

**ADAM
5000**

PC-based Solution for Distributed Data Acquisition & Control

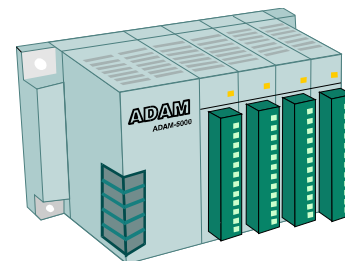


Outline

New Product Announcement

--- ADAM-5000/RS-485

Ongoing ADAM-5000 CAN Bus Version



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Successful Sales on ADAM-4000



Easy to Use

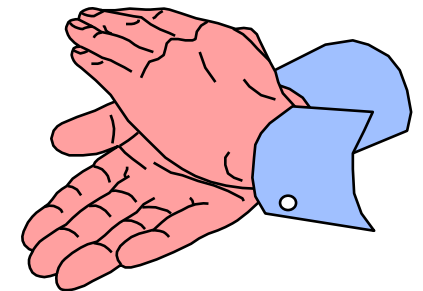
2-wire RS-485 Networking

Programming Via ASCII Command

Programmable Input Ranges

DIN-Rail/Panel Mounting

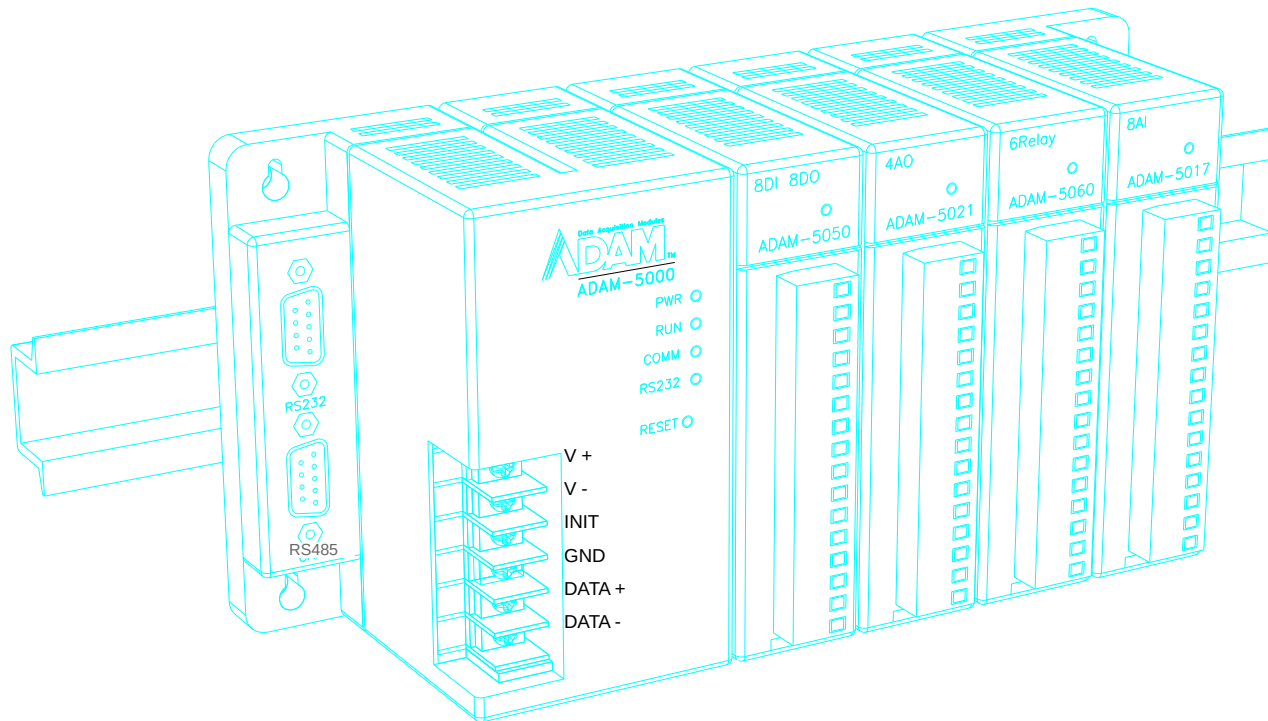
Plug-in I/O Terminal Block



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Why Design ADAM-5000 ?



