

# 2018 PRODUCT CATALOG





The Power of Reliability

# PRODUCT CATALOG

## 2018

### INNOVATIVE CIRCUIT TECHNOLOGY LTD.

ICT has been providing DC power conversion products since 1986 for two-way wireless communications, fixed wireless broadband, radio access networks, and industrial DC power markets. Our DC power supplies, N+1 redundant systems, voltage converters, battery chargers, power inverters, and power distribution products are used in land mobile radio, site equipment power and mobile power conversion applications around the world.

Our innovative Ethernet-enabled intelligent power systems, including rack mount power supplies, hot swappable DC power systems, managed DC power distribution and inverters can reduce operating costs by providing remote power monitoring and the ability to shut down or power cycle DC and AC powered devices at remote sites. This can often eliminate the need for unplanned and costly site visits.

ICT solutions are designed and manufactured in Canada, providing the highest quality, reliability, availability, and support available. Anywhere DC power is needed, ICT has been the reliable choice for over 30 years.

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For detailed product specifications and data sheets, visit [www.ict-power.com](http://www.ict-power.com).

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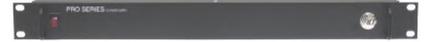
### MODULAR POWER SERIES



### DIGITAL SERIES



### PRO SERIES



#### DESCRIPTION

1RU redundant, hot swappable modular power system available with 48, 24 or 12 volts DC. Flexible configurations allow you to select the right system for your needs.

1RU high efficiency DC power supply with Intelligent Power Control and optional TCP/IP Ethernet and battery backup with adjustable low voltage disconnect.

1RU high efficiency DC power supply with universal PFC AC input, and Form C alarm contacts. Available battery backup with integrated low voltage disconnect.

#### RATINGS

- ▶ 100–300VAC input
- ▶ 12, 24 or +/-48VDC output
- ▶ Universal PFC AC input
- ▶ 90–93% efficiency
- ▶ -30°C to +60°C operating temp.
- ▶ CSA / UL approved

- ▶ 1350W & 675W models
- ▶ 12, 24 or +/-48VDC output
- ▶ Universal PFC AC input
- ▶ 90–93% efficiency
- ▶ -30°C to +60°C operating temp.
- ▶ CSA / UL approved

- ▶ 1190W & 690W output
- ▶ 12, 24 or +/-48VDC output
- ▶ Universal PFC AC input
- ▶ 90–93% efficiency
- ▶ -30°C to +60°C operating temp.

#### FEATURES

- ▶ 1RU inch design saves rack space
- ▶ TCP/IP remote Ethernet communications
- ▶ HTTPS, SMTP, SNMP protocols
- ▶ Four fully managed load outputs can be power cycled individually
- ▶ Hot swappable 700W, high efficiency 12, 24, or +/-48VDC power modules

- ▶ 1RU inch design saves rack space
- ▶ Intelligent front panel LCD allows control of output voltage and current limits
- ▶ Optional TCP/IP for remote monitoring and full control using web browser
- ▶ Optional battery backup with adjustable LVD setpoints
- ▶ Smart parallel operation of up to six units

- ▶ 1RU inch design saves rack space
- ▶ Form C alarm contacts
- ▶ Remote shutdown terminal

#### OPTIONS

- ▶ Up to 2800W of power with redundancy in a single shelf
- ▶ A second shelf can be added for higher power applications
- ▶ Accommodates optional Battery Management Module and Load Distribution Module in 1RU space

- ▶ TCP/IP Ethernet for remote monitoring and control
- ▶ Battery backup terminal for float charging, with adjustable LVD
- ▶ RJ11 jumper cable for Smart Parallel operation
- ▶ Bus bar straps for parallel connection

- ▶ Battery backup terminal with automatic LVD

#### APPLICATION EXAMPLES

- ▶ Wireless communications sites
- ▶ Fixed wireless broadband
- ▶ Radio Access Networks
- ▶ Small Cell/LTE

- ▶ Wireless communications sites
- ▶ Fixed wireless broadband
- ▶ DAS
- ▶ Industrial power applications

- ▶ Wireless communications sites
- ▶ Fixed wireless broadband
- ▶ In-building DC power
- ▶ Industrial power applications

## DISTRIBUTION SERIES 2



## DISTRIBUTION SERIES 3



## SINE WAVE SERIES



### DESCRIPTION

Single bus distribution panels allow up to 12 devices to be powered from a single DC source. TCP/IP models allow for remote monitoring and power control of individual outputs over Ethernet.

