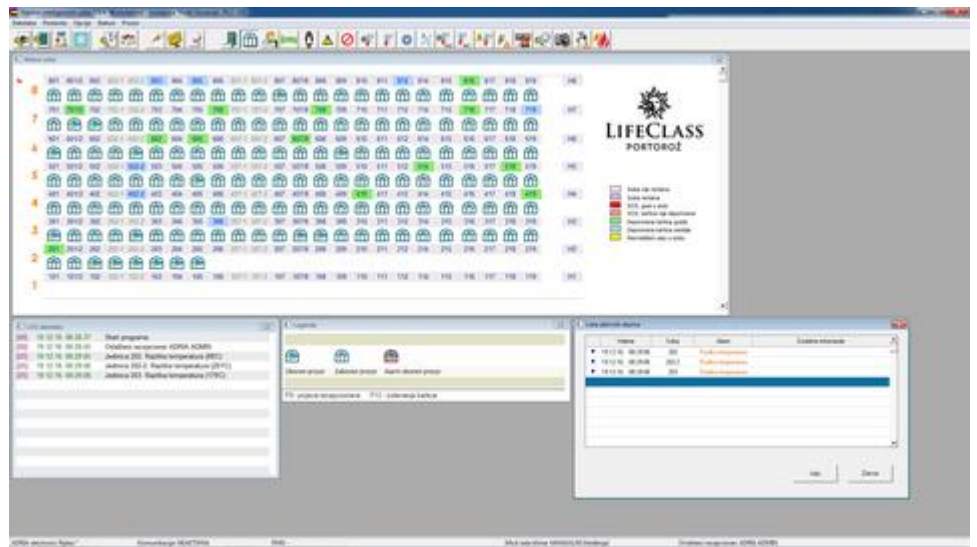


A D R I A IRooms

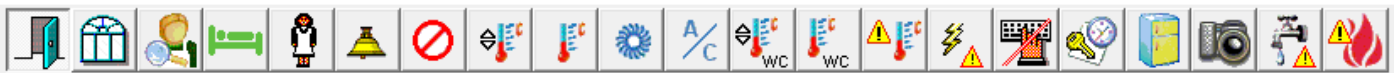
Smart Room Automation Software

by Adria Electronic Rijeka

- Windows 7 or newer, 32/64 bit
- Any PC that runs Windows OS
- No installation (portable)
- PlugAndPlay: screen layout and most of the configuration is prepared by vendor
- Easy to translate language
- Easy backup: copy and paste
- Integrated web server, PMS and BMS interfaces



STATUSES



Door, Window, Staff cards searching, Room status, Cleaning status, MUR, DND, Room set temperature, Room temperature, Ventilation speed, AirCondition status, Toilet set temperature, Toilet temperature, Temperature alarm, Electrical power supplying alarm, Blocked room console, Keycards status, Minibar status, Room armed, Water flood alarm, Electrical cabinet overheating.

CARDS

	ARRIVAL		DEPARTURE		User	Key options (accesses)	Kartice		Info
	Date	Hour	Date	Hour			Confirm	Delete	
1	19.12.16	11	29.12.16	12	John Smith	5	Confirm Delete	Active, LOC	
2							Confirm Delete		
3							Confirm Delete		
4							Confirm Delete		
5							Confirm Delete		
6							Confirm Delete		
7							Confirm Delete		
8							Confirm Delete		
9							Confirm Delete	Backup	

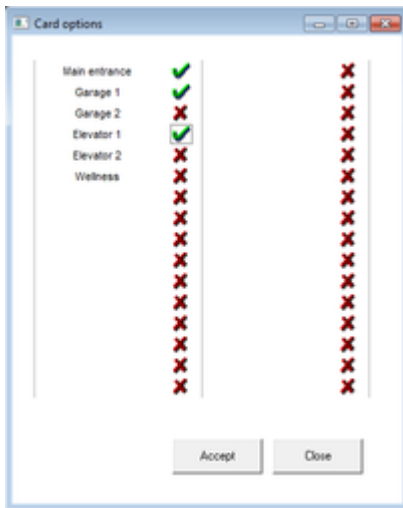
Room (F1): Duplicate (F5) Paste (F6) Sync LOG Close

Cards for guests, staff, extern clients, delivery service.

