

## Portable, Rugged High-efficiency Smart Charging and Power Charge Batteries and Operate Low-Power Systems / Accessories



- **Efficient**  $\geq 98\%$  Solar charging and  $\geq 96\%$  auxiliary power efficiency
- **Effective** High-speed maximum power point tracking delivers maximum solar charging power; Advanced charge controller minimizes charge time by charging two battery strings simultaneously
- **Compact and Lightweight** 2.83" L x 2.0" W x 0.9" H | 0.2 lbs. | Battery SOC windows remain visible
- **Durable** MIL-STD-810G compliant for use in harsh conditions and use cases
- **Simple** No buttons - just connect and charge! LCD indicates battery State of Charge (SOC), State of Health (SOH), Input Power (W), Time Until Charged/Discharged, and Faults
- **Robust** Reverse Polarity, Over Temperature, Active Current Limiting; Wake-up mode revives depleted batteries and enables charging if battery SMBus communication is lost
- **Flexible** Parallel multiple chargers from a one power source; Polarized SAE 2-pin input accepts power from DC sources; Use with or without the battery attached; add X-90 Smart Adapters to charge many other battery types
- **Weatherproof** Protected against dust and water immersion (up to 1 m)

# Nishati Outpost™ X-90 Micro Aux

## Nishati Outpost™ X-90 Micro Aux Specifications

General Description				
Part Number	92012			
Power Input Connection	(1) SAE 2-pin 5" pigtail			
Power Output Connection	(1) M8, 5" pigtail			
Limited Warranty	2 years			
Power Characteristics	Min.	Typ.	Max.	Conditions
DC Input Voltage ( $V_{in}$ )	10V	20V	50V	
Battery Voltage ( $V_{batt}$ )	10V	-	20V	
Auxiliary Power Voltage ( $V_{aux}$ ) <sup>1</sup>	11V	-	16.8V	Battery required; Li-ion chemistries only
Total Batt. Charging Current ( $I_{batt}$ )	0A	-	6A	
Auxiliary Power Current ( $I_{aux}$ ) <sup>1</sup>	-	-	3A	Continuous
			4A	Peak [battery required]
Input Power ( $P_i$ )	0	-	120W	
Battery Charging Power ( $P_{batt}$ )	0	80W	100W	
Auxiliary Power ( $P_{aux}$ ) <sup>1</sup>	-	-	45W	Continuous, $V_{aux} = 16.8V$
			60W	Peak w/battery only, $V_{aux} = 16.8V$
Efficiency: DC In to Battery	-	97.5	-	$V_{in}=20V, V_{batt}=15V, I_o=4A$
	-	96.2	-	$V_{in}=40V, V_{batt}=15V, I_o=4A$
	-	96.0	-	$V_{in}=40V, V_{batt}=15V, I_o=6A^2$
Efficiency: Battery to Aux Power Out	-	98.75	-	$V_{batt}=16V, V_{aux}=15.5V, I_{aux}=2A$
	-	97.9	-	$V_{batt}=15V, V_{aux}=14.1V, I_{aux}=2A$
Ambient Operating Temp. ( $T_A$ )	-30°C	-	60°C	Charging is software limited to -20°C <sup>3</sup>
Storage Temp. ( $T_{STG}$ )	-50°C	-	85°C	
Internal Temp. Limiting ( $T_{LIM}$ )	-	85°C	-	Auxiliary port turns off and battery charge power reduces to maintain temperature limit <sup>4</sup>
Charger Dimensions & Weight				
L x W x D	2.83" x 2.0" x 0.9"			
Weight	0.2 lbs.			
Environmental	IP67 (Dust proof; waterproof to 1m immersion)			

### Notes:

- 1) Li-ion chemistries only
- 2) Charging a BB-2590/U Li-Ion battery with the rated maximum charging current
- 3) Charging BB-2590 below 0°C may negatively impact battery capacity and lifetime
- 4) External case temperature can become very hot in certain high load conditions, use caution when handling

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