

■ MODEL NUMBER

| Part Number  | PFC   | P/out  | P/peak | 80plus | Vin        |
|--------------|-------|--------|--------|--------|------------|
| MN-P650-2018 | A/PFC | 650.0W | 845.0W | 86+    | 100~240Vac |

■ FEATURES

- Dual Forward Converter design architecture
- Active PFC, power factor value  $\geq 0.99$
- conform to intel 2013 new standard
- Support Intel Core i5 & i7 & Haswell series CPU
- Support AMD Athlon 64\*8 & FX series CPU
- Multiple protection, OVP/UVP/SCP/OCP/OPP
- 90~264Vac wider AC input range to cope with voltage instability
- Support nVIDIA SLi & ATi Crossfire multi-GPU VGA cards
- Meet Eup 2013
- $\geq 82\%$  high efficiency 50%loads
- Dual Rails +12V Output
- Super Low Ripple & Noise
- Intelligent Fan Control
- High Quality capacitors



CASE:150\*140\*86

■ GENERAL SPEC.

Hold-up Time: 17mS at 115Vac/60Hz or 230Vac/50Hz  
 Dimensions: 150\*140\*86(mm) 12CM FAN(CASE color can choose)  
 High reliability MTBF :  $\geq 100,000$  at 25 degree celsius  
 Output Rise Time: 0.1~20mS

■ ENVIRONMENTAL SPEC.

Operating Temperature: 0~45°C  
 Storage Temperature : -20~70°C

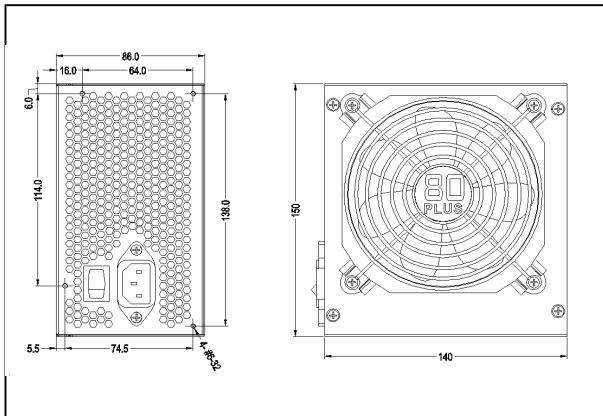
■ OUTPUT CURRENT CAPACITY

| Voltage        | +5V       | +3.3V     | +12V1     | +12V2     | -12V       | +5Vs      |
|----------------|-----------|-----------|-----------|-----------|------------|-----------|
| Regulation     | $\pm 5\%$ | $\pm 5\%$ | $\pm 5\%$ | $\pm 5\%$ | $\pm 10\%$ | $\pm 5\%$ |
| Min Load       | 0.20A     | 0.20A     | 0.50A     | 0.05A     | 0.00A      | 0.10A     |
| Max Load       | 25.00A    | 25.00A    | 40.00A    | 40.00A    | 0.50A      | 3.00A     |
| Peak Load      | 32.50A    | 32.50A    | 44.00A    | 44.00A    | ---        | ---       |
| Ripple & Noise | 50mv      | 50mv      | 120mv     | 120mv     | 150mv      | 50mv      |
| Combined       | 140.0W    |           | 600.0W    |           | 6.0W       | 15.0W     |

■ SAFETY: CB CE CCC BSMI GOST



■ OUTLINE DRAWING.



■ INPUT SPEC.

Input Voltage Range: 90~264Vac  
 Input Frequency Range: 47~63Hz  
 Input Current: 10A MAX at 90Vac  
 Leakage Current: 3.5mA at 264V  
 PFC (Harmonic): Meet IEC6100-3-2 Class D  
 EMI/RFI: CISPR 22 Class B

■ OUTPUT SPEC.

Rated Output Power: 650.0W  
 Peak Output Power: 845.0W  
 Efficiency: 82%+@20%, 86%+@50%, 82%+@100% loads  
 OVP: +12V:15.5V, +5V:6.5V, +3.3V:4.3V  
 UVP: +12V:9.5V, +5V:3.7V, +3.3V:2.4V  
 OCP: +12V1/48A, +12V2/48A, +3.3V/38A, +5V/38A  
 OPP: 877.5W ~ ~ ~ 975.0W  
 SCP: Latch Off All Main Outputs Reset by Cycling On/Off Control or Ac Power

■ CABLING CONNECTOR

|  |               |      |  |           |      |
|--|---------------|------|--|-----------|------|
|  | ATX20+4PIN    | 1PCS |  | HDD 4PIN  | 4PCS |
|  | ATX12V 4+4PIN | 1PCS |  | SATA 5PIN | 7PCS |
|  | PCI-E 6+2PIN  | 2PCS |  | FDD 4PIN  | 1PCS |