DIGI ONE IAP

Serial-to-Ethernet connectivity, protocol conversion and protocol interoperability for industrial applications

Digi One® IAP combines reliable serial-to-Ethernet connectivity with protocol conversion and interoperability. Users can IP enable a broad range of serial devices, as well as link two industrial devices. It is ideal for device management applications requiring specific industry protocol support.

Serial server functionality built into Digi One IAP allows any serial device to be connected to a TCP/IP network. Applications may communicate with the serial device using TCP/UDP or Digi's patented RealPort® COM port redirector for remote native COM port access.

Digi One IAP supports a variety of serial and Ethernet protocols, allowing users to bridge serial and Ethernet devices, or both. Multi-master access allows multiple masters to communicate with a single slave across protocols.

Digi One IAP converts ASCII data from serial devices to Ethernet protocols. An additional serial port can act as a pass-through port, allowing local devices to communicate with a slave unit without disrupting the serial-to-Ethernet connection.

BENEFITS

– 1 DB-9 serial port and additional pass-through port
– TCP/UDP and RealPort for COM/TTY port control and management
– Multi-master/Multi-protocol concurrent support Modbus protocols
– Serial and Ethernet protocol bridging support for Modbus protocols promotes interoperability
– ASCII to protocol translation for Modbus
– Switch selectable RS-232/422/485 for simple interfacing to any type of serial device
– Tunable for low latency or optimized throughput

APPLICATION EXAMPLE

PLC

Ethernet

HMI SYSTEM

DIGI ONE® IAP

RS-232/422/485

HMI Panel

Modbus RTU Slave

RELATED PRODUCTS

DigiOne® IA

DigiOne® IAP HAZ

DigiOne® SP IA

PostServer® TS MEI

Power Supply 76000736
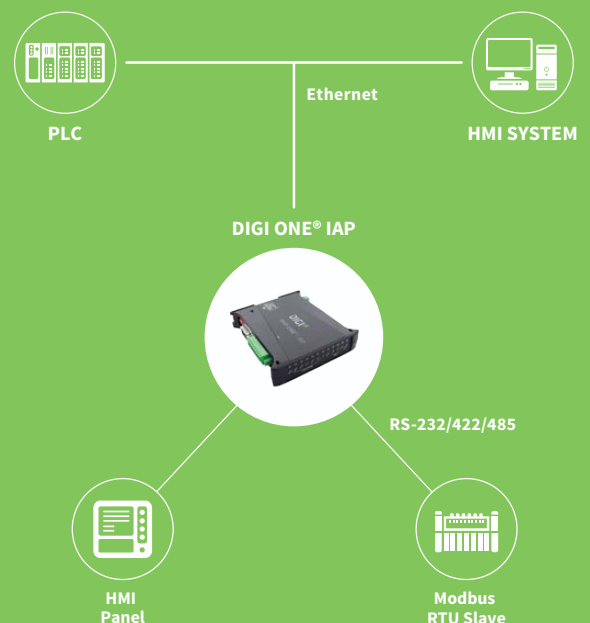
SPECIFICATIONS — Digi One IAP

FEATURES

MANAGEMENT	HTTP configuration, Digi Port Authority – Remote management diagnostics and auto-discovery tool, SNMP (read/write)
PROTOCOLS	Telnet, Reverse Telnet, RFC2217, TCP/UDP Socket Services, PPP, DHCP/RARP, ARP-Ping, Static IP for IP address assignment, Support for 64 concurrent socket connections, ASCII, Modbus RTU/ASCII, Modbus/TCP
SOFTWARE	Patented RealPort® for COM/TTY ports
SECURITY	SSHv2, SSL, TLS, HTTPS
OPERATING SYSTEMS	Microsoft Windows® 7, 8, 8.1, 10 and Windows Server® 2012, 2016, 2019; and Linux® Note: TCP/UDP socket services are operating system independent.
STATUS LEDs	Serial signals, Power, Ethernet, Diagnostics
DIMENSIONS (L x W x D)	12.00 cm x 2.30 cm x 10.10 cm (4.70 in x 0.90 in x 4.0 in)
WEIGHT	64.0 g (2.5 oz)
OTHER	Full modem and hardware flow control, Flash upgradeable firmware, 6 ms serial over Ethernet latency, 35 mm DIN rail mounting

INTERFACES

SERIAL PORTS	1 RS-232/422/485 (switch selectable)
SERIAL CONNECTOR	Screw terminal connectors or DB-9M; DB-9M can act as a second direct RS-232 port connection when used as the second port
SERIAL THROUGHPUT	Up to 230 Kbps
ETHERNET PHYSICAL LAYER	10/100Base-T

POWER REQUIREMENTS

POWER INPUT	9 - 30 VDC @ 0.5 Amps max
POWER SUPPLY	Removable screw terminal for power (power supply not included)
PRODUCT SURGE PROTECTION (ESD)	2 kV isolation between power supply and serial ground product when used with Digi power supply

ENVIRONMENTAL

OPERATING TEMPERATURE	0º C to 60º C (32º F to 140º F)
RELATIVE HUMIDITY	5% to 90% (non-condensing)
ETHERNET ISOLATION	1500 VAC min per IEEE 802.3/ANSI X3.263
SERIAL PORT PROTECTION (ESD)	15 kV human body model

REGULATORY APPROVALS

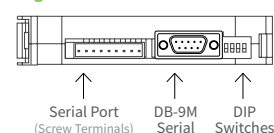|	
SAFETY	UL 1950, UL 1604 (Class 1, Div. 2), CSA 22.2 No 950, EN60950
EMISSIONS / IMMUNITY	FCC Part 15 (Class A), ICES-003 (Class A), CE, AS3548, EN6100-6-2 + EN55024, EN55022 (Class A)

PART NUMBERS — DESCRIPTION

PART NUMBERS	DESCRIPTION
70001777	Digi One IAP

MASTER \ SLAVE	MB /RTU	MB SERIAL	MB/TCP	DF1	A-B ETH	ENET/IP	ASC11
MB SERIAL	–	YES	YES	*	*	*	YES
MB/TCP	YES	YES	–	*	*	*	YES
DF1	*	*	*	–	*	*	*
A-B ETH	*	*	*	*	–	*	*
ENET/IP	*	*	*	*	*	–	*
ASC11	NO	NO	NO	NO	NO	NO	–

*Legacy status: AB protocols and conversions of other protocols to/from AB protocols are no longer supported. Existing functionality may be used on an as is basis.

DigiOne® IAP - TOP

Power Input (Screw Terminals) — Ethernet — Reset Buttons
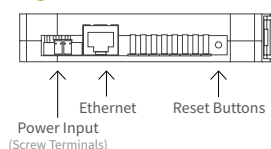
DigiOne® IAP - BOTTOM

Serial Port (Screw Terminals) — DB-9M Serial — DIP Switches

0.9" — 4.7" — 4.0"

DIGI SERVICE AND SUPPORT / You can purchase with confidence knowing that Digi is always available to serve you with expert technical support and our industry leading warranty. For detailed information visit www.digi.com/support.

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PulseSupply
pulsesupply.com

909 Ridgebrook Road.,Sparks,Maryland 21152,USA
TEL : +1-410-583-1701 FAX : +1-410-583-1704
E-mail: sales@pulsesupply.com
https://www.pulsesupply.com/digi-products

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