



# Brochure 2022

PORT-SAID, EGYPT BRANCH



**Certified KNX Training Center  
Smart Home & Building Solutions**

**Certified KNX TUTOR: Eng. Mahmoud Seada**





# Introduction

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# 1- Introduction

- ❖ **PORTO SMART** Really is making great efforts to educate students, Technicians and professionals about KNX Smart home and building technology.
- ❖ **PORTO SMART** has more than 10 years of experience in the field of designing, implementing and training of smart home and building systems, and here begins the main goal of PORTO SMART, which is to transfer those experiences to our trainees by carrying out multiple tasks in the practical field in order to enable them to enter the field by easy way.







# 1- Introduction

- ❖ **PORTO SMART** provides a summary of useful information for KNX
- ❖ **PORTO SMART** is a KNX certified training center, established at 2022 year and offering qualifying courses that combine theoretical topics and practical experience through the use of different KNX devices from different manufacturers. The center is fully equipped with KNX Building Automation devices in order to guarantee the learning experience of every KNX function required for the certification.
- ❖ **PORTO SMART** also offer **VIP KNX Training seminars** (Basic, HVAC, Advanced or Custom), adapted to our student's schedule at their place by using our Mobil rigs.





# Our Mail Goal

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## 2- Our Main Goal

- ❖ **The most important goal** for us to **spread the KNX Technology** in the world Especially in the middle east world and Egypt.
- ❖ **Spread the practical training** by achieving a lot of really practical applications by using a various ways and Certified Devices
- ❖ **We take the person From Zero Knowledge to Professional in KNX Technology**
- ❖ **To achieve these main goals**, we make a lot of various activities and Courses as these will be mentioned in the next Sections.





**PORT TO  
SMART**  
Certified KNX Training Center

**Why Us?**

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# 3- Why US?



❖ We explain to our students, **how to increase their knx partner ranking** so:

- We **encourage** partners to participate in all knx certified courses
- We **encourage** partners to buy the ETS licenses
- We **encourage** partners to be updated about their KNX knowledge

❖ We explain to our students,

- how to become a **knx expert** before beginning of basic course.
- Show them the way to be professional at KNX Field.







# 3- Why US?

- ❖ **We explain to our students,**
  - how to become a **knx expert** before beginning of basic course.
  - Show them the way to be professional at KNX Field.





## 3- Why US?

- ❖ **We teach a basic electrical Installation course** to increase the base of trainers to understand knx protocol not only who specialized in electrical field.
- ❖ **We make several and various practical applications** and that is suitable to beginners and professionals

