CUSTOS 9X+ SERIES

High-Level Online UPS

1KVA-10KVA

Applications:

Data Center | Telecom | Networking | Computer

Professional On-Line UPS Solutions

Ideal for medium-density power protection demand, Power guardian, FSP Custos 9X+ series provides Rack/ Tower to fit diverse environment. Despite its compact footprint, Custos 9X+ incorporates internal battery packs which can be accessed via the front panel for maintenance checks and replacement without removing the UPS from its rack mounting. The LCD display panel can be easily shifted by pressing buttons to suit the installation format, vertical stand or horizontal rack mount. Besides, IT personnel can manage equipment well from learning Intuitive information via LCD display.

GENERAL FEATURES

- True double-conversion online UPS
- Output power factor 0.9
- User-friendly and easy-shift LCD display
- Rack/Tower design
- Programmable power management outlets
- 50/60 Hz frequency converter mode
- ECO and advanced ECO mode for energy saving
- Emergency Power Off Function (EPO)
- Hot-swappable battery design
- Parallel option for 6K-10K models

True double-conversion online UPS

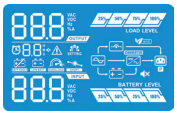
A true double conversion UPS will rectify input power to offer clean,pure, high level quality power with ±1% voltage output regulation to fully protect mission-critical devices such as sensitive networks, small computer centers servers, telecom applications, as well as for industrial applications.

Output power factor 0.9

Custos 9X+ series is a high-density UPS with output power factor 0.9 to provide higher performance and efficiency to critical applications.

User-friendly and easy-shift LCD display

The front panel digital display can be easily shifted through LCD setting to suit the installation format, vertically stand or flat wall mount.



Rack / Tower design

Custos 9X+ series is designed in true universal-mount case. It can be easily installed as floor-standing tower or in 19-inch rackmount bracket.

19" rack-mounting

Floor-standing Tower

Programmable power management

With programmable power management outlets, users can easily and independently control load segments. During power failure, this feature will extend battery time to mission critical devices by shutting down the non-critical devices.

50/60 Hz frequency converter mode

Lock output frequency at 50Hz or 60Hz to suit power sensitive equipments.

ECO and advanced ECO mode for energy saving

Thanks FSP Custos9X+ smart design, operaton efficiency up to 97% ECO mode implemented. Furthermore, Custos 9X+ 1-3K even offers advanced ECO mode to allow UPS to operate at higher efficiency up to 98% for more energy saving.

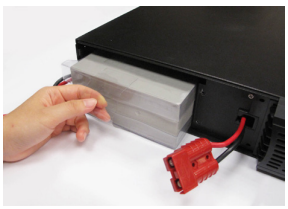
In these operation modes, load is supplied by the utility. When utility failure, UPS inverter will assume control the load and provide clean power continuity to the connected devices.

Emergency Power Off function (EPO)

The safety function can guarantee & secure the emergency responders, fire fighters not exposed to dangerous voltage, electrical hazard from the device. This is important if equipment is emitting smoke, fire, or flood, or if person is being electrocuted.

Hot-swappable battery design

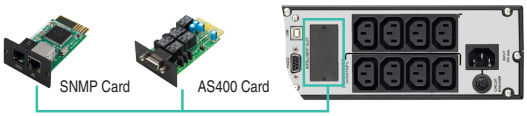
This design ensures clean and uninterruptible power to protected equipment during battery replacement.



RJ-45 Surge protector

Custos 9X+ 1-3kVA implements RJ-45 Surge Protecton ports to prevent Ethernet network damage caused by lightning or ground surges.

Intelligent slot for SNMP or Relay Card



Parallel Option N+X for 6K-10K models

Custos 9X+ 6K/10K can be parallel operated with up to 3 units to accommodate increses in power demand as well as to attain power redundancy with high system integrity.

