1:N), fingerprint (1:1, 1:N), card & password	Face (1:1, 1:N), card & password	Face (1:1, 1:N), card & password	Face (1:1, 1:N), card & password
Recommended fingerprint per user ID	2	×	×	×
Fingerprint placement	Any angle	×	×	×
Verification time – Fingerprint, sec	< 1	×	×	×
Verification time – Face, sec	< 2	< 2	< 2	< 2
Fingerprint	FAR < 0.0001%, FRR < 0.1%	×	×	×
Face	FAR < 0.01%, FRR < 0.1%	FAR < 0.01%, FRR < 0.1%	FAR < 0.01%, FRR < 0.1%	FAR < 0.01%, FRR < 0.1%
<b>CARD TECHNOLOGY</b>				
RFID: 64-bit, 125kHz	Yes	Yes	Yes	Yes
MIFARE: MIFISSO/S70, 13.56MHz	Made to order	Made to order	Made to order	Made to order
HID: HID 1325, 26-bit, 125kHz	Made to order	Made to order	×	×
<b>COMMUNICATIONS</b>				
Method	TCP/IP, RS232, RS485, USB disk <i>(Optional WiFi &amp; 3G)</i>	TCP/IP, RS232, RS485, USB disk <i>(Optional WiFi)</i>	TCP/IP, USB disk, USB client <i>(Optional WiFi)</i>	TCP/IP, USB disk, USB client <i>(Optional WiFi)</i>
Baud rates	9600 ~ 115200	9600 ~ 115200	9600 ~ 115200	9600 ~ 115200
Wiegand	26-bit output	26-bit input/output	×	×
<b>OPERATING ENVIRONMENT</b>				
Temperature (°C)	0 ~ 45	0 ~ 45	0 ~ 45	0 ~ 45
Humidity (%)	20 ~ 80	20 ~ 80	20 ~ 80	20 ~ 80
Power input	DC12V 3A	DC12V 3A	DC12V 3A	DC12V 3A
<b>TIME ATTENDANCE</b>				
Siren	Internal and external	Internal	Internal	Internal
Work Codes	Yes	Yes	Yes	Yes
Fast transaction checking	Yes	Yes	Yes	Yes
<b>MULTIMEDIA</b>				
Greeting voice	Yes	Yes	Yes	Yes
Display	4.3" 65K color TFT touch screen panel	3.0" 65K color TFT touch screen panel	3.0" 65K color TFT touch screen panel	3.0" 65K color TFT touch screen panel
Photo-ID	Yes	Yes	Yes	Yes
Short messaging	Yes	×	Yes	Yes
Day Light Saving Timer	Yes	Yes	Yes	Yes
Internal Backup Battery	Yes (DC12V, 2000m Ah)	×	×	×
<b>ACCESS CONTROL</b>				
EM lock driving output	DC12V / relay output	DC12V / relay output	×	DC12V / relay output
Alarm output	NO / NC	NO / NC	×	NO / NC
Antipassback	Yes	×	×	×



## RFID Card Access Control & Time Attendance Model

FingerTec card technology models are suitable for companies that prefer to use practical, convenient tokens during verification to track, monitor and analyze staff attendance. RFID is the default technology employed, however, Mifare and HID card technologies are also available upon request. Mix and match between the master and slave models for a cost effective IN-OUT access control solution. FingerTec door access master models come with a complimentary copy of the advanced door access software, *Ingress*, and the TimeLine 100 model comes with *TCMS V3* software.