Staff cards have a special functions, for example roommaid marks a room cleaned, housekeeper can mark a room inspected.

One cards for different areas: rooms, parking, elevator, pool, wellness... software is online/realtime and modifying can be done without presence of card.

ACCESS CONTROL FOR PUBLIC AREAS



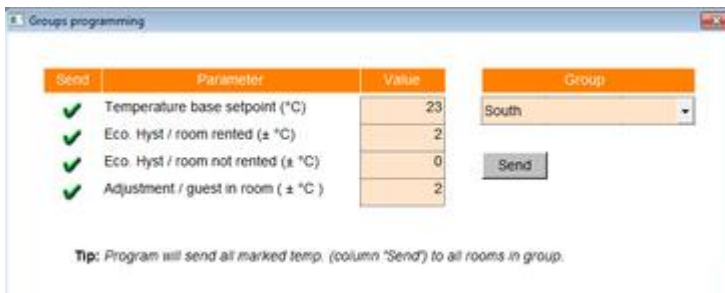
- Every guest or staff card can be allowed to enter additional public areas
- Check/Uncheck each options or use categories to handle group of options
- Can be modified online (without card)

BLUETOOTH OPTION

Additional option: bluetooth reader to enable access control by mobile devices.



HVAC

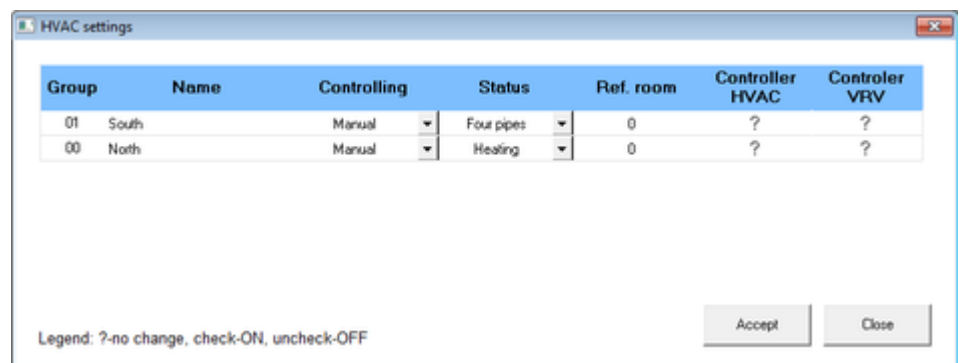


Three levels of temperature settings:

- Economic – room not rented
- Precomfort – room rented and empty
- Comfort – guest in room

Set temperature parameters for each room, group of rooms or whole hotel.

- Cool/Heat/4pipe groups
- Fancoil, VRV/VRF, radiator, floor heating, Air Conditions
- Alarm if room temperature deviates from the setpoint
- All temperature values are stored for later analysis

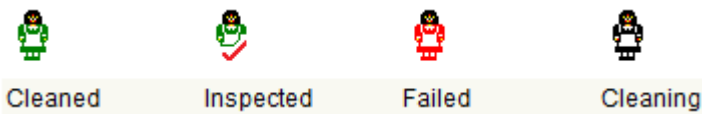


- Analysis of set and measured temperatures, valves state, ventilation speed, windows status, guest presence
- Check statistics for every graph point (number of low, mid and high ventilation speeds in other rooms)
- Table and graph view
- Export to excel

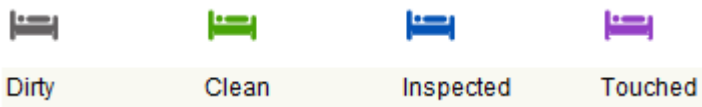
HOUSEKEEPING

- Roommaid card – mark a room as cleaned
- Housekeeping card – mark a room as inspected or returns room back from cleaned to dirty
- Fast overview of actual room statuses
- Fast overview of cleaning statuses

8	801	801/2	802	802-1	802-2	803	804	805	806
7	701	701/2	702	702-1	702-2	703	704	705	706



Cleaning status – the highest status reached during the day, for fast visual overview what is done today



Actual room status – for reception to know the actual status of room



Housekeeping mobile – overview of room statuses, cleaning status, guests, position of roommaids cards, fast search... all data is in cloud.