Dual bus distribution panels with rear or front-access connections for redundant operation or mixed voltage sites.

1500 watt pure sine wave inverter provides maximum performance and flexibility for a wide variety of applications. Options allow for tailoring to specific installation requirements.

### RATINGS

- ▶ 180A peak system current
- ▶ Nine outputs (25A max.) & three outputs (40A max.)
- ▶ ATO and GMT fuse options available
- ▶ 12, 24 or +/-48VDC applications
- ▶ -30°C to +60°C operating temp.

- ▶ 200A peak / 100A per bus current rating (rear access panel)
- ▶ 240A peak / 120A per bus current rating (front access panel)
- ▶ Six outputs per bus: 25A max for 12/24VDC; 15A max. for 48VDC (rear access panel)
- ▶ Four outputs per bus: 25A max for 12, 24 & 48VDC (front access panel)
- ▶ -30°C to +60°C operating temp.

- ▶ 1500W of pure sine wave output with 3000W surge capacity
- ▶ 230VAC output
- ▶ 12, 24 or +/-48VDC input models

### FEATURES

- ▶ 1RU space-saving design
- ▶ Front mounted fuses or breakers for easy access and replacement
- ▶ Alarm contacts standard
- ▶ TCP/IP models provide remote monitoring and alarm notifications
- ▶ TCP/IP models allow individual outputs to be controlled remotely for power-cycling
- ▶ TCP/IP models provide five digital contact inputs for site monitoring sensors

- ▶ HTTPS, SMTP, SNMP protocols supported
- ▶ Easy to use Graphical User Interface
- ▶ Five digital inputs for site monitoring sensors
- ▶ On-board web server requires no software to maintain
- ▶ Remote firmware update capability

- ▶ >90% efficiency
- ▶ Extremely low idle current draw
- ▶ -30°C to +60°C operating temp.
- ▶ Front and rear AC wiring accessibility
- ▶ Optional TCP/IP Ethernet and fast transfer switch
- ▶ 2RU rack mount kit holds one or two inverters
- ▶ Optional DC wiring box

### APPLICATION EXAMPLES

- ▶ Wireless communications sites
- ▶ Fixed wireless broadband
- ▶ RF, broadband, network power
- ▶ In-building DC power

- ▶ Wireless communications sites
- ▶ Fixed wireless broadband
- ▶ RF, broadband, network power
- ▶ Small Cell/LTE

- ▶ Power AC loads at communications sites such as servers, radio and repeater equipment
- ▶ Convert DC to AC for renewable and alternative energy systems, outdoor power enclosures



### INTELLICHARGE SERIES POWER SUPPLY/CHARGER



### CHASSIS MOUNT SERIES



### ISOLATED SERIES 2



#### DESCRIPTION

Desktop power supply with 3-stage intelligent battery charging also functions as a DC UPS, providing automatic battery revert and low voltage disconnect.

Compact, efficient switch mode DC power supply designed for enclosures, rack systems, outdoor power systems, SCADA and backhaul sites.

Fully isolated DC power converters for use in negative or positive ground systems. Designed for high reliability and long-life operation.

#### RATINGS

- ▶ 180W and 360W models
- ▶ 12, 24 or 48VDC output
- ▶ Universal power factor corrected 100–265VAC PFC input

- ▶ 5A to 40A current ratings
- ▶ Models for 12, 24 and 48VDC applications
- ▶ Input voltage ranges from 10VDC to 60VDC

- ▶ 5A to 35A current ratings
- ▶ Models for 12, 24, 48 and 72VDC applications
- ▶ Input voltage ranges from 11VDC to 160VDC

#### FEATURES

- ▶ CSA/UL approved
- ▶ High efficiency design
- ▶ Adjustable charge rate settings
- ▶ Remote alarm contacts
- ▶ Form C alarm contacts
- ▶ Temperature compensated charging
- ▶ Separate terminals for easy connection of battery and load
- ▶ LVD prevents battery damage

