

MECHTRIC



Networking & Communication

Networking & Communication: Powered by Mechtric's Expertise and Global Partnerships

With over 60 years of industry experience, Mechtric proudly partners with world-class manufacturers to deliver innovative solutions.

Mechtric's Networking and Communication solutions include industrial switches, routers, and gateways that provide secure and reliable data exchange across connected systems. To support advanced monitoring and control, software platforms such as Polar Cloud and VTScada deliver powerful tools for real-time visibility, remote management, and process automation.

Together, these hardware and software solutions enable seamless integration and efficient operation across industrial networks.



Networking & Communication

Network Devices

Layer 1 industrial Ethernet switches



Delta

G-1

Layer 2 industrial managed switches



Delta

G-1

Layer 3 rack-mount managed switches



Delta

G-2

Industrial routers



Delta

G-2

Industrial Gateways

LTE & Ethernet gateways



Polar Monitoring

G-3

Edge Gateway with on-board processing



Polar Monitoring

G-3

Industrial Software

Cloud-based monitoring and control platform



Polar Monitoring

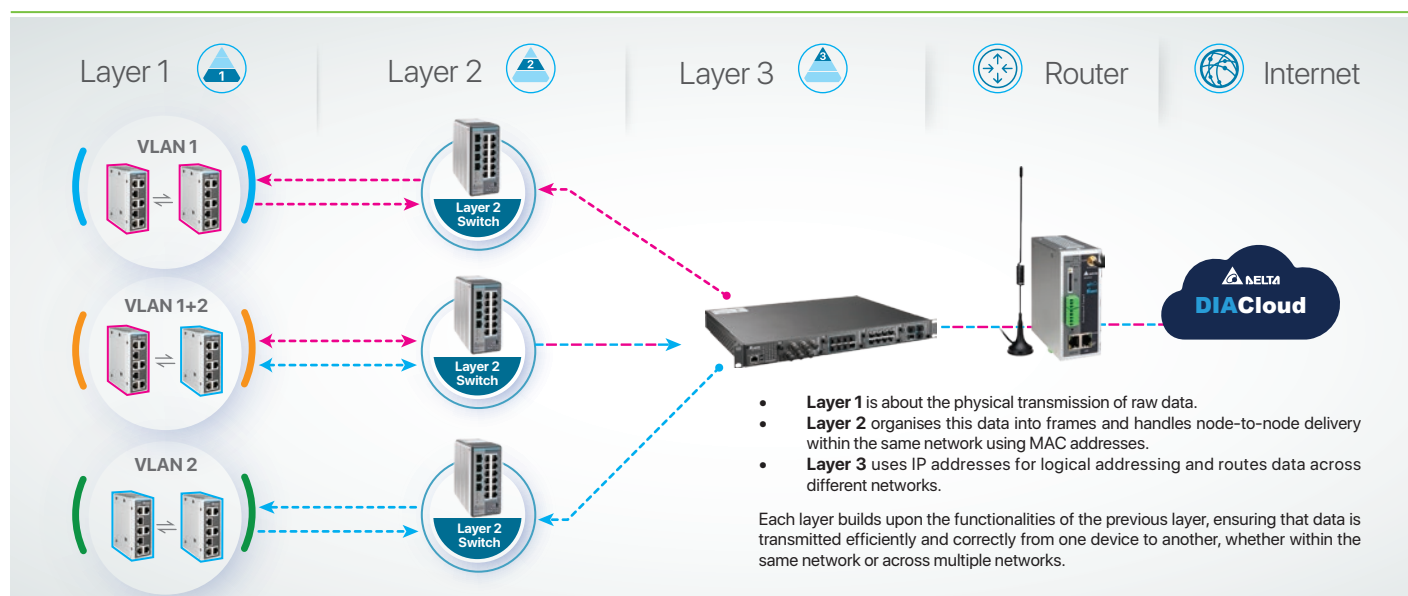
G-4

Supervisory control and data acquisition system



Delta

G-6

Rugged
ETHERNET

EMC



FANLESS



NEW



DVS-005I00C



DVS-008I00C



DVS-G116W02-4GF



type	no. ports	operating temperature	alarm contact	no. fibre ports	description
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Layer 1: Unmanaged industrial Ethernet switches**Layer 1: Compact Ethernet switches (Unmanaged)**

- Input voltage: 12 to 48 VDC
- 10 / 100 Base-T(X), auto MDI / MDI-X, auto negotiation