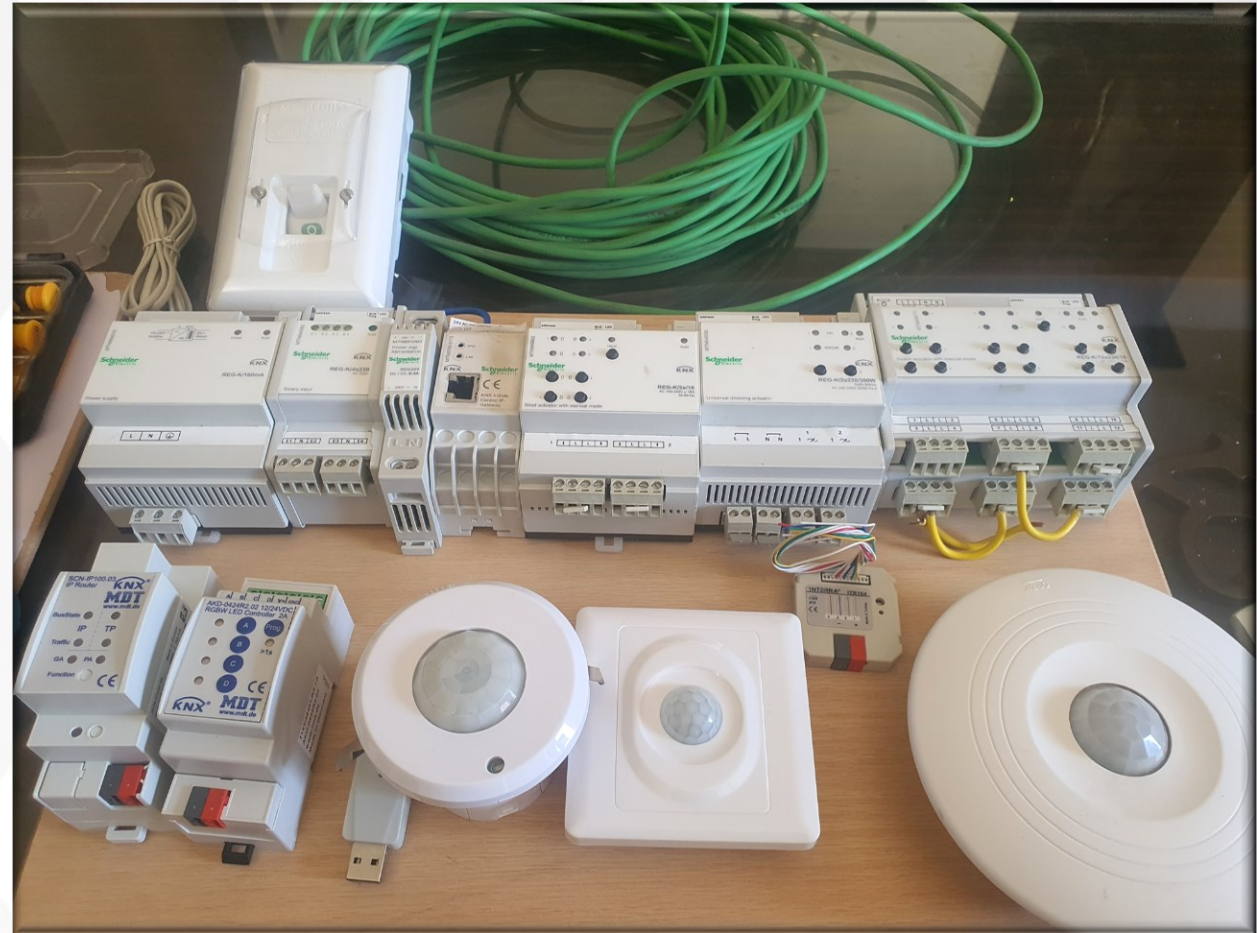






# 3- Why US?

- ❖ We Teach a KNX Panel Building Course:
- ❖ How to wire Devices Practically.
- ❖ How to connect Electrical Components.





# 3- Why US?



❖ **KNX Connectors & Electrical Terminal Connects**





## 3- Why US?



❖ Electrical Tools and Instruments used in Electrical Installation Training





## 3- Why US?

- ❖ We use real Certified devices, Shutter motors, Conventional Sensors, etc., to actually Implement the practical applications.
  - We have more than 50 different Applications can be done and implemented.
- ❖ We support all graduation projects for students of engineering faculties.
- ❖ We design and buy a training kit whit its official prices without any profit to our student to practice more and more freely at their companies and homes.





# 3- Why US?

- ❖ **We strive for the comfort of our students by:**
  - **We support E-Learning Technology in our Center.**
  - **We offer a recorded Videos for our Special Courses.**
  - **We use Certified KNX Mobile rigs to use them in the Certified training purpose at our student's site.**
  - **We offer Drinks, Snacks and Lunch to our Students at our center**
  - **We have rest rooms equipped with all living facilities at our Training center for whose need more comfort from the fatigue and stress of travel from their place to our center**





# Our Target Audience

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# 4- Our Target Audience

❖ In the Field of Training and education, We Target These trainees:

- ❖ Everyone who interested in Smart Home and Building solutions.
- ❖ Beginners in KNX field.
- ❖ Professionals in KNX field.
- ❖ Students.
- ❖ Graduation Projects for Students.
- ❖ Electrical Engineers.
- ❖ Technicians.





**Our Services to achieve our main goal:**

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# 5- Our Services to achieve our main goal:



- ❖ 1- We are revolutionizing the education world for the field of KNX, as our primary goal is to expand the base of KNX accredited partners who have sufficient experience to implement and design KNX projects
- ❖ 2- We provide a course on the basics of electrical wiring, and this is an important part for us to expand the base of trainees and students who have a passion to learn smart home and building systems, **but their studies are not specialized in the field of electricity.**
- ❖ 3- Thus, we are expanding the base of KNX certified partners to all individuals who have a passion in this field, not just electrical specialists.



# 5- Our Services to achieve our main goal:



- ❖ 4- We have all KNX Certified devices that enable the trainee to implement all the duties required of him.
- ❖ 5- The trainee can implement all the ideas and a lot of applications that he may need in the design and implementation of his projects in the field of smart home and building systems.
- ❖ 6- We provide scientific materials approved by KNX, and we also provide additional scientific materials that belong to our center.





# 5- Our Services to achieve our main goal:



- ❖ 7- We provide many different devices that have the same functions and from several different brands to communicate information about the advantages of using the KNX protocol and to train on more than one product from more than one manufacturer.
- ❖ 8- We provide technical support for graduation projects for students of engineering faculties and students interested in the field of smart homes and buildings.



# 5- Our Services to achieve our main goal:



- ❖ 9- We provide a variety of courses, recorded and available on our website, for all the students participating in our center to refer to any information that the trainee may need at any time.
- ❖ 10- We provide many applications and ideas for various projects that are part of our daily life in order to help our trainees develop their ideas and implement them on our devices





# Our KNX Applications & Devices

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# 6- Our KNX Applications & Devices

## Category A: Lighting





# 6- Our KNX Applications & Devices

## Category A: Lighting

- ❖ **Switching ON/OFF:**
  - ❖ We use **different Manufactures** and types of sensors that used in Switching
  - ❖ We use **KNX Keypad Push Button** and **KNX Touch screen panel**
  - ❖ We use **software** to control the lights using smart phone application
  - ❖ We use **Switching Actuator** and **Compo actuator** so we learn our students both of these types of actuators
- ❖ **Timed Control:**
  - ❖ All our used actuators has the function of timed control



We use KNX software and servers to schedule scenes

# 6- Our KNX Applications & Devices

## Category A: Lighting



❖ Compo Actuator “Interra”

