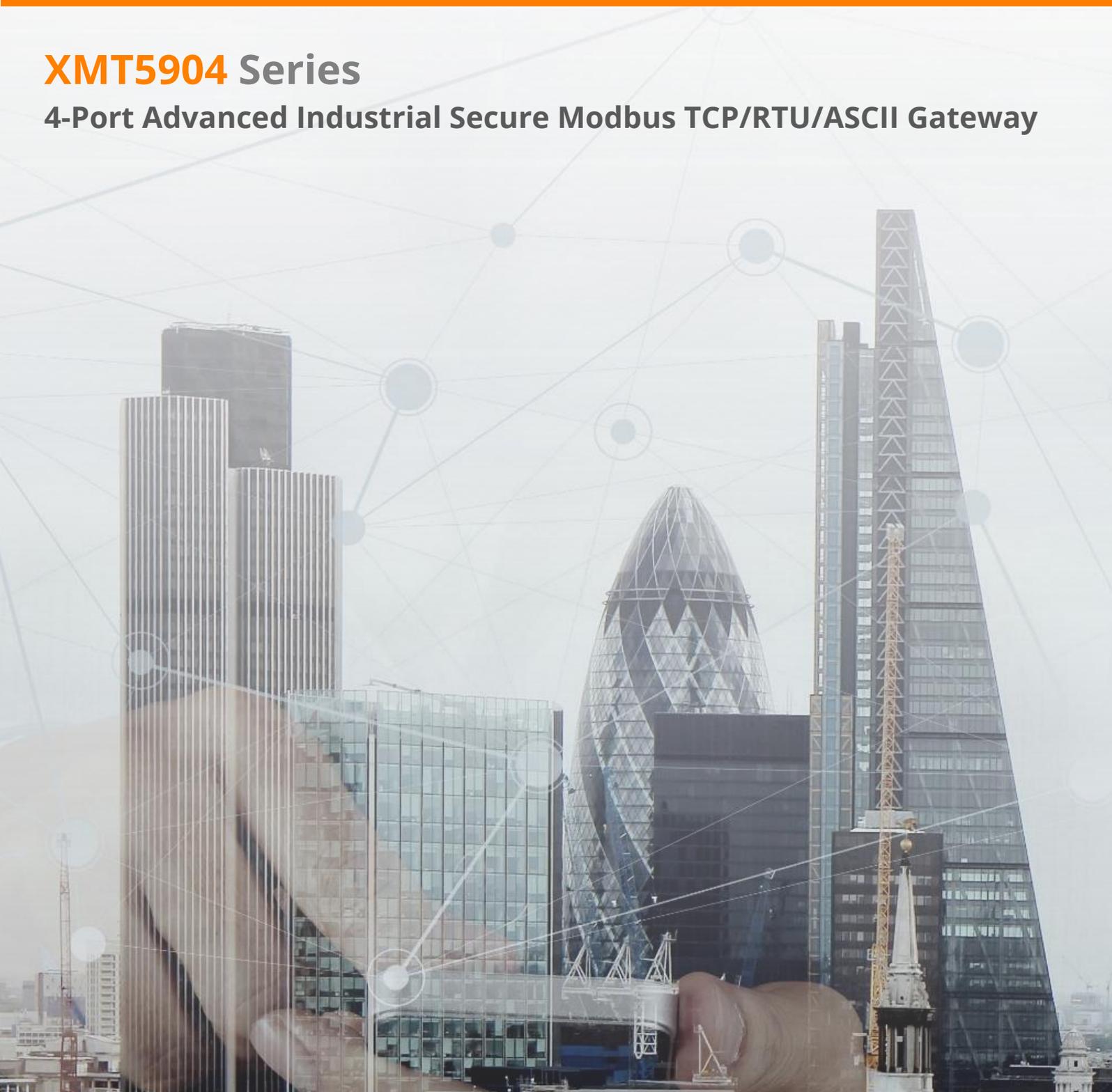# agatel
iga connect®

RELIABLE SECURE
CONNECTIVITY

XMT5904 Series
4-Port Advanced Industrial Secure Modbus TCP/RTU/ASCII Gateway

XMT5904 Series

4-Port Advanced Industrial Secure Modbus TCP/RTU/ASCII Gateway

FEATURE HIGHLIGHTS

- **Industrial EMC protection, wide temperature operation, -40°C~85°C**
- **2 Fast-Ethernet ports or 100/1000 SFP slots**
- **4 Software-selectable RS-232/RS-485/RS-422 serial ports, up to 921kbps**
- **Bi-Directional Modbus TCP/RTU/ASCII conversion from Serial to Ethernet and viceversa, VirtualCOM support, advanced Modbus Options available**
- **Isolated Redundant 12~48 VDC Power Inputs or powered (PoE models) through through the Ethernet cable (802.3af)**
- **Embedded security with PPTP, IPsec or OpenVPN (client/server)**
- **Configuration via Web Browser/ Serial Console/ Telnet Console/ Utility**