DVS-005I00C	5	-10...+60°C	—	—	entry level Ethernet switch
DVS-008I00C	8	-10...+60°C	—	—	entry level Ethernet switch

Layer 1: Standard Ethernet switches (Unmanaged)

- IEEE 802.1p Class of service / quality of service, priority protocols (**8W01** and **16W01**)
- Input voltage: 2 sets, 12 to 48 VDC redundant terminal block input

DVS-005W01	5	-40...+75°C	yes	—	standard Ethernet switch
DVS-008W01	8	-40...+75°C	yes	—	standard Ethernet switch
DVS-016W01	16	-40...+75°C	yes	—	standard Ethernet switch

Layer 1: Gigabit Ethernet switches (Unmanaged)

- 10 / 100 / 1000 Base-T, auto MDI/MDI-X, auto negotiation
- Input voltage: 12 to 48 VDC (2 set)

DVS-G005I00C	5	-40...+70°C	—	—	Gigabit Ethernet switch
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Layer 1: PoE Gigabit Ethernet switches (Unmanaged)

- 10 / 100 / 1000 Base-T PoE(PSE) ports. 2 x 100 / 1000 Base-SFP
- Based on IEEE 802.3af standard up to 30W per port. Backward compatible with IEEE 802.3af

DVS-G406W01-2GF	6	-40...+70°C	yes	2 x SFP	PoE Gigabit Ethernet switch
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Layer 2: Managed Ethernet switches

High-end Layer 2 management, redundant self-healing ring and a wide-operating temperature.

- Supports EtherNet/IP and Modbus TCP protocols for remote management by SCADA etc.
- IEEE 802.1X, TACACS+, SSH, HTTPS and SNMP v3 for enhanced network security
- Compatible with most industrial protocols, including: EtherNet/IP, PROFINET, CC-Link IE, DNP 3.0
- RJ45 ports: 10 / 100 / 1000 Base-T, auto MDI/MDI-X, auto negotiation
- SFP ports: 100 / 1000 Base-SFP

Layer 2: Managed Ethernet switches

DVS-G112W02-4GF	8	-40...+75°C	yes	4 x SFP	Managed Ethernet switch
DVS-G116W02-4GF	12	-40...+75°C	yes	4 x SFP	Managed Ethernet switch

SFP fibre transceiver

(SFP fibre transceiver - 1 port)

type	operating temperature	interface		
		connectors	fibre type	max. link distance
LCP-1250A4FDRJ	-5°C...70°C	duplex LC	multi mode	550 m

Rugged
ETHERNET


EMC



FANLESS



Excluding modules

DVS-G928W01



DVS-G900-8GE



DVS-G900-6GM12



DVS-G900-8GF



DX-2400L9

Rugged
WIRELESS


DX-3021L9

Communication devices

type	no. ports	DI	DO (relay)	power input	operating temperature	description
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Layer 3: Managed Ethernet switches

Layer 3 switches route network packets between different subnets, using hardware to determine the correct paths and ensure efficient data exchange. Delta Layer 3 switches incorporate advanced hardware and software to function effectively in harsh industrial settings.

- Enhanced network security with **IEEE 802.1X, TACACS+, SSH, HTTPS and SNMP v3**
- STP/RSTP/MSTP for network redundancy further ensures reliability

Layer 3: Managed industrial rack mount Ethernet switch

(100 to 240VAC / 125 to 370VDC)

DVS-G928W01	4	—	2	2	-40...+85°C	L3 managed ETH switch
	module slot					
	M1	M2	M3	M4		no ports
DVS-G900-8GE	•	•	•	—	-40...+85°C	8 RJ45 ETH module
DVS-G900-6GM12	•	•	•	—	-40...+85°C	6 M12 ETH module
DVS-G900-8GF	•	•	•	—	-40...+85°C	8 SPF ETH module
DVS-G900-4GF	—	—	—	•	-40...+85°C	4 SFP ETH module

DX-series - Industrial cloud solutions

input: 24 VDC

- Data acquisition equipment connected to DIA cloud servers
- Supports a two-way data collection channel between the device and the cloud
- Various peripheral interfaces include RS-485, RS-232 and LAN ports
- Built-in RTC and supports NTP time synchronization over a network
- Supports TCP/IP, UDP, ICMP, DHCP, HTTP, DNS, SSH, TCP and Modbus RTU protocols

Industrial Ethernet cloud router

(4-Port LAN FE + 1-Port WAN FE + 1 RS-232 + 1 RS-485)

The DX-2310LN is an IoT wired communication product of industrial grade. Includes Ethernet, RS232 and RS485 interfaces.