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From Customers Feedback

Multi-channel Solution

Faster Communication Speed

Watchdog Supervisory

3-way Isolation

Event Handling Capability

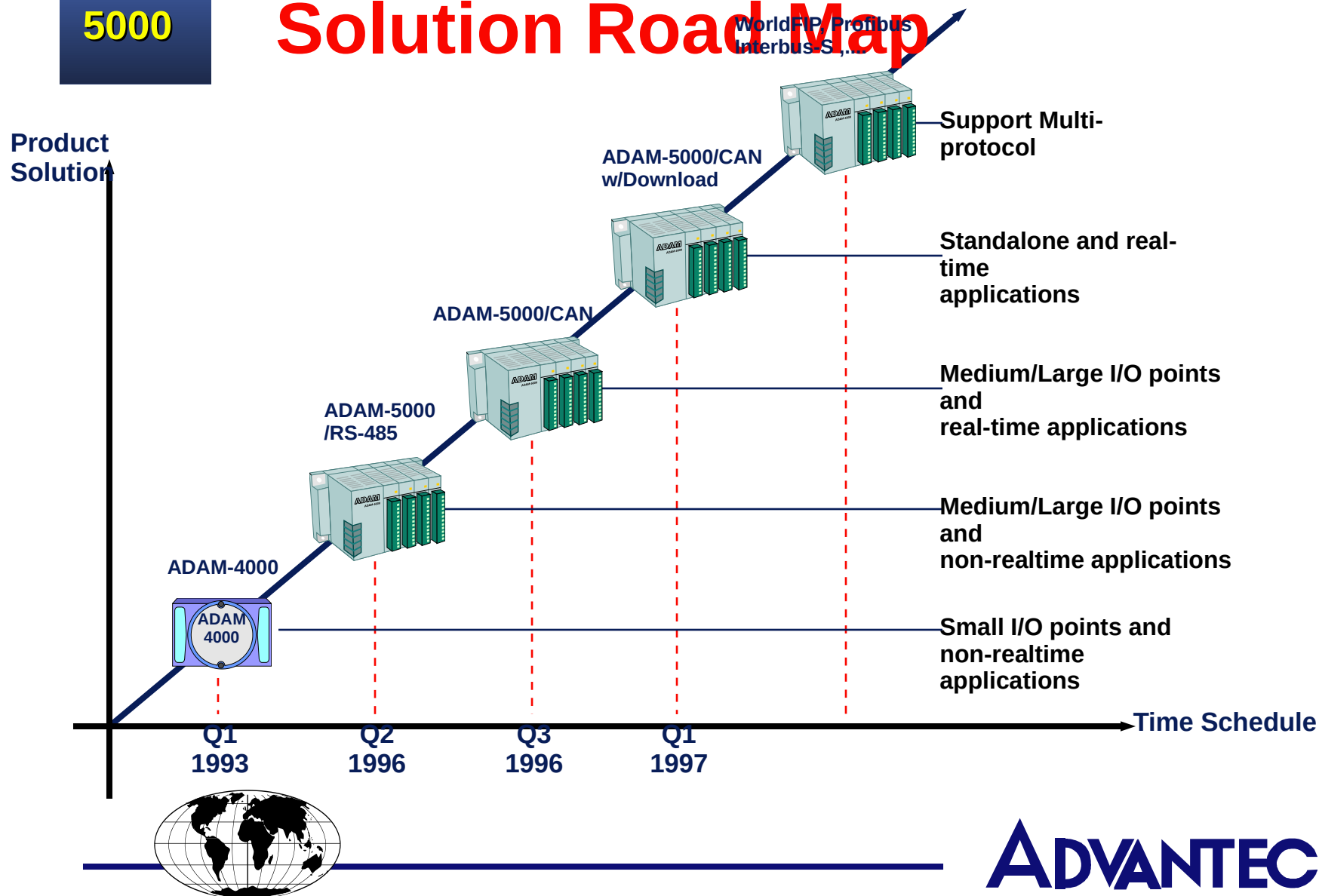
Remote Download Program

Multiple Communication Protocol Support

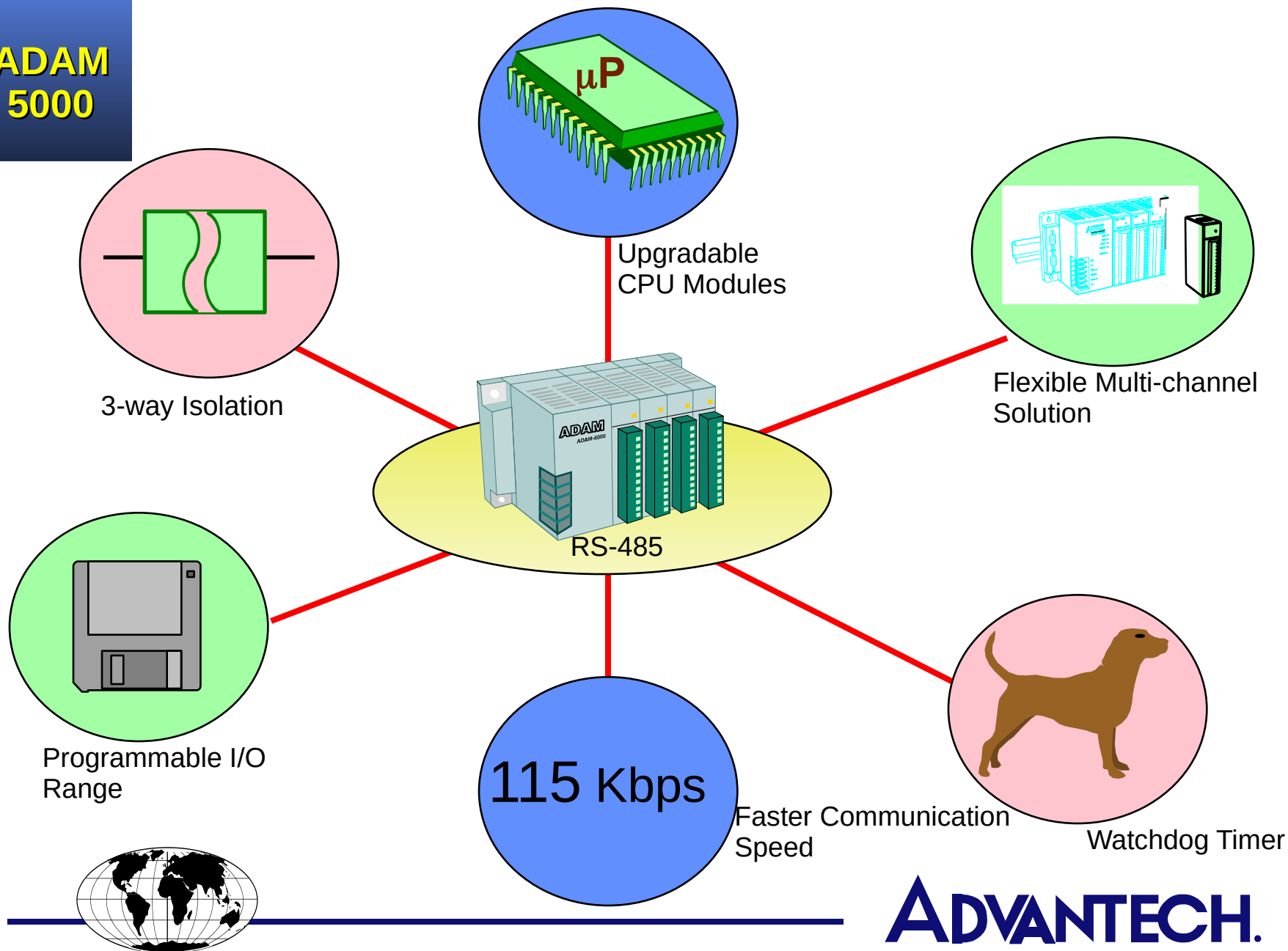


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Advantech Remote DA&C Solution Road Map



ADAM 5000



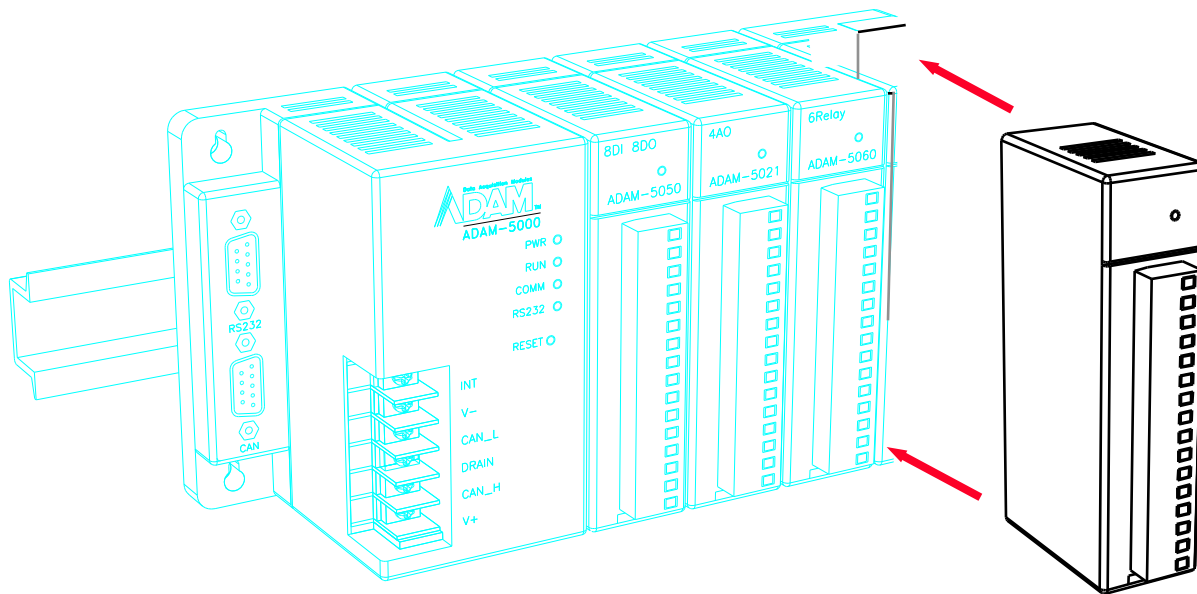
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Flexible Multi-channel Solutions

