

# RACK MOUNT IOT RT Series 15-20KVA

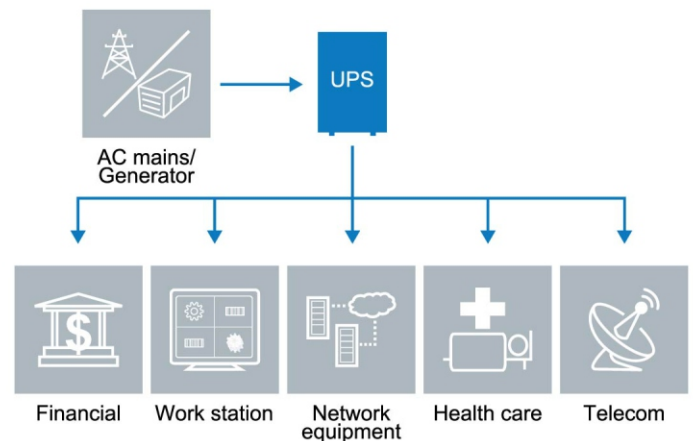


## Key features

- True on-line 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
- IBM function: Intelligent Battery Management - Automatic battery tests and warning before the end of useful battery life
- Adjustable charging current and flexible battery configuration
- Optimized charging method to expand battery life time.
- 15-20K 3-3 model can be configure as 3-1 or 1-1 model to meet utility and load wiring
- 15-20K 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; over/undervoltage; short-circuit; battery low warning to enhance the product reliability

- Programmable outlet group will extend back up time for most critical equipment (15-20K need PDU model)
- Automatic detect additional EBM quantity will simplify EBM installation for IT users
- Compact size requiring small installation space
- Low audible noise at typical load
- Dot matrix LCD support up to 10 languages for easy installation and service. 15-20K 3-3 model support colorful touchable LCD display with gravity sensor
- 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

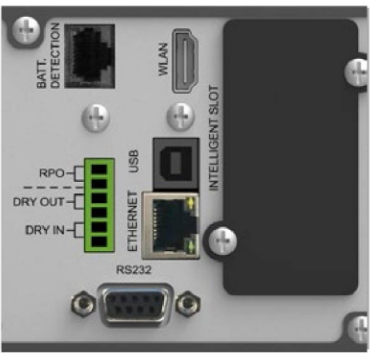
## Typical application



**New full range double conversion UPS**

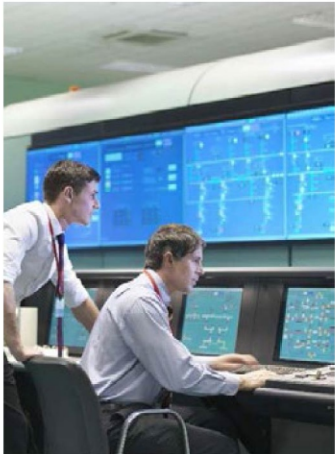
High density, true double conversion on-line power protection for IT (Information technology) and OT (operation technology) applications. Capable of supporting loads from 1 to 20kVA in a rack/tower convertible form with a 2U/3U space.

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.