PRODUCT DESCRIPTION

Diverse Hardware Infrastructure

Modbus Gateway supports the four most commonly used communication standards, RS-232/485/422, and Ethernet. The ease-of- use configuration utility provided with Modbus Gateway can quickly select the hardware interface , and easily switch to the existing communication infrastructure. Industrial EMC protection and wide temperature operation capability make XMT5904 ready for every mission. And if cabling is an issue, the PoE-powered version can allow XMT5904 to be powered through PoE.

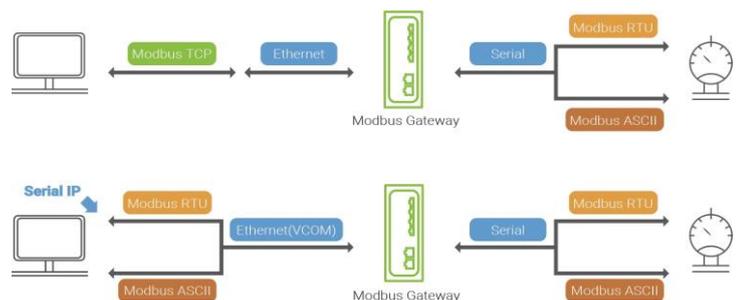**Embedded Security and advanced features**

Relax. XMT5904 Modbus Gateway supports OpenVPN and IPsec VPN encryption, allowing you to safely use the device over the internet without worrying about malicious attacks, data sniffing or unintentional remote control of your Modbus slaves. On your LAN, RSTP protocol will provide an additional layer of security in case of link losses.

Switching between Modbus Protocols

Modbus Gateway supports the standard Modbus protocol and is capable of converting any Modbus protocols between Modbus TCP, Modbus RTU, and Modbus ASCII for all supported hardware interfaces. All of this, in bi- directional mode: Ethernet and Serial ends can selected to be either master or slave

Modbus ID Routing

Modbus Gateway supports various types of hardware communication interfaces, Modbus protocol conversion, and Modbus ID routing. Therefore the Modbus Gateway can integrate your existing and complex Modbus hardware configuration into a simple network that can be easily
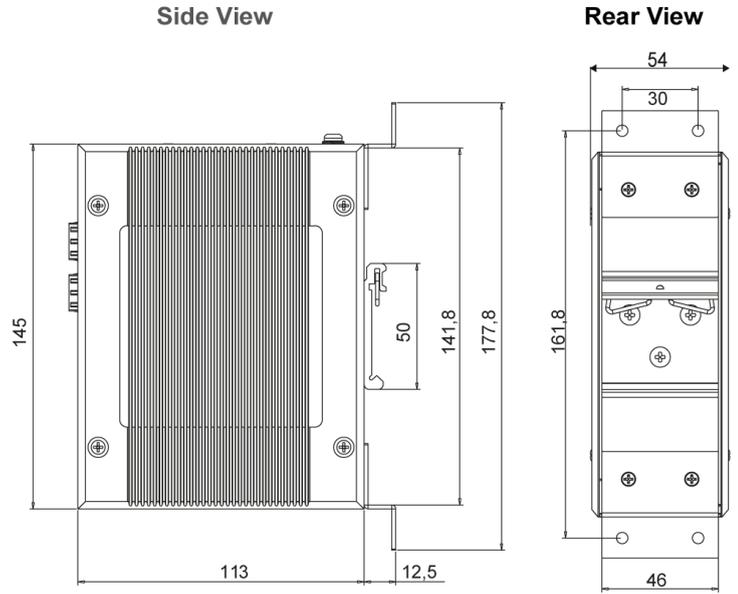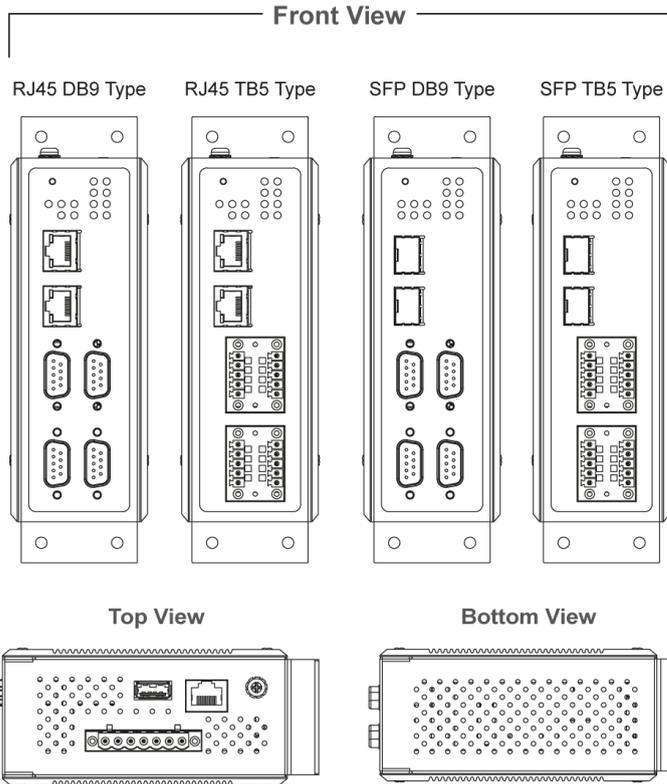
⚙ SPECIFICATION

