

## المعايير الفنية المرجعية لمكونات المدينة الذكية بأمانة العاصمة المقدسة

## (( المكون العاشر ))

## المواقف الذكية



صفحة وحدة مدينتي ذكية http://www.holymakkah.gov.sa/mundeps/SmartCity البريد الإلكتروني لوحدة مدينتي ذكية smartcity@holymakkah.gov.sa

## المعايير الفنية للمواقف الذكية

	المواصفات
Design	System based on a modular system. Single modules could configured to a project layout. Depending of the Layout, size and capacity requirement the following modular elements could use.
Redundancy layout concept	To get a maximum performance all layout configurations should base on a redundant concept. Meaning that the system stays operational, even when one component fails. This means, there always have to be a minimum of 2 modules in each project, which is connected in the layout to cover the complete project layout (no floor level limitations for shuttle and T-car). Next to that, the Control system also has a backup function and simple hand operation in case of breakdown.
Layout and	Based on the redundancy concept as described, the minimum project size for a project will be 140 places to get an economic acceptable solution.
Entrance gate	Entrance gate is always integrated with Car measurement equipment in the floor and turning plate. In the entrance, room there is no mechanical guidance for positioning the Car. In this way, the entrance floor has a high quality of performance for the user. Entrance door is an option. Walls and ceiling are part of scope delivery client.
Logistic and software concept	The central project control based in Siemens PLC and has communication to single units. Standard software protocol used for all the modules. In this protocol status, errors and order information transferred. Central project PLC controls the project safety to all single elements and communicates with the logistic module. The logistic module gives single orders to the other modules, which execute these orders at de-central level. During order, handling the status is reported to the logistic system. Project safety controlled by central PLC.
Teleservice concept	The service concept for all modules is based on a teleservice concept. This means that the central control connected to internet gateway. In this way remote control, remote diagnose and software uploading is possible. As consequence, each project needs an Internet connection. To allow safe remote operation the system is equipped with IP-Camera system and a working light in the garage must be available for video service application (min 120 lux on every place).
Software	Software for the modular components delivered based on project license. Source code is NOT part of the delivery only a user license limited to a unique project application. Software protected by license key based on project configuration. Software backup can be made for service purposes by the local service department.