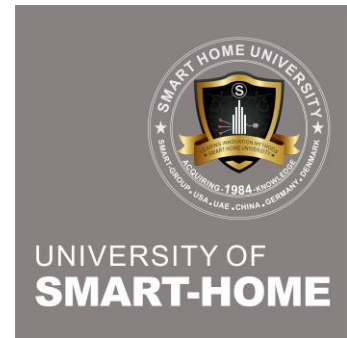




3RD PARTY INTEGRATION PROCEDURES & Pre-requisites





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3RD PARTY INTEGRATION PROCEDURES

in Installer Best Practice

Integration Recommended Procedure when Linking to Third Party Systems to avoid any inconvenience and guarantee best image and professional approach without any droughts.



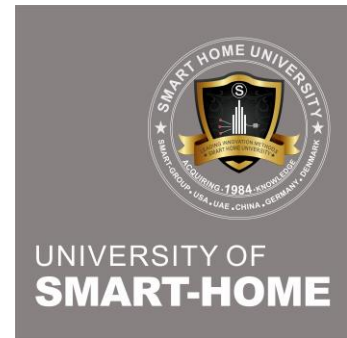
A. Air-Conditioning Integration:

- If system is Normal "FCU or AHU Type" (cooling/Heating/Fan Speed) Kindly use Normal HVAC Controller Type (NO/NC) and Use wiring method form AHU/FCU control panel of the AC unit as standard 5-8 Wires. All Control Boards to be selected by MEP must be selected in such a way that can accept any standard (unbranded) local market thermostat.

- If System is "VAV" type: Kindly make sure that All VAV's selected are 0-10 Volt Type and follow same standard (unbranded VAV Thermostat Wiring Connection Standards.

***HVAC Integration Procedure:**

1. MEP Contractor Must Install, Test, Commission his system fully using Temporary standard (unbranded) market Normal Thermostats that work based on (NO/NC) for AHU/FCU / 0-10V for VAV.
2. MEP Must Balance and Calibrate all his Units after Testing for At least 48-72 Hours.



Testing must be done as following: All Rooms to be set to 18-19 degrees (If cooling example), all rooms Doors Must be locked after that and no one to be allowed to enter the space for at least 48-72 Hrs.

3. Inspection to be carried by Owner Rep, Consultant, MEP, and Smart Automation rep after the 48-72 Hours is elapsed without any entry to the locked Area./Areas

4. If all inspection Pass without leakage, temperature in accuracy ++ and once owner and consultant are happy with the results (otherwise repeating of same procedure to be carried again till success).

5. If tests succeed and are certified good for integration, then the Temporary thermostats installed shall be replaced by Smart-HVAC controller instead.

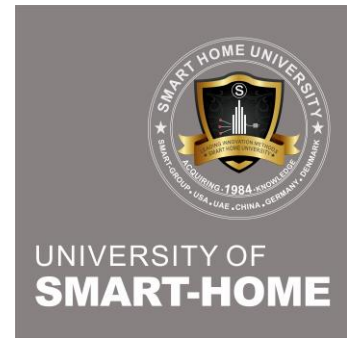


B. Motorized Curtains Integration:

- Standard Market RF Curtains Require Power Outlet for their Motors • Standard Market AC Curtains Require Double Throw Power for Integration • Sun seeker Curtains and IR/NO/NC Standard Type also require Control Cable to be connected up to Automation Panel.

- *** We recommend One Power Outlet Double Throw, and One Extra Outlet with Data Control cable to be connected to Control DB/or Zone DB.

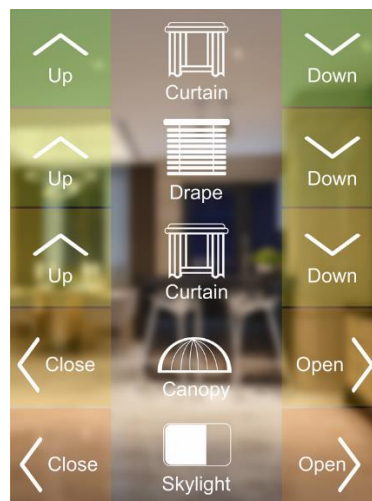
- *** All Fabrics to be selected must be thin if for roller, and must be Light in weight; otherwise Motors will have problems, low life, and high sound.

