iG200

The Modular IoT Gateway

OVERVIEW

iG200 is a modular system. It uses all programmable Xilinx zynq 7010 SoC (System on Chip) as controller processing system. The entry level version does not have machine learning capability but we are designing an advanced model with machine learning capability on chip. It is the ideal platform to infuse intelligence into today's embedded systems. The system is designed to support from -40° to 100° Celsius. It is an ideal product for African condition. Controllers and modules are based on DIN Rail mount devices which can be placed next to power DB (Distribution Box) of any setup. The main purpose of close proximity to power DB, is to measure and monitor energy consumption and controlling cost of energy heavy device electrical connection at house or building. The device will optimize the energy consumption and provide a gateway to the internet all in a single location.

This cost effective modular system controller offers a Dual ARM® Cortex®-A9 MPCore™ with CoreSight™ with 23K Logic Cells and Spartan 6 FPGA inside the expansion modules. The major benefit of the FPGA based system is a very low power requirement to run the system as well as it is less sensitive to temperature and heat conditions. Parallel processing can provide highly efficient way of reading sensor signals and making sense out of it. The main controller supports 32 modules.

FEATURES

Input	Output	Power
» Digital Modules: 10 Ports each	» PWM Module : 5 ports	» Built-in two 10/100/1000
» Analog modules 5 Ports each	» Relay Module : 5 ports	Ethernet Port – WAN and LAN
		» Fiber optic converter module.

USE CASES

» Building Automation System
» Physical Intrusion Prevention System
» Fire Prevention System
» Energy Monitoring
» Home Internet Gateway
» Smart City Applications

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CONTROLLER

Component

Specifications

ARM Cortex-A9 Based Application Processor Unit (APU)

» 2.5 DMIPS/MHz per CPU
» CPU frequency: Up to 1 GHz
» TrustZone® security
» NEON™ media-processing engine
» 512 Mb DDR3 External memory and 256 Kb internal memory
» Two 10/100/1000 tri-speed Ethernet Interface
» Two USB 2.0 OTG peripherals, each supporting up to 12 Endpoints
» Two full CAN 2.0B compliant CAN bus interfaces
» Two SD/SDIO 2.0/MMC3.31 compliant controllers
» Two full-duplex SPI ports with
» Two high-speed UARTs (up to 1 Mb/s)
» Management console interface

MODULES

Media Converter

Media transmission distance up to 550m, 10km or longer, depending on the optional 1000BASE-SX/LX SFP transceiver modules

Analog Module

Acquisition of an analogue signal at a 16-bit resolution for standard signals +/- 10V, 0-20mA, 4-20mA

Analog Module

Free configuration of its 10 terminals as digital input or output

Relay Module

5 ports with maximum output current of 1.4 A for each terminal

PWM Module

5 PWM outputs which provide pulse width modulated signals (PWM) within the range of 0% to 100% for controlling of actuators

ORDERING INFORMATION

Item	Description
iG200-GW-M-CTRL	Model 200 and controller unit
iG200-EM-ANALOG	Analog Expansion Module
iG200- EM-Digital	Digital Expansion Module
iG200- EM-PWM	PWM Module
iG200- EM-MEDIA	Fiber Optic Media converter
iG200- EM-Relay	Relay Module

FOR MORE INFORMATION

For more information about iG200 products, please contact us at sales@nybsys.com

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