❖ Single Actuator “Schneider”

❖ We use different type of actuators and Different Manufactures in our training



# 6- Our KNX Applications & Devices

## Category A: Lighting



❖ KNX Pushbutton “Schneider”

❖ KNX Touch Screen “Interra & GVS”

❖ We use different type of Sensors and Different Manufactures in our training



# 6- Our KNX Applications & Devices

## Category A: Lighting

- ❖ **Dimming Control**
  - ❖ We use **different Manufactures** and types of sensors that used in Switching
  - ❖ We use **KNX Keypad Push Button** and **KNX Touch screen panel**
  - ❖ We use **software** to control the lights using smart phone application
  - ❖ We use **Led Dimming Actuator** and **universal Dimming actuator** so we learn our students more about the different types of Lighting and the technology of the dimming for each type as LED, Halogen, Incandescent lamps, Dali, etc.,





# 6- Our KNX Applications & Devices

## Category A: Lighting



❖ KNX LED Dimming Control “MDT”

❖ KNX Universal Dimming Actuator “Schneider”

❖ We use different type of Sensors and Different Manufactures in our training



# 6- Our KNX Applications & Devices



## Category A: Lighting

- ❖ **Lighting color control and Light Scenes:**
  - ❖ We use different Manufactures and types of sensors that used in Lighting color control.
  - ❖ We use KNX Keypad Push Button and KNX Touch screen panel to control the color of lights and light scenes.
  - ❖ We use software to control the color of lights using smart phone application.
  - ❖ We use RGBW Dimming Actuator so we learn our students, How t control the color of lights.
  - ❖ We learn our students a lot of applications to know how to implement the lighting scenes at different times at day.



- ❖ **KNX RGBW LED Control “MDT”**



# 6- Our KNX Applications & Devices

## Category A: Lighting

- ❖ Automatic Occupancy Detection
- ❖ Constant Light Control
  - ❖ We use different Manufactures and types of sensors that used in constant light control.
  - ❖ We use KNX motion sensors and KNX weather station.
- ❖ We use a KNX server software to control both of Automatic Occupancy Detection and Constant Light Control.
- ❖ We use logic options in the Actuators and servers to make a constant light in room also to use it for automatic occupancy Detection.





# 6- Our KNX Applications & Devices

Category B: Heating, Ventilation & Air conditioning (HVAC)



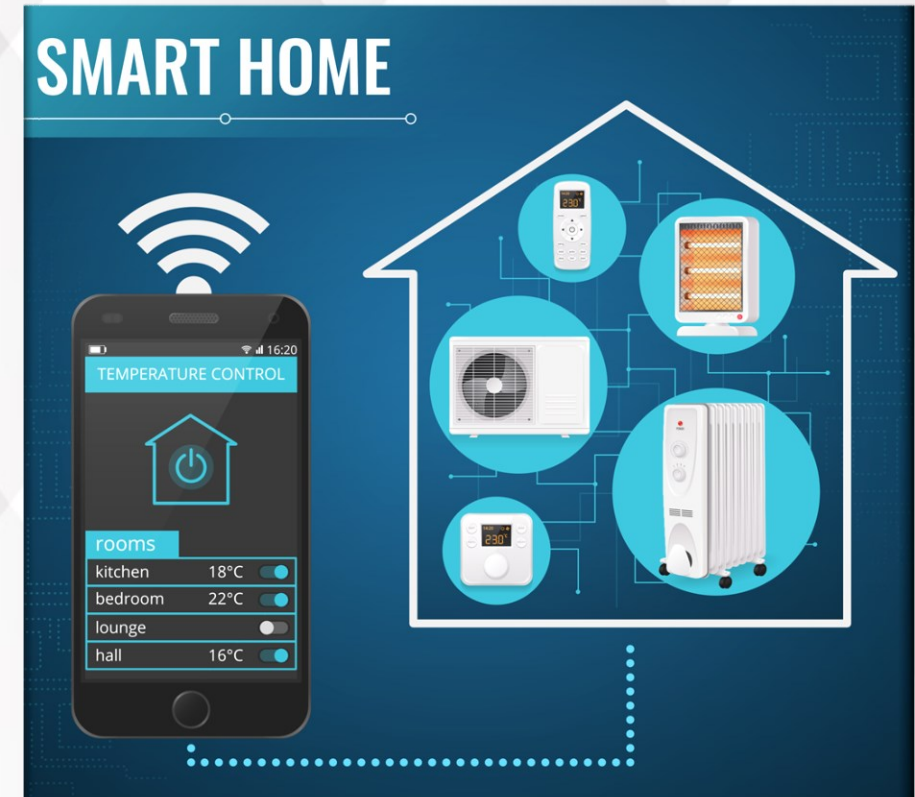




# 6- Our KNX Applications & Devices

## Category B: Heating, Ventilation & Air conditioning (HVAC)

- ❖ Individual Room Control / Zone Control
- ❖ Valve Drive Control / Fan Coil Control
- ❖ CO2 / Humidity Measuring
  - ❖ We use different Manufactures and types of sensors that used in HVAC
  - ❖ We use KNX Keypad Push Button and KNX Touch screen panel as individual Room Control and to measure the CO2 + Humidity
  - ❖ We use software to control HVAC using smart phone application
  - ❖ We use Compo actuator to control FCU and Valve drive





