



EYTECH

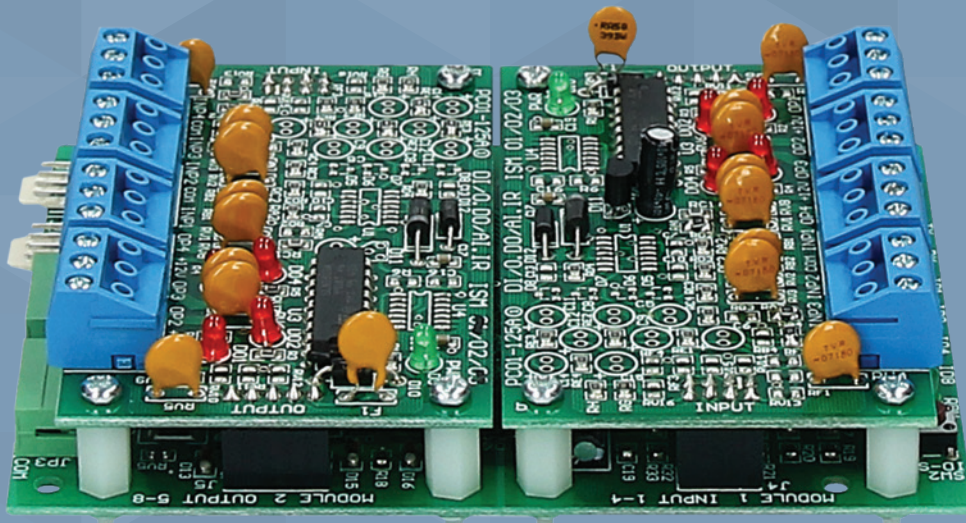
IRIO

INPUT/ OUTPUT MODULE

MULTI-PURPOSE CONTROL MODULE

The IRIO01 Intelligent Remote Input/Output Module is a Multi-Purpose Control Module capable of a wide range of automation and process control functions including Digital Inputs, Digital Outputs, Analog Inputs (0-10V and 0-20mA), Analog Outputs (0-10V), Current, Temperature and Light level sensing.

This allows the control of HVAC (with Fan Speed), Blinds, Infrared signal transmission, as well as Proportional + Integral Control (P+I) for process control applications.

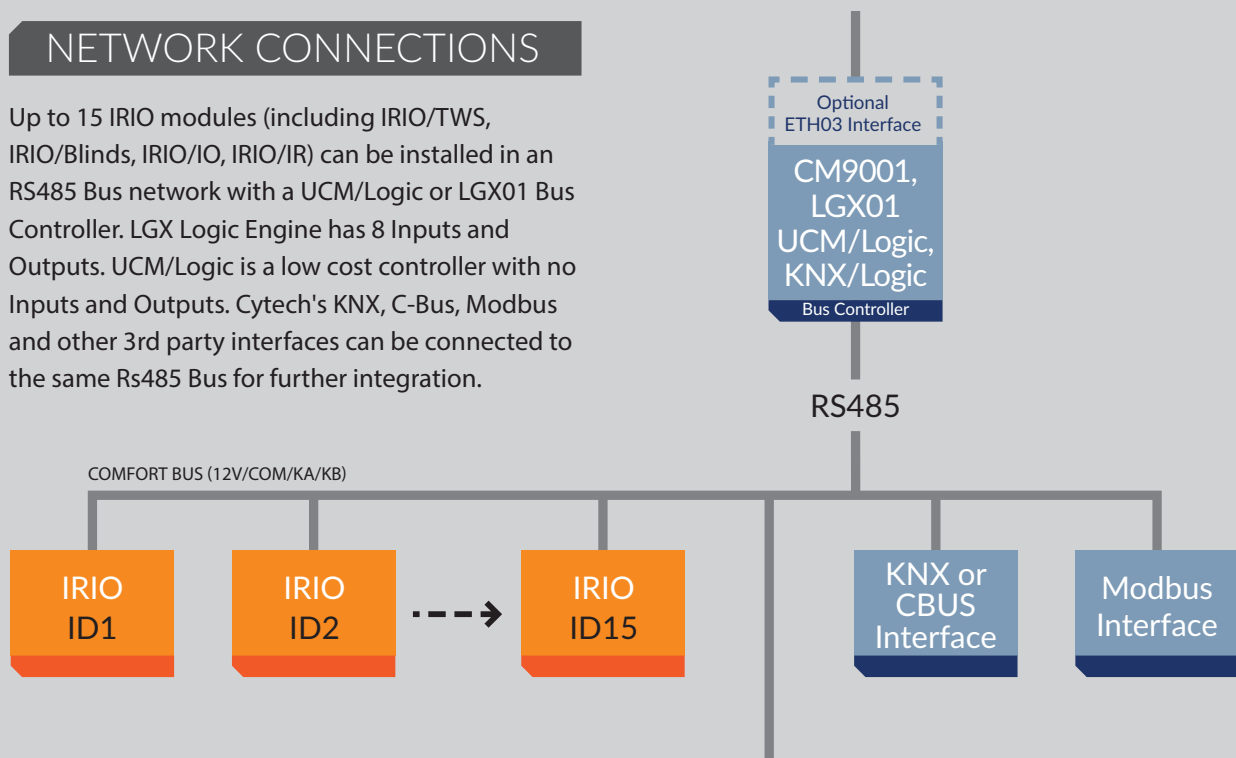


IRIO01 WITH 2 ISM SUBMODULES

The IRIO handles control functions in a way that is easy to configure. Up to 15 IRIOs can be connected to any Cytech controller system including CM9001 Alarm/Automation System, LGX01 Logic Engine, UCM/Logic Controller or KNX/Logic Controller. It is possible to interface to 3rd party automation systems including KNX, C-Bus, Modbus with the appropriate UCM Modules. The IRIO can be used in stand-alone mode when no control from other systems or other IRIOs is required.

