Quattro

INVERTER/CHARGER

3kVA ~ 15kVA

HmT electrical

victron energy BLUE POWER

Quattro Inverter/Charger

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Quattro
48/5000/70-100/100

Quattro
48/15000/200-100/100

Two AC inputs with integrated transfer switch

The Quattro can be connected to two independent AC sources, for example the public grid and a generator, or two generators. The Quattro will automatically connect to the active source.

PowerControl - Dealing with limited generator, shore side or grid power

The Quattro is a very powerful battery charger. It will therefore draw a lot of current from the generator or shore side supply (16A per 5 kVA Quattro at 230 VAC). A current limit can be set on each AC input. The Quattro will then take account of other AC loads and use whatever is spare for charging, thus preventing the generator or mains supply from being overloaded.

PowerAssist - Boosting shore or generator power

This feature takes the principle of PowerControl to a further dimension allowing the Quattro to supplement the capacity of the alternative source. Where peak power is so often required only for a limited period, the Quattro will make sure that insufficient mains or generator power is immediately compensated for by power from the battery. When the load reduces, the spare power is used to recharge the battery.

System configuring

In case of a stand-alone application, if settings have to be changed, this can be done in a matter of minutes with a DIP switch setting procedure.
Parallel and three phase application can be configured with VE.Bus Quick Configure and Ve.Bus System Configuration software.
Off grid, grid interactive and self consumption applications, involving grid-tie inverter and/or MPPT Solar Chargers can be configured with Assistants (dedicated software for specific applications.)

On-site Monitoring and control

Several options are available: Battery Monitor, Multi Control Panel, Color Control GX or other GX devices, smart phone or tablet (Bluetooth Smart), laptop or computer (USB or Rs232).

Remote Monitoring and control

Data can be stored and displayed on our VRM (Victron Remote Management) website, free of charge.

Remote configuring

When connected to the Ethernet, systems with a GX device can be accessed and settings van be changed remotely.

GX Devices

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Ekrano GX

Cerbo GX

GX Touch (optional display for Cerbo GX and Cerbo-S GX

VRM Portal
A free remote monitoring website (VRM) will display all your system data. System settings can be changed remotely via the portal.

Ekrano GX

The Ekrano GX represents the next generation in the GX product family. It is a combination of the Cerbo GX and the GX Touch. With its complete range of connections and interfaces as well as a built-in 7-inch touchscreen display, it is the most powerful GX device to date and allows you to always have perfect control over your system from wherever you are and to maximise its performance.

Cerbo GX: communication-centre

This communication-centre allows you to always have perfect control over your system from wherever you are and to maximise its performance. Simply access your system via our Victron Remote Management (VRM) portal, or access it directly, using the optional GX Touch screen, a Multi-Functional Display (MFD) or our VictronConnect app thanks to its Bluetooth capability.

GX Touch: display accessory

The GX Touch 50 and GX Touch 70 are display accessories for the Cerbo GX. The five inch touch screen display gives an instant overview of your system and allows you to adjust settings. Simply connect the display to the Cerbo GX with just one cable. Both GX Touch displays have a waterproof design, a top-mountable setup and is simple to install.

Remote Console on VRM

Monitor, control and configure the Cerbo GX remotely, over the internet. Just like if you were standing in front of the device, using Remote Console. The same functionality is also available on the local network LAN, or using the WiFi Access Point of the Cerbo GX.

Perfect monitoring & control

Instantly monitor the battery state of charge, power consumption, power harvest from PV, generator, and mains, or check tank levels and temperature measurements. Easily control the power input current limit, (auto)start/stop generator(s) or change any setting to optimise the system. Follow up on alerts, perform diagnostic checks and resolve complications remotely.

