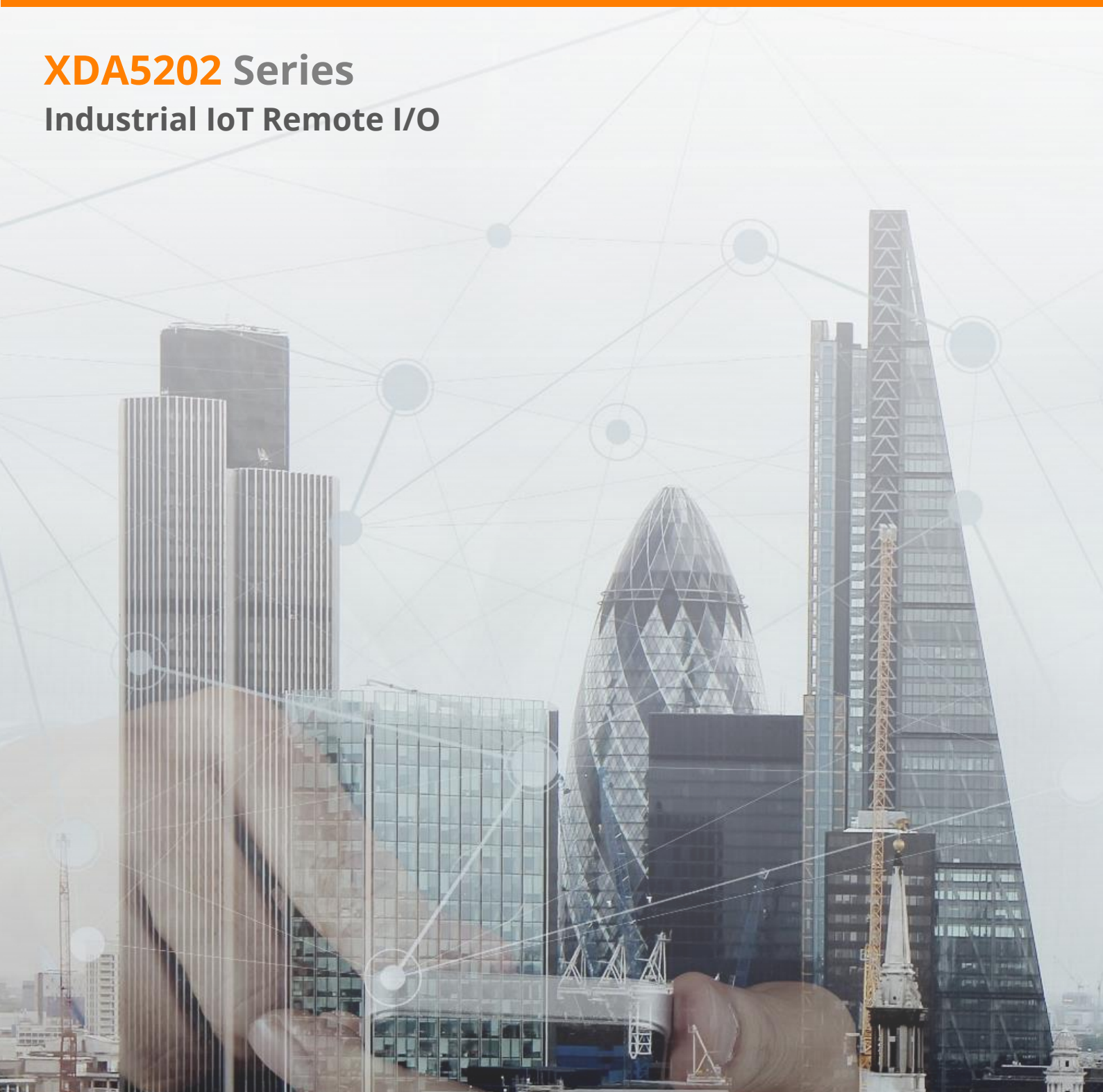


RELIABLE SECURE CONNECTIVITY

XDA5202 Series
Industrial IoT Remote I/O





XDA5202 Series

Industrial IoT Remote I/O



FEATURE HIGHLIGHTS

- Access data through Modbus/TCP/RTU/ASCII
- Supports MQTT for IIoT applications
- 2 x redundant LAN ports
- Support for MQTT Security over TLS
- Optional WiFi version with Client mode
- Up to 20 x different I/O combinations available
- Industrial EMC protection
- Wide operating temperature range: -40°C~70°C*



