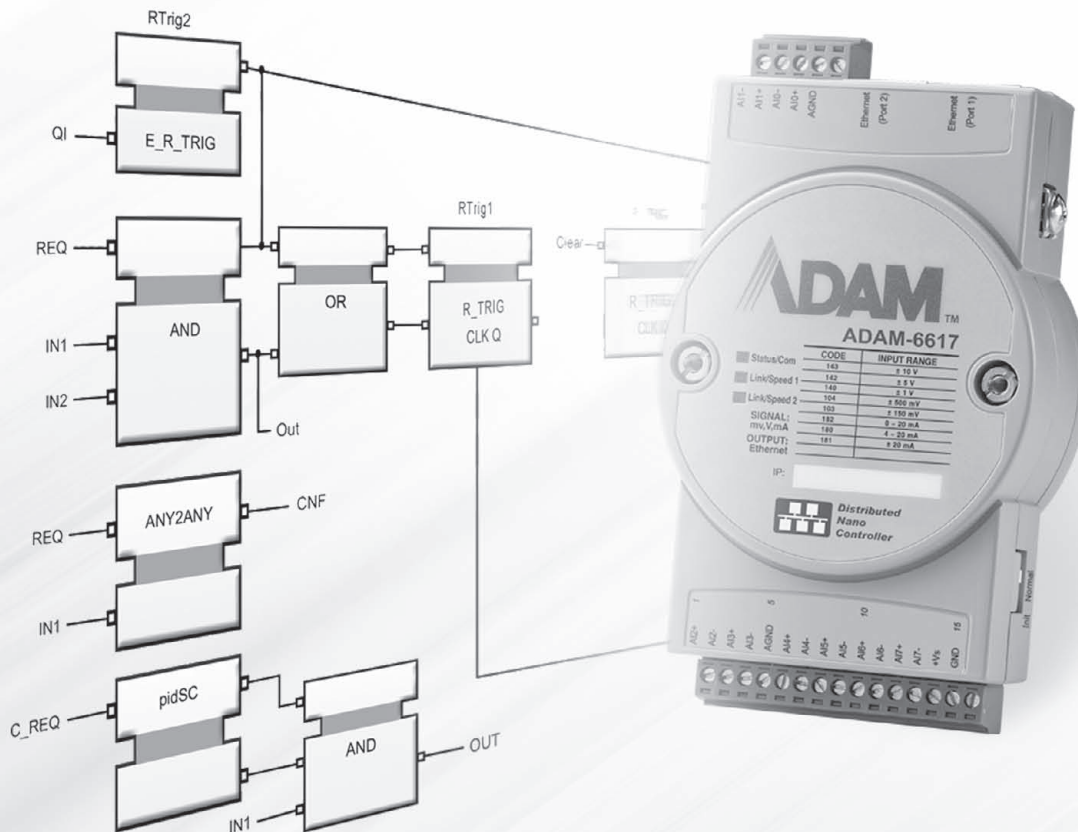


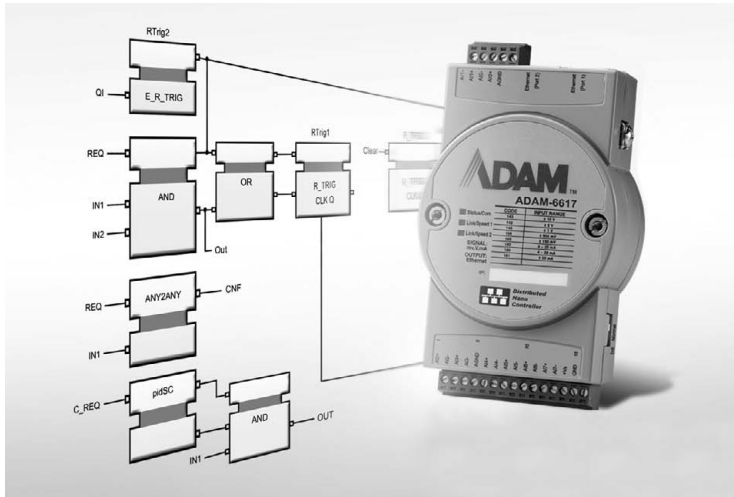
Distributed Nano Controllers

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To view all of Advantech's Distributed Nano Controllers, please visit www.advantech.com/products.