# 6- Our KNX Applications & Devices

## Category B: Heating, Ventilation & Air conditioning (HVAC)

- ❖ Central & Automatic Control
- ❖ Timed Operation Modes
- ❖ Automatic Occupancy Detection
- ❖ Weather Dependent Control
- ❖ We use KNX Keypad Push Button and KNX Touch screen panel as individual Room Control
- ❖ We use software to control HVAC using smart phone application
- ❖ We use Compo actuator to control FCU and Valve drive with timed operation modes
- ❖ We use Weather Station to control HVAC

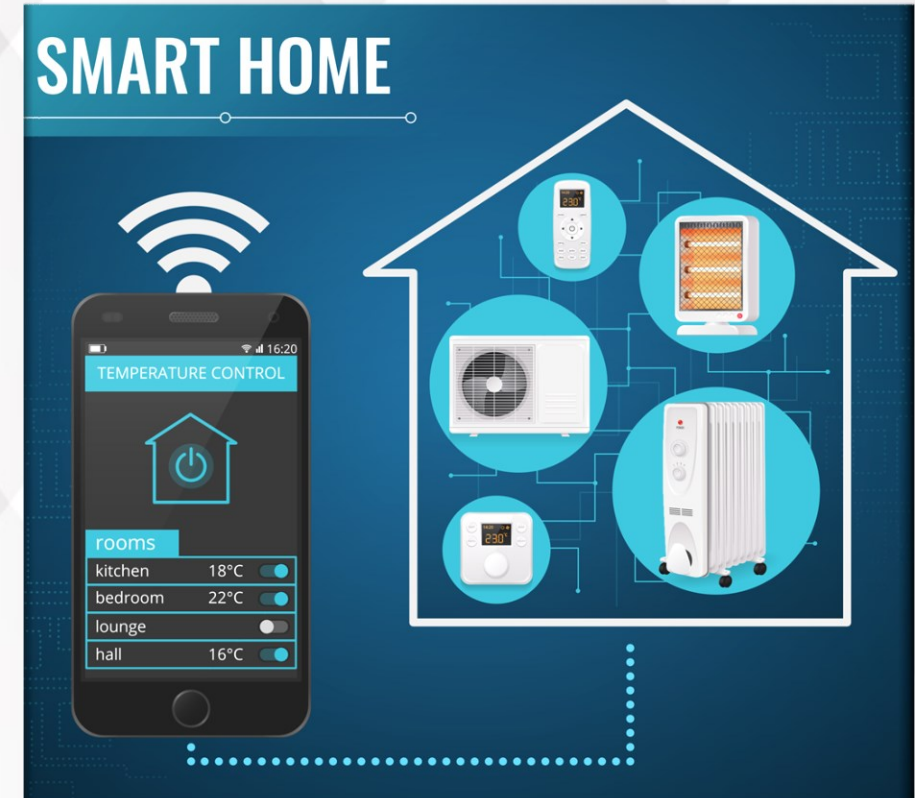




# 6- Our KNX Applications & Devices

## Category B: Heating, Ventilation & Air conditioning (HVAC)

- ❖ Natural Ventilation
- ❖ Floor Heating Control
- ❖ Boiler and burner Control
  - ❖ We use KNX Keypad Push Button and KNX Touch screen panel as individual Room Control
  - ❖ We use software to control HVAC using smart phone application
  - ❖ We use Compo actuator to control FCU and Valve drive with timed operation modes
  - ❖ We use Weather Station to control HVAC







# 6- Our KNX Applications & Devices

## Category B: Heating, Ventilation & Air conditioning (HVAC)



❖ **KNX IR Emitter “GVS”**

❖ **Compo Actuator “Interra”**

❖ **We use different type of Actuators and IR Emitter and Different Manufactures in our training**

