

Essential XS IOT RT 1-10KVA

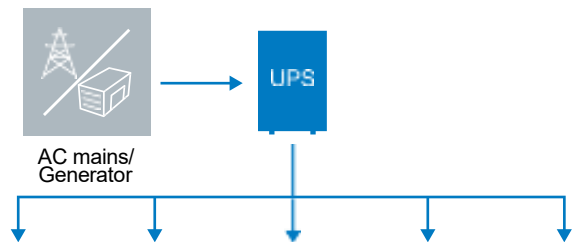


Key features

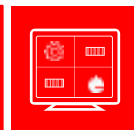
- True double-conversion design with high adaptability to harsh mains conditions
- Real PF 1 can provide more power in same space
- High efficiency results in energy saving
- Adjustable charging current and flexible battery configuration
- Optimized charging method to expand battery life time.
- 10-20K 3-3 model can be configure as 3-1 or 1-1 model to meet utility and load wiring
- 10-20K 3-3 model can be configure as single source input or dual source input for utility and bypass
- Built-in OVCD protection, fan lock detection, over temperature detection, overload warning to enhance the product reliability

- Programmable outlet group will extend back up time for most critical equipment (6-20K need PDU model)
- Automatic detect additional EBM quantity will simplify EBM installation for IT users
- Compact size requiring small installation space
- Hot swappable battery will save customer service cost (For 1-3K standard UPS model)
- Low audible noise at typical load
- Dot matrix LCD support up to 10 languages for easy installation and service. 10K 3-3 model support Color touchable LCD display with gravity sensors
- Embedded Ethernet port solution provide safe network connection to Cloud which will meet the increasing IoT trend
- WLAN module for IoT connection
- Mobile APP for monitoring, configuration. Support Android/iOS
- USB HID enable monitoring on UPS without software installation
- Dry contactor for industrial condition
- Upgraded network card compliance with IEC standard cybersecurity

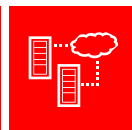
Typical application



Financial



Work station



Network
equipment



Health care



Telecom

New full range double conversion UPS

High density, true double conversion on-line power protection for IT (Information technology) and OT (operation technology) applications. Capable of supporting loads from 1 to 20kVA in a rack/tower convertible form with a 2U/3U space.

These latest range of UPS comes with future-proof connectivity design having the capability to connect to cloud seamlessly to allow the monitoring of the UPS online through any internet connected device. To ensure users information is safe and protected, these connectivity is compliant with IEC standard cybersecurity and GDPR regulation.

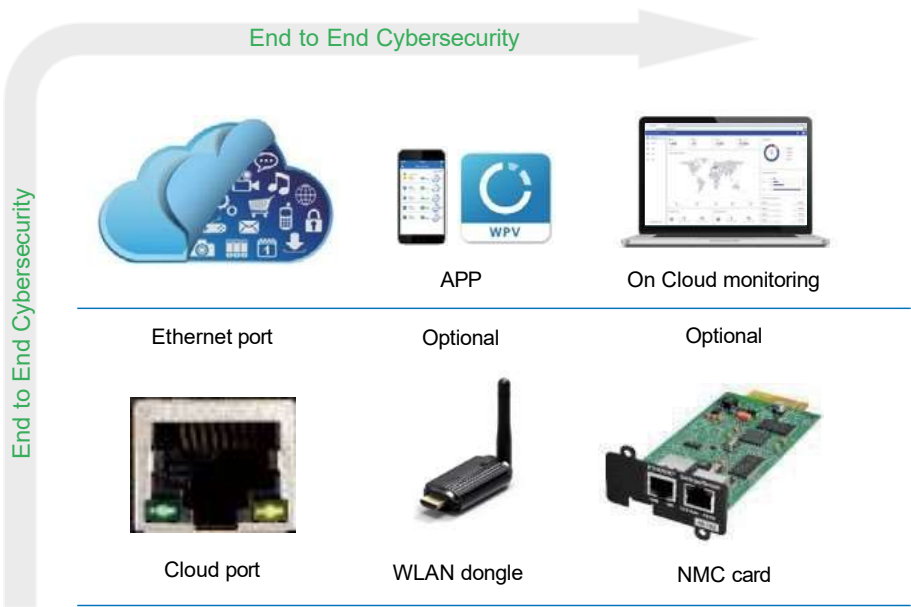


Network connected and data to cloud

- Easy to setup the Safe connection to Cloud
- Connect to Cloud through MQTT protocol (the most widely used IoT protocol)
- Real time health monitoring on the equipment to enable business continuity and failure prevention
- Remote monitoring, scheduled maintenance and UPS firmware upgrade *
- Improve the data visibility to the service people and end user
- Reduce the responsive time on product failure as Cloud push the exact information to end user and service people at the same time
- Create value added service opportunities based on digitalization transformation