- Flexible connection method over WAN ports, e.g. static IP, DHCP client and more

DX-2310LN	5	—	—	1	-20...+70°C	cloud based VPN router
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Industrial 4G cloud router

(1-Port LAN + 1-Port WAN/LAN + 1-Port RS-485 + 1-Port RS-232)

The DX-2400L9 industrial router supports multiple mobile networks and provides internet access via WAN and cellular connections. It includes Ethernet, RS232, and RS485 interfaces

- Connect to AWS IoT MQTT Broker through MQTT protocol
- Universal LTE-FDD and LTE-TDD frequency bands
- Connect to internet through 4G cellular network or WAN broadband interfaces

DX-2400L9	2	—	—	1	-20...+70°C	4G/WAN cloud router
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Industrial 4G/WAN

(1-Port WAN + 4-Port LAN + 1-Port RS-232 + 1-Port RS-485)

- USB port can accept 3rd-party Wi-Fi USB adapter(only Realtek RTL8192EU driver supported)
- Universal 4G LTE-FDD and LTE-TDD frequency bands

DX-3021L9	5	2	2	1	-20...+70°C	cloud based 4G/WAN router
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Industrial FieldBus Delta solution

Industrial automation products for converting communication signals of automation, servo and control devices. IFD communication modules are robust, high quality devices offering stable communication with in-built protection.

type	from	to	description
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Ethernet to serial Modbus RS-232/485 Converters (full isolation)

IFD9506	RS-232/485	MODBUS TCP	converter (inc. power supply)
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To configure IFD devices you need to install DCISoft

Serial to serial communication converters

IFD6500	USB	RS-485	converter (no ext. power supply required)
IFD6530	USB	RS-485	with 9V power supply (115.2k bps Max.)
IFD8500-A	RS-232	RS-422/485	RS-232 isolated converter
IFD8510	RS-485	isolated repeater/amplifier	(extends transmission to 1.2 km)

IFD65xx requires special driver to work with Windows OS, available on Delta website.

CAN / DeviceNet to serial converters

IFD6503	USB	CAN	CAN to serial converter
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GL-PMGW-LTE



GL-PMGW-GE



PM-MB4442

**Polar Monitoring - All-in-One Cloud-Based Monitoring**

Polar Monitoring offers a comprehensive, cloud-based monitoring solution tailored for the agriculture, commercial, and industrial sectors.

type	supply voltage	network connection	connector type	description
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Industrial LTE gateway

DIN mounting rail

IP40

LTE Gateways use the GSM/LTE mobile network to connect to the Polar Cloud Service. Gateways have a pre-installed SIM Card, managed by Polar Monitoring for user convenience.

- SIM: Pre-installed, no airtime/data required (*managed by Polar Monitoring*)
- Antenna: Includes standard antenna (PM-A-2)

LTE solution

M-PM-GW-LTE-AUS	9 - 36 VDC	2G/LTE	terminal	LTE - Gateway
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Industrial Ethernet gateway

DIN mounting rail

IP40

The Ethernet Gateway requires an existing on site internet connection. It connects directly into an existing IP network via DHCP.

- DHCP client connects through firewall. No VPN or port forwarding required

Ethernet solution

GL-PMGW-ETH	9 - 36 VDC	Ethernet	terminal	Ethernet - Gateway
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Industrial Edge gateway

DIN mounting rail

IP40

Glacier Edge has capabilities to store data locally and maintain on-site control even during an internet outage. It experiences no downtime due to network issues and automatically syncs any missing data with the cloud once the connection is restored.

- Key features: Dual Ethernet ports, GPS, Intel CPU 4-core 2.5Ghz, 4GB RAM, 126GB SSD, fan-less design, 4x isolated RS-485, Modbus TCP support, Virtual Com ports

Edge solution

GL-PMGW-GE	12 - 24 VDC	2G/LTE	terminal	Edge - Gateway
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Industrial fieldbus solution

DIN mounting rail

IP40

type	supply voltage	inputs (DI)	outputs (DO)	inputs (AI)	pulse counter
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The PM-MB4442 is a Remote I/O solution designed for use with the Polar Gateway via RS-485. This unit supports 4-20mA analog inputs, pulse counters, and Digital I/O, allowing you to conveniently monitor real-world variables in the Polar Cloud.