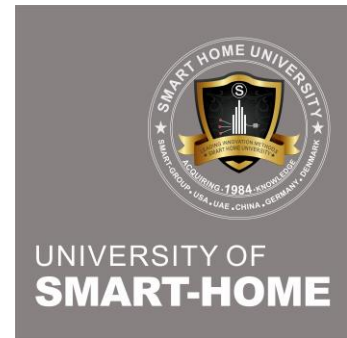


- Curtains Supplier Must provide curtains with either of the following integration possibilities:
 - o RS-232 (with clear protocol Document) fully programmed and addressed o NO/NC Connection fully tested o IR Unique Codes Integration enabled o AC Normal or Double Throw Type Curtain Motors o
- *** (All AC Type and Non AC Types Needs to be coordinated with MEP Contractor to provide proper wiring to electrical and control DB)

***Motorized Curtains Integration Procedure:**

1. Curtain Provider Install Curtain complete with all Fabrics
2. Curtain Provider test and certify workability
3. Curtain Provider Test integration Ports separately in front of SmartHome
4. SmartHome Connect, test and complete integration in front of Curtain supplier.





C. Motorized GATE Integration:

- Gate Supplier Must Prepare His NO/NC to connect to our Volt-Free dry Ports. (We require: Open, Stop, and Close)

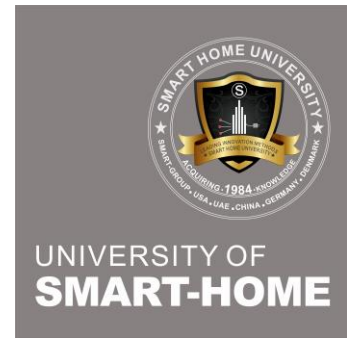
*Motorized GATE Integration Procedure:

1. Gate Provider Install Gate complete
2. Gate Provider test and certify workability
3. Gate Provider Test NO/NC integration Ports separately in front of SmartHome
4. SmartHome Connect, test and complete Gate integration in front of Gate supplier.



D. Lighting control Integration:

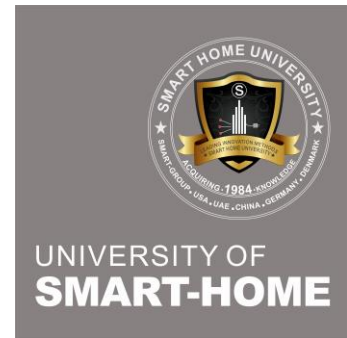
- Wiring for smart Integrated Lighting and Dimming the way is totally different than the Normal Light switch wiring.
- All loads must come to Control Room or Zone DB and to be connected as if all manual switches are located inside that electrical DB or zone DB.
- All Digital control panels that will replace the normal light switches shall be looped as daisy chain and back to the Electrical DB or zone DB (Where Data wire will be used here).



***Lighting Integration Procedure:**

1. MEP Contractor Must Install, Test, Commission his system fully after installing Light Fixtures, and then by using Temporary standard Market Normal Switches AT DB.
2. MEP Must Switch one by one circuit, and all together to make sure no electrical shorts.
3. MEP Must Leave all lights totally on for 24-48 Hours to make sure that all connections are secure, no overload, and no sparks.
4. Inspection to be carried by Owner Rep, Consultant, MEP, and Smart Automation rep after the 24-48 Hours is elapsed without any Problems.
5. If all inspection pass without Issues, and once owner and consultant are happy with the results (otherwise repeating of same procedure to be carried again until success).
6. If tests succeed and are certified good for integration, then the Temporary Switches installed temporarily above DB by MEP shall be replaced by Smart-Soft Panels instead.





is there an option to integrate fire alarm system to our Smart G4 system? Like they want the lights to be fully on in case of fire or any emergency?

Yes the integration is very easy. There are several ways like protocol, Rs232/485, 0-10 volt and other. Easiest is dry contact trigger where once fire alarm is triggered it signals digitally as NO/NC to SmartG4 4Z module and you program the contact zone trigger as universal or global or mood or scene switch or other event or flag. One way to get dry digital signalling is by connecting a contractor of fire alarm is only volt driven. In case you like to use volt driven ELV direct, kindly use mini/IO instead of 4Z





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AUTOMATION INSTALLATION SYSTEM PREREQUISITES

in Installer Best Practice

In order to Install S-BUS the following Prerequisites must be available prior to Commencing with Smart-BUS Final Installation and Commissioning:

1. LC Cabling for control System is done as per Schematics and riser diagram examples and is certified
2. Third party systems Installed, coordinated, tested and commissioned and certified like:
 - a. Lighting fixtures
 - b. HVAC
 - c. Gates and Garages
 - d. Motorized Curtains..etc.
3. Temporary or Permanent Electricity is Connected to all DB's and Panels
4. Space is allocated for Smart-BUS Systems additions Ready with Permanent Power Outlets and connection p to S-BUS cabinets / DB's
5. Final Paint Coat is not yet applied
6. No Wall Paper is applied Yet
7. All Ceiling Access Panels are ready as Needed

Download our guide File:

- [Shop Drawings](#)