# 6- Our KNX Applications & Devices

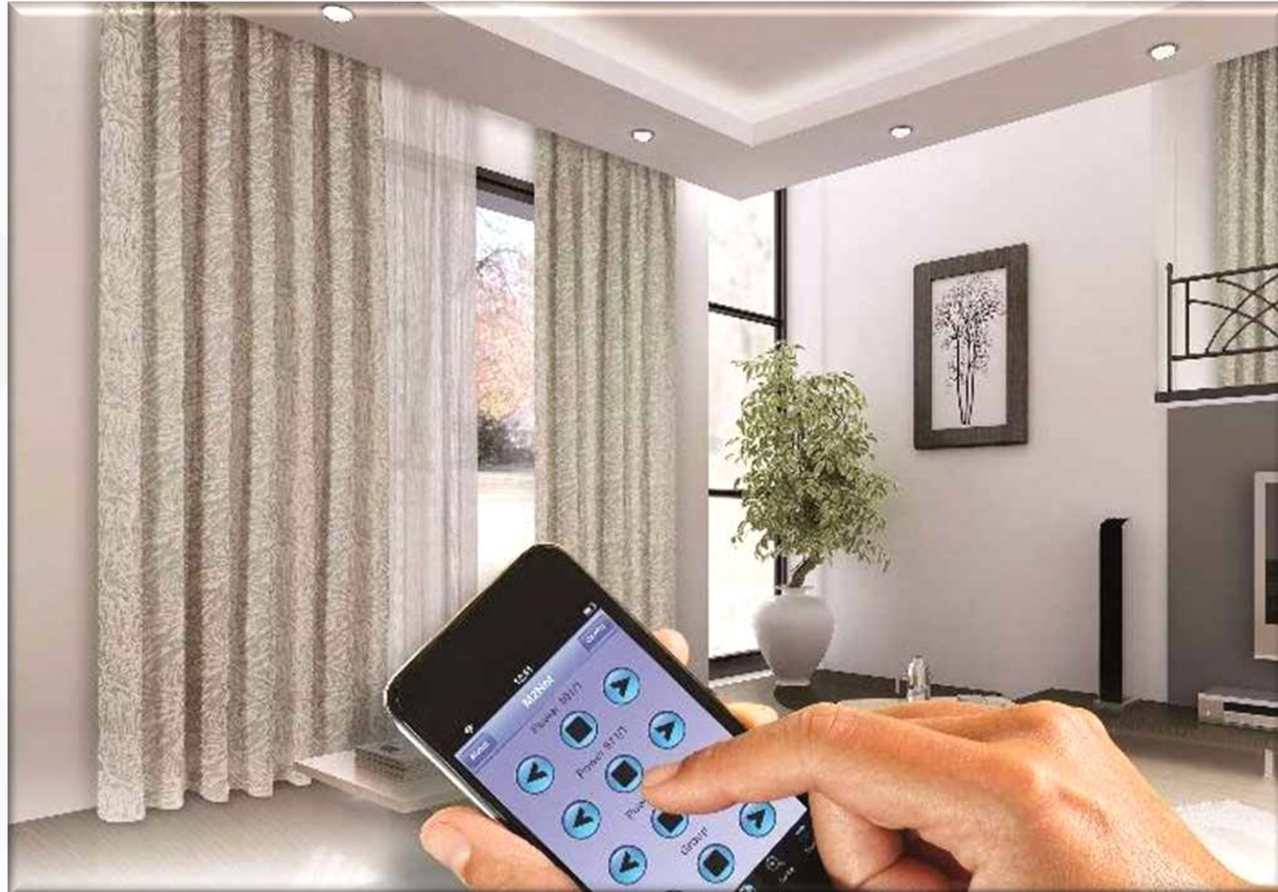
Category B: Heating, Ventilation & Air conditioning (HVAC)



- ❖ **KNX Push Button “Schneider” & KNX Touch Screen Room Controller “Interra”**
- ❖ **We use different type of Sensors and Different Manufactures in our training**

# 6- Our KNX Applications & Devices

## Category C: Blind and Shutter Control







# 6- Our KNX Applications & Devices

## Category C: Blind and Shutter Control

- ❖ Individual Control
  - ❖ Group & Central Control
  - ❖ Preset Positioning
  - ❖ Automatic Programs
- 
- ❖ We use different Manufactures and types of sensors that used in Blind control.
  - ❖ We use KNX Keypad Push Button and KNX Touch screen panel
  - ❖ We use software to control the Bkinds using smart phone application
  - ❖ We use Blind Actuator and Compo actuator so we learn our students both of these types of actuators