Remote I/O solution

PM-MB4442	12 - 24 VDC	4	4	4 (4-20mA)	2
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Accessories (for Polar related products)

type	gain	mounting	cable	description
PM-A-2	2.5dB	magnetic	2m	magnetic base antenna cable
PM-A-28	8dB	bracket	5m	omni-directional outdoor ant. cable

Advanced remote monitoring and control solution

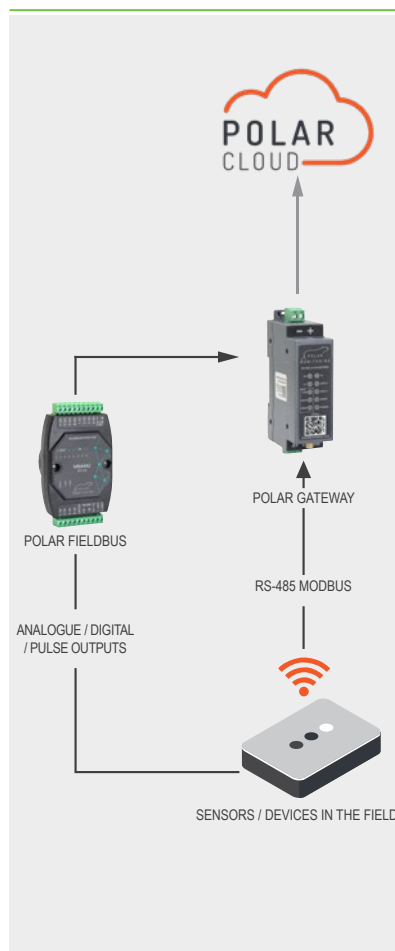
(H) 240 (W) 190 (D) 125 mm

The Polar Cube combines the Polar Monitoring LTE Gateway and the MB4442 module into an advanced remote monitoring and control system designed for easy installation and versatile application.

- Inputs/Output: 4x AI, 4x DO, 2x DI, 2x pulse counter
- Polar Cube requires Polar Cloud license

GL-CUBE-S	12-24 VDC or 230 VAC	2G/LTE	—	remote monitoring and control solution
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Polar Cube - Applications & Uses



Polar Cloud - Software for Monitoring & Control

Polar Cloud serves as the backbone of the entire Polar Monitoring ecosystem. This user-friendly platform, in conjunction with the Polar Gateway, consolidates and displays crucial data from your field devices in a single location. It also provides the convenience of remote programming and system parameter adjustments.

The Polar Cloud is device and brand agnostic meaning one can monitor a multitude of different devices and brand types from one platform.

General features:

- Remote programming, monitoring, trending
- Alerts and notifications (*SMS and email*)
- Error codes and reporting
- Multiple user access rights
- Device agnostic (*Supports multiple types of devices and applications in one platform*)



Pricing small to medium systems

Polar Site Based Licencing					Subscription options		
Code	I/O tags	Alerts	Schedulers	Up to Gateways	1-Year	2-Year	3-Year
PL-Y-T15	15	2	4	1	PL-1-T15	PL-2-T15	PL-3-T15
PL-Y-T32	32	10	20	2	PL-1-T32	PL-2-T32	PL-3-T32
PL-Y-T50	50	16	32	5	PL-1-T50	PL-2-T50	PL-3-T50
PL-Y-T100	100	32	64	10	PL-1-T100	PL-2-T100	PL-3-T100
PL-Y-T150	150	46	92	20	PL-1-T150	PL-2-T150	PL-3-T150
PL-Y-T250	250	70	140	50	PL-1-T250	PL-2-T250	PL-3-T250
PL-Y-T500	500	130	260	100	PL-1-T500	PL-2-T500	PL-3-T500
PL-Y-T1000	1 000	200	400	250	PL-1-T1000	PL-2-T1000	PL-3-T1000

For 2 or 3 year licence option, replace Y with 2Y or 3Y to part number eg. **PL-2Y-T15** for a 2 year licence

Extras

Additional tags, alerts and schedulers can be added to any licence above to extend the offering

Code	description
PL-Y-AT-1	Additional Tag
PL-Y-AA-1	Additional Alerts
PL-Y-AS-1	Additional Schedulers