Up to 32 AIO or 64 DIO per Node

Flexible I/O Combination and Alarm Setting

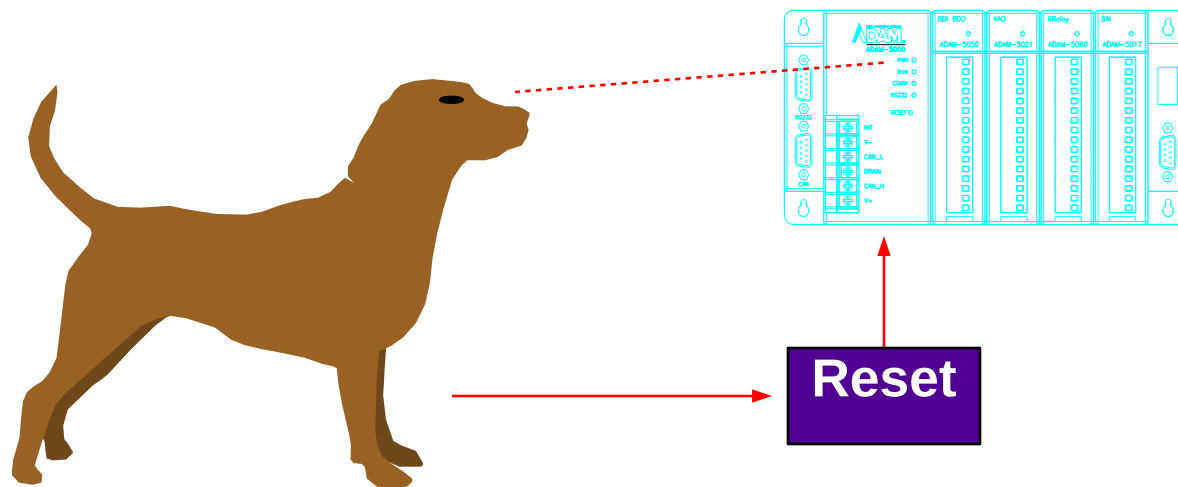


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Watchdog Supervisory

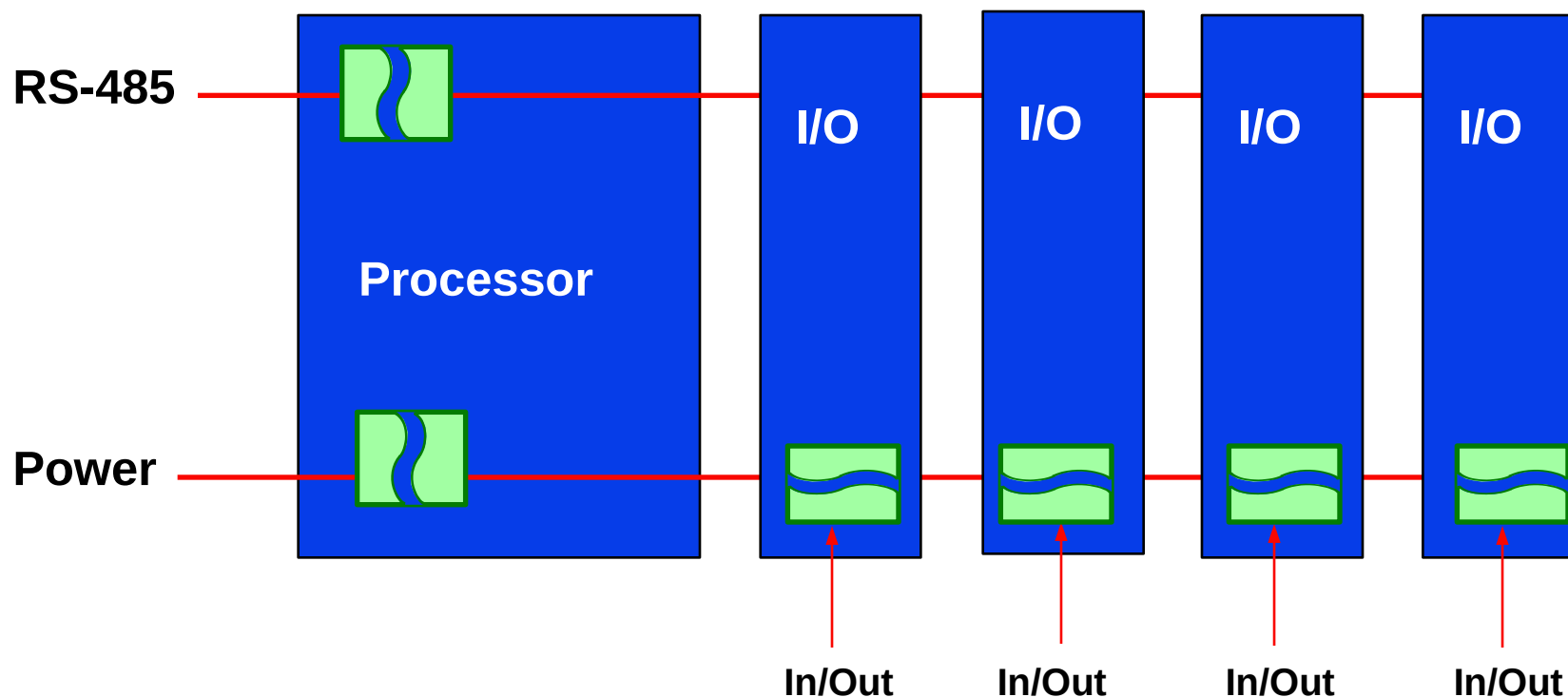
Auto Reset ADAM-5000 Microprocessor
After System Failure
Reduce Maintenance Works



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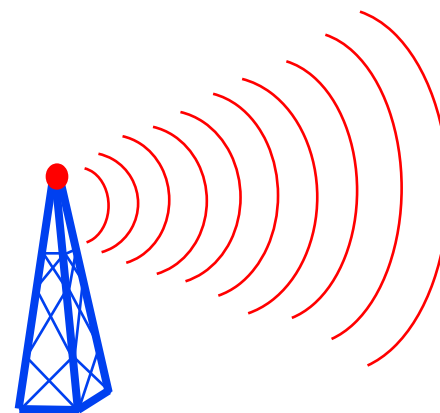
3-way Isolation -- I/O, Power and Communication



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Faster Communication, Larger System Scale

Communication Speed Up to 115.2 Kbps
(Scan Rate : 400 Analog Reading/Sec.)
Controllable Points per Serial Port : 8192

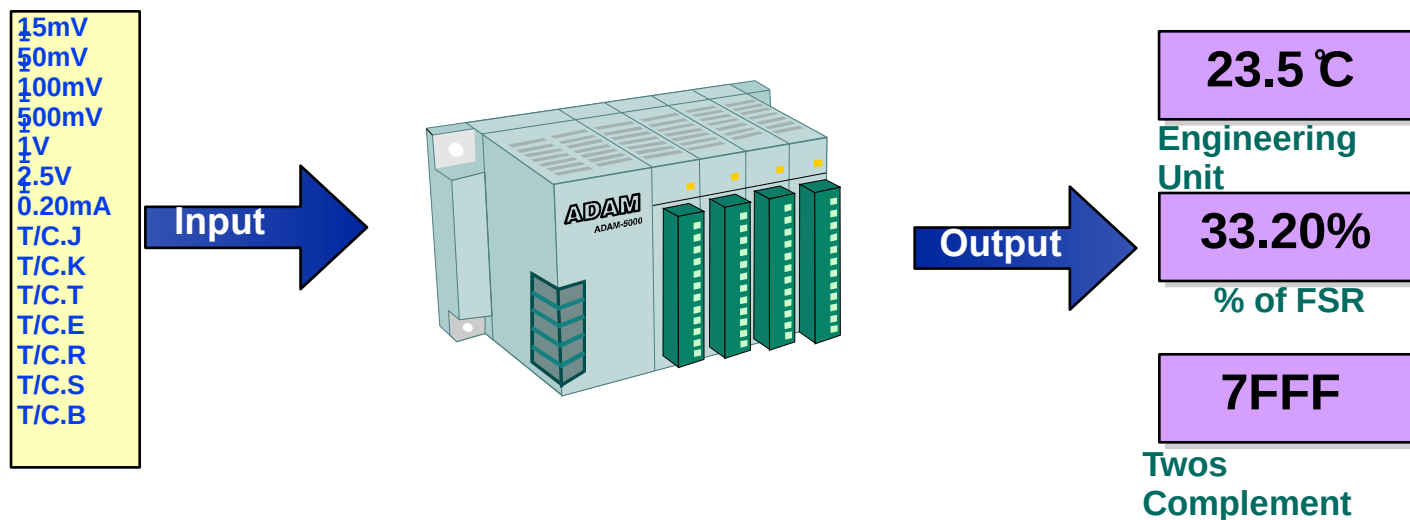


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Programmable Input/Output Type and Ranges