Quattro Inverter/Charger

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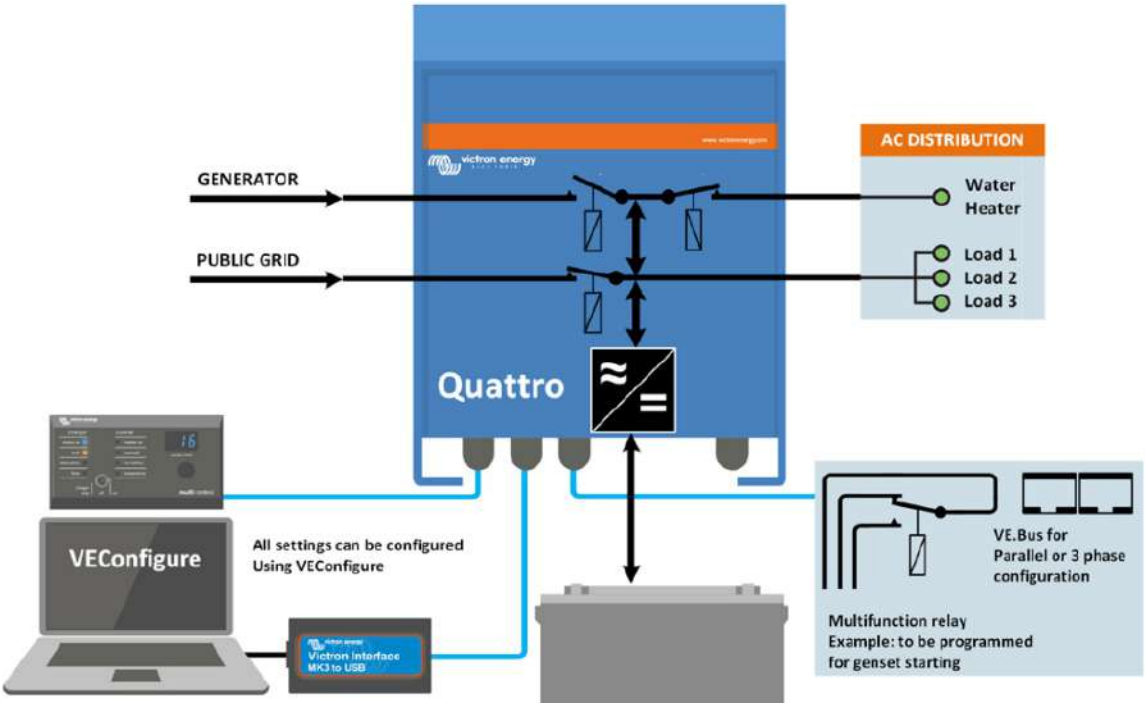
Quattro-II
24/5000/120-50/50 230V (connections)



Specifications

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Quattro	12/3000/120-50/50 24/3000/70-50/50	12/5000/220-100/100 24/5000/120-100/100 48/5000/70-100/100	24/8000/200-100/100 48/8000/110-100/100	48/10000/140-100/100	48/15000/200-100/100
PowerControl / PowerAssist	Yes				
Integrated Transfer switch	Yes				
AC inputs (2x)	Input voltage range: 187-265 VAC Input frequency: 45 – 65 Hz Power factor: 1				
Maximum feed through current (A)	2x 50	2x100	2x100	2x100	2x100
INVERTER					
Input voltage range (V DC)	9,5 – 17V 19 – 33V 38 – 66V				
Output (1)	Output voltage: 230 VAC ± 2% Frequency: 50 Hz ± 0,1%				
Cont. output power at 25°C (VA) (3)	3000	5000	8000	10000	15000
Cont. output power at 25°C (W)	2400	4000	6400	8000	12000
Cont. output power at 40°C (W)	2200	3700	5500	6500	10000
Cont. output power at 65°C (W)	1700	3000	3600	4500	7000
Peak power (W)	6000	10000	16000	20000	25000
Maximum efficiency (%)	93 94	94 94 95	94 96	96	96
Zero load power (W)	20 20	30 30 35	60 60	60	110
Zero load power in AES mode (W)	15 15	20 25 30	40 40	40	75
Zero load power in Search mode (W)	8 10	10 10 15	15 15	15	20
CHARGER					
Charge voltage 'absorption' (V DC)	14,4 28,8	14,4 28,8 57,6	28,8 57,6	57,6	57,6
Charge voltage 'float' (V DC)	13,8 27,6	13,8 27,6 55,2	27,6 55,2	55,2	55,2
Storage mode (V DC)	13,2 26,4	13,2 26,4 52,8	26,4 52,8	52,8	52,8
Charge current house battery (A) (4)	120 70	220 120 70	200 110	140	200
Charge current starter battery (A)	4 (12V and 24V models only)				
Battery temperature sensor	Yes				
GENERAL					
Auxiliary output (A) (5)	25	50	50	50	50
Programmable relay (6)	3x	3x	3x	3x	3x
Protection (2)	a-g				
VE.Bus communication port	For parallel and three phase operation, remote monitoring and system integration				
General purpose com. port	2x	2x	2x	2x	2x
Remote on-off	zĞƐ				
Common Characteristics	Operating temp.: -40 to +65˚C Humidity (non-condensing): max. 95%				
Maximum altitude	3500 m				
ENCLOSURE					
Common Characteristics	Material & Colour: aluminium (blue RAL 5012) Protection category: IP 21				
Battery-connection	Four M8 bolts (2 plus and 2 minus connections)				
230 V AC-connection	Screw terminals 13 mm² (6 AWG)	Bolts M6	Bolts M6	Bolts M6	Bolts M6
Weight (kg)	19	34 30 30	45 41	51	72
Dimensions (hxwxd in mm)	362 x 258 x 218	470 x 350 x 280 444 x 328 x 240 444 x 328 x 240	470 x 350 x 280	470 x 350 x 280	572 x 488 x 344
STANDARDS					
Safety	EN-IEC 60335-1, EN-IEC 60335-2-29, EN-IEC 62109-1				
Emission, Immunity	EN 55014-1, EN 55014-2, EN-IEC 61000-3-2, EN-IEC 61000-3-3, IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3				
Road vehicles	12V and 24V models: ECE R10-4				
Anti-islanding	See our website				