PRODUCT DESCRIPTION

As an IIoT I/O module, Agatel's XDA5202 Series is a compact solution for connecting digital and analog devices and sensors, enabling you to monitor, acquire and process data from remote sensors and control digital and analog outputs. The XDA5202 Series is a cost-effective solution for integrating existing applications into an IIoT framework, such as automated manufacturing, building management and control, and agricultural and irrigation systems.

For applications in which running cable can be impractical, then the XDA5202 WiFi-equipped version is a cable-free solution for widely disappeared devices and sensors, which also allows for better scalability for operations that continue to evolve and grow.

Offering plug-and-play simplicity, the XDA5202 Series supports numerous protocols, including Modbus TCP/RTU/ASCII, MQTT, MQTT over TLS and SNMP. Using the intelligent processing and publishing features of the XDA5202 Series, data can be polled, logged, or even automatically pushed when I/O statuses change.

Supporting numerous configurations options to support various types of digital I/O, analog I/O, and relay scenarios, the XDA5202 Series has been designed for demanding industrial applications that require compact solutions while delivering high network performance. Supporting a wide operating temperature range of -40°C~70°C* and Industrial EMC protection, the XDA5202 Series can perform under a variety of environmental conditions, such as power input voltage, shock, drop and vibration.

* non-wireless models only

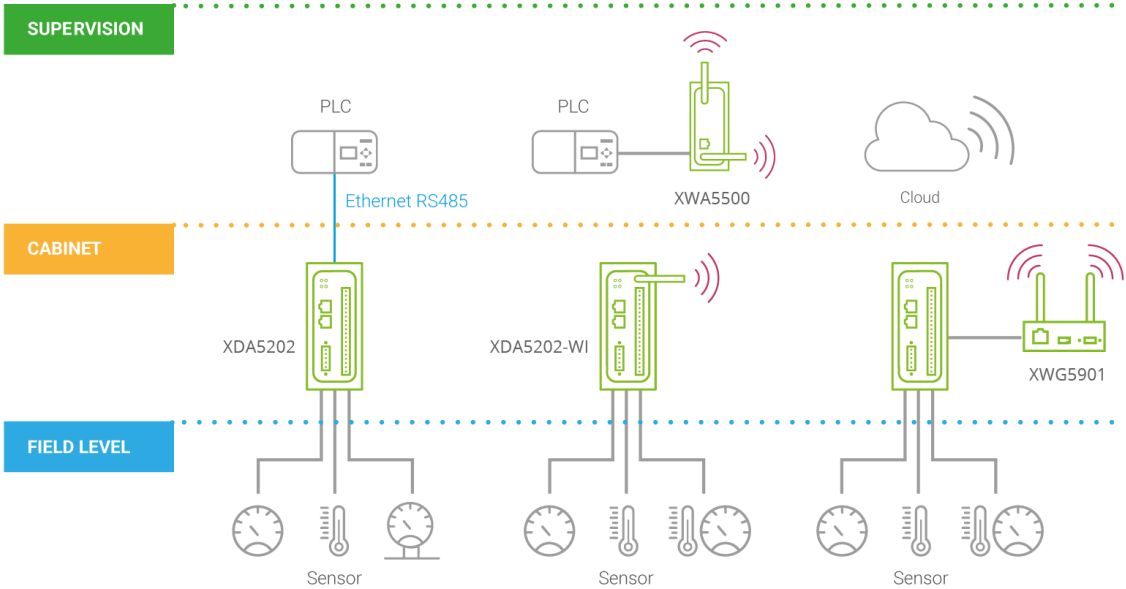




APPLICATION

In situations where running cable is impractical, XDA5202 WiFi-equipped version comes handy as a cable-free solution for widely disappeared de- vices and sensors. It also allows for better scalability for operations that continue to evolve and grow.

