Visualisation

Industrial PC v800
Monitor v200
VisiWinNET®

Visualisation

Contents

Product key

v200 and v800, 2nd generation

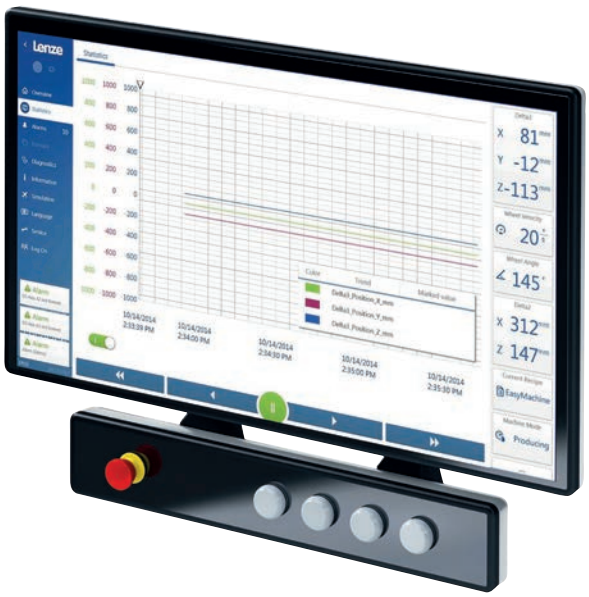
	V80	G	B	S	J	7	5	0	H	4	R	XXXX	-00009000000
Device series													
V20 - Monitor													
V80 - Industrial PC													
Version													
S - Protec (industrial PC)													
D - Protec (monitor)													
P - Cabinet (industrial PC)													
M - Cabinet (monitor)													
Screen diagonal/resolution													
J - 43.9 cm (17.3 ")													
L - 61.0 cm (24 ")													
USB IP65 on rear (Protec only)													
0 - Without													
5 - 1x USB													
Processor type													
0 - Without (monitor)													
H - Mobile Intel Celeron 1.6 GHz													
K - Mobile Intel Core i5 1.9 (max. 2.9) GHz													
Main memory													
0 - Without (monitor)													
6 - 4 GB (Celeron only)													
7 - 8 GB (i5 only)													
Mass storage													
0 - Without (monitor)													
R - Solid State Disk (SSD) 120 GB													
Operating system													
0 - Without (monitor)													
9 - Windows Embedded Standard 7 P 64 Bit													

v200 and v800, 1st generation

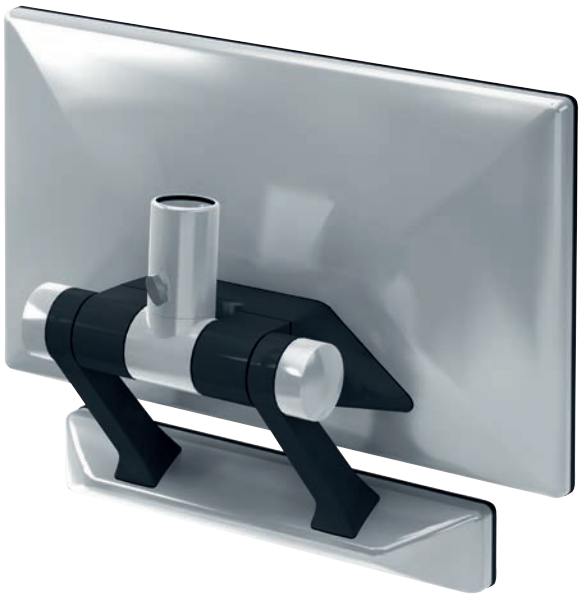
	V80	G	A	P	G	7	0	0	G	6	R	XXXX	-00009000000
Device series													
V80 - Panel PC													
Version													
P - Cabinet (panel PC)													
Screen diagonal/resolution													
G - 33.8 cm (13.3 ")													
H - 39.1 cm (15.4 ")													
K - 54.6 cm (21.5 ")													
Processor type													
G - Intel® Celeron 1.5 GHz													
J - Intel® Core i5 2.7 (max. 3.3) GHz													
Main memory													
6 - 4 GB													
Mass storage													
R - Solid State Disk (SSD) 120 GB													
Operating system													
9 - Windows Embedded Standard 7 P 64 Bit													

Features

The v800 visualisations are compact and designed with a high degree of protection. The connections are protected and integrated into the housing.



v800-Protec front view with switch box



Rear view with support arm

Product information

Visualisation solutions with the industrial PC v800

Machine visualisations with the v800 industrial PCs can be easily scaled and realised in an optimal manner for the machine. The various screen diagonals and processor capacities are tailored to the requirements of modern machine control. As a stand-alone type (Protec) or embedded panel (Cabinet), they will fit into any machine concept. All devices are equipped with cutting-edge multi-touch glass sensors that can be operated even with gloves on and the operating program can be set up intuitively using the engineering software VisiwinNet.