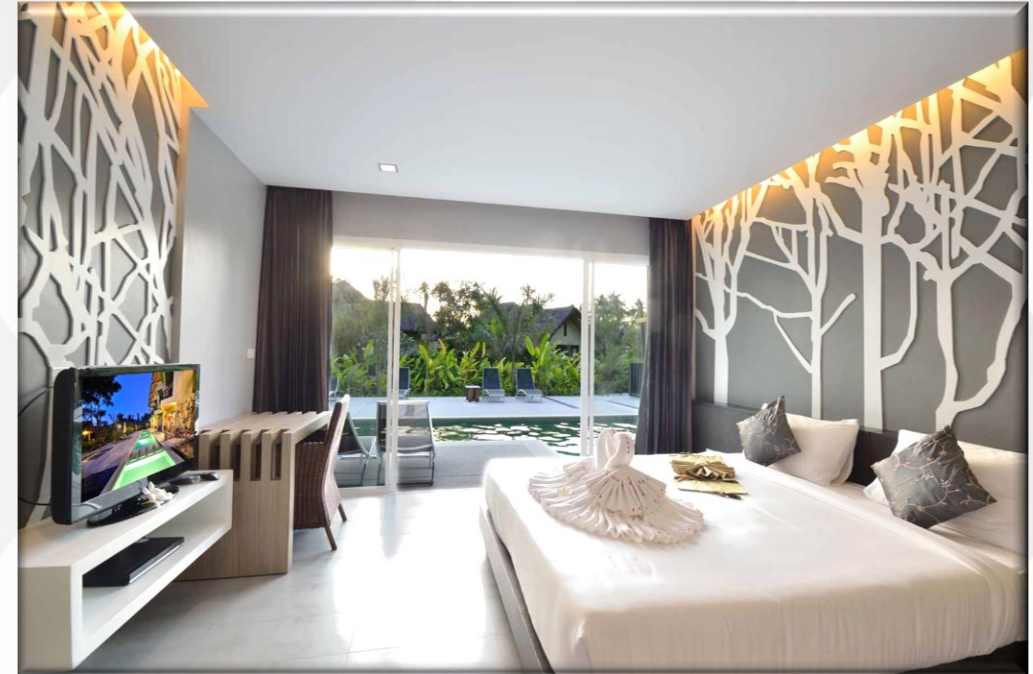




# 6- Our KNX Applications & Devices

## Category C: Blind and Shutter Control

- ❖ Wind and Rain Protection
- ❖ Sun Tracing (interaction with HVAC / lighting)
  - ❖ We use different Manufactures and types of sensors that used in Blind control.
  - ❖ We use KNX Keypad Push Button and KNX Touch screen panel
  - ❖ We use software to control the Blinds using smart phone application
  - ❖ We use Blind Actuator and Compo actuator so we learn our students both of these types of actuators
  - ❖ We use weather station to interact the blind control with HVAC.





# 6- Our KNX Applications & Devices

## Category C: Blind and Shutter Control



❖ Compo Actuator “Interra”

❖ Blind Actuator “Schneider”

❖ We use different type of blind actuators and Different Manufactures in our training





# 6- Our KNX Applications & Devices

## Category C: Blind and Shutter Control



❖ We use Real Curtain and Shutter Motor In our Training

# 6- Our KNX Applications & Devices

## Category C: Blind and Shutter Control



- ❖ We use Weather Station Devices to control Blinds and others In our Training

# 6- Our KNX Applications & Devices

## Category D: Security and Safety







# 6- Our KNX Applications & Devices

## Category D: Security and Safety

- ❖ Smoke/Fire Detection
- ❖ Faults (Leak Detection, Glass Break Detection, Window Contacts)
  - ❖ We use **different Manufactures** and types of sensors that used in security and safety.
  - ❖ We use **KNX Keypad Push Button** and **KNX Touch screen panel** to activate and deactivate alarm system
  - ❖ We use **software** to control the security and safety using smart phone application
  - ❖ We use **KNX motion Sensor** and **conventional Sensors** using the KNX binary inputs
  - ❖ We use **KNX binary dry & live input** so we learn our students the difference between dry contacts and live voltage binary inputs



# 6- Our KNX Applications & Devices

## Category D: Security and Safety



❖ **KNX Dry input “Interra & GVS”**

❖ **KNX binary live input “Schneider”**

❖ **We use KNX binary dry & live input so we learn our students the difference between dry contacts and live voltage binary inputs**



# 6- Our KNX Applications & Devices

## Category D: Security and Safety

- ❖ Access Control
- ❖ Intrusion Detection / Alarm Systems
- ❖ Presence Simulation
- ❖ Supervision (Cameras)
- ❖ Interaction with HVAC/Lighting
  - ❖ We use different Manufactures and types of sensors that used in security and safety.
  - ❖ We use KNX Keypad Push Button and KNX Touch screen panel to activate and deactivate alarm system
  - ❖ We use software to control the security and safety using smart phone application and monitoring using IP cameras





# 6- Our KNX Applications & Devices

## Category D: Security and Safety



- ❖ We use in our training:
- ❖ **KNX motion Sensor “GVS”**
- ❖ **conventional Sensors** using the KNX binary inputs “Interra”



# 6- Our KNX Applications & Devices

## Category E: Operation and Visualization





# 6- Our KNX Applications & Devices

## Category E: Operation and Visualization

- ❖ **Switches / Push Buttons**
- ❖ **Touch Panels & Display Panels**
- ❖ **IR Remote Control**
  - ❖ **We use different Manufactures and types of sensors that used in security and safety.**
  - ❖ **We use KNX Keypad Push Button and KNX Touch screen panel in our Training.**
  - ❖ **We use KNX IR Emitter to control all devices that have remote control like, AC, TV, Audio devices, etc.**