* Will be launched soon



Product rear panel



Essential XS IOT RT 1K-1.5K rear panel



Essential XS IOT RT rear panel



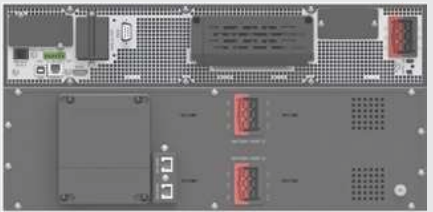
Essential XS IOT RT 3K rear panel



Essential XS IOT RT 1K-1.5K EBM rear panel



Essential XS IOT RT 2K-3K EBM rear panel



Essential XS IOT RT 6K-10K rear panel



Essential XS IOT RT 6K-10K EBM rear panel



Essential XS RT 6K-10K MBP rear panel



Essential XS IOT RT 10K 3-1 rear panel



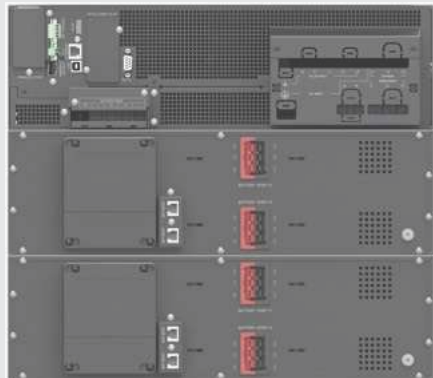
Essential XS IOT RT 10K 3-1 MBP rear panel



Essential XS IOT RT 10K 3-3 rear panel



Essential XS IOT RT 10K 3-3 EBM rear panel



Essential XS IOT RT 15-20K 3-3 rear panel



INNOVA Unity IOT RT 15-20K 3-3 EBM rear panel



INNOVA Unity IOT RT 10-20K 3-3 MBP rear panel



Essential XS IOT RT 10-20K 3-3 MBP parallel 1+1 version rear panel

Product specification

Model name		Essential XS IOT RT 1K	Essential XS IOT RT 1KS	Essential XS IOT RT 1.5K	Essential XS IOT RT 1.5KS
Power rating	VA/Watt	1000VA/1000W	1000VA/1000W	1500VA/1500W	1500VA/1500W
Efficiency	Double coversion mode	89%	89%	89%	89%
	ECO mode	96%	96%	97%	97%
Input performance	Voltage range	160-300V 100% load, 110-160V derating to 50% load linearly	160-300V 100% load, 110-160V derating to 50% load linearly	160-300V 100% load, 110-160V derating to 50% load linearly	160-300V 100% load, 110-160V derating to 50% load linearly
	Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
	Frequency range	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)
	PF	>0.99	>0.99	>0.99	>0.99
	THDI	<5%	<5%	<5%	<5%
Input connection		IEC C14	IEC C14	IEC C14	IEC C14
Output performance	Rated voltage	200/208/220/230/240 VAC(derating 10% at 208V, derating 20% at 200V)	200/208/220/230/240 VAC(derating 10% at 208V, derating 20% at 200V)	200/208/220/230/240 VAC(derating 10% at 208V, derating 20% at 200V)	200/208/220/230/240 VAC(derating 10% at 208V, derating 20% at 200V)
	Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
	Maximum PF	1	1	1	1
	Voltage accuracy	±1%	±1%	±1%	±1%
	THDv	<1% linear load <5% non linear load	<1% linear load <5% non linear load	<1% linear load <5% non linear load	<1% linear load <5% non linear load
	Transfer time	0ms(4ms @ line <-> bypass;10ms @ ECO <->Inverter)	0ms(4ms @ line <-> bypass;10ms @ ECO <->Inverter)	0ms(4ms @ line <-> bypass;10ms @ ECO <->Inverter)	0ms(4ms @ line <-> bypass;10ms @ ECO <->Inverter)
	Crest Ratio	max 3:1	max 3:1	max 3:1	max 3:1
	Overload(line mode)	100%<load≤105% continuous. 105%< load ≤125% for 3 minutes 125<load≤150% for 30 seconds. >150% for 500ms.	100%<load≤105% continuous. 105%< load ≤125% for 3 minutes 125<load≤150% for 30 seconds. >150% for 500ms.	100%<load≤105% continuous. 105%< load ≤125% for 3 minutes 125<load≤150% for 30 seconds. >150% for 500ms.	100%<load≤105% continuous. 105%< load ≤125% for 3 minutes 125<load≤150% for 30 seconds. >150% for 500ms.
Output connection	Wiring/socket	1 main outlet group (with 4 x IEC C13) and 1 program-mable outlet group (with 4 x IEC C13)	1 main outlet group (with 4 x IEC C13) and 1 program-mable outlet group (with 4 x IEC C13)	1 main outlet group (with 4 x IEC C13) and 1 program-mable outlet group (with 4 x IEC C13)	1 main outlet group (with 4 x IEC C13) and 1 program-mable outlet group (with 4 x IEC C13)
	Load segment control	Yes	Yes	Yes	Yes
Battery	Voltage	36V/24VDC	36VDC	36VDC	36VDC
	Capacity(AH)	3 x 12V/7Ah or 2 x 12V/9Ah	NA	3 x 12V/9Ah	NA
	Backup time Typical value by default battery capacity, PF=1	"3.0min 100% load 12.2min 50% load"	NA	"2.4min 100% load 8.7min 50% load"	NA
Maximum connect external battery module quantity		4	4	4	4
Charger	Charging current	1.5A	8A	1.5A	8A
	Recharging time	3h to 90%	NA	3h to 90%	NA