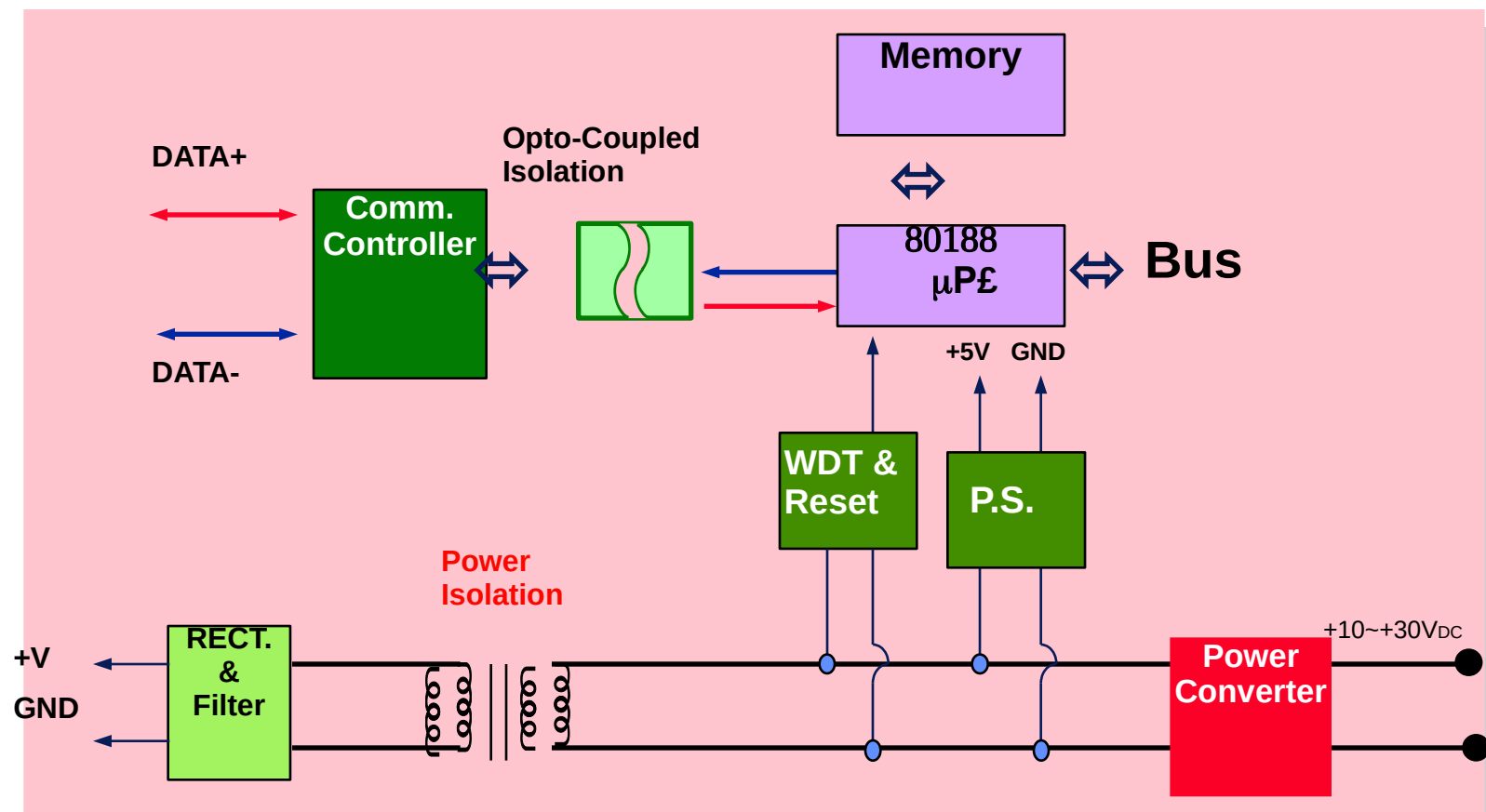
No Pots, No Switches to Set
Reducing Your Stock



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ADAM-5000/485 Upgradable CPU Module



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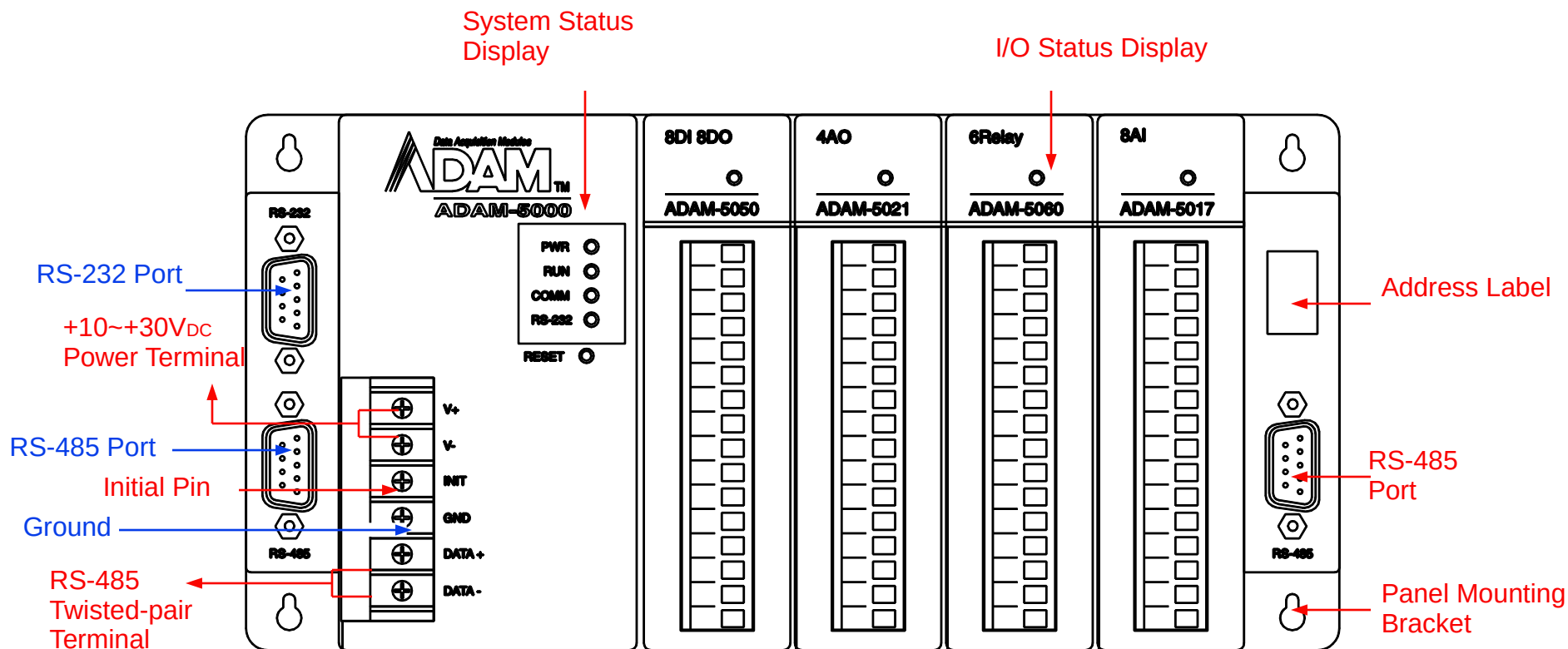
I/O Modules