Technical Specifications	
Model Name	XMT5904
Network interface	
Supported Standards	IEEE 802.3 10BaseT IEEE 802.3u 100BaseT(X) IEEE 802.3u for 100Base-X IEEE 802.3z for 1000Base-X (SFP version only)
Power over Ethernet	IEEE 802.3af for Power over Ethernet (PD) - PoE version only
LAN Mode	Dual Subnets or RSTP Redundancy
Connector ports	2x 10/100BASE-T(X) RJ-45 or 2x 100/1000 Base-X SFP Slots (SFP version)
Serial Interface	
Connector	4x D-Sub9 RS-232/422/485 software selectable (DB models) or 4x 5.08mm 5-Pin Terminal block RS-232/422/485 sw selectable (TB models)
Baud Rate	1,200 ~ 921,600 bps software selectable
Data Bits	7, 8 software selectable
Stop Bits	1, 2 software selectable
Flow Control	None, Xon/Xoff, RTS/CTS
Isolation	3 kV (Sis versions only)
USB interface	
Universal Serial Bus	1x USB A Type connector (USB 2.0)
Power	
Input Voltage **Input Current (@ 12VDC)** **Power Consumption** **Power Redundancy** **Reverse Polarity Protection**	Dual 12 - 48VDC (non-PoE Models); or through Ethernet Cable (PoE versions) 0.65 A Approximately 8 W (Max) Yes Yes
Connector	7-Pin 5.08mm Lockable Terminal Block
Relay Output	1A @ 30 VDC (normal open)
Physical Characteristics	
Housing **Dimension (W x H x D)** **Weight** **Installation** **Reset Button**	IP30 SPCC housing 55 x 145 x 113 mm 1000 g DIN-Rail, Wall mount (optional kit) Yes
Environmental Limits	
Operating Temperature **Storage Temperature** **Ambient Relative Humidity**	-40°C~85°C (-40°F~185°F) -40°C~85°C (-40°F~185°F) 5%~95%, 55°C (Non-condensing)
Sofware	
Protocols	IPv4, ICMP, TCP, UDP, DHCP Client, SNMPv1,v2c,v3, HTTP, HTTPS, Telnet, RFC2217, RSTP, Security via PPTP, OpenVPN Client/Server or IPsec (peer-to-peer or peer-to-side) with up to 37.9Mbps VPN throughput,SMTP/TLS
Configuration	AGATEL Management Utility, Web UI, Telnet
VirtualCOM	Windows/Linux redirection software
Modbus Features	
Supported Modes	Ethernet: Modbus TCP Server/Client(or VCOM); Serial: Modbus RTU/ASCII (master/slave)
Maximum number of clients/slaves	Modbus TCP: Maximum 16 clients; Maximum 32 slave connections