- ▶ Battery backup float charging terminals standard
- ▶ Current limited battery float charge to prevent battery damage
- ▶ FCC Class B compliant
- ▶ Threaded mounting holes for easy installation
- ▶ Terminal block input and output connectors

- ▶ Complete isolation between input and output circuits
- ▶ Conformal coating for moisture and vibration resistance
- ▶ Wide input voltage ranges for rugged applications
- ▶ Remote on/off contact terminal

#### OPTIONS

- ▶ High resolution OLED display
- ▶ Remote battery temp. sensor
- ▶ 1RU rack mount kit

▶ None

- ▶ 2RU 19" rack mount kit (holds one, two or three converters)

#### APPLICATION EXAMPLES

- ▶ Communications sites
- ▶ Outdoor power systems
- ▶ Renewable energy systems
- ▶ DC UPS systems

- ▶ Outdoor power systems
- ▶ Integrated radio transmitters
- ▶ DAS
- ▶ Backhaul

- ▶ Outdoor power systems
- ▶ Renewable energy systems
- ▶ DC site voltage conversion
- ▶ Utility sub-stations

## 100A ISOLATION MODULE



## LOW VOLTAGE DISCONNECT



## NOISE FILTERS



### DESCRIPTION

The 100 ampere Redundant Isolation Module allows for easy parallel connection of two DC power supplies or DC-DC converters to create an N+1 fault-tolerant redundant power system.

A 200 ampere rated low voltage disconnect used to protect system batteries from over discharging. The Intelligent Control panel allows easy adjustment of disconnect and reconnect voltage setpoints.

Filters out common and differential noise in industrial, automotive and electrical systems. Filters both positive and negative sides.

### RATINGS

- ▶ Two input channels
- ▶ 100A rating
- ▶ 12, 24 or 48VDC support
- ▶ Compact, high efficiency active design minimizes voltage and heat loss

- ▶ 200A at 12 and 24VDC, 100A at 48VDC
- ▶ Intelligent Control panel displays voltage, current and alarms status
- ▶ Form C remote alarm contact

- ▶ 0.1VDC to 100VDC input range
- ▶ 12, 25 and 40A ratings
- ▶ 10Hz–200MHz filter range

## BATTERY TEMPERATURE SENSOR



## CIRCUIT BREAKERS



## RACK MOUNT KITS



### DESCRIPTION

Provides temperature compensated charging for ICT IntelliCharge and Modular Power Series.

High quality, hydraulic magnetic circuit breakers for Distribution Series 3 and Modular Power Series Load Distribution Module.

Allows desktop or flange-mount DC power products to be mounted in a standard 19" equipment rack.

### RATINGS

- ▶ 3m (10ft) cable
- ▶ Adhesive backed plastic clip for affixing probe to battery case included