Feature/Module		5017	5018	5024	5050	5060
Analog I/O	Channels	8	8	4	—	—
	Input Types	mV, V, mA	mV, V, mA, T/C	—	—	—
	Sampling Rate	10	10	—	—	—
	Resolution	16 bits	16 bits	12 bits	—	—
	Isolation	1,000 V _{DC}	1,000 V _{DC}	500 V _{DC}	—	—
	Output Types	—	—	mA, V	—	—
	Slew Rate	—	—	Programmable	—	—
Digital I/O	D/I Channels (Input: 0~30V)	—	—	—	8	—
	D/O Channels (Open Collector)	—	—	—	8	6 (Relay Output)
	Isolation	—	—	—	—	Yes



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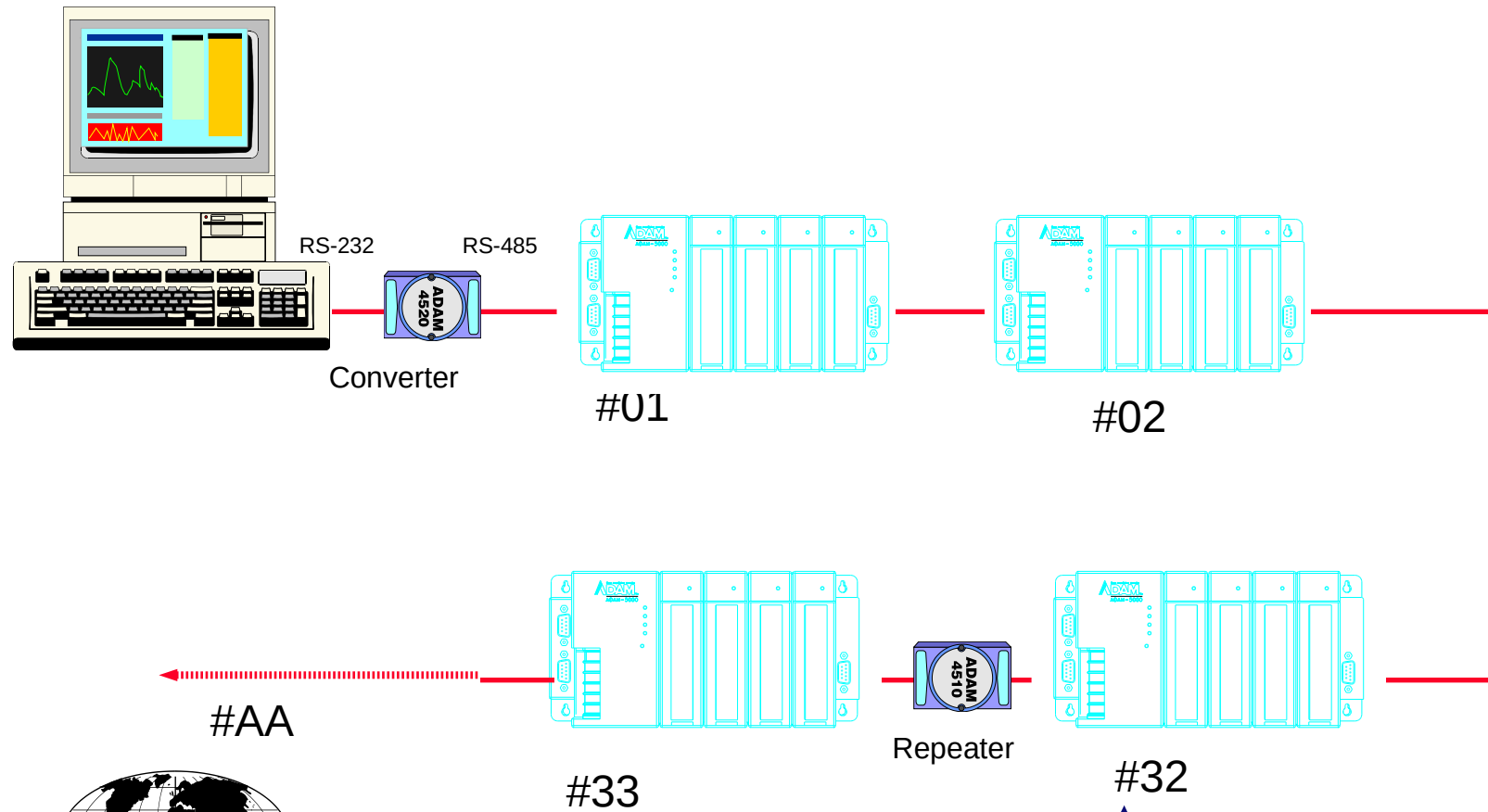
ADAM-5000 Mechanism -- Front Panel



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Flexible Networking



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Programming

Simple ASCII Command
Easy Programming and Configuration
Support both ADAM-5000 and ADAM-4000
Protocols

Node
Address Channel

Command : #05 1
Response : >+4.834

ADAM-4000

Node
Address Slot Channel

Command : #05 S0 C1
Response : >+4.834

ADAM-5000

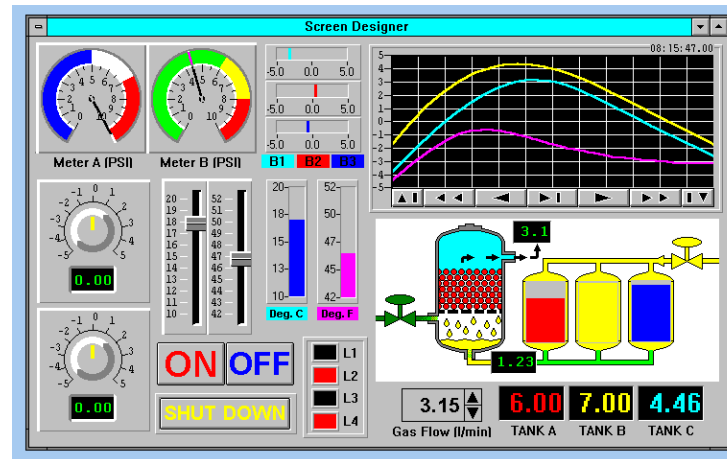


Extensive Windows Application Support

DDE Server

DLL

Advantech DA&C S/W package -- Genie



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Welcome to CAN

ControllerArea Network

Developed by Bosch

ISO 11898 Standard



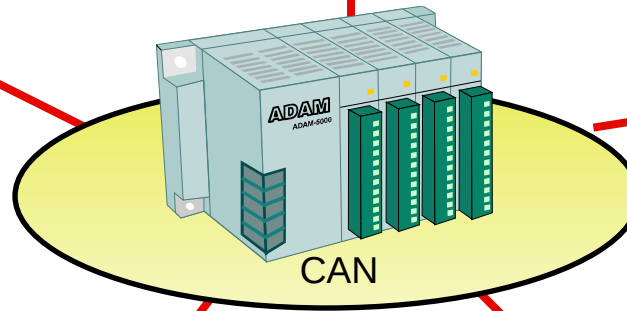
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Communication
Collision
Management