Product specification

Model name		Essential XS IOT RT 1K	Essential XS IOT RT 1KS	Essential XS IOT RT 1.5K	Essential XS IOT RT 1.5KS
Other working mode	CVCF	Yes (derating to 60% load)	Yes (derating to 60% load)	Yes (derating to 60% load)	Yes (derating to 60% load)
	Parallel	no	no	no	no
HMI(human-machine interface)	Display	Dot matrix LCD, rotatable manually(optional segment LCD)	Dot matrix LCD, rotatable manually(optional segment LCD)	Dot matrix LCD, rotatable manually(optional segment LCD)	Dot matrix LCD, rotatable manually(optional segment LCD)
	Language	10 Languages	10 Languages	10 Languages	10 Languages
	USB	USB 2.0 with HID	USB 2.0 with HID	USB 2.0 with HID	USB 2.0 with HID
	RS232	Yes(DB9)	Yes(DB9)	Yes(DB9)	Yes(DB9)
	Dry in/out	1 programble dry in; 1 programble dry out	1 programble dry in; 1 programble dry out	1 programble dry in; 1 programble dry out	1 programble dry in; 1 programble dry out
	EPO	yes	yes	yes	yes
	Intelignet slot	yes(for long card)	yes(for long card)	yes(for long card)	yes(for long card)
	Network card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card
	Modbus card	Optional,CMC/Modbus Long Card	Optional,CMC/Modbus Long Card	Optional,CMC/Modbus Long Card	Optional,CMC/Modbus Long Card
	Dry contactor card	Optional,AS400 Long Card	Optional,AS400 Long Card	Optional,AS400 Long Card	Optional,AS400 Long Card
	WLAN module	Optional,HDMI type	Optional,HDMI type	Optional,HDMI type	Optional,HDMI type
	Ethernet port for IOT	RJ45	RJ45	RJ45	RJ45
	Monitor software	Winpower	Winpower	Winpower	Winpower
Physical performance	Dimension(W*D*H)MM	438*445*86.5(2U)	438*445*86.5(2U)	438*445*86.5(2U)	438*445*86.5(2U)
	IP protection level	IP20	IP20	IP20	IP20
Environment	Operating temperature	0-40℃	0-40℃	0-40℃	0-40℃
	Relative Humidity	0-95%	0-95%	0-95%	0-95%
	Operating Altitude	0-3000m (the load derating 1 % every up 100m @1000-3000m)	0-3000m (the load derating 1 % every up 100m @1000-3000m)	0-3000m (the load derating 1 % every up 100m @1000-3000m)	0-3000m (the load derating 1 % every up 100m @1000-3000m)
	Acoustic Noise	<45dB @ typical load with battery fully charged	<45dB @ typical load with battery fully charged	<45dB @ typical load with battery fully charged	<45dB @ typical load with battery fully charged
Certification		CE,IEC/EN 62040	CE,IEC/EN 62040	CE,IEC/EN 62040	CE,IEC/EN 62040
EMI	Conduction/Radiation	C2	C2	C2	C2
EMS	ESD	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2
	RS	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3
	EFT	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4
	Surge	IEC/EN 61000-4-5	IEC/EN 61000-4-5	IEC/EN 61000-4-5	IEC/EN 61000-4-5
Accessory	Maintenance bypass switch	NA	NA	NA	NA
	Input power cable	yes	yes	yes	yes
	Output power cable	yes,1*10A	yes,1*10A	yes,1*10A	yes,1*10A
	EBM cable	yes(in EBM)	yes(in EBM)	yes(in EBM)	yes(in EBM)
	USB cable	yes	yes	yes	yes
	RS232 cable	Optional	Optional	Optional	Optional
	Rail kit	Optional	Optional	Optional	Optional
	Tower Feet	yes	yes	yes	yes
	Rack ear	yes	yes	yes	yes
	Manual	yes	yes	yes	yes