### SPECIFICATIONS

MODEL	TimeLine 100	Kadex	m-Kadex	i-Kadex (Slave)	k-Kadex (Slave)
<b>SURFACE FINISHING</b>	Acrylonitrile butadiene styrene (ABS)	Acrylonitrile butadiene styrene (ABS)	Polycarbonate	Polycarbonate	Acrylonitrile butadiene styrene (ABS)
<b>MICROPROCESSOR</b>	400 MHz	400 MHz	400 MHz	Managed by master	Managed by master
<b>MEMORY</b>	8 MB flash memory & 32 MB SDRAM	8 MB flash memory & 32 MB SDRAM	4 MB flash memory & 32 MB SDRAM	Managed by master	Managed by master
<b>ALGORITHM</b>	×	×	×	×	×
<b>PUSH TECHNOLOGY</b>	Yes	Yes	×	Managed by master	Managed by master
<b>DIMENSION (L X W X H), mm</b>	190 x 50 x 140	92 x 49 x 137	92 x 29 x 134	55 x 15 x 100	75 x 20 x 115
<b>STORAGE</b>					
Cards	10000	30000	30000	Storage in master	Storage in master
Transactions	30000	50000	50000	Storage in master	Storage in master
<b>ENROLLMENT &amp; VERIFICATION</b>					
Methods	Card & password	Card & password	Card	Card	Card & password
Card per user ID	1	1	1	Managed by master	Managed by master
Reading distance, mm	40 ~ 80 (RFID, HID), 30 ~ 50 (Mifare)	40 ~ 80 (RFID, HID), 30 ~ 50 (Mifare)	40 ~ 80 (RFID, HID), 30 ~ 50 (Mifare)	40 ~ 80 (RFID), 30 ~ 50 (Mifare)	40 ~ 80 (RFID), 30 ~ 50 (Mifare)
Verification time (sec)	< 1	< 1	< 1	Managed by master	Managed by master
<b>CARD TECHNOLOGY</b>					
RFID: 64-bit, 125kHz	Yes	Yes	Yes	Yes	Yes
MIFARE: MF1S50/S70, 13.56MHz	Made to order	Made to order	Made to order	Made to order	Made to order
HID: HID 1325, 26-bit, 125kHz	Made to order	Made to order	Made to order	×	×
<b>COMMUNICATIONS</b>					
Method	TCP/IP, USB disk <i>(Optional RS232 &amp; RS485)</i>	TCP/IP, RS232, RS485, USB disk	TCP/IP, RS232, RS485, USB disk	Wiegand	Wiegand
Baud rates	9600 ~ 115200	9600 ~ 115200	9600 ~ 115200	×	×
Wiegand	×	26-bit input / output	26-bit input / output	26-bit output	26-bit output
<b>OPERATING ENVIRONMENT</b>					
Temperature (°C)	0 ~ 45	0 ~ 45	0 ~ 45	-10 ~ 70	-10 ~ 70
Humidity (%)	20 ~ 80	20 ~ 80	20 ~ 80	20 ~ 80	20 ~ 80
Power input	DC 5V 2A	DC 12V 2A	DC 12V 2A	DC 12V 1A	DC 12V 1A
<b>TIME ATTENDANCE</b>					
Siren	Internal and external	×	×	×	×
Work codes	Yes	Yes	×	×	×
<b>MULTIMEDIA</b>					
Voice	Yes	Yes	×	×	×
Display	Black and white	Black and white	×	×	×
Short messaging	Yes	Yes	×	×	×
Music playback	×	×	×	×	×
Movie playback	×	×	×	×	×
Internal backup battery	×	×	×	×	×
<b>ACCESS CONTROL</b>					
EM lock driving output	×	DC 12V 3A / relay output	DC 12V 3A / relay output	Managed by master	Managed by master
Alarm output	×	NO / NC	NO / NC	Managed by master	Managed by master
Anti passback	×	Yes	Yes	Managed by master	Managed by master



## Fingerprint & Card Simple Door Access Model



FingerTec non-communicative readers are simple plug-and-play door access terminals that require no additional software to function. Offering fingerprint, card and/or password, these independent readers are suitable for small businesses and homes.