1) Can be adjusted to 60 HZ. 120 V models available on request
2) Protection key:
   a) output short circuit
   b) overload
   c) battery voltage too high
   d) battery voltage too low
   e) temperature too high
   f) 230 VAC on inverter output
   g) input voltage ripple too high
3) Non-linear load, crest factor 3:1
4) Up to 25˚C ambient
5) Switches off when no external AC source available
6) Programmable relay that can a.o. be set for general alarm,
   DC under voltage or genset start/stop function
   AC rating: 230 V / 4 A
   DC rating: 4 A up to 35 VDC, 1 A up to 60 VDC

*Awaiting approval of NRS097 Certification

Quattro-II Inverter/Charger

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Quattro-II
24/5000/120-50/50

Quattro-II
48/5000/70-100/100

Quattro-II

Similar to the MultiPlus-II, the Quattro-II is also a combined inverter and charger. Additionally it can accept two AC inputs and automatically connect to the active source. Its many features include a true sine wave inverter, adaptive charging, hybrid PowerAssist technology plus multiple system integration features such as three or split phase operation and parallel operation.

A Quattro, plus ESS (Energy Storage System) functionality

The Quattro-II can be connected to two independent AC sources, for example the public grid and a generator, or two generators. The Quattro-II will automatically connect to the active source.

PowerControl and PowerAssist boosting the capacity of the grid or a generator

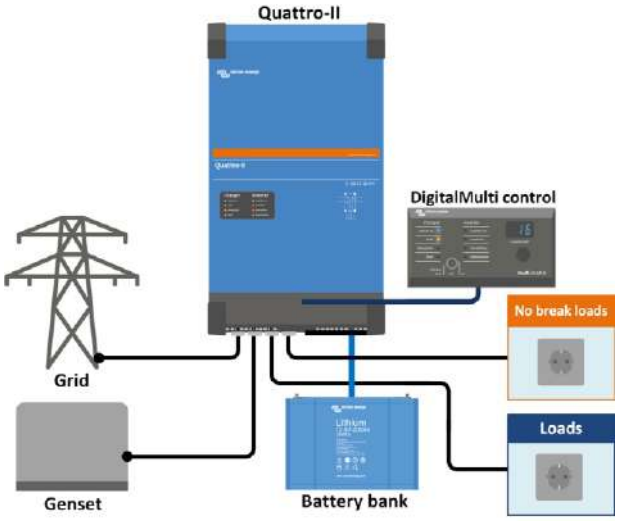
A maximum grid/generator current can be set. The Quattro-II will then take account of other AC loads and use whatever is extra for battery charging, therefore preventing the generator or grid from being overloaded (PowerControl function). PowerAssist takes the principle of PowerControl to a further dimension. Where peak power is so often required only for a limited period, the Quattro-II will compensate insufficient generator, shore or grid power with power from the battery. When the load reduces, the spare power is used to recharge the battery.

Solar energy: AC power available even during a grid failure

The Quattro-II can be used in off grid as well as grid connected PV and other alternative energy systems. It is compatible with both solar charger controllers and grid-tie inverters.

Two AC Outputs

The main output has no break functionality. The Quattro-II takes over the supply to the connected loads in the event of a grid failure or when generator power is disconnected. This happens so fast (less than 20 milliseconds) that computers and other electronic equipment will continue to operate without disruption. The second output is only live when AC is available on the output. Loads that should not discharge the battery, like a water heater for example can be connected to this output.



Standard mobile or off-grid application
Loads that should shut down when AC input power is not available can be connected to a second output. These loads will be taken into account (limit AC input).