The high-quality solution – v800-protec
An appealing, elegant device design with IP65 degree of protection and a shape that ensures ease of cleaning results in a product that offers simple elegance with maximum functionality and the best possible platform for demanding user interface concepts. A high degree of standardisation guarantees maximum availability and protection of software investments over a long period of time.

The highlights
- High-resolution full HD displays in 17.3 " and 24.0 "
- Maintenance-free thanks to no rotary components
- IPC type with low-power Intel Mobile processors
- Complies with hygienic design guidelines, no visible screws, IP65 degree of protection
- Individualisation via optional switch box

High-quality, integrated into machine housing – v800-Cabinet
The Cabinet version is intended for installation in machine housing. With the same technical specifications as the v800-Protec, this version is an equivalent alternative. The frameless design with narrow edge ensures a streamlined and visually appealing integration thanks to the circumferential seal on the multi-touch glass pane.

The highlights
- High-resolution full HD displays in 17.3 " and 24.0 "
- Maintenance-free thanks to no rotary components
- IPC type with low-power Intel Mobile processors
- Complies with hygienic design guidelines, no chamfering, front panel, IP65 degree of protection

The high-performance industrial PC – the v800-Cabinet
The devices in this range are ideal for applications that require even more power. The front panels meet the high demands regarding the degree of protection. The innovative cooling method comprising aluminium housing on the rear and durable fans guarantee optimal heat dissipation while ensuring maximum performance.

The highlights
- High-resolution displays in 13.3 ", 15.4 " and 21.5 "
- Solid-state disk
- IPC with high-performance industrial Intel processors
- Fan cooled for maximum performance, easily swappable
- Front panel IP65 degree of protection

Product information

Visualisation solutions with monitor

The v200 monitors depict the visualisation created on the upstream IPC. All the required functions are transferred to the monitors and scaled to suit the features of the v800 industrial PC family. A visually uniform line from the industrial PC to the monitor enables uniform machine design. They are available both as embedded panel (Cabinet) or as stand-alone (Protec) versions. All devices are equipped with cutting-edge multi-touch glass sensors that can be operated even when wearing gloves.

The modern monitor – v200-Protec

An appealing, elegant device design with IP65 degree of protection and an easy-to-clean design results in sleek elegance with maximum functionality and the best possible platform for demanding user interface concepts. A high degree of standardisation guarantees maximum availability and protection of investments over a long period of time.

The highlights

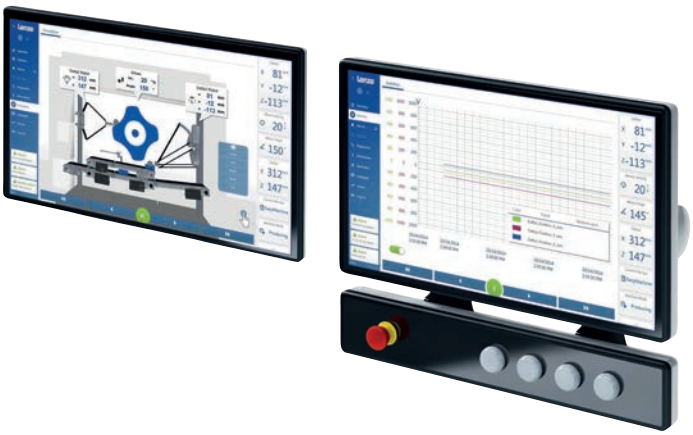
- High-resolution full HD displays in 17.3 " and 24.0 "
- Standard HDMI or DisplayPort connection
- Optional mounting up to 100 m from control cabinet PC via integrable Extender
- Complies with hygienic design guidelines, no visible screws, IP65 degree of protection

Modern integrable monitor – v200-Cabinet

Designed for direct installation into machine housing, these devices offer an alternative platform as they have the same technical specifications and options as the v200-p series. The frameless design with narrow edge ensures a streamlined and visually appealing integration thanks to the circumferential seal on the multi-touch glass pane.