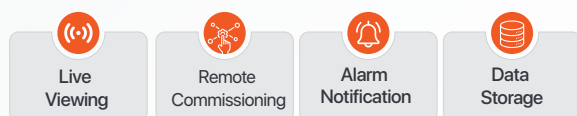
* Glacier Edge Gateways require data bundles if connecting to the internet through the embedded SIM

** 3rd party API available

Polar Cloud - Software for Monitoring & Control



Remote Monitoring Solution

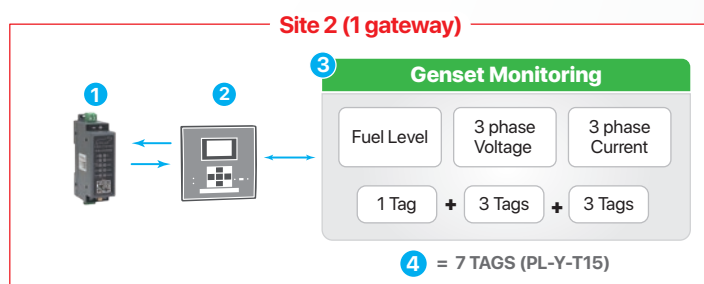
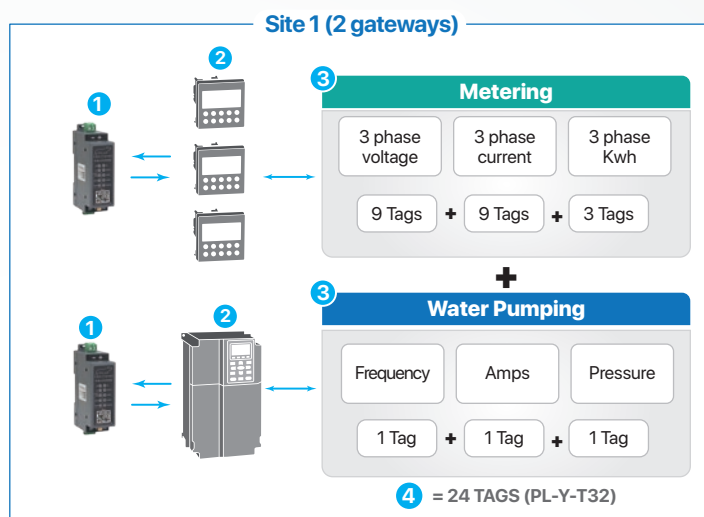


Polar Monitoring's new tag/site based licensing offers a flexible tag based pricing model. Below is an example of how the tag based model works and how you can implement it in your future projects and applications.

- Step 1** Choose Your Gateway (LTE Local, LTE International, or Ethernet)
- Step 2** Select Your Compatible RS485/Modbus RTU Device
- Step 3** Identify Your Monitoring Needs and Calculate Required Tags
- Step 4** Choose a License That Fits Your Requirements



Test the Polar Platform today! Access the Polar Demo Portal via the QR code for a hands-on experience of everything Polar has to offer.



Powerful Simplicity

Monitor and Control your system from anywhere in the world

VTScada award-winning software trusted for real-time monitoring and control of industrial operations. Its user-friendly interface and advanced visualisation make it ideal for all users, ensuring operational excellence across industries.

Key Benefits:

- **User-Friendly Interface:** Designed for both technical and non-technical users.
- **Advanced Visualisation:** Clear and concise data presentation.
- **Scalability:** Ideal for both small and large operations.
- **Operational Excellence:** Reduce costs, enhance safety, increase uptime, and improve compliance.

Featured VTScada Industries



Manufacturing



Water & Waste Water



Oil & Gas



Power Generation



Mining



ICT

VTScada Successes

The City of Houston modernised its 400 MGD water purification plant expansion by implementing VTScada, providing real-time monitoring and control over its water and wastewater systems. This upgrade improved efficiency, reduced downtime, and enhanced reliability, ensuring continuous clean water delivery. The user-friendly interface also enabled the team to quickly adapt and optimise processes.



Scan to learn more



Scan to learn more

Bright Alloys, a ferrochrome smelter in South Africa, transformed into a more agile, sustainable, and efficient operation with the implementation of VTScada. This led to a one-third reduction in natural gas consumption, a 10% increase in furnace availability, and a 1% improvement in feed accuracy tolerance, driving better performance and reducing environmental impact.