Distributed Nano Controller Overview



Features

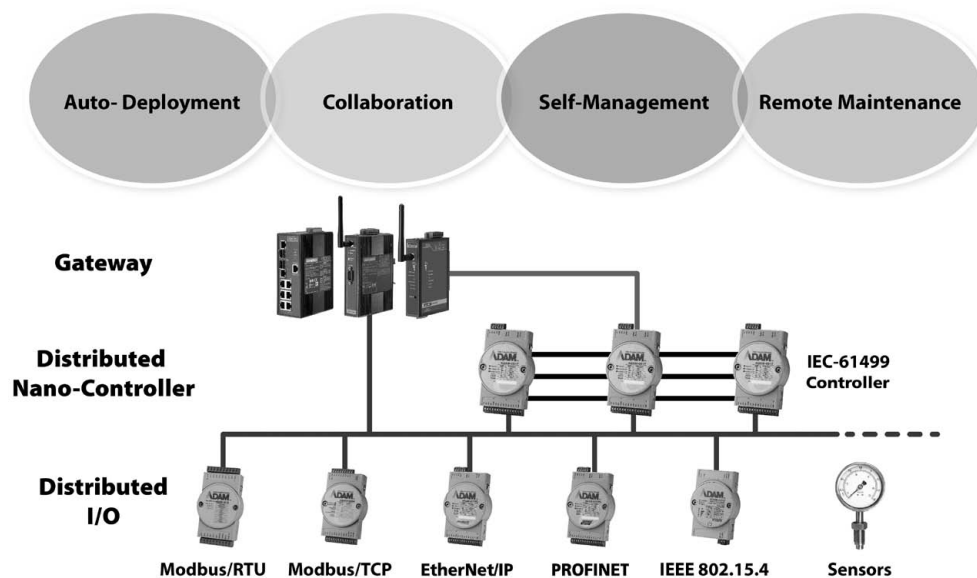
- IEC 61499 Standard Compliance
- Real-time Embedded Kernel
- Ethernet-based Smart I/O Controller
- Mixed I/O In Single Module
- Uninterruptible Daisy Chain Connections
- Function Block Configuration By IDC Builder
- Real Time Clock
- Non-volatile memory for Data Storage
- Multiple Mounting Mechanisms

The Concept of Intelligent Distributed Control Systems

Imagine that you have a smart device that can be assigned for independent work and it makes tasks simpler and more intelligent. What you have to do is map out the scenario you need, then this smart device will work intelligently after a simple installation. In the near future, buildings will automatically adjust their internal temperature as the weather changes; traffic signals will identify traffic conditions and send alerts to drivers; oil fields and solar farms will be able to be remotely managed and maintained and manufacturing plants will be able to work independently and enable self-acting mechanisms to detect abnormal situations. By leveraging Intelligent Distributed Control Systems. People have already started to make these ideas come true.

Today, while centralized control systems provide significantly more benefits than earlier ones, they also suffer from the disadvantage that the entire process will be shut down once the central processing station is lost. Therefore, specific devices and applications are required to provide more flexibility and the ability to self-manage. The devices also need to be enduring with an ability to be automatically deployed and managed. People can easily maintain their settings through the internet with remote applications. This trend implies that active communication between systems is to increase and these automation systems, as well as controlling software applications, have to be reconfigurable and reusable.

Now, we are pleased to inform you that Advantech's ADAM-6600 series, which adheres to the international IEC 61499 standard, will help you to accomplish these ideals. It possesses an embedded run-time kernel and Ethernet-based transmission. Users can design a variety of unlimited applications through the easy-to-use IEC 61499 function block builder (IDC Builder) which is simply downloaded on to your application and into ADAM-6600 modules without being restricted by the limitations of Ethernet cables. ADAM-6600 modules will also work intelligently with other distributed modules and offer the user with a series of unexpected capabilities including auto deployment, collaboration, self-management and remote maintenance.



Distributed Nano Controller Overview

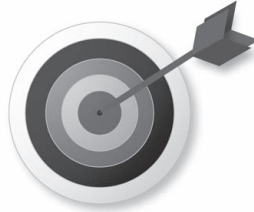
ADAM-6600 Special Product Feature

Uninterruptible Daisy Chain Connection



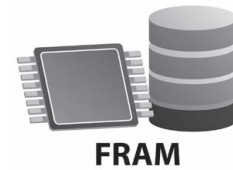
In a traditional daisy-chained topology, network communication will be lost if one Ethernet switch is shutdown because of unanticipated factors and will therefore lead to a loss of data. ADAM-6600 modules offer an uninterruptible daisy chain connection which enables the signal to bypass the broken Ethernet devices and go to the next Ethernet port. ADAM-6600 modules also have rechargeable batteries to sustain the power of the Ethernet switch for over two months if external power is cut.