The highlights

- High-resolution full HD displays in 17.3 " and 24.0 "
- Standard HDMI or disply port connection
- Optional installation up to 100 m from control cabinet PC via integrable Extender
- Complies with hygienic design guidelines, no chamfering, IP65 degree of protection on front panel



Standards and operating conditions

Type	Protec	Cabinet
Conformity	CE	
RoHS		
EN50581	2011/65/EU	
Degree of protection		
	IP65	IP65 on front
		IP20 on rear
Vibration resistance		
Vibration (IEC/EN 60721-3-3)	3M4	3M5
Shock (IEC/EN 60721-3-3)	3M4	3M5
Climatic conditions		
Storage (IEC/EN 60068-2-1)	-20 °C – 60 °C, 10% - 85% air humidity without condensation	-20 °C – 60 °C, 10% – 85% air humidity without condensation
Transport (IEC/EN 60068-2-2)	-20 °C – 60 °C, 10% – 85% air humidity without condensation	-20 °C – 60 °C, 10% – 85% air humidity without condensation
Operation (IEC/EN 60068-2-14)		
13.3 "		0 °C – 55 °C, 10% – 85% air humidity without condensation
15.4 "		0 °C – 55 °C, 10% – 85% air humidity without condensation
17.3 "	0 °C – 50 °C, 10% – 85% air humidity without condensation	0 °C – 50 °C, 10% – 85% air humidity without condensation
21.5 "		5 °C – 45 °C, 10% – 85% air humidity without condensation
24 "	0°C – 45°C, 10 % – 85 % air humidity without condensation	0°C – 45°C, 10 % – 85 % air humidity without condensation
Site altitude		
Transport	< 12000 m amsl	< 12000 m amsl
	< 3000 m amsl	< 3000 m amsl
Degree of pollution		
IEC/EN 61131-2	2	2

Rated data v800 and v200-Protec

								
Version			v800-P				v200-P	
Screen diagonal			43.9 cm (17.3 ")	61 cm (24 ")	43.9 cm (17.3 ")	61 cm (24 ")	43.9 cm (17.3 ")	61 cm (24 ")
Resolution		Pixel	1920 x 1080		1920 x 1080		1920 x 1080	
Touch			Capacitive glass surface, Multi-Touch		Capacitive glass surface, Multi-Touch		Capacitive glass surface, Multi-Touch	
Processor type			Intel® Celeron® Processor 2980U (2M Cache, 1.60 GHz)		Intel® Core™ i5-4300U Processor (3M Cache, 1.90 up to 2.90 GHz)			
Graphics processor			Intel® HD Graphics		Intel® HD Graphics 4400			
Operating system			Windows Embedded Standard 7 P 64 Bit		Windows Embedded Standard 7 P 64 Bit			
Storage medium								
Mass storage		[GB]	120 (2.5 " SSD)		120 (2.5 " SSD)			
Internal memory		[GB]	4		8			
Interfaces								
USB host 3.0/2.0 1 x external access point			2 / 1		2 / 1		-	/2
USB Device 2.0			2		2		1	
Ethernet (10/100/1000 Mbit/s)			2		2			
HDMI/display port							1/1	
Rated voltage DC	$U_{N, DC}$	[V]	24 (+/- 20%)		24 (+/- 20%)		24 (+/- 20%)	
Max. current consumption (incl. USB)	I	[A]	3	4	3	4	2	2
Maximum starting current	I	[A]	4	4	4	4	3	3
Fusing of supply voltage	I	[A]	4 slow-blow	6 slow-blow	4 slow-blow	6 slow-blow	4 slow-blow	4 slow-blow
Weight	m	[kg]	4.8	7.7	4.8	7.7	4.6	7.5
Dimensions incl. switch box	W x H x D	[mm]	431 x 351 x 216	578 x 436 x 216	431 x 351 x 216	578 x 436 x 216	431 x 351 x 216	578 x 436 x 216
Dimensions without switch box	W x H x D	[mm]	431 x261 x 216	578 x 347 x 216	431 x 261 x 216	578 x 347 x 216	431 x 261 x 216	578 x 347 x 216

