PTX DEFENSE

SkyDock Pro Dual USB C Chargers provide up to 100W per port. This product is designed to meet today's challenging PED charging demand while maintaining in-flight safety, efficiency, lower installation costs, reduce e-waste and empower consumers to make more sustainable choices. SkyDock Pro is preventing up to 22 million pounds of e-waste each year.

The SkyDock Pro comes pre-configured as a USB-C 100-Watt Charger with the following profiles:

Features:

- SkyDock Pro Universal Mounting options.
- Fixed Wing, Flight Deck & Rotorcraft.
- USB-C QC 3.0/4.0 Compatible.
- Integrated 24V DC Protection on Protected HVD+, HVD-, HVCC1, HVCC2 Outputs
- Over Voltage Input Protection
- Under Voltage Input Protection
- Over Current Voltage Output Protection
- Resettable Fuse Input Protection
- 5V Default Output for Non-Quick Charge Compatible Devices
- Over Temperature Shutdown
- Static Protection
- Input Spike Protection
- Dual Output Connectors USB-C and USB-A
- Input Voltage Range of 5VDC-34VDC   5 AMP In-Rush
- Input Current Range of 50mA Standby to 1.8A max
- USB-C Output Voltage Ranges 5V/3A, 9V/3A, 12V/25
- Output Power Max 100 Watts USB-C
- Max Power 100W
- Peak Efficiency: 90% to-93%
- Size: 1.95 W X 1.29 H X 3.71 L
- Weight: 6.8 oz (Estimated Weight With Universal Bracket)
- Environmental:
- Temperature Range: Operating -40C to +105C
- Decompression: 50,000ft
- Altitude:15,000ft
- High Humidity Operational Environment: 95%
- Stress Tested to 20g acceleration & 11mSec 6g acceleration curve
- DO160G, QTR available upon request.
- Connector for (1) USB-C, (1) USB-A and (1) Input Power Locking Connector

OrderingInformation:

SKD-505-01 REV. G

CONTACTINFO:
PTX DEFENSE LLC
Website: ptxdefense.com
Phone: +01(909)914 - 0568
E-mail: info@ptxdefense.com

Specifications, Performance, & Benefits:

- Integrated Legacy USB 2.0 Charging Support including BC1.2, Apple CarPlay, MFi R33, and OTG Integrated ESD Protection.
- Reduced inrush current with Soft-Start and output is not engaged until unit starts-up. Input filtering also reduces inrush current. Safe dissipation of inrush energy
- Self-protected from transient voltages exceeding these limits in circuit under normal operation.
- Efficiency 93%
- Input Voltage (allows operation on in on / off conditions. 14 VDC-34 VDC 5 AMP most efficient input power is 28VDC.
- Common USB-PD VBUS voltage outputs up to 5.0A when in 20V mode & 3A in other output voltage configurations
- EMI interference avoidance and Input Power Conditioning
- Forced-PWM at Light or No-Load conditions for reduced EMI through USB cable.
- Board Layout Design and Enclosure Design reduces EMI.
- Only one port per controller no syncing.
- Thermal Shutdown
- Integrated USB-PD VBUS Features Over-Current Protection Limits
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- Under-Voltage Protection Limits
- VBUS Over-Voltage Protection Limits
- Digital Voltage Scaling (DVS) for smooth, predictable voltage transitions
- Integrated USB VBUS Discharge
- Integrated Watchdog timer for guaranteed safe operation.
- Integrated Output Voltage Adjustment for Cable Voltage Drop on Captive-Cable Applications
- Devices provide a single-port Type-C compliant USB Power Delivery PHY for an external TCPM.
- Designed to comply with Type-C, USB-PD and TCPC specifications. USB Type-C Revision 1.3
- USB Power Delivery Revision 2.0, and Revision 3.0 Version 1.2
- USB Inter-Block Specification Revision 2.0 Version 1.1
- Implements Type-C Configuration Channel (CC) interface and USB-PD Physical layer functions to a Type-C
- Port Manager (TCPM) that handles PD Policy management.
- Type-C Cable plug orientation detection
- Type-C Detection supporting default, 1.5A or 3.0A current capabilities.
- SAR ADC for VBUS Voltage Monitoring
- Integrated Over-Current Protection common voltage rail in the application.
- Integrated Protection for Cable Shield-Short-to-Battery faults preventing cable, passenger, and device damage.
- Fast detection of cable shield over-current
- Fast turn-off of external protection switch
- Supports USB BC1.2 Charging Downstream Port (CDP) Dedicated Charging Port (DCP), and High-Speed pass-through Modes.
- 100W USB-PD Controller and Protector
- USB D+/D- Protection and Host Charger Emulator
- Integrated HVDP/HVDM Apple® and Samsung® Charge Detection Termination Resistors
- Compatible with USB On-The-Go Specification
- Compatible with Oppo® and One-plus devices.
- Apple® Mafi R33 Over current Compatible
- Integrated Robust High-Voltage Protection for the USB-PD or TCPM controller from events at the receptacle or captive cable:
- Apple® Mafi R33 Over current Compatible
- Automatic Fault Detection and Retry
- Short-to-Battery and Short-to-Bus Protection
- ESD Protection on USB HVD+, HVD-, HVCC1, HVCC2 and SHLD_SNS pins