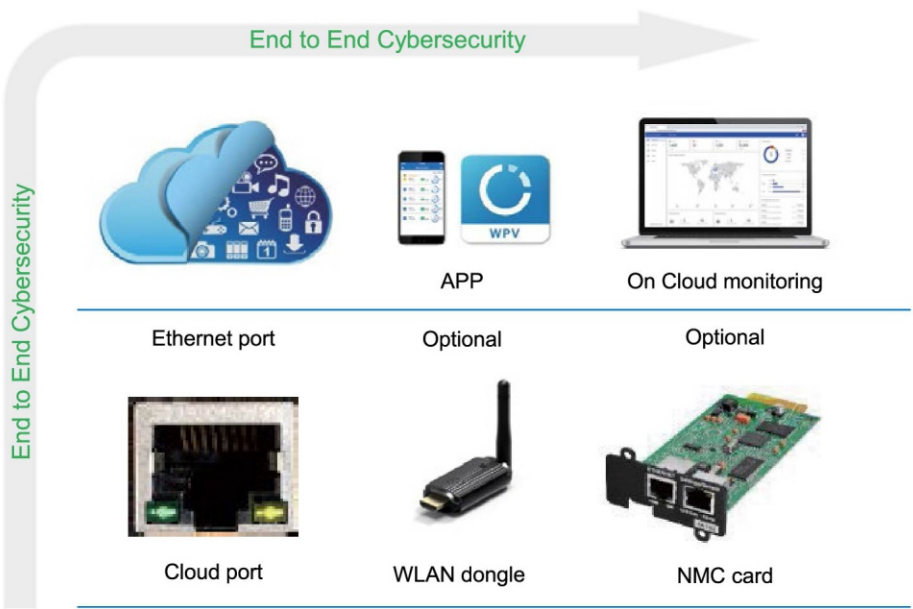


**Network connected and data to cloud**

- 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 specification

| Model name                                          |                                                                   | RT 15K 3-3                                                                                                                | RT 15KS 3-3                                                                                                               | RT 20K 3-3                                                                                                                | RT 20KS 3-3                                                                                                               |
|-----------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Power rating                                        | VA/Watt                                                           | 15000VA/15000W                                                                                                            | 15000VA/15000W                                                                                                            | 20000VA/20000W                                                                                                            | 20000VA/20000W                                                                                                            |
| Efficiency                                          | AC / AC Mode                                                      | ≥ 97%                                                                                                                     | ≥ 97%                                                                                                                     | ≥ 97%                                                                                                                     | ≥ 97%                                                                                                                     |
|                                                     | ECO mode                                                          | 98.8%                                                                                                                     | 98.8%                                                                                                                     | 98.8%                                                                                                                     | 98.8%                                                                                                                     |
| Input performance                                   | Voltage range                                                     | 80-300Vac (L-N) 1 phase;<br>135-485Vac (L-L ) 3 phase                                                                     | 80-300Vac (L-N) 1 phase;<br>135-485Vac (L-L ) 3 phase                                                                     | 80-300Vac (L-N) 1 phase;<br>135-485Vac (L-L ) 3 phase                                                                     | 80-300Vac (L-N) 1 phase;<br>135-485Vac (L-L ) 3 phase                                                                     |
|                                                     | Rated frequency                                                   | 50Hz/60Hz                                                                                                                 | 50Hz/60Hz                                                                                                                 | 50Hz/60Hz                                                                                                                 | 50Hz/60Hz                                                                                                                 |
|                                                     | Frequency range                                                   | 40Hz-70Hz(45Hz-55Hz<br>54Hz-66Hz @ load>60%<br>and 1 phase in 1 phase out)                                                | 40Hz-70Hz(45Hz-55Hz<br>54Hz-66Hz @ load>60%<br>and 1 phase in 1 phase out)                                                | 40Hz-70Hz(45Hz-55Hz<br>54Hz-66Hz @ load>60%<br>and 1 phase in 1 phase out)                                                | 40Hz-70Hz(45Hz-55Hz<br>54Hz-66Hz @ load>60%<br>and 1 phase in 1 phase out)                                                |
|                                                     | Power factor                                                      | >0.995                                                                                                                    | >0.995                                                                                                                    | >0.995                                                                                                                    | >0.995                                                                                                                    |
|                                                     | THDI                                                              | <3%                                                                                                                       | <3%                                                                                                                       | <3%                                                                                                                       | <3%                                                                                                                       |
| Input connection                                    |                                                                   | L1/L2/L3/N/PE or L/N/<br>PE hardware terminnal<br>connection<br>Dual input for line and<br>bypass                         | L1/L2/L3/N/PE or L/N/<br>PE hardware terminnal<br>connection<br>Dual input for line and<br>bypass                         | L1/L2/L3/N/PE or L/N/<br>PE hardware terminnal<br>connection<br>Dual input for line and<br>bypass                         | L1/L2/L3/N/PE or L/N/<br>PE hardware terminnal<br>connection<br>Dual input for line and<br>bypass                         |
| Output performance                                  | Rated voltage                                                     | 220/230/240V or<br>380/400/415V                                                                                           | 220/230/240V or<br>380/400/415V                                                                                           | 220/230/240V or<br>380/400/415V                                                                                           | 220/230/240V or<br>380/400/415V                                                                                           |
|                                                     | Rated frequency                                                   | 50Hz/60Hz ± 1%                                                                                                            | 50Hz/60Hz ± 1%                                                                                                            | 50Hz/60Hz ± 1%                                                                                                            | 50Hz/60Hz ± 1%                                                                                                            |
|                                                     | Power factor                                                      | 1                                                                                                                         | 1                                                                                                                         | 1                                                                                                                         | 1                                                                                                                         |
|                                                     | Voltage accuracy                                                  | ±1%                                                                                                                       | ±1%                                                                                                                       | ±1%                                                                                                                       | ±1%                                                                                                                       |
|                                                     | THDv                                                              | <1% linear load<br><5% non linear load                                                                                    | <1% linear load<br><5% non linear load                                                                                    | <1% linear load<br><5% non linear load                                                                                    | <1% linear load<br><5% non linear load                                                                                    |
|                                                     | Transfer time                                                     | 0ms(2ms @ ECO+ ->In-<br>verter)                                                                                           | 0ms(2ms @ ECO+ ->In-<br>verter)                                                                                           | 0ms(2ms @ ECO+ ->In-<br>verter)                                                                                           | 0ms(2ms @ ECO+ ->In-<br>verter)                                                                                           |
|                                                     | Crest Ratio                                                       | max 3:1                                                                                                                   | max 3:1                                                                                                                   | max 3:1                                                                                                                   | max 3:1                                                                                                                   |
|                                                     | Overload(line mode)                                               | 100%<load≤105%<br>continuous.<br>105%< load ≤125% for 10<br>minutes<br>125<load≤150% for 1<br>minutes<br>>150% for 500ms. | 100%<load≤105%<br>continuous.<br>105%< load ≤125% for 10<br>minutes<br>125<load≤150% for 1<br>minutes<br>>150% for 500ms. | 100%<load≤105%<br>continuous.<br>105%< load ≤125% for 10<br>minutes<br>125<load≤150% for 1<br>minutes<br>>150% for 500ms. | 100%<load≤105%<br>continuous.<br>105%< load ≤125% for 10<br>minutes<br>125<load≤150% for 1<br>minutes<br>>150% for 500ms. |
| Output connection                                   | Wiring/socket                                                     | L1/L2/L3/N/PE or L/N/<br>PE hardware terminnal<br>connection                                                              | L1/L2/L3/N/PE or L/N/<br>PE hardware terminnal<br>connection                                                              | L1/L2/L3/N/PE or L/N/<br>PE hardware terminnal<br>connection                                                              | L1/L2/L3/N/PE or L/N/<br>PE hardware terminnal<br>connection                                                              |
|                                                     | Load segment control                                              | Optional (need MBP model)                                                                                                 | Optional (need MBP model)                                                                                                 | Optional (need MBP model)                                                                                                 | Optional (need MBP model)                                                                                                 |
| Battery                                             | Voltage                                                           | 384VDC(384~480VDC<br>adjustable)                                                                                          | 384VDC(384~480VDC<br>adjustable)                                                                                          | 384VDC(384~480VDC<br>adjustable)                                                                                          | 384VDC(384~480VDC<br>adjustable)                                                                                          |
|                                                     | Capacity(AH)                                                      | 2*16*12V/7Ah, 32~40pcs<br>adjustable                                                                                      | NA                                                                                                                        | 2*16*12V/9Ah, 32~40pcs<br>adjustable                                                                                      | NA                                                                                                                        |
|                                                     | Backup time Typical value<br>by default battery capacity,<br>PF=1 | 4 min. at 100% load<br>9 min. at 50% load                                                                                 | NA                                                                                                                        | 4 min. at 100% load<br>9 min. at 50% load                                                                                 | NA                                                                                                                        |
|                                                     | Type                                                              | Valve Regulated Sealed Lead-Acid (VRLA) ; Maintenance-free                                                                |                                                                                                                           |                                                                                                                           |                                                                                                                           |
| Maximum connect external<br>battery module quantity |                                                                   | 6                                                                                                                         | 6                                                                                                                         | 6                                                                                                                         | 6                                                                                                                         |
| Charger                                             | Charging current                                                  | 1.4A(0-13A adjustalbe)                                                                                                    | 1.4A(0-13A adjustalbe)                                                                                                    | 2A(0-13A adjustalbe)                                                                                                      | 2A(0-13A adjustalbe)                                                                                                      |
|                                                     | Recharging time                                                   | 3h to 90%                                                                                                                 | NA                                                                                                                        | 3h to 90%                                                                                                                 | NA                                                                                                                        |