Open
Communication
Protocols

Event
Handling



Peer-to-Peer
Communication

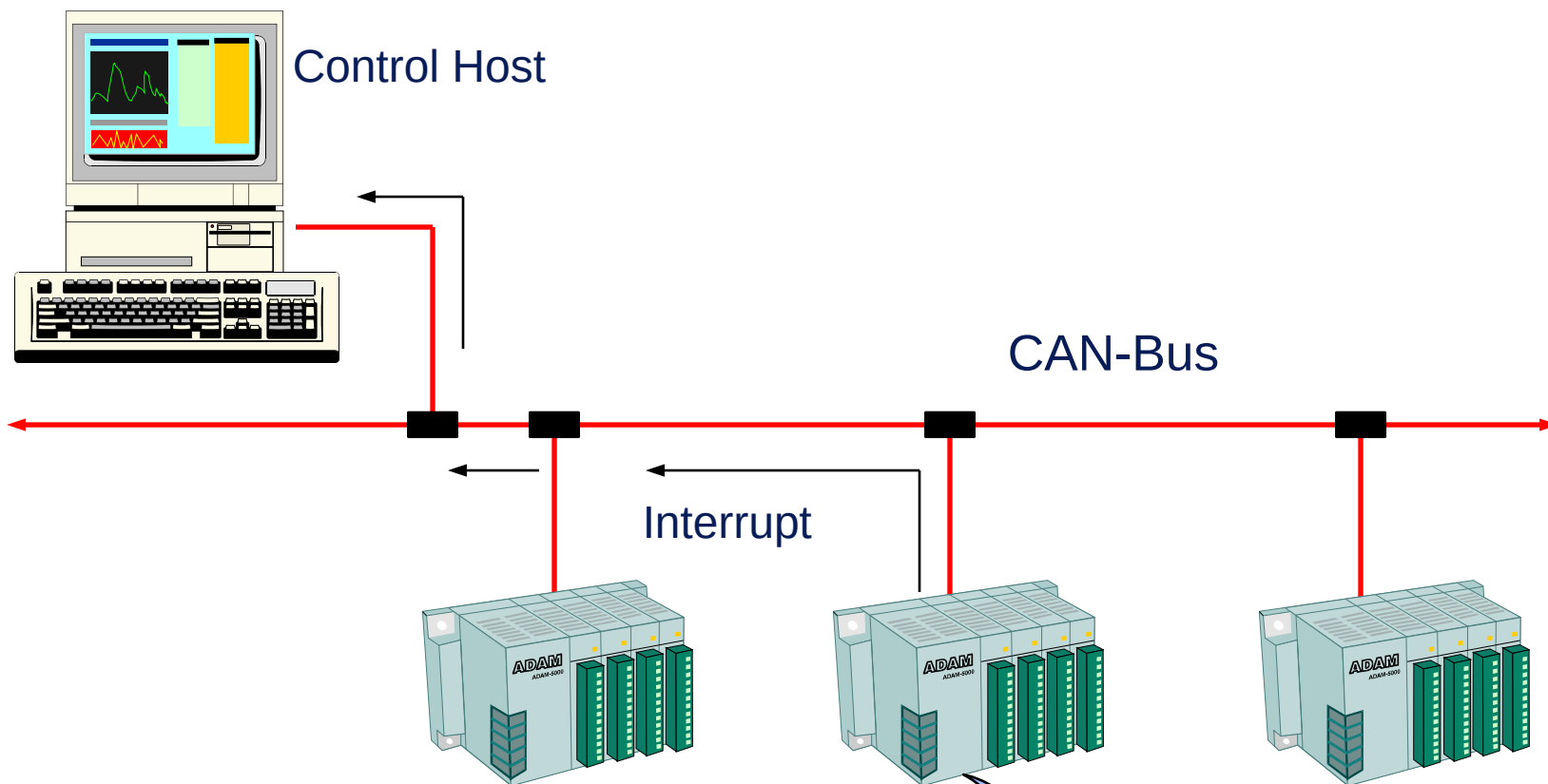
Error Free
Communication



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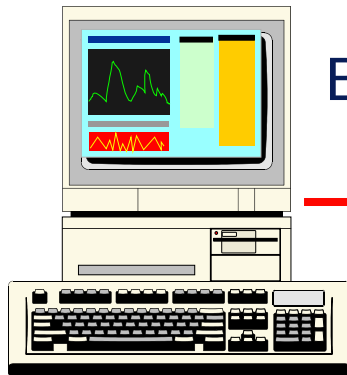
Event Handling



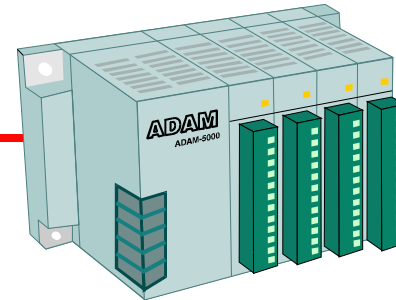
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Error Free Communication



Bit Error Probability $\approx 10^{-13}$



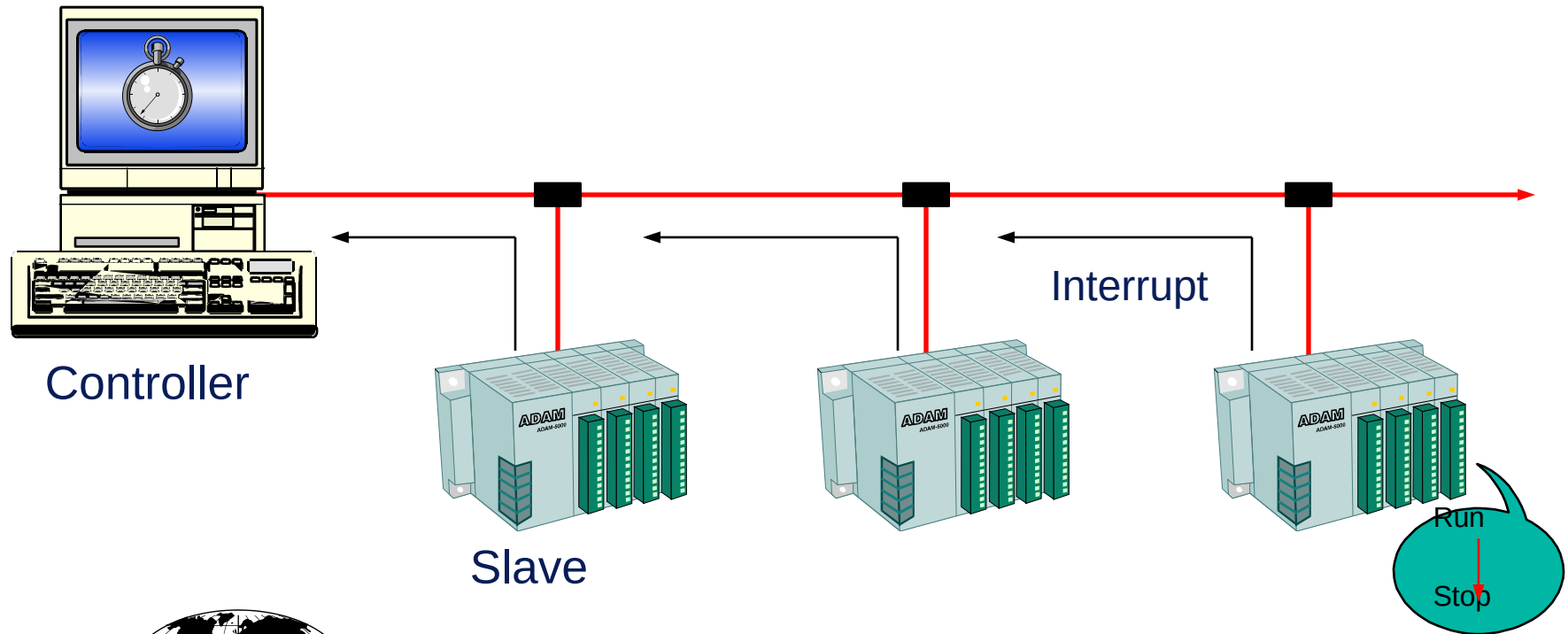
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Peer-to-Peer Communication