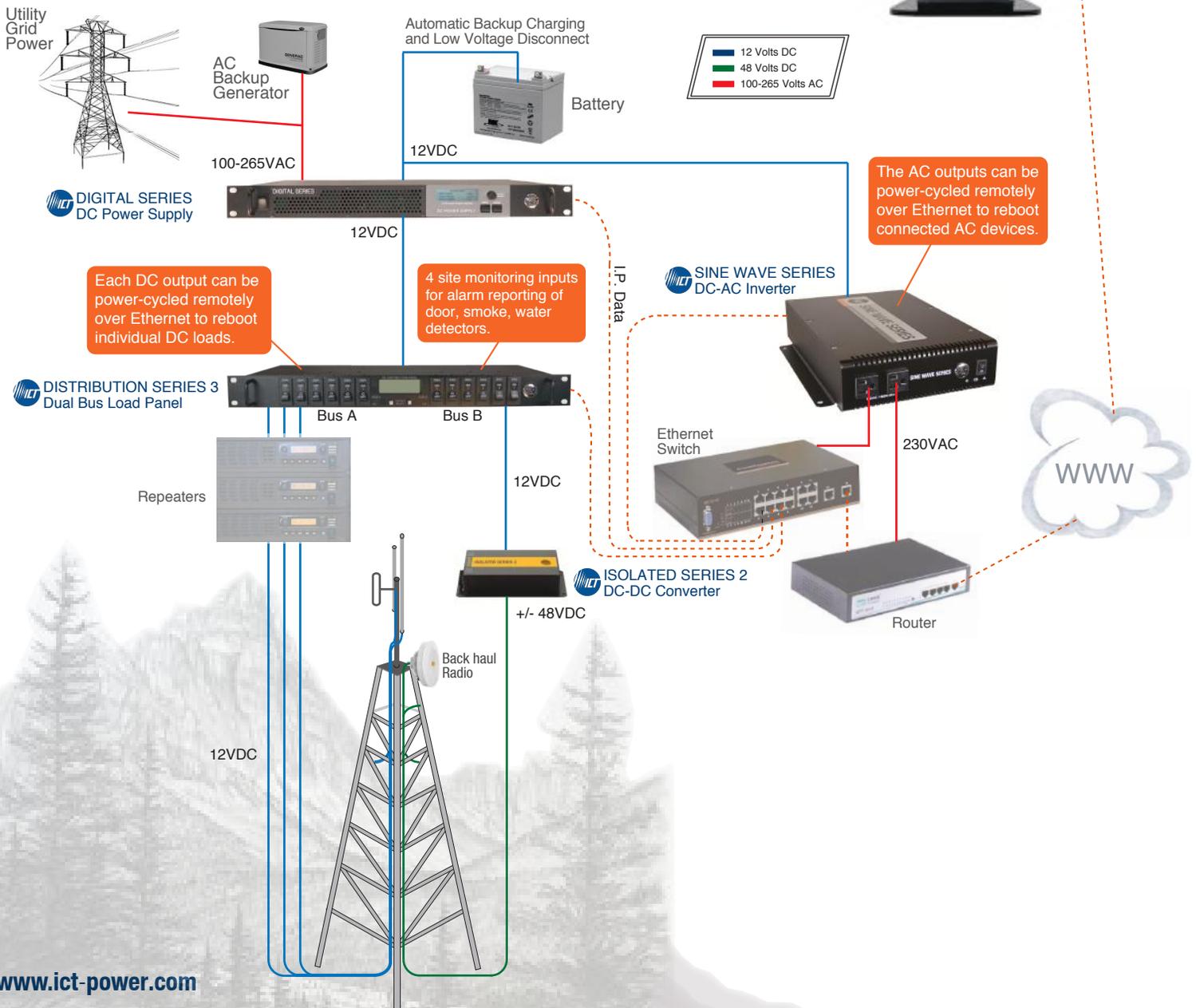
- ▶ Available in 5A, 15A, 25A
- ▶ Blanking plate available for unused positions

- ▶ 1RU and 2RU models for rack mounting one or two desktop power supplies and battery chargers
- ▶ 2RU model for rack mounting one, two or three DC Converters
- ▶ 1RU and 2RU models for rack mounting 300W and 1500W inverters



# AFFORDABLE, MANAGED DC POWER FOR LMR NETWORKS

DC power supplies, load distribution panels and inverters from ICT with built-in user interfaces allow remote monitoring and power control of connected devices over Ethernet including radios, repeaters, switches and firewalls. With the ability to power cycle locked up devices, load shed non-critical loads to conserve battery life, and disconnect individual loads remotely over Ethernet, costly unplanned site visits can be avoided while quality of service is maintained.