# Product specification

| Model name                   |                           | RT 15K 3-3                                                                         | RT 15KS 3-3                                                  | RT 20K 3-3                                                                         | RT 20KS 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 10 sets)                                                           | Optional (up to 10 sets)                                     | Optional (up to 10 sets)                                                           | Optional (up to 10 sets)                                     |
| HMI(human-machine interface) | Display                   | colour touch LCD and LED (optional Dot matrix LCD)                                 | colour touch LCD and LED (optional Dot matrix LCD)           | colour touch LCD and LED (optional Dot matrix LCD)                                 | colour touch LCD and LED (optional Dot matrix LCD)           |
|                              | Alarm                     | Warning alarm at AC abnormal; battery mode; battery low; over load; UPS fault...   |                                                              |                                                                                    |                                                              |
|                              | 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/ RS485              | 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 SNMP card                                                                 | Optional SNMP card                                           | Optional SNMP card                                                                 | Optional SNMP 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        | 9U height including 438*589*129(power module, 3U)<br>(438*593*129)*2 (Battery, 6U) | 438*589*129(power module, 3U)                                | 9U height including 438*589*129(power module, 3U)<br>(438*593*129)*2 (Battery, 6U) | 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        | 0-4000m ( the load derating 1 % every up 100m @1000-4000m )                        | 0-4000m ( the load derating 1 % every up 100m @1000-4000m )  | 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                                                          |



Up Select Electronics Co., Ltd.

4F, No.56 Jian Er Rd., Chung Ho City Taipei Taiwan R.O.C. Tel: 886 2 22286170 Fax: 886 2 82215491