Respond Only

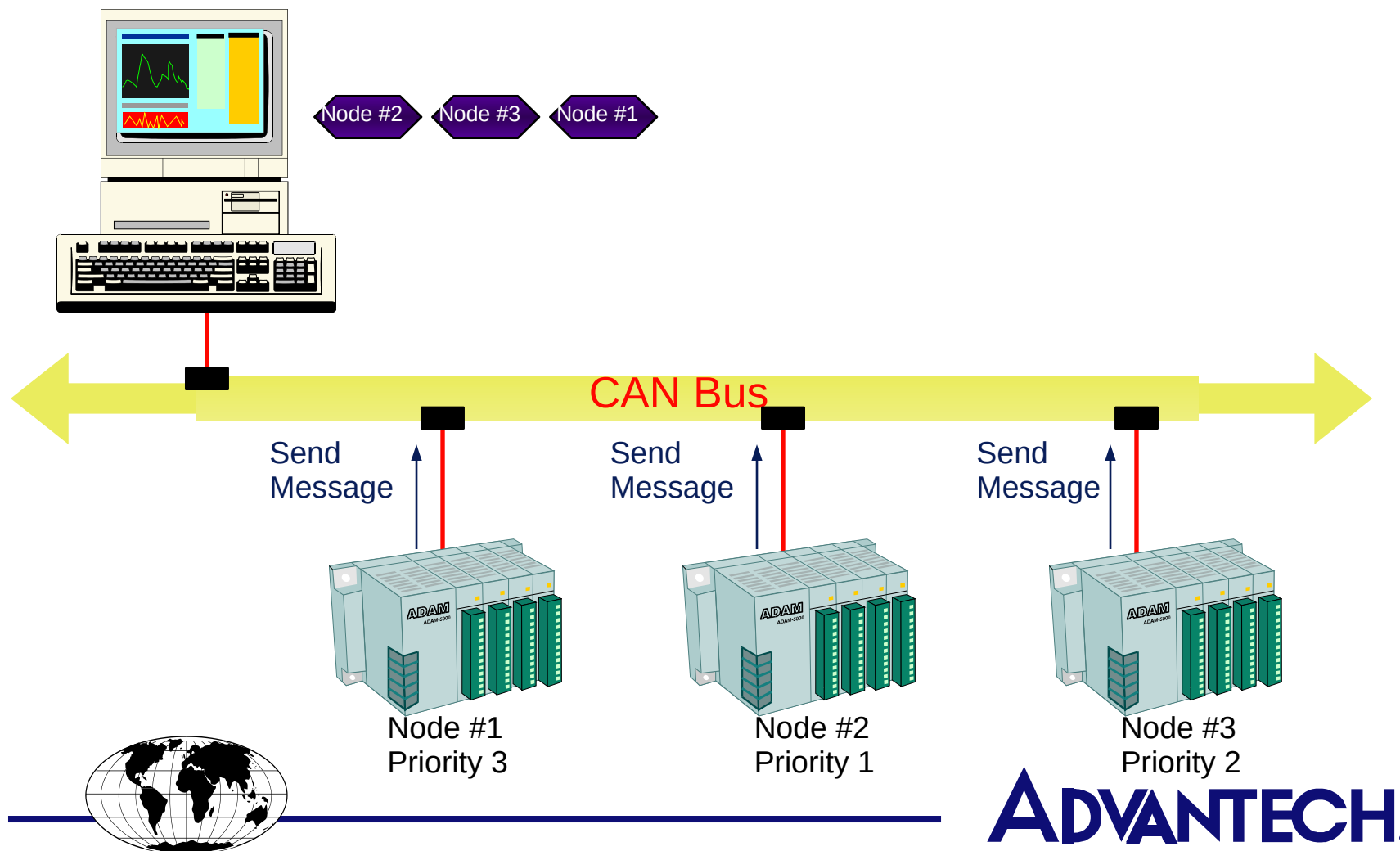
Automatic Report in A Fixed Period

Automatic Report While The State Is Changed



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Communication Collision Management



Communication Protocol of CAN

Media : Shield Twisted Pair, Multidrop

Access : Master/Slave and Peer-to-Peer

Max. Nodes Per Line : 64

Speed Dependent on Overall Length

125 Kbps @500m/1600ft

250 Kbps @200m/600ft

500 Kbps @100m/300ft

Data IDENTIFIER -- 11bits with Priorities

Five Communication Error Detection Mechanisms

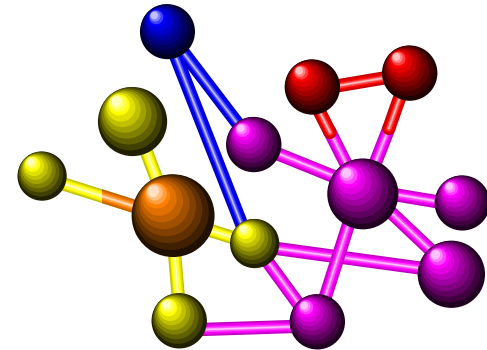


Open Communication Protocols

DeviceNet

SDS (Smart Distributed System)

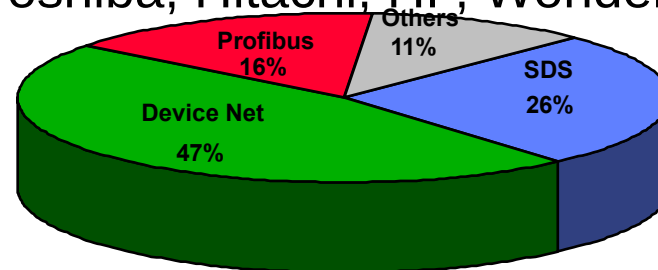
CiA (CAN International Association)



Why Choose DeviceNet First?

DeviceNet is # 1 in U.S. Market
Study of Sensor/Device Level Bus

Over 100 Companies Join ODVA (Open DeviceNet
Vendors Association) --- Allen-Bradley , [Advantech](#),
Belden
Wire & Cable, Phoenix, Wago, OMRON, Clutter-Hammer,
Yaskawa
Electric, ABB, Toshiba, Hitachi, HP, Wonderware, Intellution,
etc.