Minibar – detection if someone opens minibar door and status for all rooms. Save the time – there is no need to check all rooms!

Name	Room Count	Duration	Average	Room (duration)
Dida Sorrels	3	00:47:00	00:15:42	109 (14), 110 (19), 111 (14)
Dawn Lemelin	19	04:36:00	00:14:30	109 (19), 110 (18), 114 (21), 113 (16), 112 (17), 111 (14), 117 (15), 118 (13), 119 (18), 120 (14), 121 (20), 122 (12), 123 (11), 124 (12), 125 (19), 127 (9), 128 (8), 123 (10), 122 (10)
Jennifer Teasdale	5	00:51:00	00:10:12	130 (9), 131 (10), 132 (13), 134 (12), 701 (7)
Flavia Deby	4	00:34:00	00:08:30	146 (11), 149 (9), 151 (7), 153 (7)
Lorena Dunbrey	15	04:49:00	00:19:18	141 (19), 142 (19), 143 (26), 144 (18), 145 (18), 146 (10), 148 (11), 147 (10), 148 (19), 149 (19), 150 (22), 151 (20), 152 (19), 153 (24), 155 (20), 103 (18), 104 (9), 105 (20), 106 (5), 128 (12), 129 (15), 130 (16), 131 (5), 131 (12), 132 (11), 134 (6), 134 (9), 133 (19), 135 (6), 135 (9), 136 (10), 138 (10), 137 (6), 137 (8), 138 (12), 135 (14)
Edith Butney	3	00:25:00	00:08:18	254 (7), 103 (7), 351 (11)
Maryo Godbolt	6	01:00:00	00:10:00	140 (14), 141 (8), 144 (11), 145 (9), 150 (11), 152 (7)
Suzy Vanghese	3	00:22:00	00:07:18	351 (9), 305 (5), 415 (8)
Kim Leonard	2	00:36:00	00:18:00	116 (19), 115 (17)

Roommaid efficiency report – number of rooms for each roommaid, total time, average time, list of rooms...

SECURITY



Alarm 'opened door'



Alarm 'opened window'



Room armed



NAK water alarm



NAK Controller temperature



Burglary - Room Safe

Security is important part of Smart Room System. Surveillance of window, door, burglary, water flood, el. cabinet temperature, room safe... can be extended according to the wishes of investor.

CONTROL OF LIGHTS IN PUBLIC AREAS (LOBBY, HALL...)

• STANDARD

	0h	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	11h	12h	13h	14h	15h	16h	17h	18h	19h	20h	21h	22h	23h	
Ground floor																									
Reception light 1	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Reception light 2	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Lobby left	Time																								
Lobby right	Luxomat																								
Lobby center	On																								
Entrance	On																								
Elevator	On																								
1st floor																									
Hall 1	Time																								
Hall 2	On																								
Elevator	On																								
2nd floor																									
Hall 1	Time																								
Hall 2	On																								
Elevator	On																								
3rd floor																									
Hall 1	Time																								
Hall 2	On																								
Elevator	On																								
Roof	On																								

Reliable low cost solution to control lights in halls. Every controller can handle up to 12 light circles. There are many options adjustable by software:

- On/Off
- Luxomat
- Time
- Luxomat + time
- PIR
- PIR + luxomat
- PIR + time

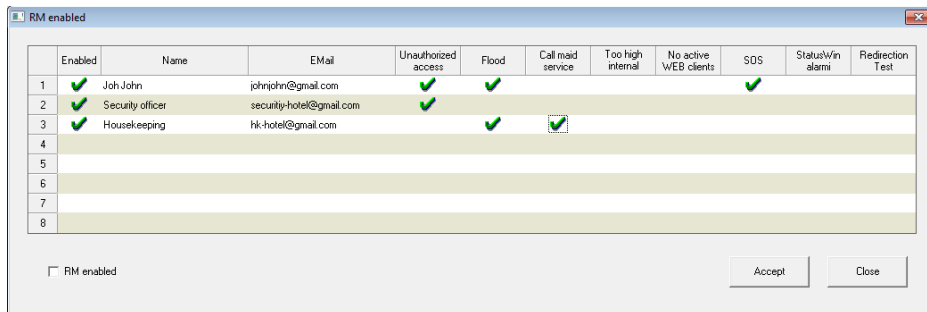
• DALI INTERFACE



Control of lights by DALI protocol. Staff can use tablet (Android application) to switch lights on/off, dim lights, start/stop scene etc.

LOGGING, REDIRECTING

Online system makes possible to store in database all events in real time. For example if roommaid loses the card it will be very simple to cancel it, create new one and check in log if the card was used in last few hours. Example of events: access to room, access to some public area, card inserted/removed into card-holder, opened/closed window, DND, MUR, create/modify/delete card, change hvac settings, room clean, room dirty, room safe opened, all alarms (start, acknowledge, stop), room temperatures... etc.



Enabled	Name	E-Mail	Unauthorized access	Flood	Call maid service	Too high internal	No active WEB clients	SOS	Status/Win alarm	Redirection Test
1	Joh.John	johjohn@gmail.com	✓	✓				✓		
2	Security officer	security-hotel@gmail.com	✓							
3	Housekeeping	hk-hotel@gmail.com		✓	✓					
4										
5										
6										
7										
8										

RM enabled

Accept Close

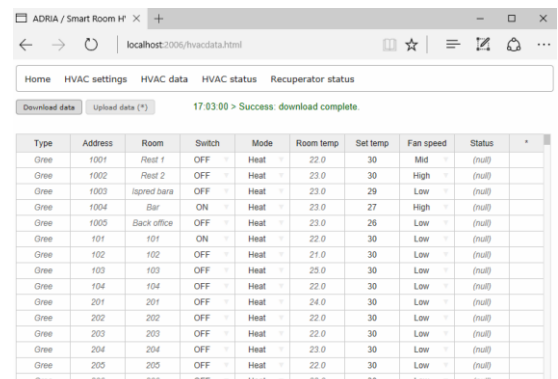
There is an option to redirect most important alarms to email (for example to gmail account that is connected to some mobile device).

INTERFACES

- PMS
 - Opera/Fidelio, Protel, GPData, Iteso Brilliant, Sihot, any local PMS that wants to connect
 - Speed up procedures for cards manipulation (create, modify, delete, move)
 - Optionally: use same rfid card for room and for POS identification
 - Export cleaning status to PMS

- HVAC
 - Daikin VRV, Mitsubishi VRF, Hitachi, Toshiba, Gree...
 - Two parallel controls: locally in room and by software interface
 - Direct link to HVAC central controller