### SPECIFICATIONS

MODEL	H3i	s-Kadex
<b>SURFACE FINISHING</b>	Acrylonitrile butadiene styrene (ABS)	Acrylonitrile butadiene styrene (ABS)
<b>TYPE OF SCANNER</b>	Non coated optical scanner	×
<b>MICROPROCESSOR</b>	400 MHz	400 MHz
<b>MEMORY</b>	32 MB flash memory	32 MB flash memory
<b>PUSH TECHNOLOGY</b>	×	×
<b>ALGORITHM</b>	BioBridge VX 10.0	×
<b>DIMENSION (L X W X H), mm</b>	88 x 25 x 88	88 x 25 x 88
<b>STORAGE</b>		
Fingerprint templates	200	×
Cards	500	500
Passwords	8 sets	8 sets
<b>ENROLLMENT &amp; VERIFICATION</b>		
Methods	Fingerprint (1:N), card & password	card & password
Recommended fingerprint per user ID	1	×
Fingerprint placement	Any angle	×
Password length (digits)	Max 4	Max 4
Verification time (sec)	< 1	< 1
FAR (%)	< 0.0001	×
FRR (%)	< 1	×
<b>CARD TECHNOLOGY</b>		
RFID: 64-bit, 125kHz	Yes	Yes
MIFARE: MF1S50/S70, 13.56MHz	Made to order	Made to order
HID: HID 1325, 26-bit, 125kHz	×	×
<b>OPERATING ENVIRONMENT</b>		
Temperature (°C)	0 ~ 45	0 ~ 45
Humidity (%)	20 ~ 80	20 ~ 80
Power input	DC 12V 3A	DC 12V 3A
<b>ACCESS CONTROL</b>		
EM lock driving output	DC 12V/relay output	DC 12V/relay output
Alarm output	NO only	NO only
Door sensor	Yes (NO / NC)	Yes (NO / NC)
<b>GROUP VERIFY TYPE</b>		
Password only	Yes	Yes
Card only	Yes	Yes
Fingerprint only	Yes	×
Fingerprint card or password	Yes	Yes (card & password only)
Card and password	Yes	Yes
Fingerprint and password	Yes	×



Two DVDs loaded with Self-Learn Video Guides, Comprehensive Time Management Software (TCMS V3), Advanced Door Access Software (Ingress) and useful resources available with every purchase of a FingerTec terminal.

NOTE: Specifications are subject to change. Check <http://product.fingertec.com> for latest product information.



## Logical Fingerprint PC Access Model

FingerTec logical access fingerprint readers (OFIS) are designed to work with our single sign-on enterprise software application and developer's tools (SDKs) for integration with select applications. It comes complimentary with the OFIS Gateway software, providing a quicker and safer way to use fingerprints for PC login authentication. OFIS TA for attendance system is also available for purchase.



SPECIFICATIONS		
MODEL	OFIS-X	OFIS-Y
ALGORITHM	BioBridge VX 9.0 / VX 10.0	
SUPPORTING OS	32-bit Windows XP, Windows Vista, Windows 7	32/64-bit Windows XP, Windows Vista, Windows 7, Windows 8, Windows 10, Windows Server 2008
PIXEL RESOLUTION	512 dpi (average x, y over the scanning area)	
SCAN CAPTURE AREA, MM	17 x 26	15 x 18
SCAN DATA	8-bit grayscale (256 levels of gray)	
READER SIZE (APPROXIMATE) (L X W X H), MM	87 x 58 x 24	45 x 78 x 40
COMPATIBILITY	USB 1.0, 1.1 and 2.0 (Full speed) specifications	
OS/BROWSER	MS Windows/ MS Internet Explorer (IE 9)	
POWER SUPPLY	5.0V +/- 0.25V USB supply	
OPERATING TEMPERATURE (°C)	0 - 55	0 - 55
OPERATING HUMIDITY (%)	20 - 80 non-condensing	
STANDARD FCC CLASS	FCC Class B, CE, USB	
USAGE	Indoor, home and office use	

- ### FEATURES
- Small form factor
  - Excellent scan quality
  - Encrypted fingerprint data
  - Latent print rejection
  - Counterfeit finger rejection
  - Rotation invariant
    - Recognize dry, moist, or rough fingerprints
    - Compatible with FingerTec's standalone readers and software products
    - Compatible with Windows XP, Windows Vista, Windows 7, Windows 8 Windows Server 2003 and Windows Server 2008

- ### APPLICATIONS
- Desktop computer security
  - Registration station for users
  - Mobile PCs
  - Custom applications
  - Home and office use



## Controller Security Hub for Smart Control

The FingerTec controllers, Ingressus I and II, are designed to provide access control functions for 1 and 2-door environments and Ingressus IV is designed for a 4-door environment. Ingressus can be used in combination with FingerTec slave readers and accessories for a more economical and flexible door access control solution. Each controller comes complimentary with FingerTec's advanced access control software, *Ingress*.