Real Time Clock



A real time clock (RTC) is a valuable built-in feature of ADAM-6600 modules which consume very little power and have the benefit of current time tracking thereby freeing the main system for time-critical tasks.

Non-volatile RAM for Data Storage



With a controller, a supplementary storage space to keep the data and parameters is important once the device shuts down. Previously, this was performed by the battery backup RAM. However, the biggest disadvantage of that solution is that the data will be lost once the battery power runs out. ADAM-6600 modules provide an attractive design with built-in non-volatile Ferroelectric RAM (FRAM), which prevents time-limited data storage so you won't be afraid of unanticipated data loss when the devices power off.

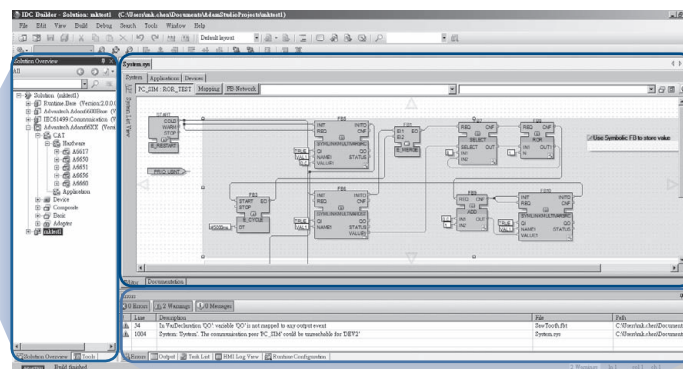
IDC Builder (Intelligent Distributed Control Builder)

IDC Builder is an easy-to-use FREE software for designing distributed control systems. It has been developed to meet the requirements of systems with one or more different controllers based on the IEC 61499 standard and communication between the distributed controllers is established automatically. With this software, function block control logic can be simply integrated with ADAM-6600 series, using clever operating interface to reduce the complexity of the setting. The IDC Builder is based on .NET technology and can therefore be extended without much effort. It allows the programming language Structure Text to create the control algorithm for the basic function block.

When using this software, customers participate in the development process of the product itself.

Extraction from the list of functions:

- Design of distributed control systems according to IEC 61499
- Design of dynamic visualizations
- Process linking through hardware CATs
- Diagnosis and maintenance also without any other engineering tool
- Automatic communication between distributed logic units
- Project storage in standards-compliant XML
- And much more...



Solution Overview

- Ready-to-use ADAM-6600 Function Block
- Versatile Function Block Library
- Flexible Project Development UI

Edit Zone

- Graphical System Architecture
- Switchable Working Environment
- Simulation for Multiple Devices In Single Window

Message Window

- System Operation Information
- Error and Debug Message
- Run-time Configuration Tool

- 1 Motion Control
- 2 Hazardous Location
- 3 Energy Automation
- 4 Building Automation Systems
- 5 Automation Software
- 6 Operator Panels
- 7 Automation Panel PCs
- 8 Industrial Monitors
- 9 Industrial Ethernet
- 10 Device Servers & Gateways
- 11 Serial Communication Cards
- 12 Embedded Auto. Computers
- 13 PACs
- 14 M2M I/O
- 15 Distributed Nano Controllers
- 16 RS-485 I/O
- 17 Ethernet I/O
- 18 DAO Boards

Distributed Nano Controller Overview

General IEC 61499 Standard Introduction

The IEC 61499, which was official launched by International Electrotechnical Commission (IEC) in 2005, defines an open architecture for the development of distributed control applications in Industrial Process Measurement and Control Systems (IPMCS). IEC 61499 integrates advanced software technologies, event-driven execution, component-based design and distributed control concept. Regarding distributed control systems, IEC 61499 architecture provides all the essential features such as encapsulation of semantics, portability, configurability and a holistic view of distributed applications. The IEC 61499 accomplishes these features above through Function Blocks which is basically extended from IEC 61131 standards and consists of a body with data inputs and outputs and of a head with event inputs and outputs

