



# MPS Ultra

## 2RU Redundant Hot Swap Modular DC Power System

The ICT MPS Ultra provides hot swappable, N+1 redundancy for power requirements up to 5.6KW. Three power chassis models are preconfigured at the factory to provide fast, easy installation at the site. Every model includes the ICT Intelligent Control Module to provide full TCP/IP remote monitoring and control of all system functions.



2.8KW	3.5KW	5.6KW
<ul style="list-style-type: none"> <li>▶ Intelligent Control Module</li> <li>▶ Remote power monitoring and control over Ethernet</li> <li>▶ 150A Low Voltage Disconnect</li> <li>▶ Dual 100A Battery Disconnect Breakers</li> <li>▶ 12 fully managed load distribution outputs</li> <li>▶ Accepts up to four 700 Watt Power Modules</li> </ul>	<ul style="list-style-type: none"> <li>▶ Intelligent Control Module</li> <li>▶ Remote power monitoring and control over Ethernet</li> <li>▶ 150A Low Voltage Disconnect</li> <li>▶ Dual 100A Battery Disconnect Breakers</li> <li>▶ 8 fully managed load distribution outputs</li> <li>▶ Accepts up to five 700 Watt Power Modules</li> </ul>	<ul style="list-style-type: none"> <li>▶ Intelligent Control Module</li> <li>▶ Remote power monitoring and control over Ethernet</li> <li>▶ Accepts up to eight 700 Watt Power Modules</li> </ul>

### Power Chassis

- ▶ 2RU Power Chassis configured at factory for fast, easy installation
- ▶ All connections are accessible from the rear, there are no covers to remove during setup
- ▶ Accepts 48 or 24 volt DC hot-swappable ICT 700 watt Power Modules
- ▶ Dual AC feeds

### Integrated Intelligent Control Module

- ▶ TCP/IP remote Ethernet communications for monitoring and control of all system parameters through a single I.P. address and fully integrated user interface
- ▶ Embedded web server for plug and play set up
- ▶ HTTP/HTTPS, SMTP, SNMPv1/v2c/v3 protocols supported
- ▶ Alarms can be sent to multiple email accounts
- ▶ Four site monitoring sensor inputs with alarm reporting
- ▶ Data logging
- ▶ Password protection with multiple security levels

### Load Distribution Features (2.8 and 3.5KW models)

- ▶ Current monitoring and alarm reporting of each output for pinpointing of issues with connected loads
- ▶ Outputs can be power cycled individually over Ethernet
- ▶ Adjustable alarm and load-shed settings for each output

### Battery Management Features (2.8 and 3.5KW models)

- ▶ Temperature compensated charging, display of battery voltage, status, battery current, state of charge, and run time remaining
- ▶ Adjust LVD settings remotely
- ▶ Configure advanced battery management features such as boost charge parameters, max charge current, battery capacity, battery test timer, and battery discharge test cut-off voltage

### 700 Watt Power Modules (order separately)

- ▶ 100-300 volts AC input with Power Factor Correction
- ▶ +/- 48 or 24VDC volts nominal DC output
- ▶ 90-93% efficiency
- ▶ -30 to +60C operating temperature range

AC INPUT	
Nominal system voltage	120/240VAC
Input voltage range	100-300VAC
Power factor (typical)	0.99
Frequency	50/60Hz

SYSTEM OUTPUT	48VDC	24VDC
Max. Output Current:		
2.8KW System (4 modules)	50A	100A
3.5KW System (5 modules)	63A	125A
5.6KW System (8 modules)	100A	N/A

COMMUNICATIONS AND CONTROL	
Front display	High resolution OLED with function keys
Remote communications	TCP/IP 10/100 Base-T
I.P. protocols	HTTP/HTTPS, SMTP, SNMPv1/v2c/v3
Inputs	4 digital, 1 analog temp sensor contacts
<b>Monitoring functions:</b>	
5.6KW model	AC input, DC output V and A, Power Module status, system current, alarms reporting
2.8KW & 3.5KW models	AC input, DC output V and A, Power Module status, system current, battery voltage, battery current, state of charge, run time remaining, LVD status, load current monitoring, alarms reporting
<b>Control functions:</b>	
5.6KW model	Enable/disable DC outputs, adjust output voltage and current settings, auto restart delay time
2.8KW & 3.5KW models	Enable/disable DC outputs, adjust output voltage and current settings, auto restart delay time, battery equalization, discharge test, LVD setpoints, power cycle load outputs, auto load-shedding, network watchdog, power-on sequencing, customizable input alarm labels and settings