SPECIFICATIONS			
MODEL	Ingressus I	Ingressus II	Ingressus IV
<b>BASIC</b>			
Dimension (L X W X H), mm	186 x 106 x 36	186 x 106 x 36	226 x 106 x 36
Power input	12V DC	12V DC	12V DC
Operating temperature (°C)	0 - 55	0 - 55	0 - 55
Operating humidity (%)	10 - 80	10 - 80	10 - 80
CPU	32-bit, 400MHz	32-bit, 400MHz	32-bit, 400MHz
Flash memory (MB)	128	128	128
SDRAM (MB)	32	32	32
Polarity protection	Yes	Yes	Yes
<b>STORAGE</b>			
Fingerprints	3000	3000	3000
Cards	30000	30000	30000
Passwords	30000	30000	30000
Transactions	100000	100000	100000
<b>COMMUNICATIONS</b>			
Communications with server	TCP/IP, RS485	TCP/IP, RS485	TCP/IP, RS485
Quantity of terminal	2	4	4
Communication with terminals	2 x 26-bit Wiegand input. Each for 1 slave terminal (1 x RS485 input to support RS485 network) <b>(max 2 units)</b>	4 x 26-bit Wiegand input. Each for 1 slave terminal (1 x RS485 input to support RS485 network) <b>(max 4 units)</b>	4 x 26-bit Wiegand input. Each for 1 slave terminal (1 x RS485 input to support RS485 network) <b>(max 8 units)</b>
<b>INPUT</b>			
Push release button	1	2	4
Door sensor	1	2	4
AUX	1	2	4
Types of AUX input supported	Motion detector, passive DIR detector, curtain passive infrared detector, pet immunity PIR detector, two beam digital active infrared detector, heat detector	Motion detector, passive DIR detector, curtain passive infrared detector, pet immunity PIR detector, two beam digital active infrared detector, heat detector	Motion detector, passive DIR detector, curtain passive infrared detector, pet immunity PIR detector, two beam digital active infrared detector, heat detector
<b>OUTPUT</b>			
Door lock (12VDC 10A form C relay)	1	2	4
AUX output (30VDC 2A form C relay)	1	2	4
Types of AUX output supported	Gas detector and compatible sensors, Piezo strobe siren, electronic siren	Gas detector and compatible sensors, Piezo strobe siren, electronic siren	Gas detector and compatible sensors, Piezo strobe siren, electronic siren
<b>ACCESS CONTROL FEATURES</b>			
Main features	Door opening time (0-999s), Anti-pass back (Local only), Multi card unlocking, First card unlocking, Time zone (50), Holiday time zone, Permanent door release/lock time zone, Day light saving time zone, Continuous verification of users	Door opening time (0-999s), Inter-locking (Ingressus II & IV only), Anti-pass back (Local only), Multi card unlocking, First card unlocking, Time zone (50), Holiday time zone, Permanent door release/lock time zone, Day light saving time zone, Continuous verification of users	Door opening time (0-999s), Inter-locking (Ingressus II & IV only), Anti-pass back (Local only), Multi card unlocking, First card unlocking, Time zone (50), Holiday time zone, Permanent door release/lock time zone, Day light saving time zone, Continuous verification of users
Security features	Door force open alarm, Door open time out alarm, Fire linkage, Duress alarm, Door status and event (51 types)	Door force open alarm, Door open time out alarm, Fire linkage, Duress alarm, Door status and event (51 types)	Door force open alarm, Door open time out alarm, Fire linkage, Duress alarm, Door status and event (51 types)



# Hardware Selection Guide

FingerTec

has an extensive range of biometric and card products. This guide serves as initial tool for you to compare it against your requirements and budget. Once you have decided on the models you want or if you have any further questions, email us at [info@fingertec.com](mailto:info@fingertec.com) for detailed discussions. FingerTec pledges to make things easy for you, always.