Rated data v800 and v200-Cabinet, 2nd generation

								
Version			v800-C				v200-C	
Screen diagonal			43.9 cm (17.3 ")	61 cm (24 ")	43.9 cm (17.3 ")	61 cm (24 ")	43.9 cm (17.3 ")	61 cm (24 ")
Resolution		Pixel	1920 x 1080		1920 x 1080		1920 x 1080	
Touch			capacitive glass surface, Multi-Touch		capacitive glass surface, Multi-Touch		capacitive glass surface, Multi-Touch	
Processor type			Intel® Celeron® Processor 2980U (2M Cache, 1.60 GHz)		Intel® Core™ i5-4300U Processor (3M Cache, 1.90 up to 2.90 GHz)			
Graphics processor			Intel® HD Graphics		Intel® HD Graphics 4400			
Operating system			Windows Embedded Standard 7 P 64 Bit		Windows Embedded Standard 7 P 64 Bit			
Storage medium								
Mass storage		[GB]	120 (2.5 " SSD)		120 (2.5 " SSD)			
Internal memory		[GB]	4		8			
Interfaces								
USB host 3.0/2.0 1 x external access point			2 / 1		2 / 1		-	/2
USB Device 2.0			2		2		1	
Ethernet (10/100/1000 Mbit/s)			2		2			
HDMI/DisplayPort							1/1	
Rated voltage DC	$U_{N, DC}$	[V]	24 (+/- 20%)		24 (+/- 20%)		24 (+/- 20%)	
Max. current consumption (incl. USB)	I	[A]	3	4	3	4	2	2
Maximum starting current	I	[A]	4	4	4	4	3	3
Fusing of supply voltage	I	[A]	4 slow-blow	6 slow-blow	4 slow-blow	6 slow-blow	4 slow-blow	4 slow-blow
Dimension	W x H x D	[mm]	433 x 263 x 89	580 x 349 x 89	433 x 263 x 89	580 x 349 x 89	433 x 263 x 89	580 x 349 x 89
Mounting depth	D	[mm]	79	79	79	79	62	62
Mounting cutout	W x H	[mm]	422 x 252	569 x 338	422 x 252	569 x 338	422 x 252	569 x 338

Rated data v800-Cabinet, 1st generation

								
Version			v800-C					
Screen diagonal			33.8 cm (13.3 ")	39.1 cm (15.4 ")	54.6 cm (21.5 ")	33.8 cm (13.3 ")	39.1 cm (15.4 ")	54.6 cm (21.5 ")
Resolution			1280 x 800	1280 x 800	1920 x 1080	1280 x 800	1280 x 800	1920 x 1080
Touch			capacitive glass surface, Multi-Touch			capacitive glass surface, Multi-Touch		
Processor type			Intel® Celeron® Processor 2002E (2M Cache, 1.50 GHz)			Intel® Core™ i5-4400E Processor (3M Cache, 2.70 up to 3.30 GHz)		
Graphics processor			Intel® HD Graphics			Intel® HD Graphics 4600		
Operating system			Windows® Embedded Standard 7 P 64 bit			Windows® Embedded Standard 7 P 64 bit		
Storage medium								
Mass storage		[GB]	120 (2.5 " SSD)			120 (2.5 " SSD)		
Internal memory		[GB]	4			8		
Interfaces								
COM (RS232)			1			1		
USB Device 2.0			2/2 on rear			2/2 on rear		
Ethernet (10/100/1000 Mbit/s)			3			3		
Rated voltage DC	$U_{N, DC}$	[V]	24 (+/- 20%)		24 (+/- 20%)		24 (+/- 20%)	
Max. current consumption (incl. USB)	I	[A]	3	4	3	4	3	4
Maximum starting current	I	[A]	8	8	8	8	8	8
Fusing of supply voltage	I	[A]	4 slow-blow	4 slow-blow	4 slow-blow	4 slow-blow	6 slow-blow	6 slow-blow
Weight	m	[kg]	3.6	4.9	8.6	3.6	4.9	8.6
Dimension	W x H x D	[mm]	353 x 261 x 63	426 x 261 x 66	567 x 369 x 66	353 x 261 x 63	426 x 261 x 66	567 x 369 x 66
Mounting depth	D	[mm]	51	54	54	51	54	54
Mounting cutout	W x H	[mm]	332 x 240	392 x 269	532 x 334	332x240	392 x 269	532 x 334

DBaseT Extender kit

The HDBaseT Extender can be optionally retrofitted to the monitors v200-C and v200-P. This expansion in the form of a transmitter and receiver module enables digital image and USB 2.0 signals to be transferred up to 100 m via a network cable using the HDBaseT standard.