The XDA5202 Series supports Modbus TCP/RTU/ASCII, MQTT, MQTT over TLS and SNMP. Using the intelligent processing and publishing features, data can be polled, logged, or even au- tomatically pushed when I/O statuses change. Also, data can be pushed to connect and interact with a public or private cloud servers.



AVAILABLE COMBINATION

Model Name	Serial port	Digital I/Os	Relay Outputs	Analog Inputs	Analog Outputs	Wi-Fi	Remark
XDA5202-DB-16-0-0-0	DB9	16	0	0	0	No	8 DI/ 8 DO
XDA5202-TB-16-0-0-0	TB5	16	0	0	0	No	8 DI/ 8 DO
XDA5202-DB-0-0-8-0	DB9	0	0	8	0	No	
XDA5202-TB-0-0-8-0	TB5	0	0	8	0	No	
XDA5202-DB-6-2-4-0	DB9	6	2	4	0	No	
XDA5202-TB-6-2-4-0	TB5	6	2	4	0	No	
XDA5202-DB-8-4-0-0	DB9	8	4	0	0	No	8 DIO, Jumper Selectable
XDA5202-TB-8-4-0-0	TB5	8	4	0	0	No	8 DIO, Jumper Selectable
XDA5202-DB-0-0-4-4	DB9	0	0	4	4	No	
XDA5202-TB-0-0-4-4	TB5	0	0	4	4	No	
XDA5202-DB-16-0-0-0-W	DB9	16	0	0	0	Yes	8 DI/ 8 DO
XDA5202-TB-16-0-0-0-W	TB5	16	0	0	0	Yes	8 DI/ 8 DO
XDA5202-DB-0-0-8-0-W	DB9	0	0	8	0	Yes	
XDA5202-TB-0-0-8-0-W	TB5	0	0	8	0	Yes	
XDA5202-DB-6-2-4-0-W	DB9	6	2	4	0	Yes	
XDA5202-TB-6-2-4-0-W	TB5	6	2	4	0	Yes	
XDA5202-DB-8-4-0-0-W	DB9	8	4	0	0	Yes	8 DIO, Jumper Selectable
XDA5202-TB-8-4-0-0-W	TB5	8	4	0	0	Yes	8 DIO, Jumper Selectable
XDA5202-DB-0-0-4-4-W	DB9	0	0	4	4	Yes	
XDA5202-TB-0-0-4-4-W	TB5	0	0	4	4	Yes	