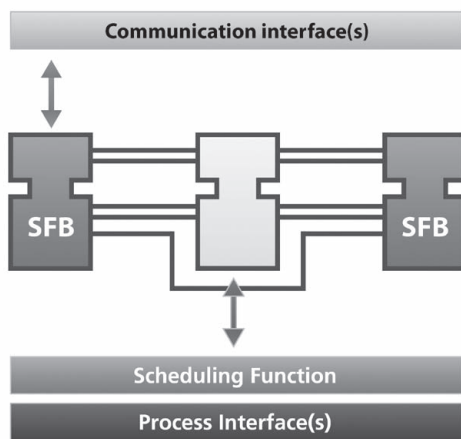


Figure 1: The Structure of IEC 61499

IEC 61499 Function Block Type

IEC 61499 defines three types of function block by interior design: Basic Function Block, Composite Function Block and Service Function Block. A basic function contains algorithms and an Execution Control Chart (ECC). The ECC controls the execution of the algorithm is triggered by an input event. The execution of the algorithm will generate output data based on the input data and the output event is generated afterwards. Then, the output event will be delivered to the next function blocks.

Composite function blocks contain basic function blocks and/or other composite function blocks. Finally, service function block define specific mechanisms which are the interaction between function block applications and hardware resources.

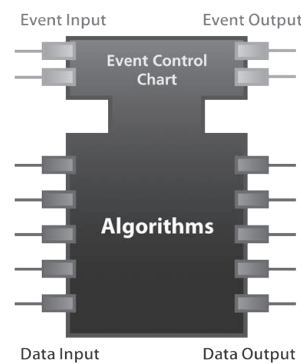


Figure 2: Basic Function Block

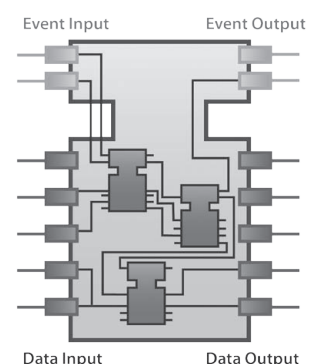


Figure 3: Composite Function Block

New Point of View from IEC 61499

The IEC 61499 standard features an XML-based interchange format for function blocks and control applications.

There is no restriction toward the applied controller and communication networks once the specific service function blocks are established. It clearly shows IEC 61499 outperforms than IEC 61131, which the controller structure is a real object-oriented, distributed and allowed reconfiguration at runtime and resources. The emerging standard also provides a remarkable benefits including the data consistency, synchronous operation among devices and simplifying the development and maintaining robust control systems. IEC 61499 is also able to split the different parts of function block applications into different controllers for a complex industrial automation process. These divided function blocks can be distributed and interconnected across multiple controllers such as the example of Figure 4.

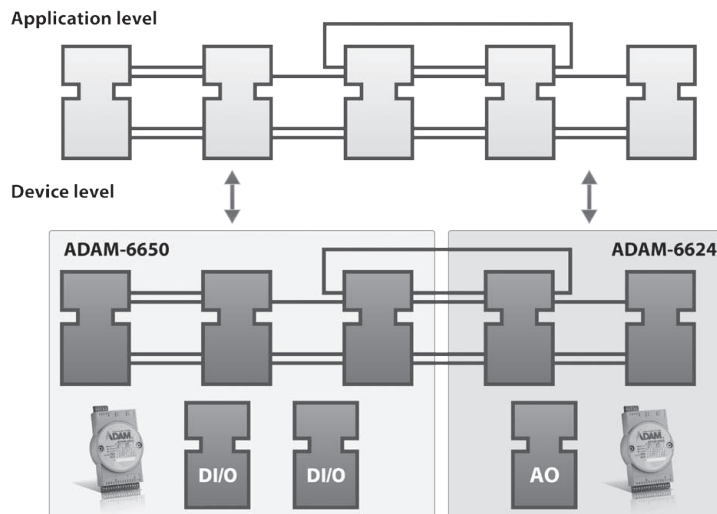


Figure 4: Example of IEC 61499

Distributed Nano Controller Selection Guide

NEW



NEW



NEW



Specification/Model		ADAM-6617	ADAM-6618	ADAM-6624
CPU		ARM Cortex-M3		
Memory		SDRAM 8MB; Flash ROM 4MB		
Interface		10/100 Mbps Ethernet		
IEC 61499 Standard Compliance		Yes		
Real Time Kernel Embedded		Yes		
Real Time Clock		Yes		
Analog Input	Resolution	16 bits		-
	Channels	8	7	-
	Sampling Rate	10 S/s	10 S/s	-
	Voltage Input	± 150 mV, ± 500 mV ± 1 V, ± 5 V, ± 10 V	± 50 mV, ± 100 mV, ± 500 mV ± 1 V, ± 2.5 V	-
	Current Input	0-20 mA, 4-20 mA ± 20 mA	0-20 mA, 4-20 mA ± 20 mA	-
	Direct Sensor Input	-	J, K, T, E, R, S, B Thermocouple	-
Analog Output	Resolution	-	-	12 bits
	Channels	-	-	4
	Voltage Output	-	-	0 ~ 5 V, 0 ~ 10 V, ± 5 V, ± 10 V
	Current Output	-	-	0 ~ 20 mA, 4 ~ 20 mA
Digital Input/ Output	Input Channels	-	-	4 (Dry Contact Only)
	Output Channels	-	-	-
Isolation Protection		2,500 V _{DC}		
Connectors		2 x RJ-45 LAN (Uninterruptible Daisy Chain) Plug-in screw terminal block (I/O and Power)		
Page		15-6	15-7	15-8