Transmission of DisplayPort/HDMI/DVI video and USB (2.0) signal
- Transmission length: max. 100 m
- Easy installation: plug and play, no software driver required
- Easy installation: TX module on DIN rail, RX module is inserted into module slot on the rear of the monitor

Version	Characteristics	Product key
HD BaseT Extender kit	HDBase-T transmitter (TX) • Control cabinet mounting via DIN rail • 1 x HD Base-T transmitter (TX) • 1 x DisplayPort > HDMI cable (100 cm) • 1 x USB host > USB slave cable (100 cm) • 1 x 24 VDC connector	EPCZEBE1
	HDBase-T receiver (RX) • Snap-in installation slot in monitor • 1 x HD Base-T receiver (RX) • 1 x HDMI > HDMI cable (25cm) • 1 x USB host > USB slave cable (10 cm) • 1 x 24 VDC supply cable (10 cm) • 1 x 24 VDC connector	

Transmission cable for HDBaseT Extender

The following CAT cables are recommended for operation:
- CAT6a cable, maximum cable length up to 80 m, 24AWG/27AWG, shielded
- CAT7 cable, maximum cable length up to 100 m, 24AWG, shielded

Transmission cable for v200 monitor

A Display Port (DP) or HDMI cable and USB cable can be used to connect the v200 monitors:

Version	Characteristics	Product key
DP/DP cable	• Length: 3 m for connection via DisplayPort	EWL0091
	• Length: 5 m for connection via DisplayPort	EWL0092
HDMI/HDMI cable	• Length: 3 m for video connection via HDMI	EWL0093
	• Length: 5 m for video connection via HDMI	EWL0094
USB (host/slave)	• Length: 3 m for touch and external devices on monitor	EWL0095
	• Length: 5 m for touch and external devices on monitor	EWL0096

T-Adapter

The support arm is required to mount the v800-Protec and v200-Protec on a standard 48 mm stainless steel tube. It has an integrated tilting device to tilt the display unit and can be rotated +/- 90° using the quick release clamping screw. This type is designed for use in support arm constructions with the IP65 degree of protection. The support arm adapter is supplied in series for hanging mounting but can be adapted for vertical mounting in just a few steps.

T-Adapter with switch box

The switch box is designed to expand the T-Adapter with standard 22 mm command elements. Like the console, the switch box has a screwless design. Thanks to easy removal of the front unit and by tearing the perforated installation opening, up to seven standard command elements (e.g. for 6 pushbuttons and 1x emergency-off switch) can be fitted. The labelling on the command elements can be individualised using slide-in strips.

Version	Characteristics	Product key
T-Adapter	• Mounting on 48 mm tube, either hanging or vertical	EPCZMP1
T-Adapter 17.3 " with switch box	• Mounting on 48 mm tube, either hanging or vertical • 7 x command elements • The switch box is prepared for the recording of standard 22.5 mm command elements. • Standard pushbuttons and switches can be installed. • The command elements are not included in the scope of supply.	EPCZEBT801-000
T-Adapter 24 " with switch box	• Mounting on 48 mm tube, either hanging or vertical • 7 x command elements • The switch box is prepared for the recording of standard 22.5 mm command elements. • Standard pushbuttons and switches can be installed. • The command elements are not included in the scope of supply.	EPCZEBT901-000
Tool for T-Adapter mounting	• Rotates the mounting tube 180°.	EPCZMB5

VisiWinNET® Smart

Machines are almost exclusively equipped with visual operating units. Creating a machine visualisation used to be a subtask of control programming, but today it has developed into a core autonomous discipline. Interfaces that were often technically overloaded and could only be operated by experts have given way to user-oriented visual machine operation and have therefore become an important sales argument. VisiWinNET® Smart is the ideal tool for this task.

Advantages of visualisation software:

- Intuitive project planning:
  the integrated development environment of VisiWinNET Smart offers all functions under one roof. The graphics designer for visualisation pages and all other editors and tools are grouped into a flexible, modern window layout with dockable elements that also enables the use of multiple monitors.

- Intelligent data exchange
  Project data such as variables, texts or alarms can easily be exchanged with other programs. The transfer of variables directly from the control project goes hand-in-hand with easy exchange of data with Microsoft Excel using the Windows clipboard.