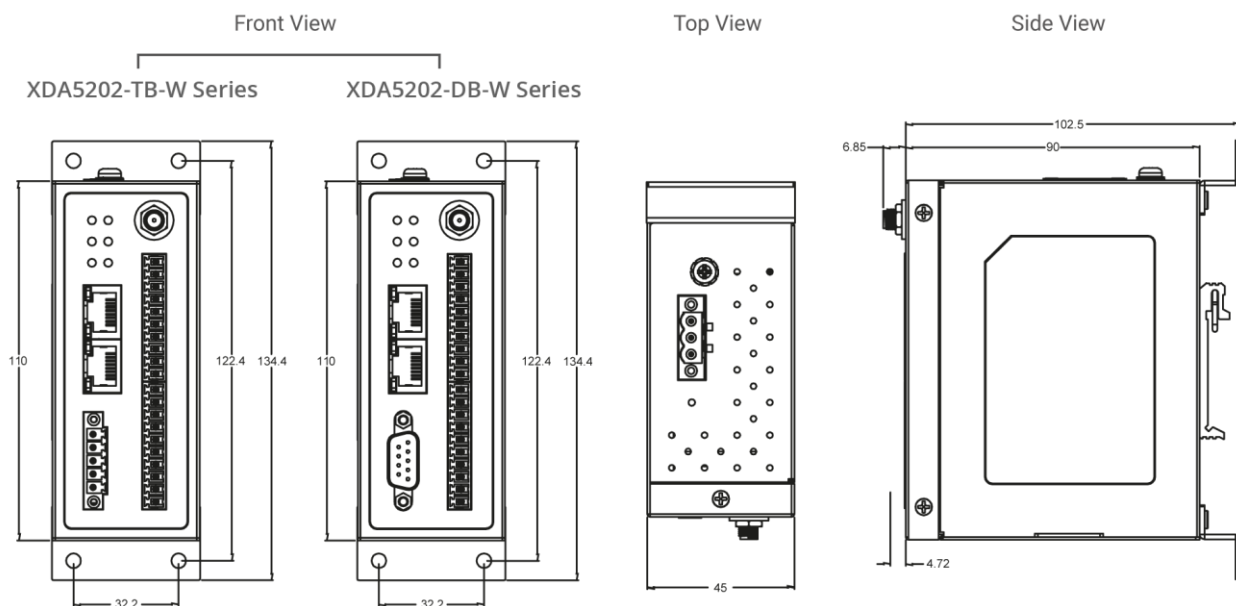
Technical Specifications	
Model Name	XDA5202
Ethernet	
Compliance	IEEE802.3 for 10BASE-T IEEE802.3u for 100BASE-T(X)
Number of ports Transmission Rate Auto MDI/MDI-X	2x RJ45 10/100 Mbps Yes
Serial	
Mode	RS-232/ RS-422 / RS-485 (2-wire and 4-wire)
Number of ports	1x
Connector	5-pin 3.81mm Terminal Block (-TB models) or 9-pin D-Sub9 (-DB models)
Baud rate	1200~234,000 bps
Data bits	7,8 software selectable
Stop bits	1,2 software selectable
Auto-detection	RS-485 auto-detection by hardware
Wireless LAN (-W version only)	
Standard	802.11b (2.4GHz) 802.11g (2.4GHz) 802.11n (2.4GHz)
Antennas	1x RP-SMA(F) connector
Max. Throughput	72.2Mbps using 20MHz bandwidth - 150Mbps using 40MHz bandwidth
Frequencies	FCC/IC (US/CA): 2412~2462MHz; TSI(EU)/Japan: 2412~2472MHz
Encryption	WPA, WPA2, 802.1x, 802.11i, Open, Shared Key, Pair-wise-key authentication
Power	
Input Voltage	12-48VDC
Input Current	0.6~0.2A
Max. Power Consumption	9.6W
Reverse polarity protection	Present
Connector	5.08mm 3-Pin Lockable Terminal Block
LED	
Indicators	PWR, RUN, RJ45 Act/Link, COM1 Tx, COM1 Rx, Wireless
Software features	
Protocols	TCP, IPv4, UDP, DHCP Client/Server, HTTP, HTTPS, NTP client, Telnet, ARP, SNMPv1,v2c,v3, serial console(on-board connector), MQTT, MQTT Security over TLS, SMTP/ SMTP with TLS
Wireless Options (-W only)	Client mode
I/O access	Modbus TCP/RTU/ASCII, MQTT publisher/subscriber
Other I/O software features	Mirror function



