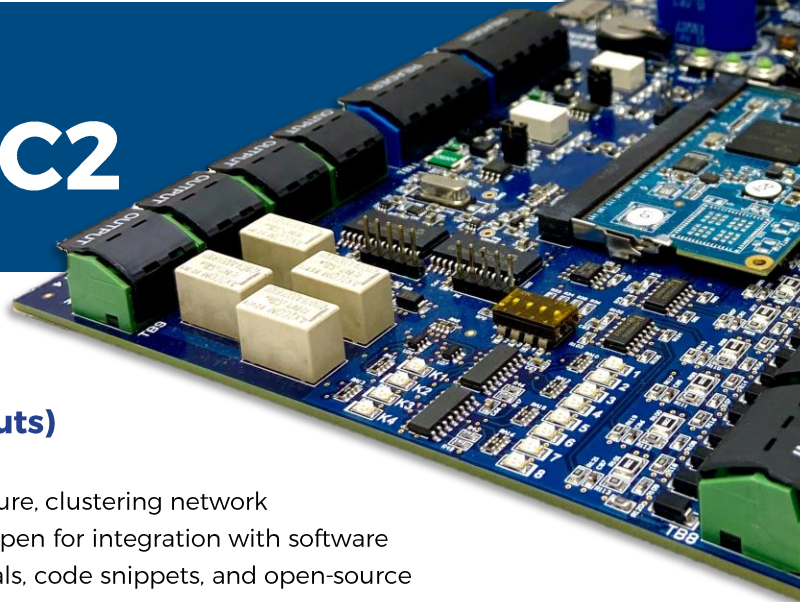# BLU-IC2

Azure Access Technology BLU-IC2
High-Speed, 2-Reader Network Controller
(2 Reader Ports, 8 Supervised Inputs, 4 Outputs)

The high-performance BLU-IC2 is an open-hardware architecture, clustering network controller that fully supports up to two doors. The BLU-IC2 is open for integration with software solutions via intuitive SDKs (across multiple languages). Tutorials, code snippets, and open-source example applications are available to accelerate integration. The BLU-IC2 fully leverages the embedded Linux™ OS to offer features like 3rd party application support. Communications are encrypted end-to-end (Host to reader), firmware is encrypted, and user certificates are supported.

Notable Features

◗ **OPEN HARDWARE PLATFORM**
> SDK allows for hardware integration into any cloud or on-site Host software

◗ **EMBEDDED LINUX™ OS**

◗ **HOST-TO-READER ENCRYPTION**
> All serial and network communications can be encrypted

◗ **FULLY CONFIGURABLE HARDWARE INTERFACES**
> Onboard interfaces support 2 doors using TTL or RS485 (OSDP) readers, or up to 4 doors using OSDP readers with extra licenses

◗ **RAPID DOWNLOAD SPEEDS**
> Performance of up to 10K cards per second

◗ **BIOMETRIC TEMPLATES STORED ONBOARD**

◗ **READER PORTS SUPPORT BOTH WIEGAND & OSDP READERS**

Competitive Edge

◗ **NETWORK CLUSTERING**
> Controller-to-controller communications for features like shared anti-passback and improved Host connection performance

◗ **OEM / 3rd-PARTY DEVELOPED & INSTALLED APPS**
> User-developed, user-deployed, and user-maintained applications that run on the controller in a safe, containerized environment

◗ **ASYNCHRONOUS COMMUNICATIONS**
> Events are sent to the host in real time, without polling

◗ **SCRIPTING & INTERNAL VARIABLES**
> Without modifying firmware, user-created scripts can be run locally to modify logic, create conditional actions, manage events, and manipulate interfaces

◗ **COST-EFFECTIVE EXPANSION**
> Connect up to 16 OSDP readers with inexpensive upgradable licenses while reducing hardware costs

◗ **INDUSTRIAL OPERATING TEMPERATURE (-40°C to +85°C)**

◗ **PoE+ OPTION**
> PoE+ coupled with the auxiliary output power port enables fully securing a door without needing a DC power supply