NETWORK CONNECTIONS

Up to 15 IRIO modules (including IRIO/TWS, IRIO/Blinds, IRIO/IO, IRIO/IR) can be installed in an RS485 Bus network with a UCM/Logic or LGX01 Bus Controller. LGX Logic Engine has 8 Inputs and Outputs. UCM/Logic is a low cost controller with no Inputs and Outputs. Cytech's KNX, C-Bus, Modbus and other 3rd party interfaces can be connected to the same Rs485 Bus for further integration.



ScsRio01

Write to IRIO | Read from IRIO | Reset to Default | Get Status

iRio Properties	Submodule 1	Submodule 2	Analog Output 1	Analog Output 2	IR Transmit Codes
Submodule	ISM04 TWS				
Output 1	Two Way Switch				
Output 2	Two Way Switch				

Output Properties	
Number	1
Function	Two Way Switch
Name	Office Light 1
Register Type	Flag
Control/Feedback Flag Number	11
Control/Feedback Flag Name	F11OfficeL1
Control Register 1 Number	Unassigned
Control Register 1 Name	
Control Register 2 Number	Unassigned
Control Register 2 Name	
Control Register 3 Number	Unassigned
Control Register 3 Name	
Sensor Number	3
Sensor Name	_TWS1
Current Sensing Threshold	128
Sensor Reporting Offset	1
Sensitivity Level	1

ScsRio01

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iRio Properties	Submodule 1	Submodule 2	Analog Output 1	Analog Output 2
Analog Output Properties				
Number	1			
Name	Bedroom Light			
Register Type	Counter			
Control Counter Number	59			
Control Counter Name	Counter059			
Full Scale Value	255			
Travel Time	0			
On Level	Full Bright			
Minimum Dim Level	0			

PROGRAMMING

The IRIO is programmed using the free Configurator Software tool. (Requires UCM Universal Communications Module).

APPLICATION AREA EXAMPLES

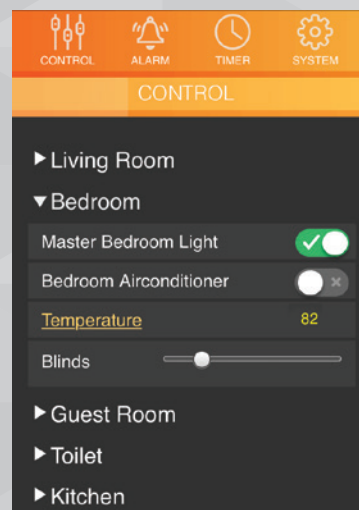
- LED Lighting – 0-10V Dimming Control
- Process Control: 0-10V for Valves, Fan Speed etc with Proportional + Integral (P+I) Control
- A/C Current Monitoring in Air-Conditioning, Heating, Lighting and other appliances
- Use with CM9001-EMS Environmental Monitoring System to manage and display set-points, Sensor Values, trigger alarms which activate sirens, and send notifications by SMS and email

TIME PROGRAMS

Time programs can be scheduled to switch any device on or off or change temperature of aircons based on time of day and different days of week.

APP CONTROL

Free apps are available for iOS and Android to control and see the status of the connected lighting, aircons, blinds and other appliances. The UCM/Logic ethernet interface should be connected to the router in the house.



SPECIFICATION

- Low Power Microcontroller with Flash memory for firmware and configuration settings
- Power Supply: 12V 1 Amp DC
- Analog Outputs: 2 x 0-10V DC Suitable for loads with min 5K ohms input impedance
- Bus Communications: Up to 15 IRIOs on RS485 network
- Baseboard PCB Size: 120 × 88 mm (Mounting Holes: 98 × 78 mm (same location as UCM))
- Sockets: 2 x submodule (ISMs) sockets

ISM SUBMODULES

Each IRIO can accept two plug-in submodules from the list below:

- ISM01 Digital I/O Submodule with 4 Outputs and 4 Inputs
- ISM02 Digital Outputs/Analog Inputs Submodule with 4 Digital Outputs and 4 Analog Inputs
- ISM03 IR (Infrared) Submodule with 4 Infrared Outputs and 4 with Current Sensor Inputs
- ISM06 NO/NC Relay Submodule
- ISM07 Relay I/O Submodule
- ISM08 General I/O Submodule
- ISM09 PT1000 Submodule for Temperature Sensing

The IRIO baseboard has 2 programmable analog outputs (0-10V) for dimming and control.

Note that the submodules are not included in IRIO. They are ordered separately as required. The IRIO can work with 0, 1 or 2 submodules. The IRIO will automatically detect what submodule is plugged in.

FUNCTIONS (DEPENDING ON ISM SUBMODULE INSTALLED)

OUTPUT

- On/Off Digital Outputs with Relays
- Heating and Cooling with or without 2 speed/3 speed fan
- Air-conditioner Relay Interface with digital Feedback
- Infrared Signal with or without Current Sensing feedback
- TWS (Two Way Switch) for Lighting with current-sensing feedback
- Blinds Control AC or DC
- Analog Output 0-10V for dimming or analog control
- Proportional + Integral control (P+I) for Process Control applications (using ISM02)

INPUT

- Digital Input
- Pulse Count
- Current Sensing
- Analog Input 0-10V
- 0-20mA Input (ISM02A)
- Resistive Temperature Sensor
- PT1000 Temperature Sensor
- Resistive Sensor



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