

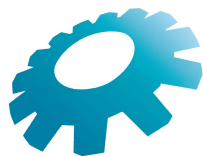


AGIOxx

Central-i I/O Module

Datasheet

Rev.1.1



www.agito-akribis.com

Member of Akribis Systems group



Product Description

The AGIOxx is a series of Central-i remote I/O modules. They are used to expand the number of I/O interfaces in the Central-i network. These adapters enable the Central-i master controller to read from and write to both digital and analog I/Os.

The I/Os are configurable either by hardware or software.

- AGIO01-CI is an I/O module that supports up to 16 digital inputs, 8 digital outputs, 4 analog inputs (16-bit), and 3 differential bi-directional I/Os.
- AGIO02-CI is an I/O module that supports up to 32 digital inputs, 16 digital outputs, 4 analog inputs (12-bit) and 2 analog outputs (16-bit).

Most of the inputs are configurable to connect NPN or PNP sensors. Most of the outputs are

software configurable to sink or source current. Typically, each output can sink up to 500 mA and source 300 mA, which is sufficient current to operate most relays and solenoids.

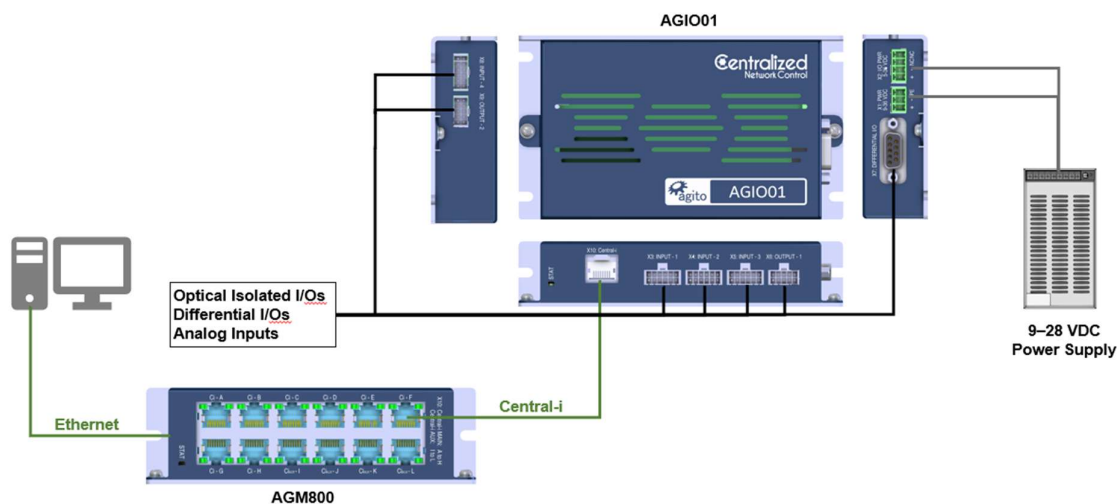
Part Numbering

Product Description	Part Number
16 digital inputs and 8 digital outputs 4 analog inputs (16-bit) 3 bi-directional differential I/Os	AGIO01-CI-1608
32 digital inputs and 16 digital outputs 4 analog inputs (12-bit) and 2 analog outputs (16-bit)	AGIO02-CI-3216