MODEL FEATURE	METHOD				LCD DISPLAY		COMMUNICATION						FUNCTIONALITY		Bundled Software	Price Range	
	Fingerprint	Face	Card	Password	Back & White	Color	RS232/RS485	TCP/IP	WiFi	3G	USB	Wiegand	Push Technology	Time Attendance			Door Access
<b>Fingerprint Time Attendance Model</b>																	
TA300	✓	×	A	✓	✓	×	×	×	×	×	✓	×	×	✓	×	TCMS V3	★
TA500	✓	×	A	✓	×	✓	×	✓	×	×	✓	×	×	✓	×	TCMS V3	★
TA700W	✓	×	×	✓	×	✓	×	×	✓	×	✓	×	✓	✓	×	TCMS V3	★
AC100C	✓	×	×	✓	×	✓	A	✓	A	×	✓	×	✓	✓	×	TCMS V3	★★
TA100C	✓	×	×	✓	×	✓	A	✓	A	×	✓	×	✓	✓	×	TCMS V3	★★
TA100C-R	✓	×	✓	✓	×	✓	A	✓	A	×	✓	×	✓	✓	×	TCMS V3	★★
TA200 PLUS	✓	×	✓	✓	×	✓	A	✓	A	A	✓	×	✓	✓	×	TCMS V3	★★★
TA200 PLUS (POE)	✓	×	✓	✓	×	✓	A	✓	A	×	✓	×	✓	✓	×	TCMS V3	★★★
<b>Fingerprint Access Control &amp; Time Attendance Model</b>																	
AC900	✓	×	×	✓	✓	×	✓	✓	×	×	×	✓	×	✓	✓	Ingress	★★
R2	✓	×	✓	✓	✓	×	✓	✓	×	×	✓	✓	✓	✓	✓	Ingress	★★★
R3	✓	×	✓	✓	×	✓	✓	✓	×	×	✓	✓	✓	✓	✓	Ingress	★★★
R2c*	✓	×	✓	×	×	×	RS485 only	×	×	×	×	×	×	×	×	×	★
H2i	✓	×	✓	×	×	×	✓	✓	×	×	✓	✓	×	✓	✓	Ingress	★
Q2i	✓	×	✓	✓	×	✓	✓	✓	A	A	✓	✓	✓	✓	✓	Ingress	★★★
i-Kiosk 100 Plus	✓	×	✓	✓	×	✓	✓	✓	✓	×	✓	✓	✓	✓	✓	Ingress	★★★★★
<b>RFID Card Access Control &amp; Time Attendance Model</b>																	
TimeLine 100	×	×	✓	✓	✓	×	A	✓	×	×	✓	×	✓	✓	×	TCMS V3	★
Kadex	×	×	✓	✓	✓	×	✓	✓	×	×	✓	✓	✓	✓	✓	Ingress	★★
m-Kadex	×	×	✓	×	×	×	✓	✓	×	×	✓	✓	×	✓	✓	Ingress	★
k-Kadex*	×	×	✓	✓	×	×	×	×	×	×	×	✓	×	×	×	×	★
i-Kadex*	×	×	✓	×	×	×	×	×	×	×	×	✓	×	×	×	×	★
<b>Face Recognition Access Control &amp; Time Attendance Model</b>																	
Face ID 2	✓	✓	✓	✓	×	✓	✓	✓	A	A	✓	✓	✓	✓	✓	Ingress	★★★★★
Face ID 3	×	✓	✓	✓	×	✓	✓	✓	A	×	✓	✓	✓	✓	✓	Ingress	★★★★
Face ID 4	×	✓	✓	✓	×	✓	×	✓	A	×	✓	×	✓	✓	×	TCMS V3	★★★
Face ID 4d	×	✓	✓	✓	×	✓	×	✓	A	×	✓	×	✓	✓	✓	Ingress	★★★
<b>Fingerprint Logical Access Model</b>																	
OFIS Series	✓	×	×	×	×	×	×	×	×	×	✓	×	×	×	×	Gateway	★
<b>Fingerprint &amp; Card Simple Door Access Model</b>																	
H3i	✓	×	✓	✓	×	×	×	×	×	×	×	×	×	×	✓	×	★
s-Kadex	×	×	✓	✓	×	×	×	×	×	×	×	×	×	×	✓	×	★
<b>Controller Security Hub for Smart Control</b>																	
Ingressus I	✓	×	✓	✓	×	×	RS485 only	✓	×	×	×	✓	×	✓	✓	Ingress	★
Ingressus II	✓	×	✓	✓	×	×	RS485 only	✓	×	×	×	✓	×	✓	✓	Ingress	★★
Ingressus IV	✓	×	✓	✓	×	×	RS485 only	✓	×	×	×	✓	×	✓	✓	Ingress	★★