DIMENSIONS & LAYOUT

Front View

RJ45 DB9 Type   RJ45 TB5 Type   SFP DB9 Type   SFP TB5 Type

Top View

Bottom View

Side View

Rear View

REGULATORY APPROVALS

Regulatory Approvals			
Safety	UL61010-2-201		
EMC	FCC Part 15, Subpart B, Class A EN 55032, EN 55024, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 61000-6-4,		
Test	**Item**	**Value**	**Level**
IEC 61000-4-2	ESD	Contact Discharge Air Discharge	±8KV ±15KV	4 4
IEC 61000-4-3	RD	Radiated (enclosure)	10 V/m	3
IEC 61000-4-4	EFT	AC Power Port Signal Port	±2.0KV ±2.0KV	3 4
IEC 61000-4-5	Surge	AC Power Port AC Power Port Signal Power Port	Line-to Line±1.0KV Line-to Earth±2.0KV Line-to Earth±2.0KV	3 3 3
IEC 61000-4-6	CS	Conducted (enclosure)	10 V rms	3
IEC 61000-4-8	PFMF	Enclosure	10 A/m	3
IEC 61000-4-11	DIP	Power Port	-	—
Shock	IEC 60068-2-27		
Drop (Freefall)	IEC 60068-2-32		
Vibration	IEC 60068-2-64		
RoHS II	Yes		
MTBF	14.56 Years (according to MIL-HDBK-217F)		
Warranty	5 years		

ORDERING INFORMATION

Ordering information			
Model name	**Description**	**Ethernet**	**Serial**
XMT5904-4P-DB	Ind. 4-Port Modbus Gateway, 10/100BASET(X), DB9	2 (RJ45)	4 (DB9)
XMT5904-4P-TB	Ind. 4-Port Modbus Gateway, 10/100BASET(X), TB5	2 (RJ45)	4 (TB)
XMT5904-4P-SI	Ind. 4-Port Modbus Gw,10/100BASET(X),3kV Isolated	2 (RJ45)	4 (TB)
XMT5904-4P-P-DB	Ind. 4-Port Modbus Gw,10/100BASET(X)with PoE, DB9	2 (RJ45)	4 (DB9)
XMT5904-4P-P-TB	Ind. 4-Port Modbus Gw, 10/100BASET(X)with PoE, TB5	2 (RJ45)	4 (TB)
XMT5904-4P-P-SI	Ind. 4-Port Modbus Gw, RJ45, PoE, 3kV Isolated	2 (RJ45)	4 (TB)
XMT5904-4P-G-DB-S	Ind. 4-Port Modbus Gw, 100/1000BASEX SFP Slot, DB9	2 (SFP)	4 (DB9)
XMT5904-4P-G-TB-S	Ind. 4-Port Modbus Gw, 100/1000BASEX SFP Slot, TB5	2 (SFP)	4 (TB)
XMT5904-4P-G-SI-S	Ind. 4-Port Modbus Gw,100/1000 SFP Slot,3kV Isolated	2 (SFP)	4 (TB)

OPTIONAL ACCESSORIES

Optional Accessories	
Model Name	**Description**
XDP-75-24	75W/3.2A DIN-Rail 24VDC power supply with 88~264VAC / 124~370VDC input
XSC-RJ45-DB9-90-F	8-pin RJ45-DB9 debug cable, 90cm
GDC-120	120mm copper woven grounding cable
XCA-DB9-TB5	Female DB9 to Female 3.81mm TB5 Converter
XWK450-A-BK	Aluminum wall mount kit
XTR-28-SX-550M	SFP Transceiver, 1250Mbps, 850nmVCSEL, Multi-mode, 550m, 3.3V, -20~85°C
XTR-38-SX-2K	SFP Transceiver, 1250Mbps, 1310nmFP, Multi-mode, 2km, 3.3V, -40~85°C
XTR-38-LX-10K	SFP Transceiver, 1250Mbps, 1310nmFP, Single-mode, 10km, 3.3V, -40~85°C
XTR-38-LX-30K	SFP Transceiver, 1250Mbps, 1310nmDFB, Single-mode, 30km, 3.3V, -40~85°C

agatel
iga connect®

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.

Agatel Ltd

1st Floor, Apex House
Calthorpe Road, Edgbaston
Birmingham B15 1TR
United Kingdom

Tel: +44 121 809 8855
E-mail: info@agatel.co.uk
Website: www.agatel.co.uk