NEW



NEW



NEW



NEW



Specification/Model		ADAM-6650	ADAM-6651	ADAM-6656	ADAM-6660
CPU		ARM Cortex-M3			
Memory		SDRAM 8MB; Flash ROM 4MB			
Interface		10/100 Mbps Ethernet			
IEC 61499 Standard Compliance		Yes			
Real Time Kernel Embedded		Yes			
Real Time Clock		Yes			
Digital Input/ Output	Input Channels	8	16	-	-
	Output Channels	7	-	16	6-ch Relay
Isolation Protection		2,500 V _{DC}			
Connectors		2 x RJ-45 LAN (Uninterruptible Daisy Chain) Plug-in screw terminal block (I/O and Power)			
Page		15-9	15-9	15-9	15-10

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Motion Control

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Hazardous Location

3
Energy Automation

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Building Automation
Systems

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Automation Software

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Operator Panels

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Automation Panel PCs

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Industrial Monitors

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Industrial Ethernet

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Device Servers &
Gateways

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Serial Communication
Cards

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Embedded Auto.
Computers

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M2M I/O

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Distributed Nano
Controllers

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RS-485 I/O

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Ethernet I/O

18
DAQ Boards

ADAM-6617

Distributed Nano Controller with 8-ch Isolated Analog Input

NEW



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Features

- Isolated 8-ch analog input
- IEC 61499 standard compliance
- Real-time embedded kernel
- Uninterruptible daisy chain connections
- Real-time clock
- Non-volatile RAM for data storage
- Multiple mounting mechanisms

Specifications

Analog Input

- **Channels** 8 (differential)
- **Input Impedance** > 10 M Ω (voltage)
120 Ω (current)
- **Input Type** mV, V, mA
- **Input Range** ± 150 mV, ± 500 mV, ± 1 V
 ± 5 V, ± 10 V, 0-20 mA, 4-20 mA, ± 20 mA
- **Span Drift** ± 30 ppm/ $^{\circ}$ C
- **Zero Drift** ± 6 μ V/ $^{\circ}$ C
- **Resolution** 16-bit with accuracy $\pm 0.1\%$ of FSR (voltage)
 $\pm 0.2\%$ or better of FSR (current)
- **Sampling Rate** 10 sample/second (total)
- **CMR @ 50/60 Hz** 92 dB
- **NMR @ 50/60 Hz** 60 dB
- **High Common Mode** 200 V_{DC}

General

- **CPU** ARM Cortex-M3
- **SDRAM** 8MB (with 1KB Non-volatile RAM)
- **Flash ROM** 4MB
- **LAN** 10/100Base-T(X)
- **Power Consumption** 3 W @ 24 V_{DC}
- **Connectors** 2 x RJ-45 LAN, (Daisy Chain)
Plug-in screw terminal block, (I/O and power)
- **Watchdog** System (1.6 second) and Communication (programmable)
- **Power Input** 10 ~ 30 V_{DC}

Protection

- **Isolation Protection** 2,500 V_{DC}
- **Built in TVS/ESD Protection**
- **Power Reversal Protection**

Environment

- **Operating Temperature** -10 ~ 70 $^{\circ}$ C (14 ~ 158 $^{\circ}$ F)
- **Storage Temperature** -20 ~ 80 $^{\circ}$ C (-4 ~ 176 $^{\circ}$ F)
- **Operating Humidity** 20 ~ 95% RH (non-condensing)
- **Storage Humidity** 0 ~ 95% RH (non-condensing)