\* = Slave reader | ✓ = Available | × = Not available | A = Available Upon Request

# Software Selection Guide

FingerTec

offers a variety of different softwares to suit the different business needs of our clients. With all the different requirements, comparing the different software functions can be a little tricky. So here's a selection guide to help you out with the details, similarities, and differences between our offered solutions.

APPLICATION	Functionality	Database Engine	Mobile App	OS/Browser	Hardware	Total Reports	Export Format	Languages	Price
<b>WINDOWS APPLICATION</b>									
	Advance access control and complete time attendance	MySQL, MS Access	Android and iOS	Windows XP, Server 2003, Server 2008, Windows Vista, Windows 7, Windows 8, Windows 10	AC900, R2, R3, H2i, Q2i, Kadex, m-Kadex, Face ID 2/3/4d, Ingressus I/II/IV	36	CSV, TXT, XLS	Arabic, Bulgarian, Chinese (Simplified), Chinese (Traditional), English, French, German, Hindi, Indonesian, Kurdish, Malay, Persian, Portuguese, Russian, Spanish, Thai, Vietnamese	Bundled with hardware
	Visitor management system	MySQL	×	Safari, Google Chrome, Mozilla Firefox, Internet Explorer	AC900, R2, R3, H2i, Q2i, Kadex, m-Kadex, Face ID 2/3/4d, Ingressus I/II/IV	5	PDF	Arabic, Bulgarian, Chinese (Simplified), Chinese (Traditional), English, German, Hindi, Indonesian, Kurdish, Malay, Persian, Portuguese, Russian, Spanish, Thai, Vietnamese	Payable
	Complete time attendance	MS Access	×	Windows XP, Server 2003, Server 2008, Windows Vista, Windows 7, Windows 8, Windows 10	TA300, TA500, TA700W, AC100C, TA100C, TA200Plus, Timeline 100, Face ID 4	28	CSV, TXT, XLS	Arabic, Bulgarian, Chinese (Simplified), Chinese (Traditional), English, French, German, Hindi, Indonesian, Kurdish, Malay, Persian, Portuguese, Russian, Spanish, Thai, Vietnamese	Bundled with hardware
<b>CLOUD-BASED APPLICATION</b>									
	Cloud-based platform to consolidate and centralize the database for time attendance	MySQL	×	Safari, Google Chrome, Mozilla Firefox, Internet Explorer	AC100C, TA100C, TA200 Plus, TA700WAC900, R2, R3, Q2i, Timeline 100, Kadex, mKadex, Face ID 2/3/4/4d, Android phones, iPhones	×	CSV, TXT, XLS	All languages (Original + Machine translations)	Subscription
	Advance attendance	MySQL	Android and iOS	Safari, Google Chrome, Mozilla Firefox, Internet Explorer		30	CSV, TXT, XLS	All languages (Original + Machine translations)	Subscription
	Security guards and patrol management	MySQL	Android	Safari, Google Chrome, Mozilla Firefox, Internet Explorer	NFC tags and Android phones	6	CSV, TXT, XLS	All languages (Original + Machine translations)	Subscription
	HR workforce hiring	MySQL	Android and iOS	Safari, Google Chrome, Mozilla Firefox, Internet Explorer	N/A	TBA	CSV, TXT, XLS	All languages (Original + Machine translations)	Subscription
	Leave management	MySQL	Android and iOS	Safari, Google Chrome, Mozilla Firefox, Internet Explorer	Android phones and iPhones	21	CSV, TXT, XLS	All languages (Original + Machine translations)	Subscription