Physical Characteristics	
Housing	IP30 protection according to EN 60529
Material	SPCC
Dimension (W x H x D)	45.3 x 89.6 x 110 mm
Weight	350g
Installation	DIN-rail or wall-mount (optional)
Environmental Limits	
Operating Temperature	-40~70°C (-40~158°F) - 0~65°C (34~149°F) Wireless version only
Storage Temperature	-40~85°C (-40~185°F) - -20~85°C (-4~185°F) Wireless version only
Ambient Relative Humidity	5~95% RH (non-condensing)
I/O Specifications	
Digital Inputs	
Input Type	Single status (wet or dry contact) or counter
Dry contact	Logic 1: short to GND, Logic 0: open
Wet contact	Logic 1: 0 to 3 VDC, Logic 0: 10 to 30 VDC
Counter Frequency	250 Hz
Isolation	3K Vrms
Digital Outputs	
Output Type	Output or Pulse output
Nominal Voltage	30 VDC
Current Rating	max 500 mA totally
Over-voltage Protection	45 VDC
Over-current Protection	2.6A
Over-temperature shutdown	175°C
Isolation	3K Vrms
Relay Outputs	
Form	Form A power relay
Isolation resistance	1G Ω @500VDC
Isolation between contacts	3K Vrms
Analog Inputs	
Current contact rating	Voltage/Current Software Selectable
Input Range	Voltage: ± 60 m VDC, ± 500 m VDC, ± 1 VDC, ± 5 VDC, ± 10 VDC Current: 4 to 20 mA
Resolution	16 bits
Accuracy	$\pm 0.1\%$ FSR (Voltage)@ 25 °C $\pm 0.2\%$ FSR (Current)@ 25 °C
Sampling Rate	> 10 samples/sec (per channel)
Isolation	3K VDC or 2K Vrms
Analog Outputs	
Output Type	Voltage/Current Software Selectable
Voltage Range	Voltage: ± 10 VDC
Current Range	Current: 4 to 20 mA
Resolution	16 bits
Accuracy	$\pm 0.1\%$ FSR @ 25 °C
Load Resistor	Internal resistor, 500 Ω



DIMENSIONS & LAYOUT



REGULATORY APPROVALS

Regulatory Approvals					
Safety	EN62368-1				
EMC	EN55032:2015+AC:2016, EN61000-6-4:2007+A1:2011, EN55024:2010+A1:2015, EN61000-6-2:2005+AC:2005, EN301489-1 v2.2.0 / EN301489-17 v3.2.0 FCC Part 15B FCC Part 18				
Radio	FCC Part 15.247 for WIFI b/g/n EN300328 V2.1.1 for WIFI b/g/n				
Test	Version	Item		Value	Level
IEC 61000-4-2	2009	ESD	Contact Discharge	±4KV	2
			Air Discharge	±8KV	3
IEC 61000-4-3	2010	RS	80-1000MHz 1.4-6.0GHz	10(V/m)	3
				3(V/m)	2
IEC 61000-4-4	2012	EFT	DC Power Port Signal Port	±1.0KV	2
				±1.0KV	3
IEC 61000-4-5	2017	Surge	DC Power Port	Line-to Line± 0.5 KV	2
			DC Power Port	Line-to Earth± 1 KV	2
			Signal Port	Line-to Earth± 1 KV	2
IEC 61000-4-6	2013	CS	DC Power Port	10 V rms	3
IEC 61000-4-8	2009	PFMF	Enclosure	30A/m	4
Shock	MIL-STD-810F Method 516.5				
Drop	MIL-STD-810F Method 516.5				
Vibration	MIL-STD-810F Method 514.5 C-1 & C-2				
RoHS	Yes				
MTBF	22.66 Years				
Warranty	5 Years				