Software

- **Control Software** IDC Builder (development tool)
- **Function Block library** ADAM-6600 I/O block
Plentiful function block
Distributed communication block
System management block
- **Programming Capacity** Flexible application mapping to distributed modules
Function block capacity depends on the available memory
- **Up-Link Communication with SCADA/HMI** Support MODBUS TCP Protocol
Client Limitation: 8
- **Distributed Communication** Nodes up to 64/ Network Segment
Communication block up to 64/ Network Segment
- **Status Logger Message** 2 files, 64KB for each
- **WatchDog** Enable/Disable WDT through function block

Ordering Information

- **ADAM-6617** Distributed Nano Controller with 8-ch Isolated Analog Input

ADAM-6618

Distributed Nano Controller with 7-ch Thermocouple Input

NEW



CE FCC RoHS

Specifications

Analog Input

- **Channels** 7 (differential)
- **Input Impedance** > 1 M Ω (voltage), 120 Ω (current)
- **Input Type** mV, V, mA, Thermocouple
- **Temperature Range** Type: J (-210 ~ 1,200°C), Type K (-270 ~ 1,372°C), Type T (-270 ~ 400°C), Type E (-270 ~ 1,000°C), Type R (0 ~ 1,768°C), Type S (0 ~ 1,768°C), Type B (200 ~ 1,820°C)
- **Voltage/Current Range** \pm 50 mV, \pm 100 mV, \pm 500 mV, \pm 1 V, \pm 2.5 V, 0~20 mA, 4~20 mA, \pm 20 mA
- **Span Drift** \pm 30 ppm/°C
- **Zero Drift** \pm 6 μ V/°C
- **Resolution** 16-bit with accuracy \pm 0.1% (voltage or T/C)
 \pm 0.2% or better (current)
- **Sampling Rate** 10 sample/second (total)
- **CMR @ 50/60 Hz** 92 dB
- **NMR @ 50/60 Hz** 60 dB
- **High Common Mode** 200 V_{DC}

General

- **CPU** ARM Cortex-M3
- **SDRAM** 8MB (with 1KB Non-volatile RAM)
- **Flash ROM** 4MB
- **LAN** 10/100Base-T(X)
- **Power Consumption** 3 W @ 24 V_{DC}
- **Connectors** 2 x RJ-45 LAN, (Daisy Chain)
Plug-in screw terminal block, (I/O and power)
- **Watchdog** System (1.6 second) and Communication (programmable)
- **Power Input** 10 ~ 30 V_{DC}

Protection

- **Isolation Protection** 2,500 V_{DC}
- **Built in TVS/ESD Protection**
- **Power Reversal Protection**

Features

- 7-ch thermocouple input
- IEC 61499 standard compliance
- Real-time embedded kernel
- Uninterruptible daisy chain connections
- Real-time clock
- Non-volatile RAM for data storage
- Multiple mounting mechanisms

Environment

- **Operating Temperature** -10 ~ 70°C (14 ~ 158°F)
- **Storage Temperature** -20 ~ 80°C (-4 ~ 176°F)
- **Operating Humidity** 20 ~ 95% RH (non-condensing)
- **Storage Humidity** 0 ~ 95% RH (non-condensing)

Software

- **Control Software** IDC Builder (development tool)
- **Function Block library** ADAM-6600 I/O block
Plentiful function block
Distributed communication block
System management block
- **Programming Capacity** Flexible application mapping to distributed modules
Function block capacity depends on the available memory
- **Up-Link Communication with SCADA/HMI** Support MODBUS TCP Protocol
Client Limitation: 8
- **Distributed Communication** Nodes up to 64/ Network Segment
Communication block up to 64/ Network Segment
- **Status Logger Message** 2 files, 64KB for each
- **WatchDog** Enable/Disable WDT through function block

Ordering Information

- **ADAM-6618** Distributed Nano Controller with 7-ch Thermocouple Input

1

Motion Control

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Hazardous Location

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Energy Automation

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Building Automation Systems

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Automation Software

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Distributed Nano Controllers

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RS-485 I/O

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DAQ Boards

ADAM-6624

Distributed Nano Controller with 4-ch Isolated Analog Output

NEW



CE FCC RoHS

Features

- Isolated 4-ch analog output and 4-ch digital input
- IEC 61499 standard compliance
- Real-time embedded kernel
- Uninterruptible daisy chain connections
- Real-time clock
- Non-volatile RAM for data storage
- Multiple mounting mechanisms

