



Leading 5G Innovations

## ZXEPS E6N1 Embedded Power System Datasheet

# ZTE



## Overview

ZXEPS E6N1 is an intelligent modular embedded power system. The system can provide power to -48V series communication equipment, and support 4kW rectifier module and solar module mixed plug.

Modular power system composition

Combination diagram



ZXEPS E6N1 embedded power system includes three parts:

- **Basic unit (standard):** 4U height, including 6 slots, supporting 4kW rectifier module and solar module mixed plug. The full configuration capacity is 24kW (6x4000W) .
- **Rectifier expansion unit (optional):** 1U height, used for power system capacity expansion, including 4 slots, supporting 3x4kW rectifier module and 1x3kW/4kW solar module mixed plug. The full configuration capacity is 12kW.
- **DC power distribution expansion unit (optional):** 1U height, applicable to DC power distribution expansion or differential backup transformation of existing site.

**Modular switching power supply - ZXEPS E6N1 Basic unit**, including CSU603 、 ZXEPS R4875F1 rectifiers 、 DC load circuit breaker 、 Battery input circuit breaker. (The following figure shows full configuration.)





### Highlights

- Adopt super high efficiency rectifier module ZXEPS R4875F1 with greater than **97%** peak efficiency, save energy loss during power conversion process.
- Rectifier module support work in the sleep mode to maximize system efficiency, the power consumption of the rectifier is lower than 4W in this mode.
- High power density up to **70.2W/in<sup>3</sup>**, making optimum space utilization.
- **85V~300V** wide input voltage, high adaptive to poor grid to protect battery.
- The system can be remotely managed through a computer installed with Web explorer anywhere if Ethernet is available.
- Storage expansion through the USB interface, realize fast roll-out by batched configuring site information.
- Rectifier easy touch function enables operator of convenient communication between CSU and multiple rectifiers.
- Providing dry contacts, RJ45, RS232, and RS485 interfaces. Meeting the requirements of HTTPS, SNMP networking to save maintenance and initial investment.
- System support Intelligent breakers features: Software-defined denomination; Authorization for use (the ability to restrict rights for users); Single load control; Remote switching on / off of circuit breakers; Measurement of power consumption.
- Support monitoring of the maximum power consumption of the network , control output power and intelligent smoothing of peak loads enables grid free from modernization
- Achieve intelligent and precise management of power consumption base on peak and valley power price to save electric cost.
- All breakers height is 1U type

### Basic Unit Technical Description



Parameters	Description
<b>Model Type</b>	<b>ZXEPS E6N1</b>
Rectifier module	ZXEPS R4875F1
Solar PU	ZXDT02-PU3000 V3.0
CSU module	CSU603A
<b>AC input</b>	
Input type	three-phase five-wire (L1/L2/L3/N/PE)
Input voltage range	85V AC~300V AC
Frequency	20 Hz~70 Hz (When the input frequency is lower than 40 Hz, the output power to be reduced accordingly.)
Input power factor	≥0.97 (40-90% load)
AC SPD	I <sub>max</sub> =30kA 8/20uS
AC input	--Default AC PDU configuration: 1x63A/4P circuit breaker. --Optional AC PDU configuration: 2x63A/4P circuit breakers with a mechanical interlock.
AC auxiliary output	2x16A/1P
AC expansion(optional)	3x32A/1P, used for cable connection between basic unit and rectifier expansion unit
<b>DC output</b>	
Output voltage	-53.5 V (-42V ~ -58V adjustable)
Output power	Maximum 24kw ; Rectifier: 1-6 PCS Solar PU: 1-6 PCS Rectifier + solar PU≤6
Module efficiency	The maximum efficiency is greater than 97%.
Solar PU	The maximum efficiency is greater than 98.5%.
Battery distribution	125A/1P*2
Load distribution plus DC power expansion distribution ZXDP06 D201 V2.0	Intelligent breakers(could be configured as customized): LLVD1: 2pcs*125A , 9pcs*63A , 4pcs*32A; LLVD2: 2pcs*63A , 6pcs*32 , 4pcs*16A;
Intelligent Low Voltage power-off protection mode	• LLVD1, Contactor 400A • LLVD2, Contactor 400A
Intelligent AC\DC breakers	Intelligent software controlled distribution panel of AC/DC circuit breakers allows programming and control of circuit breakers both individually and in certain groups on demand of cusotmer (flexible configuration)





DC SPD	In=15 kA (8/20 μs)
<b>Management Unit</b>	
Type	CSU603A
Networking mode	TCP/IP, SNMP
Communication interface	RS485,RS232,RJ45,USB
Environment port	Battery temp. ambient temp. flooding, door, smoke, humidity
<b>Work environment</b>	
Operation temperature	-20℃~+45℃,
Storage temperature	-45℃~+75℃
Humidity	5%-95%
Atmosphere	70kPa-106kPa
Altitude	0 to 3000 m: 100% output power; 3000 to 5000 m: The power derating percentage is 1% when the altitude increases by 100 m.
<b>Structure</b>	
System Dimension	4U × 482.6 mm × 360 mm (H × W × D)
Weight	Chassis weight: 30kg (not including rectifiers and package);
<b>Others</b>	
MTBF	≥ 3.2×10 <sup>5</sup> h

**Modular switching power - extended rectifier subrack RRN122** is the ZXEPS E6N1's rectifier expansion units, which can be expanded to 12kW (3x4000W) by adding 1U height rectifier expansion units.



## Rectifier Expansion Unit Technical Description

Parameters	Description
<b>Model Type</b>	<b>RRN122</b>
System Capacity	12kW, 3x 4000W ZXEPS R4875F1 rectifier
<b>Structure</b>	
System Dimension	1U × 482.6 mm × 360 mm (H × W × D)
Weight	Chassis weight: 5kg (not including rectifiers and package);

Note: Other electrical performance parameters are the same as the basic unit.



**Modular switching power supply – Extended ZXDP06 D201 V2.0 DC power distribution** is the ZXEPS E6N1's DC power distribution. The DC distribution part adopts intelligent breakers, which supports capacity & name definition, remote on/off control and precise metering of each load, to realize differentiated LLVD and refined management of site power system.



## DC Power Distribution Expansion Unit Technical Description

Parameters	Description
Model Type	<b>ZXDP06 D201 V2.0</b>
DC SPD	In=15 kA (8/20 $\mu$ s)
DC distribution	26 slots for Intelligent breakers in total, support 63/125A breaker mixed plug, maximum support 13 $\times$ 63A intelligent breakers configuration. (63A breaker occupies 2 slots, 125A breaker occupies 3 slots )
Input interface	DC input terminal (including 2 positive and 2 negative), used for cable connection between basic unit and DC power distribution expansion unit
<b>Structure</b>	
System Dimension	1U $\times$ 482.6 mm $\times$ 360 mm (H $\times$ W $\times$ D)
Weight	8kg



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