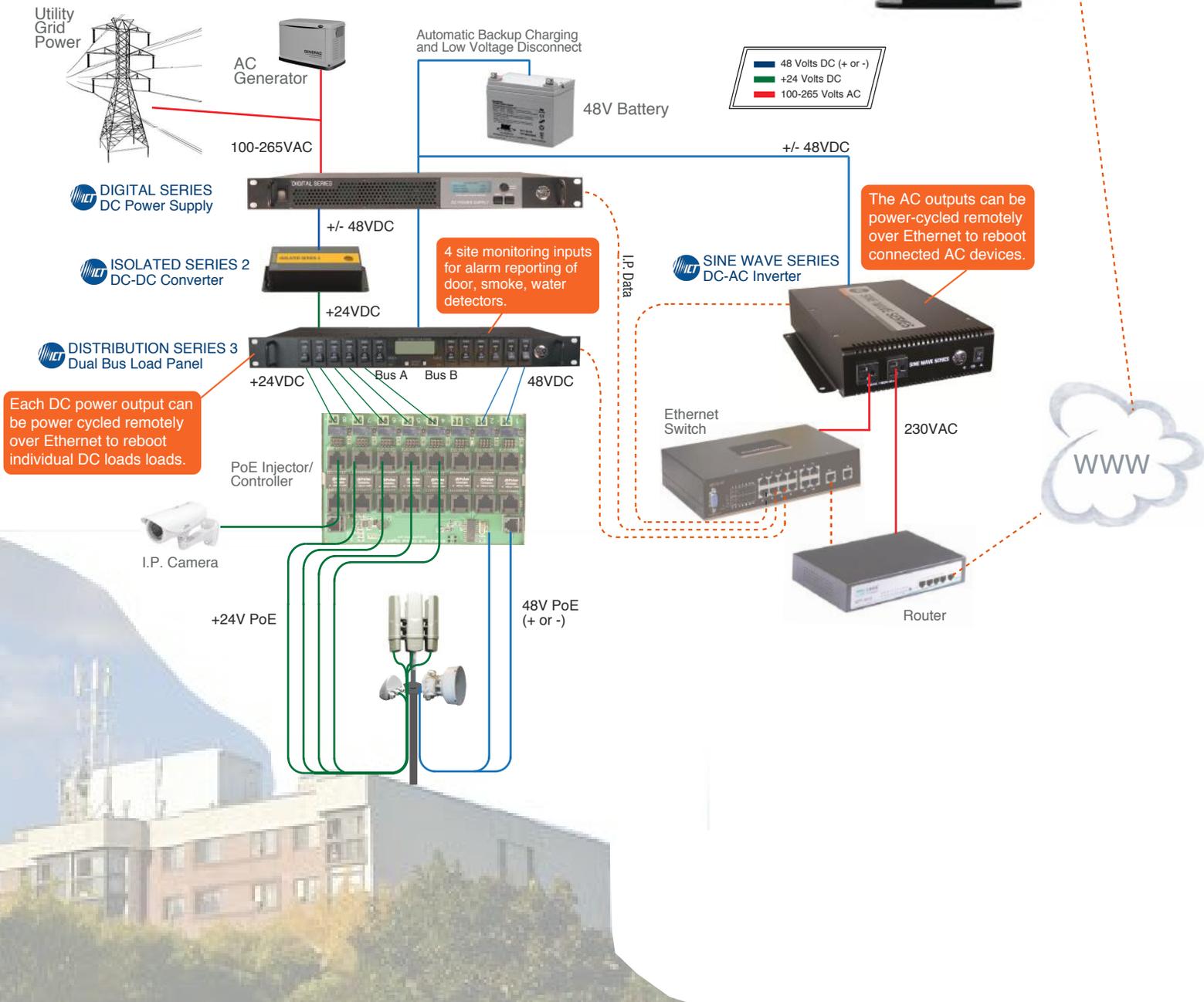


# AFFORDABLE, MANAGED DC POWER FOR FIXED WIRELESS BROADBAND NETWORKS

The ICT built-in graphical user interface allows remote monitoring and power control of ICT DC power supplies, load distribution panels and inverters over Ethernet, providing the capability to power cycle locked up devices such as back haul radios, PoE controllers, and network switches. Automatically shed non-critical loads to conserve battery life, and disconnect individual loads remotely over Ethernet. Avoid unnecessary site visits with Intelligent DC Power solutions from ICT.