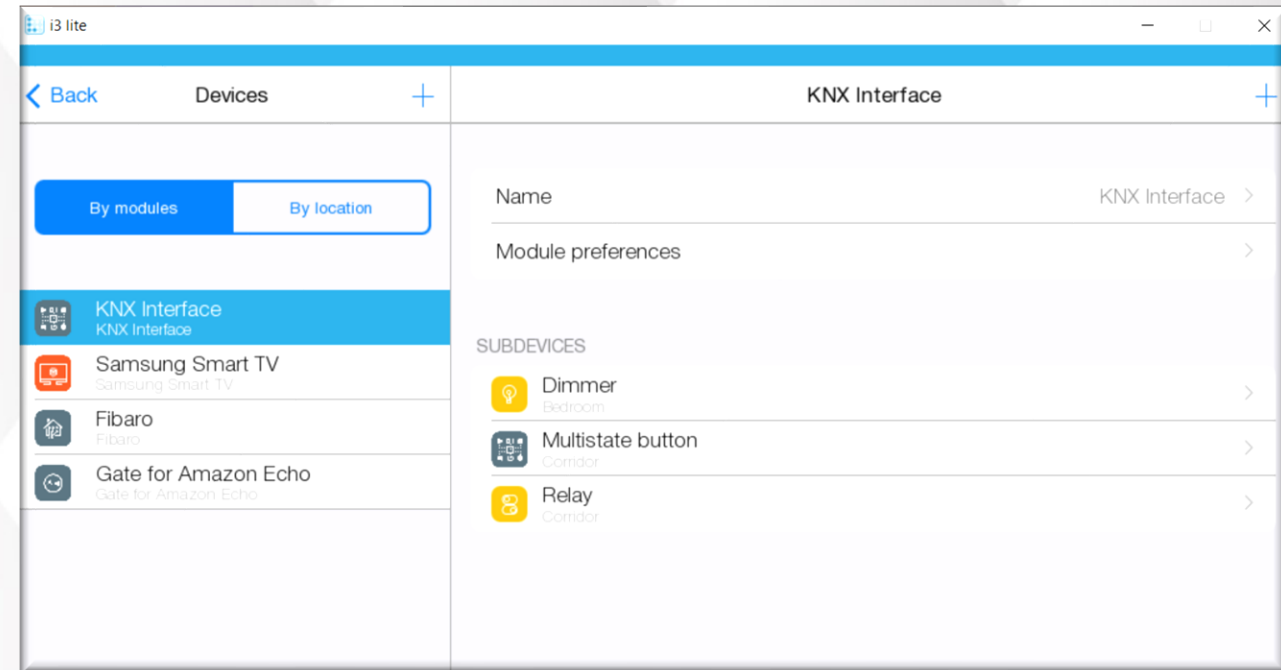




# 6- Our KNX Applications & Devices

## Category E: Operation and Visualization

- ❖ PC Visualization
- ❖ Web Servers
- ❖ Tablets and smart phones
  - ❖ We use a KNX software to control all applications in the training using smart phone application
  - ❖ We use this software to visualize the system on PC
  - ❖ We use servers to make schedules, logic operations, Routines, etc.



# 6- Our KNX Applications & Devices

## Category F: Automation and Remote Access





# 6- Our KNX Applications & Devices

## Category F: Automation and Remote Access

- ❖ **Timed Functions**
- ❖ **Logical Functions**
- ❖ **System Supervision**
- ❖ **Messaging (SMS)**
  - ❖ **We use a KNX software to control all applications in the training using smart phone application**
  - ❖ **We use thus software to visualize the system on PC and to push notifications, SMS, etc.**
  - ❖ **We use software servers to make schedules, logic operations, Routines, timed functions, etc.**







# 6- Our KNX Applications & Devices

## Category F: Automation and Remote Access

- ❖ Internet Access
- ❖ Remote Programming
  - ❖ We use different types of devices to program the KNX system locally and Remotely:
  - ❖ We use KNX Ip interface devices.
  - ❖ We use KNX IP router Devices.
  - ❖ We use KNX Secure IP Router devices.
  - ❖ We use KNX USB interface





# 6- Our KNX Applications & Devices

## Category F: Automation and Remote Access



❖ KNX Inside Control IP Interface “Schneider”

❖ KNX Secure IP Router “MDT”

❖ KNX IP Router “Zennio”

❖ We use different type of Sensors and Different Manufactures in our training

❖ We Learn our students the difference between each type of KNXIP Gateways



# 6- Our KNX Applications & Devices

Category G: Energy Management/Smart Metering







# 6- Our KNX Applications & Devices

## Category G: Energy Management/Smart Metering

- ❖ Metering
- ❖ Data Logging
- ❖ Visualization
- ❖ Current Detection
- ❖ Fuel or Water tank level control
- ❖ Peak Demand Monitoring
- ❖ Load Shedding
- ❖ Energy Harvesting (Avoiding use of batteries)
- ❖ Use of Renewable Energies



❖ KNX Power Meter Device “Ekinex”

