

Industrial Communications Report – 2023

Part of the Industrial IoT, Software and Communications Service Area Package

Global insight and analysis of industrial communications trends that enables informed decision making for industrial automation vendors, and end-users.

“ Whether it is Fieldbus, Ethernet or Wireless, this service has everything you need to know about industrial connectivity. It also answers key questions about the uptake of nascent technologies such as TSN, SPE/APL and 5G. ”

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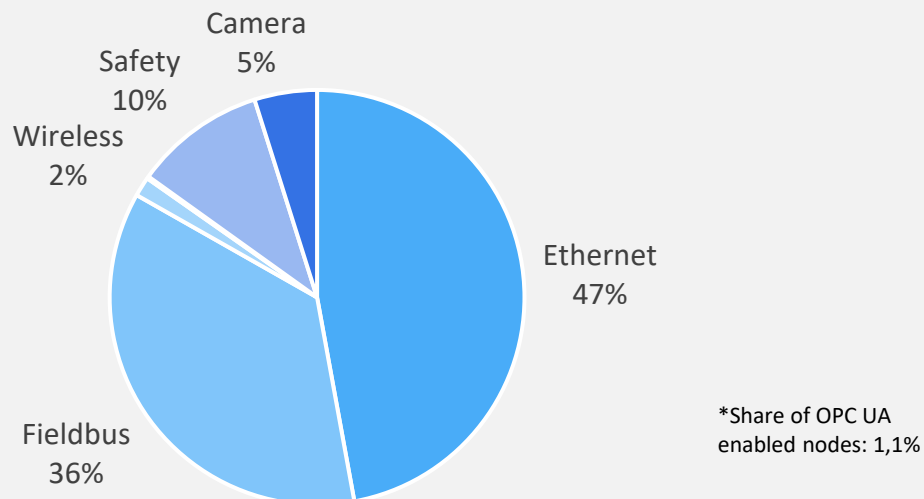
HOW OMDIA HELPS YOU

- The impact of connectivity technologies, such as 5G, TSN and SPE on industrial automation
- End-equipment connectivity (motors, pumps and compressors, generators and turbines)

KEY QUESTIONS ADDRESSED

- What are the size, share, and forecasts for new nodes by different technologies in the manufacturing space?
- What is the uptake of wired vs wireless technology?
- How is the connectivity landscape changing with the introduction of new technologies such as OPC UA, 5G, TSN and APL?
- What is the future of connectivity? New developments from various industrial associations?

The breakout of the industrial communications market by technology based on newly connected nodes, 2020



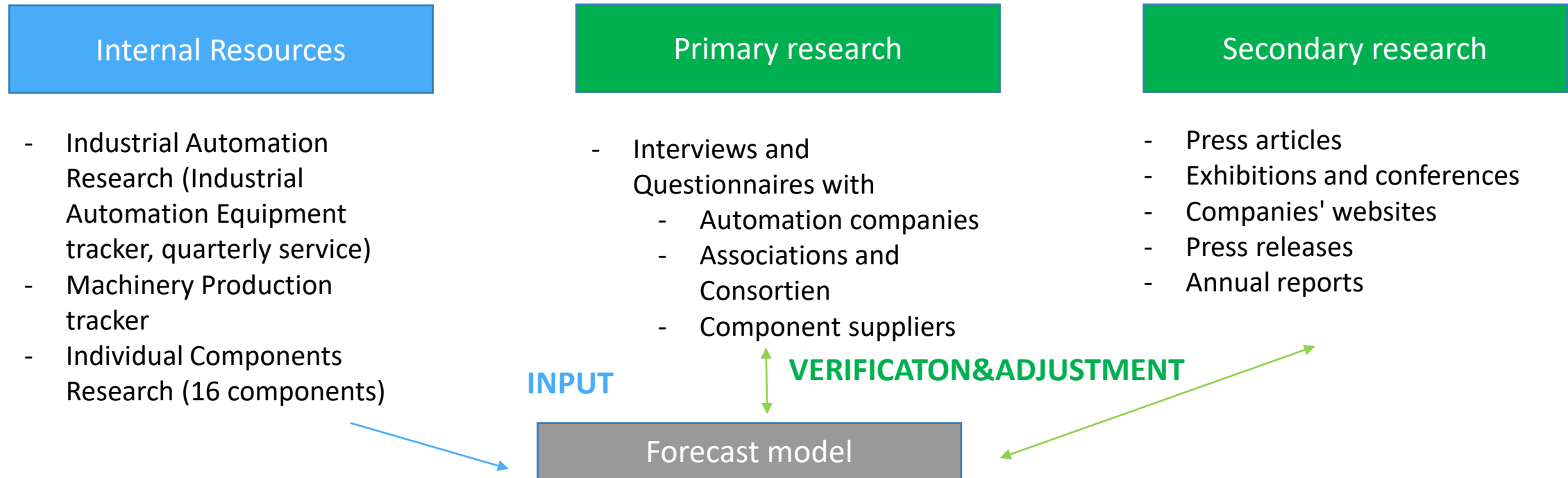
Source: Omdia

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Industrial Communications: Research Coverage

