



Premium Series

DATASHEET

Premium High Density 6S Series



PRODUCT OVERVIEW

The Premium High Density 6S Series is engineered for advanced UAVs and professional drones requiring extended flight times and lightweight packs. This series leverages ultra-high-energy cells (Ampricus SA112 or Molicel M65A) to deliver exceptional gravimetric energy density, optimized for long-endurance operations.

APPLICATIONS



Commercial Drones

Agriculture, Cargo, Missions, Tactical



Robotics

Warehouse, Cargo, Missions, Tactical

CONNECTORS

For models with Smart BMS:

- AS150U Connector (Power + Communication)
- Han® MPC30 Connector (DroneCAN support)
- Han® MPC60 Connector (DroneCAN support)

For models without Smart BMS, providing cell balancing capability:

- XT90 Connector (Power)
- Molex Micro-Fit 16-pin Connector (Balancing)

PROTECTION FEATURES

Overcharge Protection
Over-discharge Protection
Overcurrent Protection
Short Circuit Protection
Temperature Monitoring and Protection

COMMUNICATION INTERFACES

CANBUS
RS485
UART

ADDITIONAL FEATURES

State of Charge (SOC) Estimation
Cell Balancing
Remote Monitoring Capability

** The above features apply only for battery models with smart BMS.

M O D E L

TN6S1P-SA112-01

TN6S1P-M65A-01

TN6S3P-SA112-01

TN6S3P-M65A-01

ELECTRICAL SPECIFICATIONS

| | | | | |
|--------------------|-----------|-----------|-----------|-----------|
| Cell Configuration | 6S 1P | 6S 1P | 6S 3P | 6S 3P |
| Nominal Voltage | 20.8V | 21.6 V | 20.8V | 21.6V |
| Nominal Capacity | 6.5Ah | 6.5Ah | 19.5Ah | 19.5Ah |
| Energy | 135Wh | 140Wh | 405Wh | 420 Wh |
| Charge Voltage | 25.2V | 25.2V | 25.2V | 25.2V |
| Cut-off Voltage | 15V | 15V | 15V | 15V |
| Energy Density | 308 Wh/kg | 322 Wh/kg | 308 Wh/kg | 322 Wh/kg |

CURRENT PARAMETERS

| | | | | |
|--|--------------|-----------|----------------|------------|
| Max Continuous Discharge Current | 13A (2C) | 26 A (4C) | 39A (2C) | 78 A (4C) |
| Max Pulse Discharge Current ($\leq 30s$) | 26 A (4C) | 39A (6C) | 78A (4C) | 117A (6C) |
| Max Charge Current | 4.55A (0.7C) | 6.5A (1C) | 13.65 A (0.7C) | 19.5A (1C) |

PHYSICAL SPECIFICATIONS

| | | | | |
|------------------------|---|---|---|---|
| Dimensions (L x W x H) | 25 x 80 x 150 mm 25 x 72 x 150 mm (no BMS) | 25 x 80 x 150 mm 25 x 72 x 150 mm (no BMS) | 75 x 80 x 150 mm 75 x 72 x 150 mm (no BMS) | 75 x 80 x 150 mm 75 x 72 x 150 mm (no BMS) |
| Weight | 0.5 kg | 0.5 kg | 1.4 kg | 1.4 kg |
| Enclosure Material | PVC Shrink Wrap | PVC Shrink Wrap | PVC Shrink Wrap | PVC Shrink Wrap |

ENVIRONMENTAL SPECIFICATIONS

PERFORMANCE SPECIFICATIONS

| | | | |
|-----------------------|--|------------------|--|
| Operating Temperature | Charge: 0°C to 45°C | Cycle Life | ~600 cycles @0.5C/1C ~500 cycles @1C/1C |
| | Discharge: -20°C to 60°C | Designed to Meet | CE, UN 38.3, RoHS, IEC 62133 |
| Storage Temperature | Short-term (< 1 month): -20°C to 45°C | Warranty | 12 months |
| | Long-term (> 1 month): 0°C to 25°C | | |
| Humidity | $\leq 85\%$ RH | | |

**GOT QUESTIONS?
GET IN TOUCH WITH US**

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