



Ampt Integrated Converters

V40-i / V50-i / V100-i

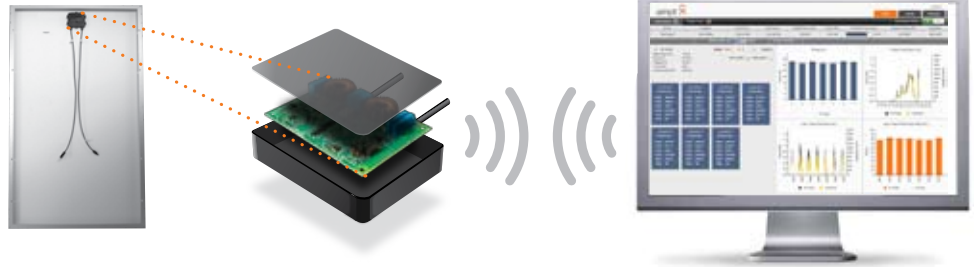
Active electronics integrated with PV junction box featuring multi-mode MPPT and wireless communication

-
- Lower BOS costs
 - Improved safety
 - More energy
 - Future-proof modules
 - Higher uptime
 - Informed decisions
-

Ampt DC/DC power converters put maximum power point tracking (MPPT) and optional wireless communication capabilities on each PV module. Our electronics enable junction box manufacturers to offer active J-boxes to module makers. The result? A lower cost of energy and higher return on investment.

Features:

- High efficiency power conversion
- Fast and accurate MPPT per PV module
- Instrument-grade precision measurement
- Optional two-way wireless communication
- Independent power optimization without reliance on communication
- Remote enable/disable output power
- Programmable output voltage and current limits
- Inverter and PV module compatible
- Utility-strength operation and stability
- Compact design
- High reliability
- 25 year warranty



Benefits:

- Prevent and detect faults to decrease downtime and mitigate fire hazard
- Correct mismatch between PV modules and strings
- Deliver more power in shaded conditions
- Recover degradation losses
- Prevent failed PV modules from dropping a full string
- Build longer strings to lower wiring costs and wire losses
- Design systems with variable string lengths or in partial shade to optimize system footprint
- Simplify module binning and inventory management
- Remove risk of module obsolescence

Results:

- Reduce the cost of PV system components and installation
- Increase the lifetime performance and uptime of PV systems
- Gain deeper knowledge, predictability, and control to operate system more efficiently
- Reduce PV project risk
- Realize a lower cost of energy and increase return on investment

Converter Model	V40-i	V50-i	V100-i
Electrical*			
Input			
Maximum module power rated at STC	300 W	320 W	400 W
Maximum module DC voltage	46 V	58 V	102 V
Module MPP DC voltage range	10 - 38 V	17 - 48 V	25 - 80 V
Maximum module DC current rated at STC	8.5 A	9.2 A	6.1 A **
Multi-mode MPPT	Yes	Yes	Yes
Output			
Maximum DC output voltage	46 V	58 V	102 V
Maximum DC output current	9.2 A	9.2 A	6.7 A**
Maximum operating efficiency	99.0%	99.2%	99.2%
Programmable voltage and current limits	Yes	Yes	Yes
Mechanical			
Ambient temperature operating range	-40°F to +158°F (-40°C to +70°C)		
Dimensions	4.2 x 3 x 0.66 in. (10.7 x 7.6 x 1.7 cm)		
Weight	3 oz. (85 g)		
Cooling	Convection		
General			
Communication	Two-way wireless (optional)		
Compliance	CSA to UL 1741, FCC Part 15 Class B IEC 62109, 61000-6-1, 61000-6-3		
Demonstrated MTBF at 40°C continuous	90 million hours		
Warranty	25 years		

* Standard test condition (STC) irradiation level of 1000 W/m² at 25°C.

** 6.1 A input and 6.7 A output at 60°C. 5.45 A input and 5.55 A output at 70°C.