# 6- Our KNX Applications & Devices

## Category H: Other Applications

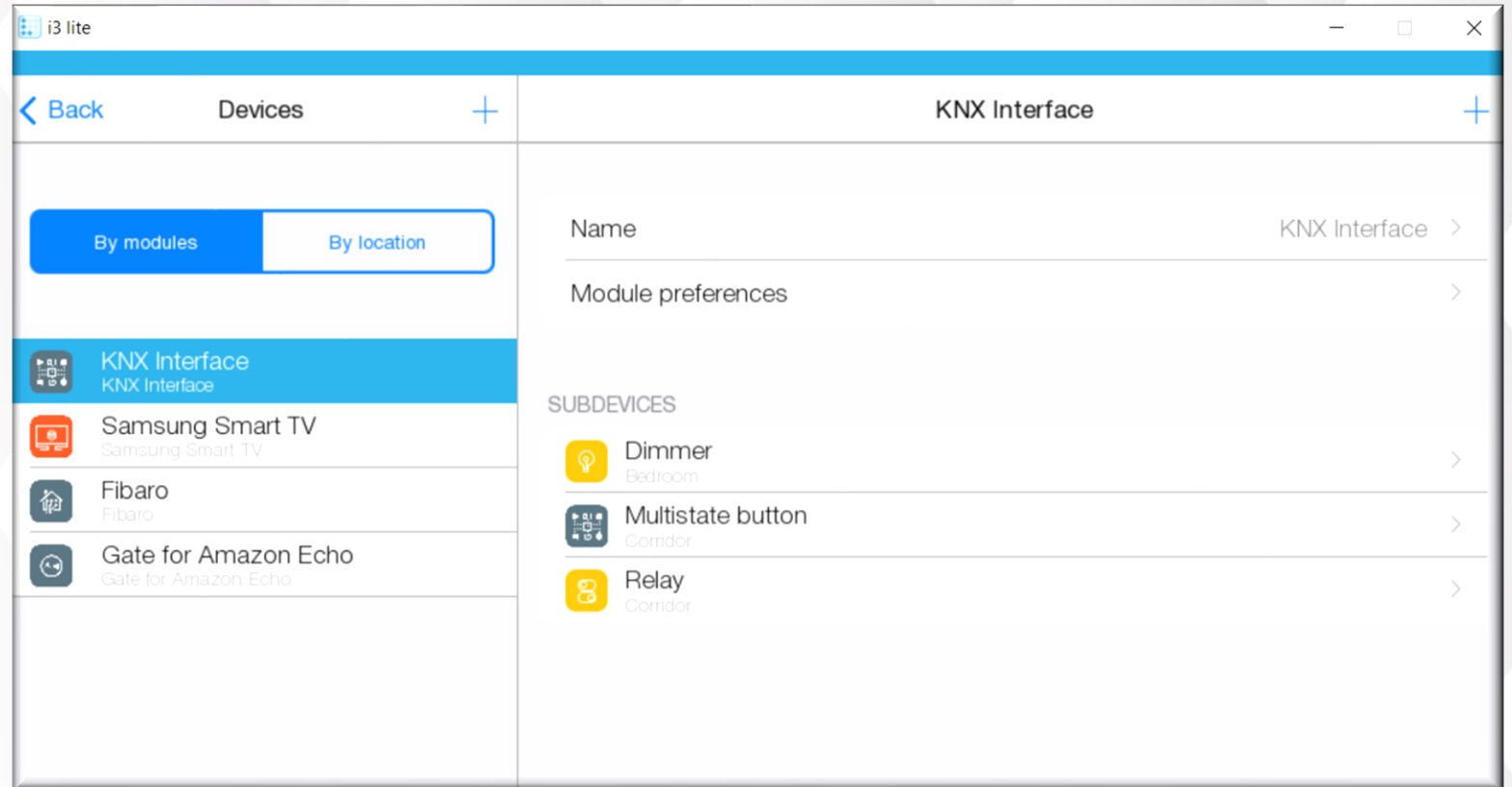




# 6- Our KNX Applications & Devices

## Category H: Other Applications

- ❖ Intercom
- ❖ Audio Control
- ❖ Video Control
- ❖ Home Appliances Control
- ❖ Irrigation Control
- ❖ Distributed Facilities







# 6- Our KNX Applications & Devices

## Category H: Other Applications

- ❖ We use other systems and integrate them to KNX System
- ❖ We Learn our students to integrate Zwave Devices with KNX System
- ❖ We Learn our students to Control KNX System With voice control Using the new Alexa
- ❖ We Learn our students how to use KNX RF Products



# 6- Our KNX Applications & Devices

## Category H: Other Applications



- ❖ We use IP Camera to monitor it in smart Application on Smart Phones
- ❖ We use it also in Security Applications

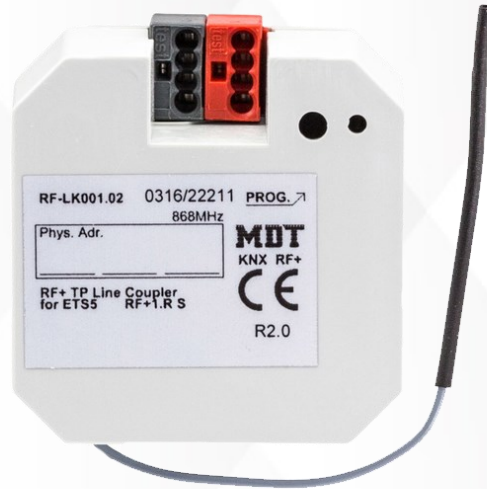


# 6- Our KNX Applications & Devices

## Category H: Other Applications



- ❖ We Learn our students how to use KNX RF Products







## **Our Future Goal**

**PORT-SAID, EGYPT BRANCH**

# 7- Our Future Goals



- ❖ We will open our second Branch
- ❖ Our new branch will contain:
  - ❖ Show Room
  - ❖ Training Center





## Contact Us

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**For more Information about our Services & our Certified Courses**

**Contact us on:**

 **Website:** [www.portosmart.com](http://www.portosmart.com)

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 **LinkedIn:** [www.linkedin.com/company/porto-smart/](http://www.linkedin.com/company/porto-smart/)





**Thank You**

**PORT-SAID, EGYPT BRANCH**