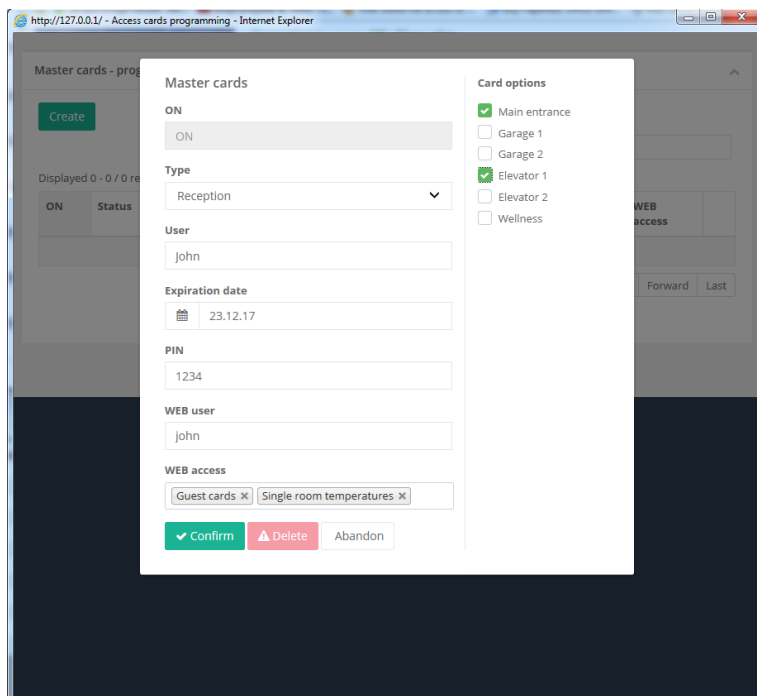
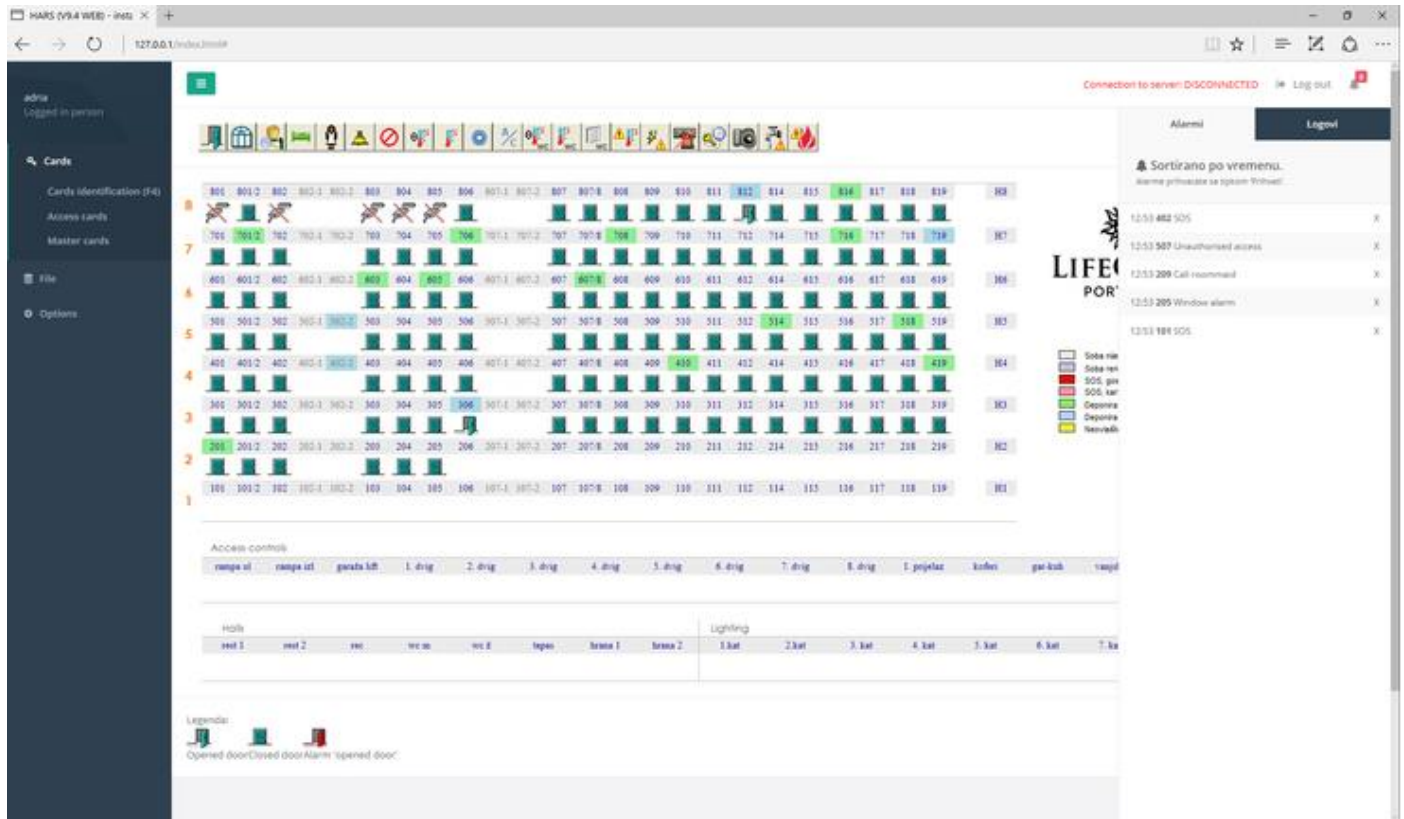
- BMS
 - Integrated MODBUS server to export data



