

Quick Start

POWER SUPPLY

PS12V16A

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WARRANTY

Imperx, Inc. warrants that this product will be free from defects in materials and workmanship for (2) years from date of purchase.

Introduction

Imperx advanced digital cameras require an external 12 V DC power supply to provide power for camera operations, communications, and control. While users are free to provide their own source of camera power, Imperx recommends using the Imperx power supply for best performance.

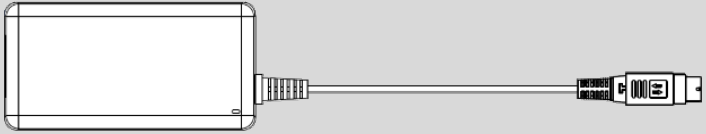
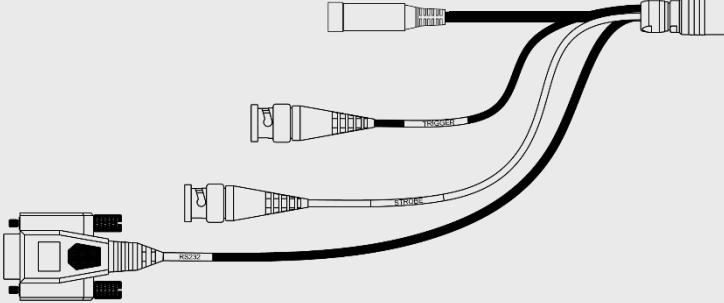
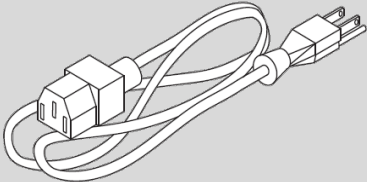
A universal power supply provides +12 V DC $\pm 5\%$ and up to 3 A DC current. The operating input voltage ranges from 100 to 240 V AC.

The PS12V16A power supply is compatible with the following Imperx cameras

Item	Description	Compatible with
PS12V16A	12 V DC, 3 A, With one strobe, one trigger, and RS232, 12-pin Hirose	SDI-C1911, SDI-C1920, SDI-C2010

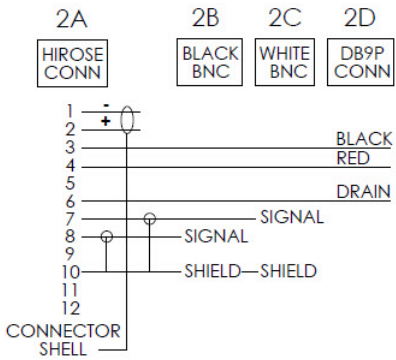
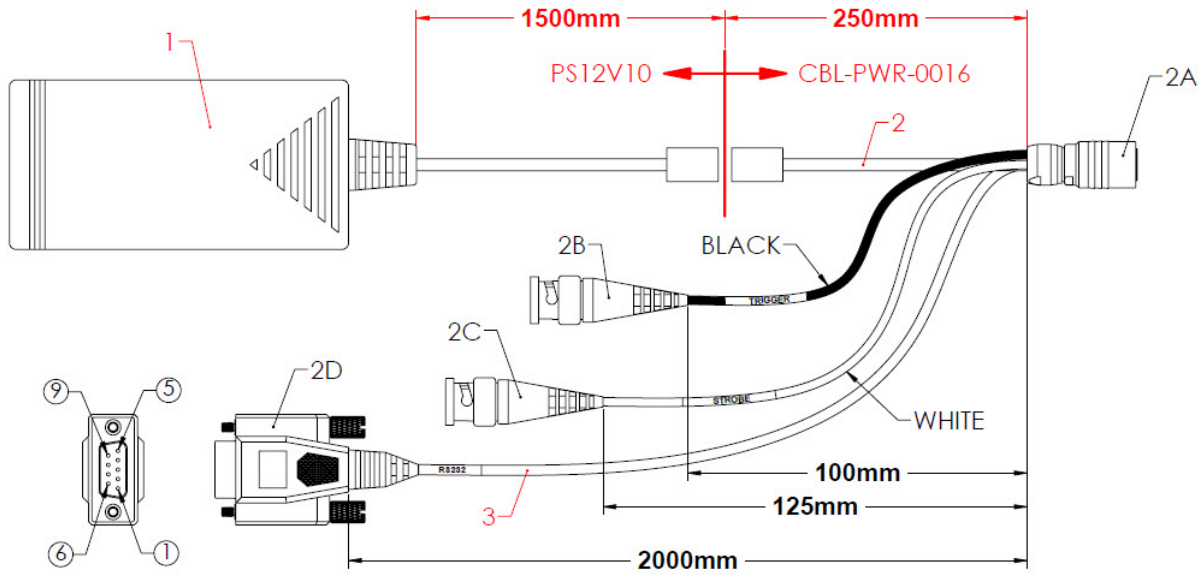
PS12V16A Universal Power Supply

The PS12V16A power supply is comprised of three components:

Item	Part number	Qty.	
Universal Power Supply	PS12V10	1	
I/O and Power cable	CBL-PWR-0016	1	
Power Cord	-	1	

The CBL-PWR-0016 terminates in a female Hirose type miniature locking plug #HR10A-10P-12S(73). It has a DB9 connector for serial RS-232 interface and two BNC pig-tail cables providing genlock trigger input (black) and strobe output (white)