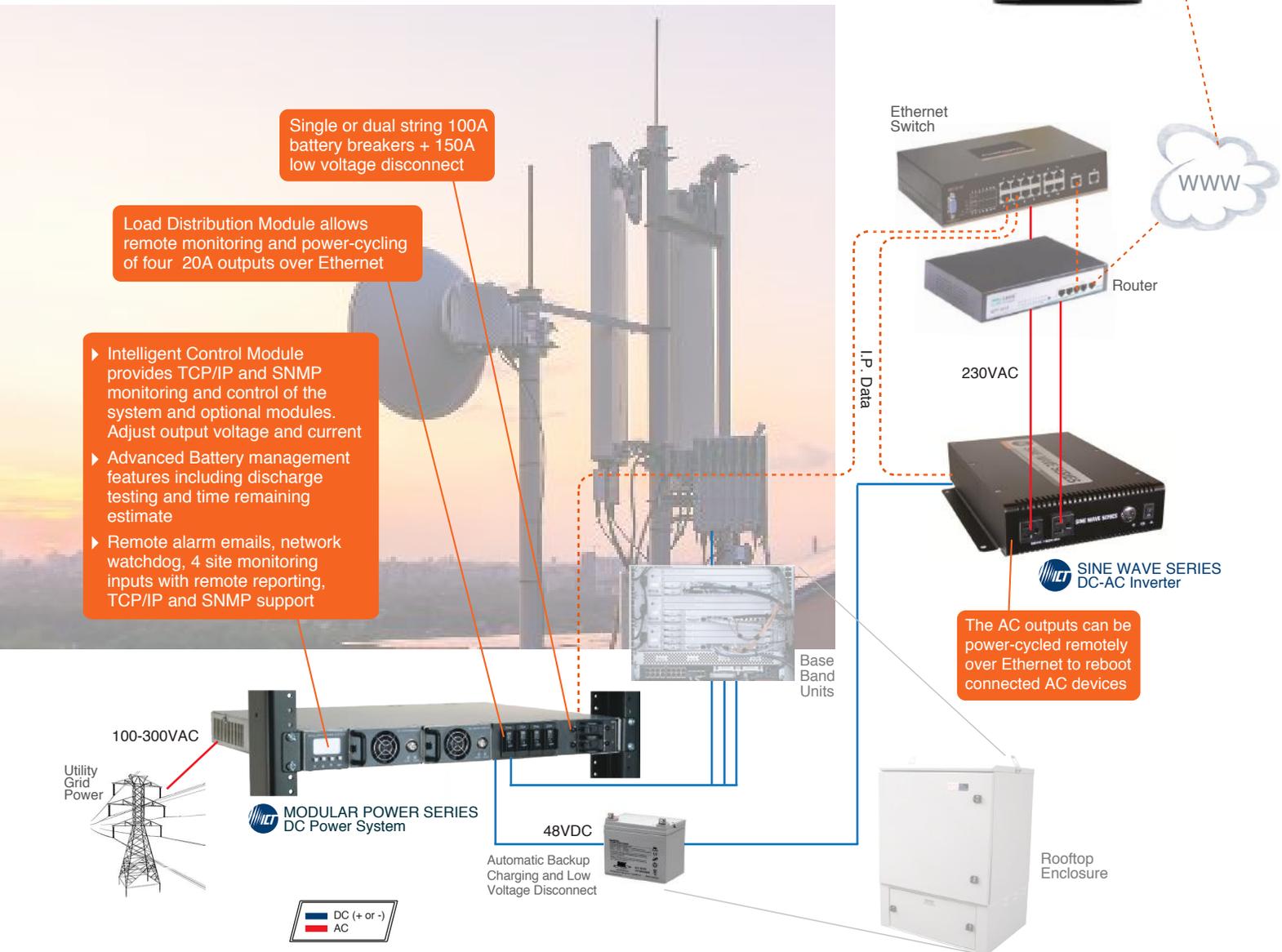
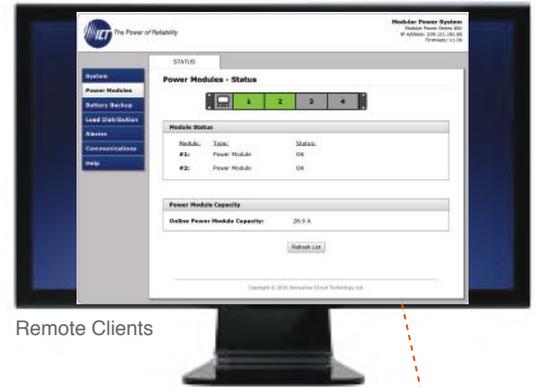


Remote Clients



## AFFORDABLE, MANAGED DC POWER FOR SMALL CELL NETWORKS

ICT built-in user interface allows remote monitoring and power control of ICT DC power supplies and load distribution modules over Ethernet, providing the capability to power cycle locked up DC devices such as LTE radios, backhaul links, and switches. Automatic load-shedding of non-critical loads can conserve battery life, and auto-ping will re-establish the site link if the router locks up. Supports standard web browsers or SNMP.





The Power of Reliability



## DISTRIBUTOR INFORMATION

minerva

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