Type	Address	Room	Switch	Mode	Room temp	Set temp	Fan speed	Status	*
Gree	1001	Rest 1	OFF	Heat	22.0	30	Mid	(null)	
Gree	1002	Rest 2	OFF	Heat	23.0	30	High	(null)	
Gree	1003	lapred bara	OFF	Heat	23.0	29	Low	(null)	
Gree	1004	Bar	ON	Heat	23.0	27	High	(null)	
Gree	1005	Back office	OFF	Heat	23.0	26	Low	(null)	
Gree	101	101	ON	Heat	22.0	30	Low	(null)	
Gree	102	102	OFF	Heat	21.0	30	Low	(null)	
Gree	103	103	OFF	Heat	25.0	30	Low	(null)	
Gree	104	104	OFF	Heat	22.0	30	Low	(null)	
Gree	201	201	OFF	Heat	24.0	30	Low	(null)	
Gree	202	202	OFF	Heat	22.0	30	Low	(null)	
Gree	203	203	OFF	Heat	22.0	30	Low	(null)	
Gree	204	204	OFF	Heat	23.0	30	Low	(null)	
Gree	205	205	OFF	Heat	22.0	30	Low	(null)	
Gree	206	206	OFF	Heat	22.0	30	Low	(null)	

MULTIUSER – INTEGRATED WEB SERVER

IRooms is portable desktop application, but it has embedded web server. Multiple users are allowed to overview statuses, create cards, acknowledge alarms, search the log etc.



Distribute functions to different departments:

- Security to handle master cards and security alarms
- Reception to handle guest cards
- Housekeeping to handle cleaning statuses and MUR
- Maintenance to handle room statuses, room alarms, HVAC settings and analysis
- Management to handle log files, reports, analysis

ROBUST

- There is bypass option for many parts of smart room system, for example window contact can be bypassed in case of failure (so air-condition will work), card-holder can be bypassed so room will be active even without inserted card.
- Room is functional without PC (there will be no logs and no new settings, but room guest will be able to use room normally).

- Room controller is powered by UPS or by local battery, it will work in case of electricity power failure and send an alarm to central PC software: main power failure.



- Five ways how to create guest cards or let the guest in room:
 - Create card by PMS
 - Create card by WEB Smart Room
 - Create card by desktop Smart Room Software
 - Use Emergency Guest Card
 - Physical key + activate room by room console



- Two ways to control air-condition:
 - Directly by wire or IR: Smart Room System → Indoor unit
 - TCP connection: Smart Room PC → HVAC central controller



- PC malfunction: copy program folder to another PC and run the software

- Disk malfunction: copy backup folder to another PC and run the software (backup is made every 5 minutes, new software instance will continue with same data)



- All equipment is plug-and-play. If there is malfunction with any part of the room equipment, it can easily be replaced by hotel maintenance in short time.



Bottom line: ADRIA Smart Room System is an extension of standard hotel room. It integrates standard room equipment to one online/realtime system, makes possible to monitor and control residential part of hotel, connects rooms to PMS, BMS and HVAC. It saves energy, increases the quality of service, increases the level of security.