Security

◗ OpenSSL
◗ TLSv1.3 with TLS Server/Peer certificate checking
◗ AES256-SHA256
◗ OSDP Secure Channel
◗ FIPS 201-2
◗ SSCPv2; Meets ANSSI encryption requirements
◗ CAC
◗ TWIC
◗ Firmware upgrades are signed and encrypted

Access Control

◗ Anti-Passback
◗ Threat levels
◗ Use Limits
◗ N man rule
◗ Occupancy Management
◗ Visitors and Escorts
◗ Elevator Control (Up to 128 floors)
◗ Host-Controlled Access Request
◗ Duress Code
◗ Keypad with flexible pin lengths
◗ Supported reader types:
> OSDP
> Wiegand
> Clock & Data
> SSCPv2
> FIPS 201 PKI-based card and legacy types
> Biometric

AZURE BLU-IC2

POWER
- Input Power (VIN):
  - 12-24VDC; 350mA typical MAX current
  - PoE+
- Auxiliary Output Power: VIN passthrough; 1A MAX current
- Reader Port output power:
  - VIN passthrough with 500mA MAX per port
  - 12VDC regulated with 500mA MAX per port or 600mA MAX combined
- USB 5VDC; 500mA MAX current
- Onboard power supervision with backup power
  - Events and RTC maintained through power failure

ONBOARD HARDWARE INTERFACES
- 2 Reader Ports supporting up to 2 TTL readers or up to 8 RS485 readers
  - Open-collector Buzzer output
  - Supports single-wire and two-wire reader LED control when using the Buzzer output for LED control
- 8 Supervised or Unsupervised Inputs
  - Configurable supervision values (12 pre-defined)
  - High-speed input scanning with filtering/noise suppression to eliminate false alarms
  - High-precision analog ICs for stability in noisy environments
- 4 Form-C Relay Outputs
  - 2A @ 30VDC MAX rating
- 2 Unsupervised Inputs for Cabinet Tamper & Power Failure
- 2 Network Ports
  - 1 dedicated 10/100 Ethernet port
  - 2nd Ethernet port possible with USB-to-Ethernet adapter
- 2 Downstream, RS485 Serial Com Ports
  - Multidrop up to 32 IO and/or Reader Interfaces per port
  - 9,600 to 115,200 baud
  - 2-wire interface; half-duplex
  - Each port can be configured for a different RS485 protocol
- Micro SD card
- Micro USB 2.0 with OTG support

MEMORY CAPACITY
- Minimum Memory Specs: 512MB Flash & 256MB RAM
- Up to 1 million cards
- Up to 128 readers with standard configuration
- Configurable 100K+ Event buffer
- 300 Access Levels per controller
- 50 Access Levels per cardholder
- 127 Magnetic stripe card formats
- 127 Wiegand card formats

NETWORK AND HOST
- Onboard web server for board configuration
- Host-initiated or controller-initiated connections
- Up to 5 concurrent Host connections with authorized-host list
- IPv4 / IPv6 (Static or DHCP)
- SNMP

REGULATORY COMPLIANCE
- UL 294, UL294B, UL1076, UL2610
- ULC / ORD C1076
- CE Compliant
  - EN 61000-6
  - EN 50130-4
- FCC Part 15 Class A
- RoHS / Pb (Lead) Free

INTUITIVE SOFTWARE INTERFACING
- Native SDK
- .NET SDK
- Java SDK
- Available tutorials, code snippets, & open-source example applications to accelerate integration

GENERAL INFORMATION
- Industrial operation temperature (-40°C to +85°C)
- Dimensions: 8in (203.2mm) x 5.5in (139.7mm) x 0.88in (22.35mm)
- Weight: 0.6 pounds (272 grams)
- SKU: **801210-***** (add "-P" to include PoE+ option)

SYSTEM DIAGRAM