Product specification

Model name		Essential XS IOT RT 2K	Essential XS IOT RT 2KS	Essential XS IOT RT 3K	Essential XS IOT RT 3KS
Power rating	VA/Watt	2000VA/2000W	2000VA/2000W	3000VA/3000W	3000VA/3000W
Efficiency	Double conversion mode	93%	93%	93%	93%
	ECO mode	97%	97%	97%	97%
Input performance	Voltage range	160-300V 100% load, 110-160V derating to 50% load linearly	160-300V 100% load, 110-160V derating to 50% load linearly	160-300V 100% load, 110-160V derating to 50% load linearly	160-300V 100% load, 110-160V derating to 50% load linearly
	Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
	Frequency range	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)
	PF	>0.99	>0.99	>0.99	>0.99
	THDI	<5%	<5%	<5%	<5%
Input connection		IEC C20	IEC C20	IEC C20	IEC C20
Output performance	Rated voltage	200/208/220/230/240 VAC(derating 10% at 208V, derating 20% at 200V)	200/208/220/230/240 VAC(derating 10% at 208V, derating 20% at 200V)	200/208/220/230/240 VAC(derating 10% at 208V, derating 20% at 200V)	200/208/220/230/240 VAC(derating 10% at 208V, derating 20% at 200V)
	Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
	Maximum PF	1	1	1	1
	Voltage accuracy	±1%	±1%	±1%	±1%
	THDv	<1% linear load <5% non linear load	<1% linear load <5% non linear load	<1% linear load <5% non linear load	<1% linear load <5% non linear load
	Transfer time	0ms(4ms @ line <-> bypass;10ms @ ECO <->Inverter)	0ms(4ms @ line <-> bypass;10ms @ ECO <->Inverter)	0ms(4ms @ line <-> bypass;10ms @ ECO <->Inverter)	0ms(4ms @ line <-> bypass;10ms @ ECO <->Inverter)
	Crest Ratio	max 3:1	max 3:1	max 3:1	max 3:1
	Overload(line mode)	100%<load≤105% continuous. 105%< load ≤125% for 3 minutes 125%<load≤150% for 30 seconds. >150% for 500ms.	100%<load≤105% continuous. 105%< load ≤125% for 3 minutes 125%<load≤150% for 30 seconds. >150% for 500ms.	100%<load≤105% continuous. 105%< load ≤125% for 3 minutes 125%<load≤150% for 30 seconds. >150% for 500ms.	100%<load≤105% continuous. 105%< load ≤125% for 3 minutes 125%<load≤150% for 30 seconds. >150% for 500ms.
Output connection	Wiring/socket	1 main outlet group (with 4 x IEC C13) and 1 programmable outlet group (with 4 x IEC C13)	1 main outlet group (with 4 x IEC C13) and 1 programmable outlet group (with 4 x IEC C13)	1 main outlet group (with 1 x IEC C19 + 4 x IEC C13) and 1 programmable outlet group (with 4 x IEC C13)	1 main outlet group (with 1 x IEC C19 + 4 x IEC C13) and 1 programmable outlet group (with 4 x IEC C13)
	Load segment control	Yes	Yes	Yes	Yes
Battery	Voltage	72V/48VDC	72VDC	72VDC	72VDC
	Capacity(AH)	6 x 12V/7Ah or 4 x 12V/9Ah	NA	6 x 12V/9Ah	NA
	Backup time Typical value by default battery capacity, PF=1	"3.3min 100% load 12.9min 50% load"	NA	"2.5min 100% load 9.3min 50% load"	NA
Maximum connect external battery module quantity		4	4	4	4
Charger	Charging current	1.5A	8A	1.5A	8A
	Recharging time	3h to 90%	NA	3h to 90%	NA