EC: Central-i communication

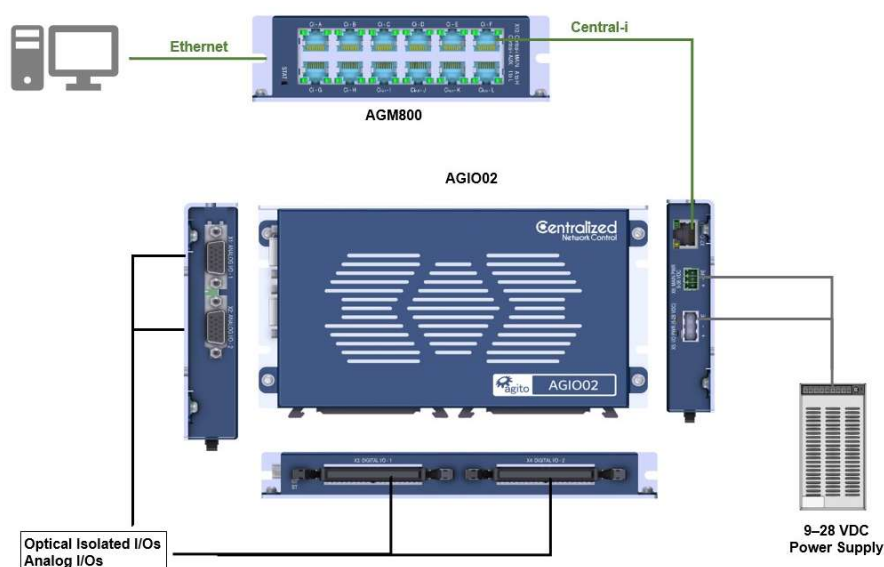
System Design

AGIO01 system





AGIO02 system



Technical Specification

Electrical Specifications

Feature	AGIO01- CI-1608	AGIO02- CI-3216
Power supply	9–36 VDC	
Communication	Central-i	
Sampling rate	16 kHz	
Isolated digital inputs	16	32
Isolated digital outputs	8	16
Analog inputs	4 (16-bit resolution)	4 (12-bit resolution)
Analog outputs	0	2 (16-bit resolution)
Bi-directional differential I/Os	3	0

I/O Specifications

Feature	Specification
Power supply for optically isolated I/Os	Voltage: 5–28 VDC
Optically isolated digital inputs	Type: PNP/NPN Propagation delay: 10 μ s Max. frequency: 100 kHz

Feature	Specification
Optically isolated digital outputs	Type: Sink/Source Max current: 0.5A (for Sink type), 0.3A (for Source type) Propagation delay: 10 μ s Max. frequency: 100 kHz
Bi-directional differential I/Os (AGIO01 only)	Hardware: Differential RS422 Termination: 120 Ω Propagation delay: 100 ns Max. frequency: 5 MHz Direction: Input or output, set by Agito PCSuite Bi-dir differential output voltage: 2.3 VDC
Analog inputs	Operational voltage: $\pm$ 10V Resolution AGIO01 : 16 bits Resolution AGIO02 : 12 bits
Analog outputs	Operational voltage: $\pm$ 10V Resolution AGIO02 : 16 bits

Central-i Specifications

Feature	Specification
Topology	Star (peer to peer)
Cycle time	61 μ s
Connector type	RJ-45 (Cat5e cable)



Feature	Specification
Cable length	Up to 20 m Longer cables, up to 100 m, are possible with special hardware
Physical layer	Dual channel RS485 full duplex
Baud rate	20 Mbps (per channel)
Synchronization between nodes	8 nanoseconds

Environmental Specifications

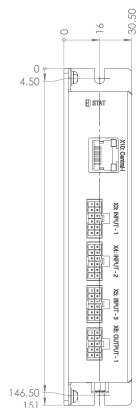
Feature	Specification
Operating temperature*	0°C to 45°C
Storage temperature	-20°C to 70°C
Operating humidity	< 90%
Storage humidity	< 40%
Pollution degree	2

Feature	Specification
Vibration	Per 1G @ 150 Hz according to IEC 60068-2-6
Operating conditions	Protection class: IP20

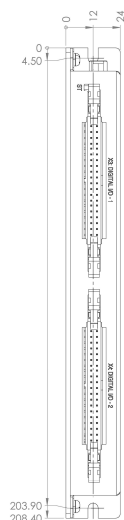
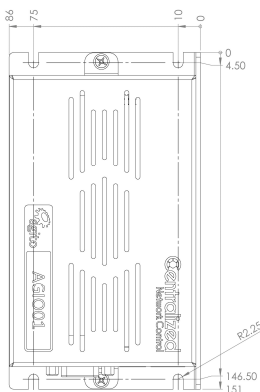
* The operational range may be additionally limited by the internal temperature protection of the product.

Dimensions and Weight

Feature	AGIO01	AGIO02
Unit dimensions (max)	H=151 mm W=30.5 mm D=86 mm	H=208.4mm W=24 mm D=115.2 mm
Package dimensions	H=210mm W=49 mm D=139mm	H=255 mm W=35 mm D=154 mm
Unit weight	334g	550.5g
Shipping weight	231.5g	387.5g



AGIO01 Dimensions (mm)



AGIO02 Dimensions (mm)