Scan to learn more

A leading oil and gas producer modernised its operations with VTScada, enabling real-time monitoring and control across its complex infrastructure. This upgrade improved operational efficiency, reduced downtime, and enhanced safety, ensuring continuous production. The intuitive interface also allowed the team to quickly adapt and optimise processes.



VTScada by Trihedral - SCADA system

SCADA (Supervisory Control and Data Acquisition) software is essential for real-time monitoring and control of industrial processes. Providing operators with tools to manage equipment efficiently, analyse data and respond to system alerts. This ensures optimal performance, safety and reliability across various industries.

Advanced SCADA Monitoring and Control with user- friendly design

VTScada is an intuitive SCADA software solution designed to simplify complex industrial processes. Combining real-time data acquisition, scalable architecture and integrated alarm management enhancing operational efficiency while reducing learning curves for engineers.

With a customisable interface and extensive support resources, it offers a user-centric approach to industrial automation, with a customisable interface and extensive support resources, it offers a user-centric approach.

- Integrated Alarm Management: Real-time event detection to prevent disruptions
- Scalable Architecture: Seamless integration across all system sizes
- Customisable Interface: Tailor your HMI to specific requirements
- Built-in Protocols: Hundreds of device drivers for broad connectivity
- Data Sharing: Integrates external data from 3rd party systems for seamless control

type	development runtime	alarm notification	data sharing	thin clients		
				1	5	∞

VTScada development runtime (200 Tag combos)

VTS-200DRTCANS	•	•	–	•	–	–
VTS-200DRULTCANS	•	•	–	–	–	•

Add additional thin clients (price per each thin client)

VTS-200VIC01	–	–	–	•	–	–
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Add 3rd party data sharing

VTS-2003RD	–	–	•	–	–	–
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Small to Medium Systems (up to 25,000 I/O Tags)

Designed to handle the complexities of large-scale industrial systems, VTScada offers robust scalability to manage thousands of I/O points seamlessly. Its architecture supports extensive data logging, high availability, and distributed systems across multiple locations.

type	tags	A	B	C	D	S	T	U	V
		run time	development runtime	alarm notification	data sharing	thin clients			dual server premium*
						1	5	∞	
VTS-001Kx	1 000	–	–	–	–	–	–	–	–
VTS-005Kx	5 000	–	–	–	–	–	–	–	–
VTS-010Kx	10 000	–	–	–	–	–	–	–	–
VTS-025Kx	25 000	–	–	–	–	–	–	–	–

Replace X above with A, B, C, D, S, T, U or V for the relevant software component - pricing for more than 25 000 tags available on request

* Dual Server Premium for Enterprise-Level SCADA solutions for large-scale critical operations (includes all of the features as below)

Access and User Interaction:		Unlimited Thin Clients Widgets and Graphics Library Multi-User Scripting Idea Studio	Unlimited PC and mobile access for seamless large-scale operations Access thousands of pre-built industry-specific widgets Advanced scripting capabilities with hundreds of functions Powerful development environment with on/offline and multi-user support
Data Management and Analysis:		High-Performance Historian Comprehensive Trending Customisable Reporting DataLogger Support	Capture and store extensive real-time data with ease Automatic trend analysis with no additional setup required Generate tailored reports to meet all compliance needs Integrated logging for DF1, SCADAPack, and more
System Security and Redundancy:		Advanced Security Backup Alarms and Event Backup ODBC/OPC Backup Deployment	Robust, integrated security features for enterprise-level protection Full redundancy for alarms and event logging Redundant ODBC and OPC servers for uninterrupted operations Redundant deployment tools for uninterrupted operations
Connectivity and Integration:		Common I/O Drivers Advanced I/O Drivers Proprietary I/O Drivers Data Sharing Multi-Plant Support	Supports Modbus, Siemens S7, Omron Host Link, Delta and more Includes DNP3, SNMP, Motorola ACE, and other advanced protocols Supports DataFlow Systems and other proprietary protocols ODBC Server, OPC Server, and Web Services for third-party integration Centralised management of multiple plants or locations
System Management and Support:		Resource Monitoring SupportPlus Year 1 Version Control Change Deployment Alarms and Events Logging	Full system view with SNMP Agent for efficient resource management Unlimited support, upgrades, and version compatibility Automatic version control (for seamless updates and disaster recovery) Remotely update all system components with a single click Comprehensive logging of all system and user actions

World Class Innovation, Local Commitment

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