Product specification

Model name		Essential XS IOT RT 2K	Essential XS IOT RT 2KS	Essential XS IOT RT 3K	Essential XS IOT RT 3KS
Other working mode	CVCF	Yes (derating to 60% load)	Yes (derating to 60% load)	Yes (derating to 60% load)	Yes (derating to 60% load)
	Parallel	no	no	no	no
HMI(human-machine interface)	Display	Dot matrix LCD, rotatable manually(optional segment LCD)	Dot matrix LCD, rotatable manually(optional segment LCD)	Dot matrix LCD, rotatable manually(optional segment LCD)	Dot matrix LCD, rotatable manually(optional segment LCD)
	Language	10 Languages	10 Languages	10 Languages	10 Languages
	USB	USB 2.0 with HID	USB 2.0 with HID	USB 2.0 with HID	USB 2.0 with HID
	RS232	Yes(DB9)	Yes(DB9)	Yes(DB9)	Yes(DB9)
	Dry in/out	1 programble dry in; 1 programble dry out	1 programble dry in; 1 programble dry out	1 programble dry in; 1 programble dry out	1 programble dry in; 1 programble dry out
	EPO	yes	yes	yes	yes
	Intelignet slot	yes(for long card)	yes(for long card)	yes(for long card)	yes(for long card)
	Network card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card
	Modbus card	Optional,CMC/Modbus Long Card	Optional,CMC/Modbus Long Card	Optional,CMC/Modbus Long Card	Optional,CMC/Modbus Long Card
	Dry contactor card	Optional,AS400 Long Card	Optional,AS400 Long Card	Optional,AS400 Long Card	Optional,AS400 Long Card
	WLAN module	Optional,HDMI type	Optional,HDMI type	Optional,HDMI type	Optional,HDMI type
	Ethernet port for IOT	RJ45	RJ45	RJ45	RJ45
	Monitor software	Winpower	Winpower	Winpower	Winpower
Physical performance	Dimension(W*D*H)MM	438*600*86.5(2U)	438*600*86.5(2U)	438*600*86.5(2U)	438*600*86.5(2U)
	IP protection level	IP20	IP20	IP20	IP20
Environment	Operating temperature	0-40℃	0-40℃	0-40℃	0-40℃
	Relative Humidity	0-95%	0-95%	0-95%	0-95%
	Operating Altitude	0-3000m (the load derating 1 % every up 100m @1000-3000m)	0-3000m (the load derating 1 % every up 100m @1000-3000m)	0-3000m (the load derating 1 % every up 100m @1000-3000m)	0-3000m (the load derating 1 % every up 100m @1000-3000m)
	Acoustic Noise	<50dB @ typical load with battery fully charged	<50dB @ typical load with battery fully charged	<50dB @ typical load with battery fully charged	<50dB @ typical load with battery fully charged
Certification		CE,IEC/EN 62040	CE,IEC/EN 62040	CE,IEC/EN 62040	CE,IEC/EN 62040
EMI	Conduction/Radiation	C2	C2	C2	C2
EMS	ESD	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2
	RS	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3
	EFT	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4
	Surge	IEC/EN 61000-4-5	IEC/EN 61000-4-5	IEC/EN 61000-4-5	IEC/EN 61000-4-5
Accessory	Maintenance bypass switch	NA	NA	NA	NA
	Input power cable	yes	yes	yes	yes
	Output power cable	yes,1*10A	yes,1*10A	yes,1*10A	yes,1*10A
	EBM cable	yes(in EBM)	yes(in EBM)	yes(in EBM)	yes(in EBM)
	USB cable	yes	yes	yes	yes
	RS232 cable	Optional	Optional	Optional	Optional
	Rail kit	Optional	Optional	Optional	Optional
	Tower Feet	yes	yes	yes	yes
	Rack ear	yes	yes	yes	yes
	Manual	yes	yes	yes	yes

Product specification

Model name		Essential XS IOT RT 6K	Essential XS IOT RT 6KS	Essential XS IOT RT 10K	Essential XS IOT RT 10KS
Power rating	VA/Watt	6000VA/6000W	6000VA/6000W	10000VA/10000W	10000VA/10000W
Efficiency	Double conversion mode	95%	95%	95%	95%
	ECO mode	98%	98%	98%	98%
Input performance	Voltage range	160-275V 100% load, 110-160V derating to 50% load linearly	160-275V 100% load, 110-160V derating to 50% load linearly	160-275V 100% load, 110-160V derating to 50% load linearly	160-275V 100% load, 110-160V derating to 50% load linearly
	Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
	Frequency range	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60%)
	PF	>0.995	>0.995	>0.995	>0.995
	THDI	<3% linear load <5% non linear load	<3% linear load <5% non linear load	<3% linear load <5% non linear load	<3% linear load <5% non linear load
Input connection		L/N/PE hardware terminal connection	L/N/PE hardware terminal connection	L/N/PE hardware terminal connection	L/N/PE hardware terminal connection
Output performance	Rated voltage	220/230/240V	220/230/240V	220/230/240V	220/230/240V
	Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
	Maximum PF	1	1	1	1
	Voltage accuracy	±1%	±1%	±1%	±1%
	THDv	<1% linear load <5% non linear load	<1% linear load <5% non linear load	<1% linear load <5% non linear load	<1% linear load <5% non linear load
	Transfer time	0ms(10ms @ ECO->Inverter)	0ms(10ms @ ECO->Inverter)	0ms(10ms @ ECO->Inverter)	0ms(10ms @ ECO->Inverter)
	Crest Ratio	max 3:1	max 3:1	max 3:1	max 3:1
Output connection	Overload(line mode)	100%<load≤105% continuous. 105%< load ≤125% for 10 minutes 125<load≤150% for 30 seconds. >150% for 500ms.	100%<load≤105% continuous. 105%< load ≤125% for 10 minutes 125<load≤150% for 30 seconds. >150% for 500ms.	100%<load≤105% continuous. 105%< load ≤125% for 10 minutes 125<load≤150% for 30 seconds. >150% for 500ms.	100%<load≤105% continuous. 105%< load ≤125% for 10 minutes 125<load≤150% for 30 seconds. >150% for 500ms.
	Wiring/socket	L/N/PE hardware terminal connection	L/N/PE hardware terminal connection	L/N/PE hardware terminal connection	L/N/PE hardware terminal connection
	Load segment control	Optional (need MBP model)	Optional (need MBP model)	Optional (need MBP model)	Optional (need MBP model)
Battery	Voltage	192VDC(192-240VDC adjustable)	192VDC(192-240VDC adjustable)	192VDC(192-240VDC adjustable)	192VDC(192-240VDC adjustable)
	Capacity(AH)	16*12V/7Ah, 16-20pcs adjustable	NA	16*12V/9Ah, 16-20pcs adjustable	NA
	Backup time Typical value by default battery capacity, PF=1	"3.6min 100% load 9.6min 50% load"	NA	"2.1min 100% load 8min 50% load"	NA
Maximum connect external battery module quantity		6	6	6	6
Charger	Charging current	1.4A(0-4A adjustable)	4A(0-12A adjustable)	2A(0-4A adjustable)	4A(0-12A adjustable)
	Recharging time	3h to 90%	NA	3h to 90%	NA
Other working mode	CVCF	Yes (derating to 60% load)	Yes (derating to 60% load)	Yes (derating to 60% load)	Yes (derating to 60% load)
	Parallel	Optional (up to 3)	Optional (up to 3)	Optional (up to 3)	Optional (up to 3)