TECHNICAL SPECIFICATIONS

MODEL	CU-1101TS	CU-11015TS	CU-1102TS	CU-1102TL	CU-1103TS	CU-1103TL
PHASE	Single phase with ground					
CAPACITY	1000 VA / 900W	1500 VA / 1350W	2000 VA / 1800 W		3000 VA / 2700 W	
INPUT						
Nominal Voltage	200/208/220/230/240 VAC					
Voltage Range	110-300 VAC ± 5% @ 50% load: 160-300 VAC ± 5% @ 100% load					
Frequency Range	40Hz ~ 70 Hz					
Power Factor	≧ 0.99 @ Nominal Voltage (100% load)					
OUTPUT						
Nominal Voltage	200/208/220/230/240 VAC					
AC Voltage Regulation	± 1%					
Frequency Range(Synchronized Range)	47 ~ 53 Hz or 57 ~ 63 Hz					
Frequency Range(Batt. Mode)	50 Hz ± 0.1 Hz or 60Hz ± 0.1 Hz					
Current Crest Ratio	5:1 (max.)					
Harmonic Distortion	≦ 2 % THD (Linear Load), ≦4 % THD (Non-linear Load)					
Transfer Time – AC mode to Battery mode	Zero					
Transfer Time – Inverter to Bypass	4 ms (Typical)					
Waveform (Batt. Mode)	Pure Sinewave					
EFFICIENCY						
AC Mode		90%	91%		91%	
ECO Mode			97%			
Battery Mode	89%	89%	88%	89%	90%	
BATTERY						
Battery Type	12V / 9 Ah	12V / 9 Ah	12 V / 9 AH	Depending on the Capacity of external batteries	12 V / 9 AH	Depending on the Capacity of external batteries
Numbers	2	3	4	4	6	6
Typical Recharge Time	4 hours recover to 90% capacity					
Charging Current (max.)	1.5 A**	1.5 A**	1.5 A**	1A/2A/4A/8A (Selectable via LCD Setting)	1.5 A**	1A/2A/4A/8A (Selectable via LCD Setting)
Charging Voltage	27.4 VDC ± 1%	41.1 VDC ± 1%	54.8 VDC ± 1%	54.8 VDC ± 1%	82.1 VDC ± 1%	82.1 VDC ± 1%
INDICATORS						
LCD Display	Load level, Battery level, AC mode, Battery mode, Bypass mode, and Fault indicators					
ALARM						
Battery Mode	Sounding every 4 seconds					
Low Battery	Sounding every second					
Overload	Sounding twice every second					
Fault	Continously sounding					
AC INPUT & OUTPUT CONNECTORS						
AC Input Connector	1 x IEC 320 C20		1 x IEC 320 C20		1 x IEC 320 C20	
AC Output Connector	8 x IEC 320 C13		8 x IEC 320 C13		1 x IEC320 C19 / 6 x IEC 320 C13	
STANDARDS						
Safety / EMC	IEC 62040-1 (safety) / IEC-62040-2 (EMC) / CE					
PHYSICAL						
Dimension, D x W x H(mm)	410 x 438 x 88 (2U)		510 x 438 x 88 (2U)		630 x 438 x 88 (2U)	
Net Weight (kgs)	11.6 / 4.2		Standard:19.5 / LongRun Model: 6.5		Standard:27.4 / LongRun Model: 10.5	
ENVIRONMENT						
Operation Humidity	20-90% RH @ 0-40°C (non-condensing)					
Noise Level	Less than 50 dBA @ 1 Meter					
MANAGEMENT						
Smart RS-232 / USB	Supports Windows 2000/2003/XP/Vista/2008, Windows 7/8/10 Linux and MAC					
Optional SNMP	Power management from SNMP manager and web browser					

*Derate capacity to 95% when the output voltage is adjusted to 115VAC, derate capacity to 90% when the output voltage is adjusted to 110VAC and derate capacity to 80% when the output voltage is adjusted to 100VAC/200VAC/208VAC.
**If standard UPS is equipped with additional charger, tbe available setting options become 2A, 3A and 4A.
Product specifications are subject to change without further notice.

Backup Time Table for Champ Series

	Battery Bank	Backup Time with Load (Min) 25%	50%	75%	100%
CU-1101TS	Internal battery (2x9Ah batteries)	24.0	10.5	6.0	3.8
	+ 1 BB-24/18RT (6x9AH batteries)	87.9	38.3	22.9	15.9
CU-11015TS	Internal battery	29.0	13.0	7.0	4.0
	+ 1 BB-36/18RT (6x9AH batteries)	65.0	27.0	17.0	10.5
CU-1102TS	Internal battery (4x9Ah batteries)	26.0	11.0	6.1	4.0
	+ 1 BB-48/18RT (12x9AH batteries)	98.0	47.0	29.0	20.0
	+ 2 BB-48/18RT (20x9AH batteries)	181.0	88.0	54.0	38.0
CU-1103TS	Internal battery (6x9Ah batteries)	28.0	11.5	6.3	4.0
	+ 1 BB-72/18RT (18x9AH batteries)	107.0	48.0	30.0	20.5
	+ 2 BB-72/18RT (30x9AH batteries)	197.0	91.0	55.0	39.0
CU-1102TL	+ 1 BB-48/18RT (8x9AH batteries)	60.0	29.0	17.5	11.5
	+ 2 BB-48/18RT (16x9AH batteries)	139.0	67.0	41.0	29.0
	+ 3 BB-48/18RT (24x9AH batteries)	224.0	110.0	68.0	48.0
CU-1103TL	+ 1 BB-72/18RT (12x9AH batteries)	65.0	29.0	17.5	11.5
	+ 2 BB-72/18RT (24x9AH batteries)	151.0	68.0	42.0	29.0
	+ 3 BB-72/18RT (36x9AH batteries)	244.0	112.0	69.0	48.0