LOAD DISTRIBUTION OUTPUTS - 2.8KW & 3.5KW Systems	
Load outputs	12 or 8
Max. current rating per output	20A
Protection	Hydraulic/magnetic circuit breakers (order separately)

BATTERY MANAGEMENT - 2.8KW & 3.5KW Systems	
Circuit breaker	Dual 100A
Low voltage disconnect	150A contactor

ENVIRONMENTAL	
Operating temperature range	-30° to +60° C
Output derating	2% /°C (above 50° C)
Storage temperature	-45° to +85° C

REGULATORY STANDARDS	
Safety	EN 60950-1
Emissions	EN61000-6-1, EN61000-6-3, EN61000-3-2, RoHS, CE

MECHANICAL	
AC input connectors (dual)	Terminal Block, #8 - #16 AWG
DC output connector	Busbars with 5/16" bolts
Ethernet connector	RJ-45
Remote alarm connectors	Terminal Block (#16 -24 AWG)
Mounting	2RU, 19 inch rack mount
Weight (exc. Power Modules)	30lbs / 13.6 kg
Dimensions - H x W x L	3.5 x 19.0 x 15.7 in. / 89 x 483 x 398 mm

HOT SWAPPABLE DC POWER MODULES (order separately)	48 VDC	24 VDC
Model number	ICT700-48PM	ICT700-24PM
Output voltage range (adjustable)	46.0 - 62.0 VDC	23.0 - 31.0 VDC
Power output per module	700W	700W
Output current per module	12.5A	25A
Power Factor	0.99 typ.	0.99 typ.
Frequency	50/60Hz	50/60Hz
Efficiency (typical)	93%	91%
Output ripple (p-p)	150mV	150mV

(a) Load breakers must be ordered separately.

**STEP 1** Select Power Chassis

	Model Number	
	-48/24VDC	+48/24VDC
<b>2.8KW</b> Intelligent Power Chassis with integrated Control Module and Ethernet communications. Includes dual 100A battery disconnect breakers and 150A Low Voltage Disconnect. 12-position fully managed load distribution outputs (load breakers must be ordered separately). Accepts up to 4 Power Modules.	ICT-2U4	ICT-2U4P
<b>3.5KW</b> Intelligent Power Chassis with integrated Control Module and Ethernet communications. Includes dual 100A battery disconnect breakers and 150A Low Voltage Disconnect. 8-position fully managed load distribution outputs (load breakers must be ordered separately). Accepts up to 5 Power Modules.	ICT-2U5	ICT-2U5P
<b>5.6KW</b> Intelligent Power Chassis with integrated Control Module and Ethernet Communications. Accepts up to 8 Power Modules.	ICT-2U8 (for 48VDC only, POS or NEG ground)	



**STEP 2** Select Power Modules

Select hot-swappable Power Modules (must be same voltage for each chassis)

Power Module, 48VDC, 700W output, hot swappable, floating output	ICT700-48PM
Power Module, 24VDC, 700W output, hot swappable, floating output	ICT700-24PM



**STEP 3** Select Load Breakers and Accessories

	5 Amp	10 Amp	15 Amp	25 Amp
Hydraulic/Magnetic load breakers	ICT-CB5	ICT-CB10	ICT-CB15	ICT-CB25

Blanking plate for unused load breaker positions	ICT-BLP
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Blanking panel for unused Power Module positions	ICT-BPM
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INTELLIGENT POWER CHASSIS

Each MPS Ultra system includes a fully integrated Intelligent Control Module to provide remote Ethernet-based monitoring and control of all aspects of the system through a single I.P. address and a built-in intuitive graphical user interface.

BATTERY MANAGEMENT

The 2.8 and 3.5KW MPS Ultra systems come with an integrated 150A Low Voltage Disconnect, dual 100A Battery disconnect breakers and a remote temperature sense probe. Monitor and adjust LVD set-points over Ethernet. Advanced battery management features include temperature compensated charging, battery state-of-charge, run-time remaining, and battery discharge testing.

MANAGED LOAD DISTRIBUTION OUTPUTS

The 2.8 and 3.5KW MPS Ultra systems come with integrated breaker-protected load outputs, allowing you to monitor and power cycle each load individually via Ethernet. Sends email alarms. Automatic load shedding and network watchdog (ping) features maximize run-time for critical loads and will power cycle critical devices such as routers, possibly preventing unplanned trips to the site.