Product specification

Model name		Essential XS IOT RT 6K	Essential XS IOT RT 6KS	Essential XS IOT RT 10K	Essential XS IOT RT 10KS
HMI(human-machine interface)	Display	Dot matrix LCD, rotatable manually	Dot matrix LCD, rotatable manually	Dot matrix LCD, rotatable manually	Dot matrix LCD, rotatable manually
	Language	10 Languages	10 Languages	10 Languages	10 Languages
	USB	USB 2.0 with HID	USB 2.0 with HID	USB 2.0 with HID	USB 2.0 with HID
	RS232	Yes(DB9)	Yes(DB9)	Yes(DB9)	Yes(DB9)
	Dry in/out	1 programble dry in; 1 programble dry out	1 programble dry in; 1 programble dry out	1 programble dry in; 1 programble dry out	1 programble dry in; 1 programble dry out
	EPO	yes	yes	yes	yes
	Intelignet slot	yes(for long card)	yes(for long card)	yes(for long card)	yes(for long card)
	Network card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card
	Modbus card	Optional,CMC/Modbus Long Card	Optional,CMC/Modbus Long Card	Optional,CMC/Modbus Long Card	Optional,CMC/Modbus Long Card
	Dry contactor card	Optional,AS400 Long Card	Optional,AS400 Long Card	Optional,AS400 Long Card	Optional,AS400 Long Card
	WLAN module	Optional,HDMI type	Optional,HDMI type	Optional,HDMI type	Optional,HDMI type
	Ethernet port for IOT	RJ45	RJ45	RJ45	RJ45
	Monitor software	Winpower	Winpower	Winpower	Winpower
Physical performance	Dimension(W*D*H)MM	5U height including 438*573*86.2 (power module, 2U) 438*593*129 (Battery, 3U)	438*573*86.2 (power module, 2U)	5U height including 438*573*86.2 (power module, 2U) 438*593*129 (Battery, 3U)	438*573*86.2 (power module, 2U)
	IP protection level	IP20	IP20	IP20	IP20
Environment	Operating temperature	0-50°C(power derating to 50% @40-50°C)	0-50°C(power derating to 50% @40-50°C)	0-50°C(power derating to 50% @40-50°C)	0-50°C(power derating to 50% @40-50°C)
	Relative Humidity	0-95%	0-95%	0-95%	0-95%
	Operating Altitude	0~3000m (the load derating 1 % every up 100m @1000~3000m)	0~3000m (the load derating 1 % every up 100m @1000~3000m)	0~3000m (the load derating 1 % every up 100m @1000~3000m)	0~3000m (the load derating 1 % every up 100m @1000~3000m)
	Acoustic Noise	<50dB @ typical load with battery fully charged	<50dB @ typical load with battery fully charged	<55dB @ typical load with battery fully charged	<55dB @ typical load with battery fully charged
Certification		CE,IEC/EN 62040	CE,IEC/EN 62040	CE,IEC/EN 62040	CE,IEC/EN 62040
EMI	Conduction/Radiation	C3	C3	C3	C3
EMS	ESD	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2
	RS	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3
	EFT	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4
	Surge	IEC/EN 61000-4-5	IEC/EN 61000-4-5	IEC/EN 61000-4-5	IEC/EN 61000-4-5
Accessory	Maintenance bypass switch	Optional (build in 1 main outlet group with 1 x IEC C19 + 2 x IEC C13 and 1 programmable outlet group with 1 x IEC C19 + 2 x IEC C13)	Optional (build in 1 main outlet group with 1 x IEC C19 + 2 x IEC C13 and 1 programmable outlet group with 1 x IEC C19 + 2 x IEC C13)	Optional (build in 1 main outlet group with 1 x IEC C19 + 2 x IEC C13 and 1 programmable outlet group with 1 x IEC C19 + 2 x IEC C13)	Optional (build in 1 main outlet group with 1 x IEC C19 + 2 x IEC C13 and 1 programmable outlet group with 1 x IEC C19 + 2 x IEC C13)
	Input power cable	NA	NA	NA	NA
	Output power cable	NA	NA	NA	NA
	EBM cable	yes(in EBM)	yes(in EBM)	yes(in EBM)	yes(in EBM)
	USB cable	Yes	Yes	Yes	Yes
	RS232 cable	Optional	Optional	Optional	Optional
	Rail kit	Optional	Optional	Optional	Optional
	Tower Feet	Yes	Yes	Yes	Yes
	Rack ear	Yes	Yes	Yes	Yes
	Manual	Yes	Yes	Yes	Yes