Quattro-II Inverter/Charger

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Quattro-II
24/5000/120-50/50 230V (connections)

Quattro-II
48/5000/70-50/50 (connector closed)

Parallel and three phase operation

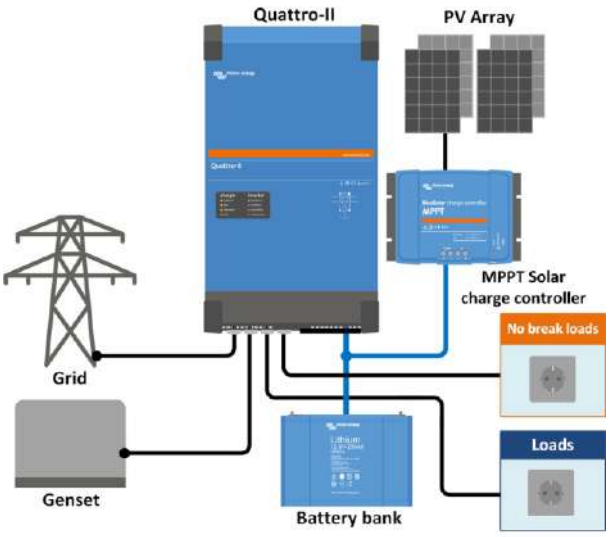
Up to 6 Quattros can operate in parallel to achieve higher power output. Six 48/5000/70 units, for example, will provide 25kW / 30kVA output power with 420 Amps charging capacity.
In addition to parallel connection, three units of the same model can be configured for three phase output, and up to 6 sets of three units can be parallel connected per phase for a 75kW / 90kVA inverter and more than 1200 Amps charging capacity.

On-site system configuring, monitoring and control

Settings can be changed in a matter of minutes with VEConfigure software (computer or laptop and MK30-USB Interface needed).
Several monitoring and control options are available such as the Cerbo GX.

Remote configuring and monitoring

Install a Cerbo GX or other GX product to connect to the internet.
Operational data can be stored and displayed on your VRM (Victron Remote Management) website, free of charge.
When connected to the internet, systems can be accessed remotely, and settings can be changed.



Application with MPPT solar charge controller

Specifications

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Quattro-II	24/5000/120-50	48/5000/70-50
PowerControl & PowerAssist	Yes	
Transfer switch	50 A	
Maximum AC input current	50 A	
INVERTER		
DC Input voltage range	19–33 V	38-66 V
Output	Output voltage: 230 VAC ± 2%	Frequency: 50 Hz ± 0,1% (1)
Cont. output power at 25°C (3)	5000 VA	
Cont. output power at 25°C	4000 W	
Cont. output power at 40°C	3700 W	
Cont. output power at 65°C	3000 W	
Maximum apparent feed-in power	5000 VA	
Peak power	9000 W	
Maximum efficiency	96%	
Zero load power	18 W	
Zero load power in AES mode	12 W	
Zero load power in Search mode	2 W	
CHARGER		
AC Input	Input voltage range: 187-265 VAC Input frequency: 45-65 Hz power factor: 1	
Charge voltage 'absorption'	28,8 / 57,6 V	
Charge voltage 'float'	27,6 / 55,2 V	
Storage mode	26,4 / 52,8 V	
Max. battery charge current (4)	120 A	70 A
Battery temperature sensor	Yes	
GENERAL		
Auxiliary output	Yes (32A) Default setting: switches off when in inverter mode	
Programmable relay (5)	Yes	
Protection (2)	a – g	
VE.Bus communication port	For parallel and three phase operation, remote monitoring and system integration	
General purpose com. port	Yes, 2x	
Remote on-off	Yes	
Operating temperature range	-40 to +65°C (fan assisted cooling)	
Humidity (non-condensing)	max 95%	
ENCLOSURE		
Material & Colour	Steel, blue RAL 5012	
Protection category	IP22	
Battery-connection	M8 bolts	
230 V AC-connection	Screw terminals 13 mm² (6 AWG)	
Weight	30 kg	30 kg
Dimensions (hxwxd)	560 x 328 x 148 mm	560 x 328 x 148mm
STANDARDS		
Safety	EN-IEC 60335-1, EN-IEC 60335-2-29, EN-IEC 62109-1, EN-IEC 62109-2	
Emission, Immunity	EN 55014-1, EN 55014-2 EN-IEC 61000-3-2, EN-IEC 61000-3-3 IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3	
Uninterruptible power supply		
Anti-islanding		

1) Can be adjusted to 60 Hz
2) Protection key:
   a) output short circuit
   b) overload
   c) battery voltage too high
   d) battery voltage too low
   e) temperature too high
   f) 230 VAC on inverter output
   g) input voltage ripple too high

3) Non-linear load, crest factor 3:1
4) Up to 25°C ambient
5) Programmable relay which can be set for general alarm, DC under voltage or genset start/stop function. AC rating: 230V / 4A, DC rating: 4A up to 35VDC and 1A up to 60VDC

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