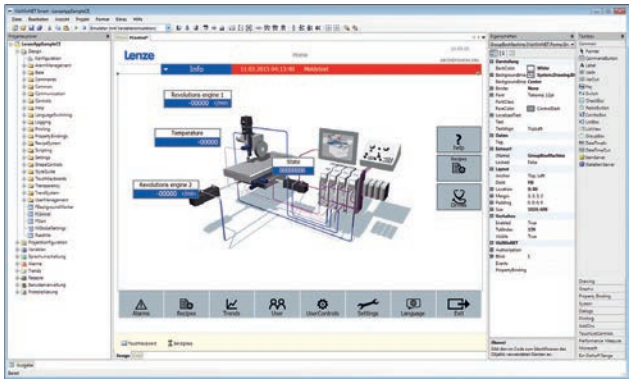
- Parallel installation
  Various VisiWinNET versions can be installed alongside one another on one computer. New projects can always be developed using the latest version and older ones are supported.

- Modern software architecture
  VisiWinNET® SMART comprises a development system with a full-graphics integrated development environment and a runtime licence scalable to the scope of the project. For the v800 industrial PCs, single user and client server solutions can be realised with the standard framework.

- ... and if you need a bit more:
  For tasks that go beyond the scope of VisiWinNET® Smart, it is possible to expand the software to suit your individual needs with the expert tools VisiWinNET® Professional. If you require this, please get in touch with your Lenze contact person. We would be happy to make you an offer for a solution that meets your needs.

VisiWinNET® Smart main components:

- Process communication for technical process monitoring
- Language options for international use
- Alarm management, data logging and trend recording for plant controlling
- Recipe management and user management



VisiWinNET® Smart development system

The integrated development environment of VisiWinNET® SMART is offered in the form of single user and client/server applications for the creation of visualisations. Please specify the respective option when ordering the engineering software.

Version	Development system	Target system	Product key
VisiWinNET® SMART	• Single user licence • Operating system engineering software: Windows® 7, Windows® 8 • Licencing: USB dongle	• Single user licence Windows® 7, Windows® 8	7710120065
	• Single user licence • Operating system engineering software: Windows® 7, Windows® 8 • Licencing: USB dongle	• Client/Server Windows® 7, Windows® 8	7710130065
	• Upgrade	Single user licence on client/server	7710131065
VisiWinNET® Professional			On request

VisiWinNET® Runtime licences

To realise your machine visualisation developed with VisiWinNET® Smart, your Lenze industrial PC requires the respective VisiWinNet® Runtime. The number of power tags, i.e. the data that needs to be exchanged with the control system, should be selected depending on the scope of the project.
For data exchange in networked environments, the runtime system also has an additional OPC server interface. Via this interface, higher-level systems can access process variables within the visualisation application and exchange relevant data, making connections to e.g. an ERP system or data exchange between multiple machines easier.

Single user licences

Item description			Order code		
VisiWinNET® 250	250 power tags	Windows® 7, Windows® 8	7700	4430	025
VisiWinNET® 500	500 power tags	Windows® 7, Windows® 8	7700	4430	050
VisiWinNET® 1000	1000 power tags	Windows® 7, Windows® 8	7700	4430	100
VisiWinNET® 2000	2000 power tags	Windows® 7, Windows® 8	7700	4430	200
VisiWinNET® 4000	4000 power tags	Windows® 7, Windows® 8	7700	4430	400
VisiWinNET® 64000	64000 power tags	Windows® 7, Windows® 8	7700	4430	999
Licencing		USB dongle Licence file with mandatory hardware			5 6

Client/server licences

Item description			Order code		
VisiWinNET® 250	250 power tags	Windows® 7, Windows® 8	7700	4440	025
VisiWinNET® 500	500 power tags	Windows® 7, Windows® 8	7700	4440	050
VisiWinNET® 1000	1000 power tags	Windows® 7, Windows® 8	7700	4440	100
VisiWinNET® 2000	2000 power tags	Windows® 7, Windows® 8	7700	4440	200
VisiWinNET® 4000	4000 power tags	Windows® 7, Windows® 8	7700	4440	400
VisiWinNET® 64000	64000 power tags	Windows® 7, Windows® 8	7700	4440	999
VisiWinNET® Client	Operate and monitor (client)	Windows® 7, Windows® 8	7700	4440	001
VisiWinNET® Viewer	Monitor (viewer)	Windows® 7, Windows® 8	7700	4440	002
Licencing		USB dongle Licence file with mandatory hardware			5 6