Product specification

Model name		Essential XS IOT RT 10K 3-1	Essential XS IOT RT 10KS 3-1	Essential XS IOT RT 10K 3-3	Essential XS IOT RT 10KS 3-3
Power rating	VA/Watt	10000VA/10000W	10000VA/10000W	10000VA/10000W	10000VA/10000W
Efficiency	Double conversion mode	95%	95%	95%	95%
	ECO mode	98%	98%	98%	98%
Input performance	Voltage range	160-275V 100% load, 110-160V derating to 50% load linearly	160-275V 100% load, 110-160V derating to 50% load linearly	160-300V (273-520) 100% load, 100-160V (173-273) derating to 50% load linearly	160-300V (273-520) 100% load, 100-160V (173-273) derating to 50% load linearly
	Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
	Frequency range	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60% and 1 phase in 1 phase out)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60% and 1 phase in 1 phase out)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60% and 1 phase in 1 phase out)	40Hz-70Hz(45Hz-55Hz 54Hz-66Hz @ load>60% and 1 phase in 1 phase out)
	PF	>0.95 at 3 phase input >0.99 at 1 phase input	>0.95 at 3 phase input >0.99 at 1 phase input	>0.995	>0.995
	THDI	<30% at 3 phase input <5% at 1 phase input	<30% at 3 phase input <5% at 1 phase input	<3% linear load <5% non linear load	<3% linear load <5% non linear load
Input connection		L1/L2/L3/N/PE or L/N/PE hardware terminal connection	L1/L2/L3/N/PE or L/N/PE hardware terminal connection	L1/L2/L3/N/PE or L/N/PE hardware terminal connection Dual input for line and bypass	L1/L2/L3/N/PE or L/N/PE hardware terminal connection Dual input for line and bypass
Output performance	Rated voltage	220/230/240V	220/230/240V	220/230/240V or 380/400/415V	220/230/240V or 380/400/415V
	Rated frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
	Maximum PF	1	1	1	1
	Voltage accuracy	±1%	±1%	±1%	±1%
	THDv	<1% linear load <5% non linear load	<1% linear load <5% non linear load	<1% linear load <5% non linear load	<1% linear load <5% non linear load
	Transfer time	0ms(10ms @ ECO->Inverter)	0ms(10ms @ ECO->Inverter)	0ms(2ms @ ECO+ ->Inverter)	0ms(2ms @ ECO+ ->Inverter)
	Crest Ratio	max 3:1	max 3:1	max 3:1	max 3:1
Output connection	Overload(line mode)	100%<load≤105% continuous. 105%< load ≤125% for 10 minutes 125%<load≤150% for 30 seconds. >150% for 500ms.	100%<load≤105% continuous. 105%< load ≤125% for 10 minutes 125%<load≤150% for 30 seconds. >150% for 500ms.	100%<load≤105% continuous. 105%< load ≤125% for 10 minutes 125%<load≤150% for 1 minutes >150% for 500ms.	100%<load≤105% continuous. 105%< load ≤125% for 10 minutes 125%<load≤150% for 1 minutes >150% for 500ms.
	Wiring/socket	L/N/PE hardware terminal connection	L/N/PE hardware terminal connection	L1/L2/L3/N/PE or L/N/PE hardware terminal connection	L1/L2/L3/N/PE or L/N/PE hardware terminal connection
	Load segment control	No	No	Optional (need MBP model)	Optional (need MBP model)
Battery	Voltage	192VDC(192-240VDC adjustable)	192VDC(192-240VDC adjustable)	192VDC(192-240VDC adjustable)	192VDC(192-240VDC adjustable)
	Capacity(AH)	16*12V/9Ah, 16-20pcs adjustable	NA	2*8*12V/9Ah, 16-20pcs adjustable	NA
	Backup time Typical value by default battery capacity, PF=1	"2.1min 100% load 8min 50% load"	NA	"1.8min 100% load 4.5min 50% load"	NA
Maximum connect external battery module quantity		6	6	6	6
Charger	Charging current	2A(0-12A adjustable)	4A(0-12A adjustable)	2A(0-13A adjustable)	2A(0-13A adjustable)
	Recharging time	3h to 90%	NA	3h to 90%	NA