Specifications

Analog Output

- **Channels** 4
- **Output Impedance** 2.1 Ω
- **Output Type** mA, V
- **Output Range**
 - Voltage range 0 ~ 5 V, 0 ~ 10 V, ± 5 V, ± 10 V
 - Current range 0 ~ 20 mA, 4 ~ 20 mA
- **Span Drift** ± 15 ppm/ $^{\circ}$ C
- **Zero Drift**
 - Voltage range 0 ~ 5 V : 20 μ V/ $^{\circ}$ C, 0 ~ 10 V : 40 μ V/ $^{\circ}$ C
 - ± 5 V : 40 μ V/ $^{\circ}$ C, ± 10 V : 60 μ V/ $^{\circ}$ C
 - Current range 0.21 μ A/ $^{\circ}$ C
- **Resolution** 12 bits
- **Accuracy** $\pm 0.1\%$ (Voltage) at 25 $^{\circ}$ C
 $\pm 0.1\%$ (Current) at 25 $^{\circ}$ C
- **Output Setting Time** 20 μ s
- **Output Slew Rate** 1.0 V/sec
- **Output Driving Capacity** 2 K Ω (Voltage)
500 Ω (Current)

Digital Input

- **Channels** 4
- **Input Level** Dry contact
Logic level 0: close to Iso. GND
Logic level 1: open

General

- **CPU** ARM Cortex-M3
- **SDRAM** 8MB (with 1KB Non-volatile RAM)
- **Flash ROM** 4MB
- **LAN** 10/100Base-T(X)
- **Power Consumption** 3 W @ 24 V_{DC}
- **Connectors** 2 x RJ-45 LAN, (Daisy Chain)
Plug-in screw terminal block, (I/O and power)
- **Watchdog System** (1.6 second) and Communication (programmable)
- **Power Input** 10 ~ 30 V_{DC}

Protection

- **Isolation Protection** 2,500 V_{DC}
- **Built in TVS/ESD Protection**
- **Power Reversal Protection**

Environment

- **Operating Temperature** -10 ~ 70 $^{\circ}$ C (14 ~ 158 $^{\circ}$ F)
- **Storage Temperature** -20 ~ 80 $^{\circ}$ C (-4 ~ 176 $^{\circ}$ F)
- **Operating Humidity** 20 ~ 95% RH (non-condensing)
- **Storage Humidity** 0 ~ 95% RH (non-condensing)

Software

- **Control Software** IDC Builder (development tool)
- **Function Block library** ADAM-6600 I/O block
Plentiful function block
Distributed communication block
System management block
- **Programming Capacity** Flexible application mapping to distributed modules
Function block capacity depends on the available memory
- **Up-Link Communication with SCADA/HMI** Support MODBUS TCP Protocol
Client Limitation: 8
- **Distributed Communication** Nodes up to 64/ Network Segment
Communication block up to 64/ Network Segment
- **Status Logger Message** 2 files, 64KB for each
- **WatchDog** Enable/Disable WDT through function block

Ordering Information

- **ADAM-6624** Distributed Nano Controller with 4-ch Isolated Analog Output

ADAM-6650

ADAM-6651/6656

Distributed Nano Controller with 15-ch Isolated Digital I/O

Distributed Nano Controller with 16-ch Isolated Digital Input / Digital Output



Features

- Multiple channels for digital input and digital output
- IEC 61499 standard compliance
- Real-time embedded kernel
- Uninterruptible daisy chain connections
- Real-time clock
- Non-volatile RAM for data storage
- Multiple mounting mechanisms

Specifications

Digital Input

- **Channels** ADAM-6650: 8
ADAM-6651: 16
- **Dry Contact** Logic level 0: close to DGND
Logic level 1: open
- **Wet Contact** Logic level 0: 0 ~ 3 V_{DC}
Logic level 1: 10 ~ 30 V_{DC}
(Dry/Wet Contact decided by switch)
- **Input Impedance** 10 kΩ
- **Transition Time** From logic level 0 to 1: 0.2 ms
From logic level 1 to 0: 0.2 ms

Digital Output

- **Channels** ADAM-6650: 7
ADAM-6656: 16
- **Output Voltage Range** 8 ~ 35 V_{DC}
- **Normal Output Current** 100 mA (per channel)

General

- **CPU** ARM Cortex-M3
- **SDRAM** 8MB (with 1KB Non-volatile RAM)
- **Flash ROM** 4MB
- **LAN** 10/100Base-T(X)
- **Power Consumption** ADAM-6650: 2.4 W @ 24 V_{DC}
ADAM-6651: 2.4 W @ 24 V_{DC}
ADAM-6656: 2.7 W @ 24 V_{DC}
- **Connectors** 2 x RJ-45 LAN, (Daisy Chain)
Plug-in screw terminal block, (I/O and power)
- **Watchdog** System (1.6 second) and Communication (programmable)
- **Power Input** 10 ~ 30 V_{DC}