	Visitor registration and management	MySQL	Android and iOS	Safari, Google Chrome, Mozilla Firefox, Internet Explorer	Android phones and iPhones	TBA	CSV, TXT, XLS	All languages (Original + Machine translations)	Subscription
	Access control management	MySQL	Android and iOS	Safari, Google Chrome, Mozilla Firefox, Internet Explorer	Android phones and iPhones	TBA	CSV, TXT, XLS	All languages (Original + Machine translations)	Subscription
	Cloud video surveillance	MySQL	Android and iOS	Safari, Google Chrome, Mozilla Firefox, Internet Explorer	IP cameras, Android phones and iPhones	4	JPEG	All languages (Original + Machine translations)	Subscription
	Residential and neighbourhood management	MySQL	Android and iOS	Safari, Google Chrome, Mozilla Firefox, Internet Explorer	Android phones and iPhones	10	CSV, TXT, XLS	All languages (Original + Machine translations)	Subscription
<b>SOFTWARE DEVELOPMENT KITS (SDK)</b>									
	To integrate FingerTec terminals to any third party system	N/A	N/A	Server 2003, Server 2008, Windows Vista, Windows 7, Windows 8, Windows 10	TA300, TA500, AC100C, TA100C, TA200 Plus, TA700W, AC900, R2, R3, H2i, Q2i, Timeline 100, Kadex, m-Kadex, Face ID 2/3/4/4d	N/A	N/A	N/A	Free for registered developers
	To integrate OFIS scanners with any solutions	N/A	N/A		OFIS scanners	N/A	N/A	English	Free for registered developers
	To integrate Ingressus with any third party access control software	N/A	N/A		Ingressus I, Ingressus II, Ingressus IV	N/A	N/A	English	Free for registered developers
	Online web based platform to consolidate and centralize the database for time attendance	MySQL	N/A	Server 2003, Server 2008, Windows Vista, Windows 7, Windows 8, Windows 10	AC100C, TA100C, TA200 Plus, TA700W, AC900, R2, R3, H2i, Q2i, Timeline 100, Kadex, m-Kadex, Face ID 2/3/4/4d	N/A	N/A	Arabic, Simplified Chinese, English, Malay, Spanish	Free for registered developers
	To integrate TimeTec solution with any third party systems	N/A	N/A	Safari, Google Chrome, Mozilla Firefox, Internet Explorer	N/A	N/A	N/A	English	Free for registered developers
<b>SOFTWARE TOOLS</b>									
	To manage and edit users, faces, fingerprints, logs and terminals' information	MS Access, MSSQL	N/A	Server 2003, Server 2008, Windows Vista, Windows 7, Windows 8, Windows 10	TA300, TA500, AC100C, TA100C, TA200 Plus, TA700W, AC900, R2, R3, H2i, Q2i, Timeline 100, Kadex, m-Kadex, Face ID 2/3/4/4d, Ingressus I/II/IV	N/A	TXT, XLS, XML, HTML	English	Bundled with hardware
	To manage user data and fingerprint information	MS Access, MSSQL	N/A		OFIS scanners and Mifare card writer	N/A	N/A	English	Bundled with hardware
	Single sign on PC login security	N/A	N/A		OFIS scanners	N/A	N/A	English	Bundled with hardware

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## 2018 Global Exhibition Schedules

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