Ordering Information	
Model name	Description
XDA5202-DB-16-0-0-0	1x RS232/422/485 DB9, 2x 10/100Mbps, 8 DOs, 8 DIs
XDA5202-TB-16-0-0-0	1x RS232/422/485 TB5, 2x 10/100Mbps, 8 DOs, 8 DIs
XDA5202-DB-0-0-8-0	1x RS232/422/485 DB9, 2x 10/100Mbps, 8 AIs
XDA5202-TB-0-0-8-0	1x RS232/422/485 TB5, 2x 10/100Mbps, 8 AIs
XDA5202-DB-6-2-4-0	1x RS232/422/485 DB9, 2x 10/100Mbps, 6 DIs, 4 AIs, 2 Rlys
XDA5202-TB-6-2-4-0	1x RS232/422/485 TB5, 2x 10/100Mbps, 6 DIs, 4 AIs, 2 Rlys
XDA5202-DB-8-4-0-0	1x RS232/422/485 DB9, 2x 10/100Mbps, 8 DIO, 4 Rlys
XDA5202-TB-8-4-0-0	1x RS232/422/485 TB5, 2x 10/100Mbps, 8 DIO, 4 Rlys
XDA5202-DB-0-0-4-4	1x RS232/422/485 DB9, 2x 10/100Mbps, 4 AIs, 4 AOs
XDA5202-TB-0-0-4-4	1x RS232/422/485 TB5, 2x 10/100Mbps, 4 AIs, 4 AOs
XDA5202-DB-16-0-0-0-W	1x RS232/422/485 DB9, 2x 10/100Mbps, 8 DOs, 8 DIs Wi-Fi
XDA5202-TB-16-0-0-0-W	1x RS232/422/485 TB5, 2x 10/100Mbps, 8 DOs, 8 DIs Wi-Fi
XDA5202-DB-0-0-8-0-W	1x RS232/422/485 DB9, 2x 10/100Mbps, 8 AIs, Wi-Fi
XDA5202-TB-0-0-8-0-W	1x RS232/422/485 TB5, 2x 10/100Mbps, 8 AIs, Wi-Fi
XDA5202-DB-6-2-4-0-W	1x RS232/422/485 DB9, 2x 10/100Mbps, 6 DIs, 4 AIs, 2 Rlys, Wi-Fi
XDA5202-TB-6-2-4-0-W	1x RS232/422/485 TB5, 2x 10/100Mbps, 6 DIs, 4 AIs, 2 Rlys, Wi-Fi
XDA5202-DB-8-4-0-0-W	1x RS232/422/485 DB9, 2x 10/100Mbps, 8 DIO, 4 Rlys, Wi-Fi
XDA5202-TB-8-4-0-0-W	1x RS232/422/485 TB5, 2x 10/100Mbps, 8 DIO, 4 Rlys, Wi-Fi
XDA5202-DB-0-0-4-4-W	1x RS232/422/485 DB9, 2x 10/100Mbps, 4 AIs, 4 AOs, Wi-Fi
XDA5202-TB-0-0-4-4-W	1x RS232/422/485 TB5, 2x 10/100Mbps, 4 AIs, 4 AOs, Wi-Fi

Optional Accessories	
Model name	Description
XDP-75-24	75W DIN-Rail 24VDC pwr supply, 88~264VAC /124~370VDC input
XPA-315-12-Y-LV6-US	Y-Type (5.08 mm) power adaptor, 100-240VAC input, 1.25A @12VDC output, US plug, LV6.
XPA-315-12-Y-LV6-EU	Y-Type (5.08 mm) adaptor, 100-240VAC input, 1.25A @ 12VDC output, EU plug
XCA-DB9-TB5	Female DB9 to Female 3.81mm TB5 Converter
XWK-454-A-BK	Black Aluminum Wall Mount Kit





WHO WE ARE

Built on 20 years of experience in designing and manufacturing industrial networking products, **Agatel** was established from the UK to serve the infrastructure and industrial sectors in EMEA markets with reliable connectivity for mission-critical systems in demanding environments.

Experienced in hardware and software design and integration, we produce high-quality yet cost-effective industrial networking and communication products with great customization capabilities and robust implementations, equipping our customers for reliable secure industrial networks.



WHAT WE OFFER

The needs of our customers' industry are different from those of corporate IT environments – industrial operating environments are tough and the impact of failure in the field can lead to business threatening situations, hence our products will have lifetimes in excess of 20 years.

From entry-level to high-performance industry-certified hardware, **Agatel** offers a full solution spectrum to suit our customers' budgets and application requirements, with features such as industrial-grade reliability, integrated security, network redundancy, and advanced performance.

Our product solution profile includes industrial Ethernet switches, network time servers, media converters, industrial wireless devices, and serial device servers, covering a wide array of mission-critical applications such as automation, security, transport, water, oil and gas, and power grids.



WHY CHOOSE US

We help our customers reduce downtime and operational costs of their industrial applications in harsh environments. Leading system integrators in EMEA rely on our niche technical expertise and product quality to increase their applications' robustness, revenues, and competitive differentiation.

Agatel ruggedized high-quality solutions are designed to deliver zero-network-downtime for harsh project demands, allowing for reliable connectivity to keep people and assets safe and secure in harsh and hazardous environments, and allowing customers to focus on growing their business.

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