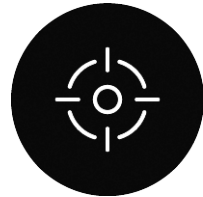
General	Communication Protocols and Emerging Technologies			Industrial Automation Devices	
<p>FREQUENCY: Annual</p> <ul style="list-style-type: none"> • 2022 base year • 5-year annual forecast (2022 - 2027) <p>MEASURES</p> <ul style="list-style-type: none"> • Node/Unit shipments • Market Share <p>REGIONS</p> <ul style="list-style-type: none"> • North America • South America • EMEA • APAC 	<p>ETHERNET VARIANT</p> <ul style="list-style-type: none"> • PROFINET • EtherNet/IP • Ethernet TCP/IP • EtherCAT • CC-Link IE • Modbus TCP/IP • Other • POWERLINK • Sercos III • MECHATROLINK-III • CC-Link IE TSN • HSE • FL-Net • Hart-IP • EPA <p>EMERGING TECHNOLOGIES</p> <ul style="list-style-type: none"> • OPC UA • APL • TSN • 5G 	<p>FIELDBUS VARIANT</p> <ul style="list-style-type: none"> • PROFIBUS • CC-Link • Other • IO-Link • DeviceNet • Modbus • CanOpen • Hart • AS-i • ControlNet • Sercos I & II • FF • MECHATROLINK-II • Interbus • FireWire <p>CAMERA</p> <ul style="list-style-type: none"> • 10/100/Gigabit • Camera Link • USB • CoaXPress • FireWire • 10 Gigabit 	<p>WIRELESS TECHNOLOGIES</p> <ul style="list-style-type: none"> • WLAN • WirelessHART • Cellular • ISA 100.11a • WiMAX • Bluetooth • Bluetooth Low Energy • Other <p>SAFETY NETWORK VARIANT</p> <ul style="list-style-type: none"> • PROFISAFE (via PROFINET) • PROFISAFE (via PROFIBUS) • CIPSafety (via Ethernet/IP) • AS-i Safety • CIPSafety (via DeviceNet) • Safety over IO-Link • Safety over EtherCAT • CC-Link Safety • OpenSAFETY <p>CLOUD CONNECTIVITY</p> <ul style="list-style-type: none"> • MQTT • AMQP 	<p>MOTOR, CONTROLS, AND CONTROLLED EQUIPMENT</p> <ul style="list-style-type: none"> • Servo drives • Safety drives • MV motor drives • Stepper drives • LV motor drives • Motion controllers • Motors • Pumps and compressors • Generators and turbines • Switchgear <p>DISCRETE CONTROL AND VISUALIZATION EQUIPMENT</p> <ul style="list-style-type: none"> • Remote I/O • IPCs • Sensors • PLCs • Machine vision • Operator terminals • Discrete machine safety components 	<p>PROCESS CONTROL AND INSTRUMENTATION</p> <ul style="list-style-type: none"> • DCS • RTUs • Process measurement devices • Process controllers • Process safety systems

Methodology



- economic data published by international organizations, including the United Nations and OECD.
- gross domestic product (GDP), industrial production, manufacturing, and machinery production growth rates. The growth rates were weighted as appropriate.
- For this report, Omdia considered that production and manufacturing growth rates carried more weight than GDP growth rates.

Industrial Communications: Deliverables



FLAGSHIP PRODUCT

—Annual—

Comprehensive report and accompanying database



MARKET BRIEFS

—Annual—

Studies addressing key trends throughout the year



ANALYST INSIGHTS

—Ongoing—

Commentary on attended events, regional developments, or emerging trends



PRESENTATIONS

—Quarterly—

Quarterly scheduled briefings with analysts on research highlights from all aspects of the market.



ANALYST ACCESS

—Ongoing—

For prompt responses to urgent and unique questions.

Related Content: Industrial IoT, Software and Communications Service Area Coverage



Service Area Package:

Industrial IoT, Software and Communications

Industrial IoT Intelligence Service

Industrial Edge Networking Components – Annual Intelligence Service

Industrial Software Intelligence Service

Digital Innovation in Manufacturing End-User Survey

Transactional reports

Industrial Communications Report -2021

- Industrial Sustainability and the Role of Technology
- 5G in Manufacturing
- Manufacturing Edge Compute and the future of Automation

About Omdia's Industrial IoT, Software and Communications Research

With a background as a market leader in industrial automation and machinery, Omdia's Industrial IoT, communications and software research provides a unique insight into the market potential, opportunities and challenges in the digital transformation of the industrial/manufacturing sector.

The research portfolio spans industrial connectivity (including 5G and TSN), industrial software (MES, APM, Digital Twin), Analytics (including Edge compute and Artificial Intelligence), and Industrial Cybersecurity. A robust primary research methodology supports quantitative analysis of these markets, alongside discussion of forecast scenarios, the competitive environment, technology trends as well as ongoing coverage of market developments. This is combined with comprehensive "voice of the customer" analysis, highlighting customer challenges, objectives and maturity levels in deployment of new solutions and business models.

This insight is used to support vendors understanding of new business opportunities, prioritizing markets and investment, as well as guiding end-users in understanding best practices for digital transformation

Our “Ask an Analyst” Service Provides Best in Class Customer Support

Whether you need guidance to navigate the service, information regarding our methodologies or you want to better understand a data trend, Omdia’s support team is here to help.

Draw on our expertise

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ABOUT OMDIA

Omdia is a global technology research powerhouse, established following the merger of the research division of Informa Tech (Ovum, Heavy Reading, and Tractica) and the acquired Omdia technology research portfolio*. We combine the expertise of more than 400 analysts across the entire technology spectrum, covering 150 markets. We publish over 3,000 research reports annually, reaching more than 14,000 subscribers, and cover thousands of technology, media, and telecommunications companies.

Our exhaustive intelligence and deep technology expertise enable us to uncover actionable insights that help our customers connect the dots in today's constantly evolving technology environment and empower them to improve their businesses—today and tomorrow.

* The majority of Omdia technology research products and solutions were acquired by Informa in August 2019 and are now part of Omdia.