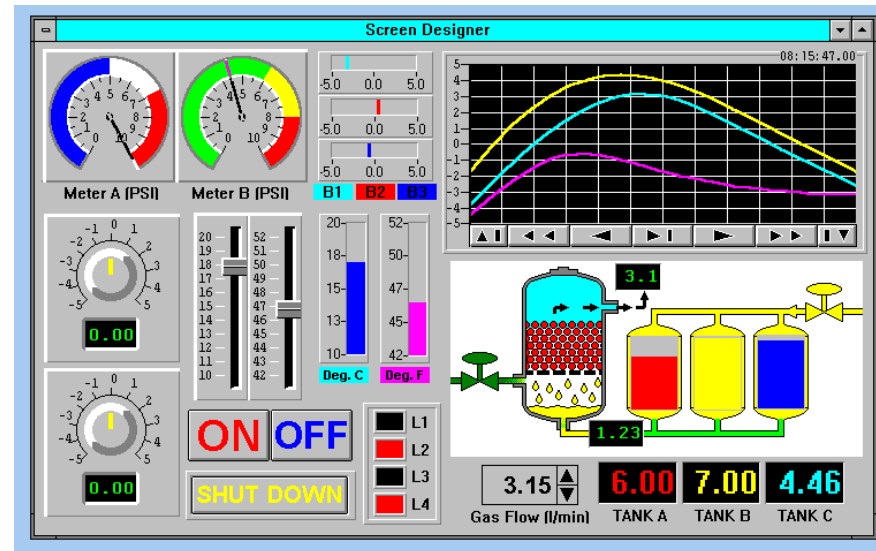


Source : Instrumentation and Control
OEMs Surveyed, spring 1995



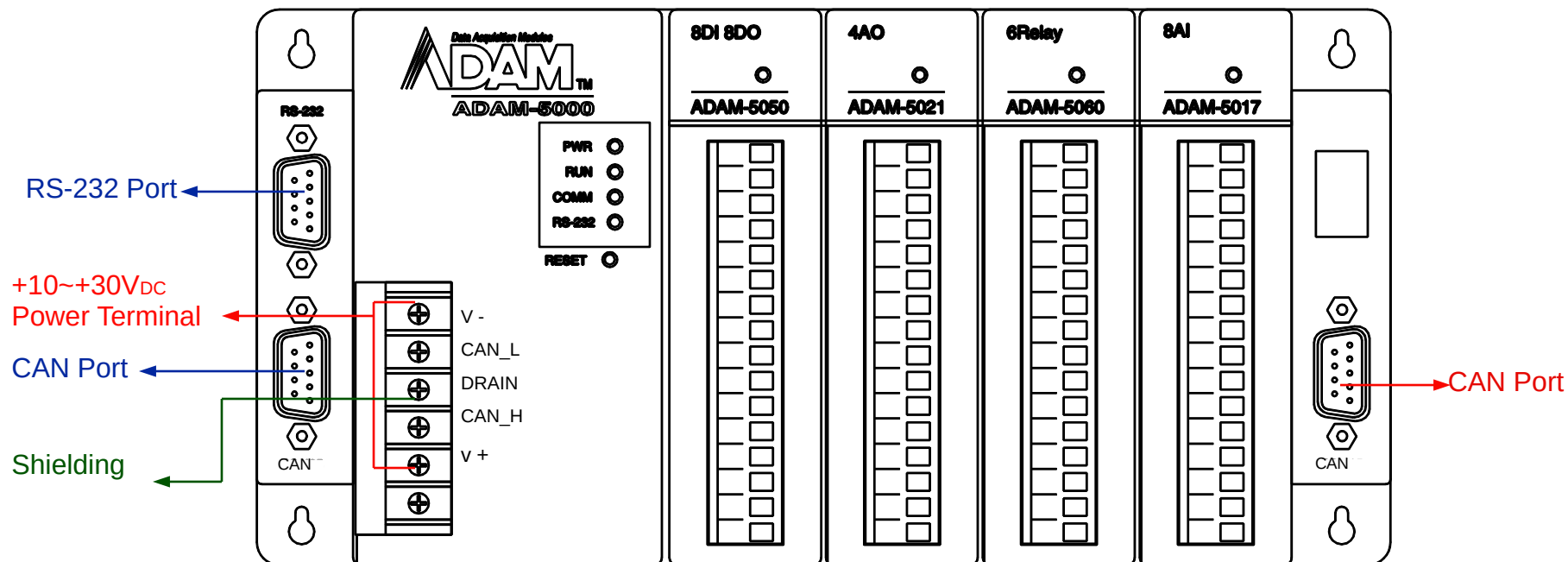
S/W Support

DeviceNet Function Library
DDE & DLL for Windows Application
Genie



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ADAM-5000 CAN Version -- Front Panel

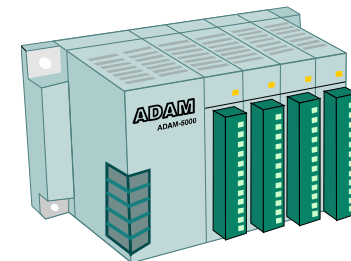


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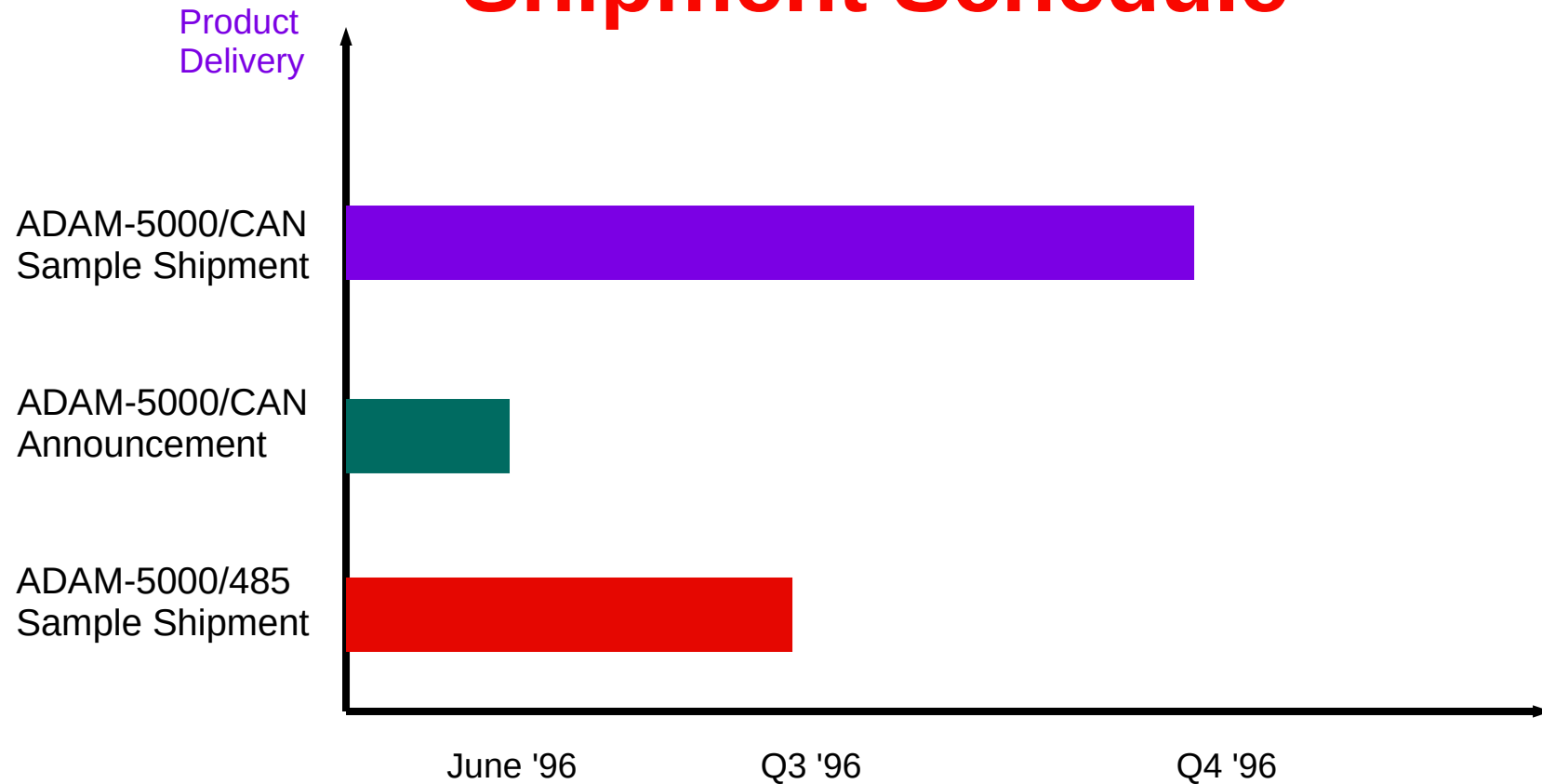
Provides Cost-effective Multi-channel
Solutions for Industrial Automation
Meets the Needs of Different Applications
from Non-realtime to Realtime



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ADAM-5000 Products Shipment Schedule



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