Protection

- **Over Voltage Protection** ±35 V_{DC}
- **Isolation Protection** 2,500 V_{DC}

Power Reversal Protection

Environment

- **Operating Temperature** -10 ~ 70°C (14 ~ 158°F)
- **Storage Temperature** -20 ~ 80°C (-4 ~ 176°F)
- **Operating Humidity** 20 ~ 95% RH (non-condensing)
- **Storage Humidity** 0 ~ 95% RH (non-condensing)
0 ~ 95% RH (non-condensing)

Software

- **Control Software** IDC Builder (development tool)
- **Function Block library** ADAM-6600 I/O block
Plentiful function block
Distributed communication block
System management block
- **Programming Capacity** Flexible application mapping to distributed modules
Function block capacity depends on the available memory
- **Up-Link Communication with SCADA/HMI** Support MODBUS TCP Protocol
Client Limitation: 8
- **Distributed Communication** Nodes up to 64/ Network Segment
Communication block up to 64/ Network Segment
- **Status Logger Message** 2 files, 64KB for each
- **WatchDog** Enable/Disable WDT through function block

Ordering Information

- **ADAM-6650** Distributed Nano Controller with 15-ch Isolated Digital I/O
- **ADAM-6651** Distributed Nano Controller with 16-ch Isolated Digital Input
- **ADAM-6656** Distributed Nano Controller with 16-ch Isolated Digital Output

- 1 Motion Control
- 2 Hazardous Location
- 3 Energy Automation
- 4 Building Automation Systems
- 5 Automation Software
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- 10 Device Servers & Gateways
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- 13 PACs
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- 15 Distributed Nano Controllers
- 16 RS-485 I/O
- 17 Ethernet I/O
- 18 DAQ Boards

ADAM-6660

Distributed Nano Controller with 6-ch Relay

NEW



Features

- 6-ch relay output
- IEC 61499 standard compliance
- Real-time embedded kernel
- Uninterruptible daisy chain connections
- Real-time clock
- Non-volatile RAM for data storage
- Multiple mounting mechanisms

CE FCC RoHS

Specifications

Relay Output

- **Channels** 5 Form C
1 Form A or B (Selectable)
- **Contact Rating** AC: 250 V @ 5 A
DC: 30 V @ 5 A
- **Mechanism** 20,000,000 operations
- **Breakdown Voltage** 500 V_{AC} (50/60 Hz)
- **Relay On Time** 7 ms
- **Relay Off Time** 3 ms
- **Contact Resistance** 30 m Ω (maximum)
- **Insulation Resistance** 1 G Ω (minimum) at 500 V_{DC}

General

- **CPU** ARM Cortex-M3
- **SDRAM** 8MB (with 1KB Non-volatile RAM)
- **Flash ROM** 4MB
- **LAN** 10/100Base-T(X)
- **Power Consumption** ADAM-6660: 3.5 W @ 24 V_{DC}
- **Connectors** 2 x RJ-45 LAN, (Daisy Chain)
Plug-in screw terminal block, (I/O and power)
- **Watchdog** System (1.6 second) and Communication (programmable)
- **Power Input** 10 ~ 30 V_{DC}

Protection

- **Over Voltage Protection** ± 35 V_{DC}
- **Isolation Protection** 2,500 V_{DC}
- **Power Reversal Protection**

Environment

- **Operating Temperature** -10 ~ 70°C (14 ~ 158°F)
- **Storage Temperature** -20 ~ 80°C (-4 ~ 176°F)
- **Operating Humidity** 20 ~ 95% RH (non-condensing)
- **Storage Humidity** 0 ~ 95% RH (non-condensing)
0 ~ 95% RH (non-condensing)

Software

- **Control Software** IDC Builder (development tool)
- **Function Block library** ADAM-6600 I/O block
Plentiful function block
Distributed communication block
System management block
- **Programming Capacity** Flexible application mapping to distributed modules
Function block capacity depends on the available memory
- **Up-Link Communication with SCADA/HMI** Support MODBUS TCP Protocol
Client Limitation: 8
- **Distributed Communication** Nodes up to 64/ Network Segment
Communication block up to 64/ Network Segment
- **Status Logger Message** 2 files, 64KB for each
- **WatchDog** Enable/Disable WDT through function block

Ordering Information

- **ADAM-6660** Distributed Nano Controller with 6-ch Relay