TECHNICAL SPECIFICATIONS

MODEL	CU-1106TL	CU-1110TL
PHASE	Single phase with ground	
CAPACITY	6000 VA / 5400 W	10000 VA / 9000 W
INPUT		
Nominal Voltage	200/208/220/230/240 VAC	
Voltage Range	110-300 VAC ± 3% at 50% load ; 176-300 VAC ± 3% at 100% load	
Frequency Range	46~54 Hz or 56~64 Hz	
Power Factor	≧ 0.99 @ Nominal Voltage (100% load)	
OUTPUT		
Nominal Voltage	200/208/220/230/240 VAC	
AC Voltage Regulation	± 1%	
Frequency Range(Synchronized Range)	46~54 Hz or 56~64 Hz	
Frequency Range(Batt. Mode)	50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz	
Current Crest Ratio	3:1 (max.)	
Harmonic Distortion	≦ 2 % THD (Linear Load), ≦4 % THD (Non-linear Load)	
Transfer Time – AC mode to Battery mode	Zero	
Transfer Time – Battery mode to AC mode	Zero	
Transfer Time – Inverter to Bypass	Zero	
Transfer Time – Bypass to Inverter	Zero	
Waveform (Batt. Mode)	Pure Sinewave	
EFFICIENCY		
Line Mode	>90%	>86%
ECO Mode	>96%	>92%
Battery Mode	>88%	>84%
BATTERY		
Battery Type	Depending on applications	
Numbers		
Typical Recharge Time		
Charging Current (max.)	4.0 A	
Float Charging Voltage	273VDC Based on 20PCS 12V VRLA Battery	
INDICATORS		
LCD Display	UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions	
ALARM		
Battery Mode	Sounding every 4 seconds	
Low Battery	Sounding every second	
Overload	Sounding twice every second	
Fault	Continuously sounding	
AC INPUT & OUTPUT CONNECTORS		
AC Input Connector	Terminal	
AC Output Connector	Terminal	
PHYSICAL		
Dimension, D x W x H(mm)	UPS unit: 606 x 438 x 133 [3U] External battery pack: 606 x 438 x133[3U]	UPS unit: 686 x 438 x 133[3U] External battery pack: 606 x 438 x133[3U]
Net Weight (kgs)	UPS unit: 20 Battery pack: 58	UPS unit: 23.5 Battery pack: 65
ENVIRONMENT		
Operation Humidity	0-95 % RH @ 0- 40°C (non-condensing)	
Noise Level	Less than 58 dBA @ 1 Meter	Less than 60 dBA @ 1 Meter
MANAGEMENT		
Smart RS-232 / USB	Supports Windows 2000/2003/XP/Vista/2008, Windows7/8/10, Linux and MAC	
Optional SNMP	Power management from SNMP manager and web browser	

*When using internal batteries from 18-19, the unit will de-rate according to below formula: P=PRating x N/20
** If the UPS is installed or used in a place where the altitude is above than 1000m, the output power must be derated one percent per 100m.
* L means long-run model
Product specifications are subject to change without further notice

Backup Time Table for Custos Series

		Backup Time with Load (Min)			
	Battery Bank	25%	50%	75%	100 %
CU-1106 TL	+1 BB-240/9RT (20 x 9AH Batteries)	43.0	20.0	12.9	8.0
	+2 BB-240/9RT (40 x 9AH Batteries)	99.0	46.0	31.7	22.7
	+3 BB-240/9RT (60 x 9AH Batteries)	150.0	71.0	43.5	30.4
CU-1110 TL	+1 BB-240/9RT (20 x 9AH Batteries)	22.0	9.0	6.0	3.0
	+2 BB-240/9RT (40 x 9AH Batteries)	54.0	23.0	16.9	12.0
	+3 BB-240/9RT (60 x 9AH Batteries)	88.0	38.0	23.0	16.0