Product specification

Model name		Essential XS IOT RT 10K 3-1	Essential XS IOT RT 10KS 3-1	Essential XS IOT RT 10K 3-3	Essential XS IOT RT 10KS 3-3
Other working mode	CVCF	Yes (derating to 60% load @ 1 phase in and 1 phase out mode)	Yes (derating to 60% load @ 1 phase in and 1 phase out mode)	Yes (derating to 60% load @ 1 phase in and 1 phase out mode)	Yes (derating to 60% load @ 1 phase in and 1 phase out mode)
	Parallel	Optional (up to 3)	Optional (up to 3)	Optional (up to 3)	Optional (up to 3)
HMI(human-machine interface)	Display	Dot matrix LCD, rotatable manually	Dot matrix LCD, rotatable manually	colour touch LCD (optional Dot matrix LCD)	colour touch LCD (optional Dot matrix LCD)
	Language	10 Languages	10 Languages	10 Languages	10 Languages
	USB	USB 2.0 with HID	USB 2.0 with HID	USB 2.0 with HID	USB 2.0 with HID
	RS232	Yes(DB9)	Yes(DB9)	Yes(DB9)	Yes(DB9)
	Dry in/out	1 programble dry in; 1 programble dry out	1 programble dry in; 1 programble dry out	1 programble dry in; 1 programble dry out	1 programble dry in; 1 programble dry out
	EPO	yes	yes	yes	yes
	Intelignet slot	yes(for long card)	yes(for long card)	yes(for long card)	yes(for long card)
	Network card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card	Optional, NMC long card
	Modbus card	Optional,CMC/Modbus Long Card	Optional,CMC/Modbus Long Card	Optional,CMC/Modbus Long Card	Optional,CMC/Modbus Long Card
	Dry contactor card	Optional,AS400 Long Card	Optional,AS400 Long Card	Optional,AS400 Long Card	Optional,AS400 Long Card
	WLAN module	Optional,HDMI type	Optional,HDMI type	Optional,HDMI type	Optional,HDMI type
	Ethernet port for IOT	RJ45	RJ45	RJ45	RJ45
	Monitor software	Winpower	Winpower	Winpower	Winpower
Physical performance	Dimension(W*D*H)MM	5U height including 438*573*86.2 (power module, 2U) 438*593*129 (Battery, 3U)	438*573*86.2 (power module, 2U)	6U height including 438*589*129(power module, 3U) 438*593*129 (Battery, 3U)	438*589*129(power module, 3U)
	IP protection level	IP20	IP20	IP20	IP20
Environment	Operating temperature	0-50°C(power derating to 50% @40-50°C)	0-50°C(power derating to 50% @40-50°C)	0-50°C(power derating to 50% @40-50°C)	0-50°C(power derating to 50% @40-50°C)
	Relative Humidity	0-95%	0-95%	0-95%	0-95%
	Operating Altitude	0-3000m (the load derating 1 % every up 100m @1000-3000m)	0-3000m (the load derating 1 % every up 100m @1000-3000m)	0-4000m (the load derating 1 % every up 100m @1000-4000m)	0-4000m (the load derating 1 % every up 100m @1000-4000m)
	Acoustic Noise	<55dB @ typical load with battery fully charged	<55dB @ typical load with battery fully charged	<55dB @ typical load with battery fully charged	<55dB @ typical load with battery fully charged
Certification		CE,IEC/EN 62040	CE,IEC/EN 62040	CE,IEC/EN 62040	CE,IEC/EN 62040
EMI	Conduction/Radiation	C3	C3	C3	C3
EMS	ESD	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2	IEC/EN 61000-4-2
	RS	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3	IEC/EN 61000-4-3
	EFT	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4	IEC/EN 61000-4-4
	Surge	IEC/EN 61000-4-5	IEC/EN 61000-4-5	IEC/EN 61000-4-5	IEC/EN 61000-4-5
Accessory	Maintenance bypass switch	Optional (need MBP model)	Optional (need MBP model)	Optional (need MBP model)	Optional (need MBP model)
	Input power cable	NA	NA	NA	NA
	Output power cable	NA	NA	NA	NA
	EBM cable	yes(in EBM)	yes(in EBM)	yes(in EBM)	yes(in EBM)
	USB cable	Yes	Yes	Yes	Yes
	RS232 cable	Optional	Optional	Optional	Optional
	Rail kit	Optional	Optional	Optional	Optional
	Tower Feet	Yes	Yes	Yes	Yes
	Rack ear	Yes	Yes	Yes	Yes
	Manual	Yes	Yes	Yes	Yes