PS12V16A Technical Drawing



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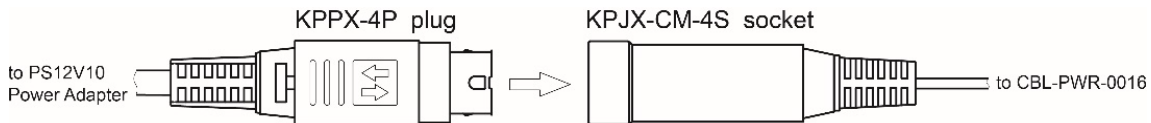
ITEM	QTY	DESCRIPTION
1	1	UNIVERSAL POWER SUPPLY PS12V10
2	1	POWER CABLE CBL-PWR-0016
3	1	CABLE, 2 CONDUCTOR SHIELDED #24AWG, ALPHA 58401SL02

ITEM	QTY	DESCRIPTION
2A	1	CONNECTOR, HIROSE HR10A-10P-12S
2B	1	BNC(M) CABLE SUBASSEMBLY (BLACK)
2C	1	BNC(M) CABLE SUBASSEMBLY (WHITE)
2D	1	DB9 CONNECTOR FEMALE

Connecting the Power Supply

The power supply uses KYCON connectors with a snap-and-lock feature that helps prevent accidental disconnects. Follow the steps below to connect the power supply to a camera.

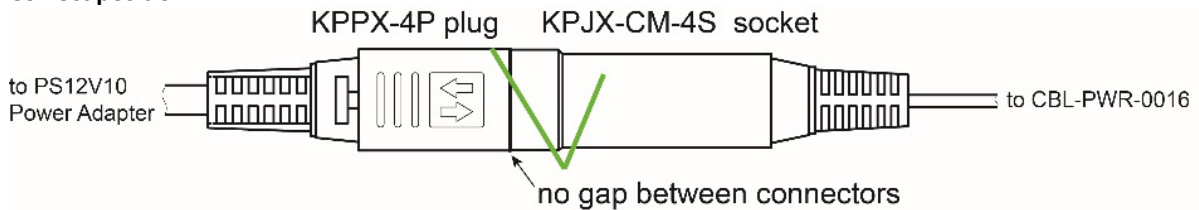
1. Connect a power cord to the PS12V10 power adapter.
2. Connect the KPPX-4P plug of the PS12V10 Power Adapter to the KPJX-CM-4S socket of the CBL-PWR-0016 cable.



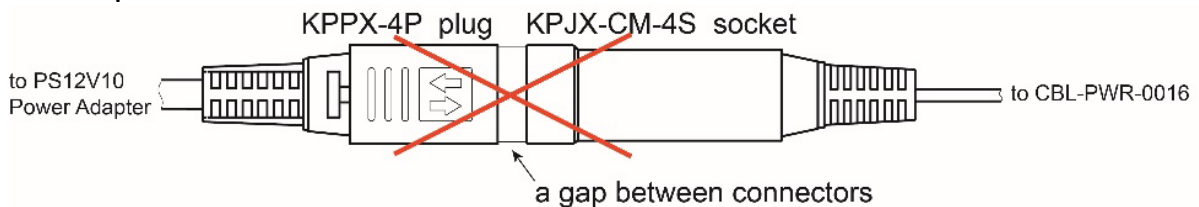
CAUTION

Push connectors together until the locking mechanism clicks, and there is no gap between the connectors. If connection is not secure, overheating may occur leading to the cable damage or fire.

Correct position



Incorrect position

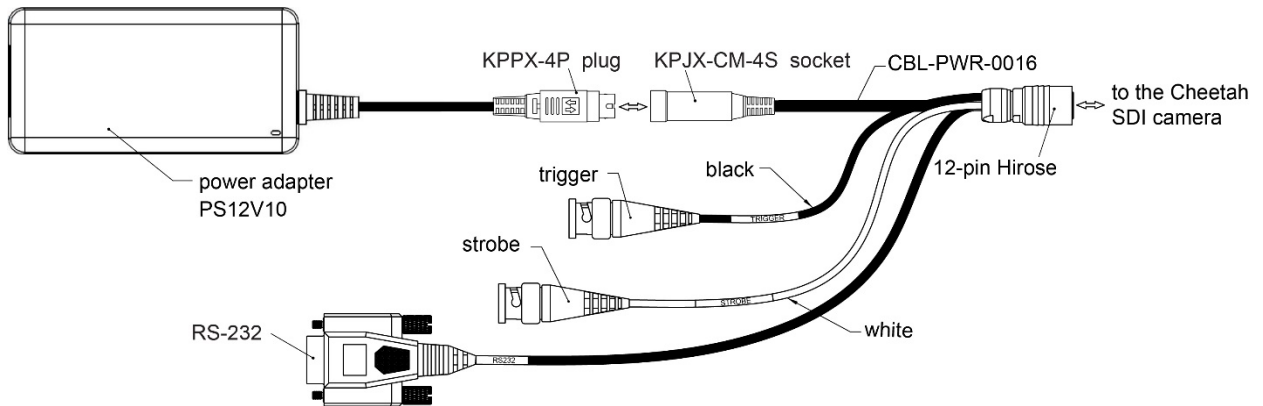


3. Connect the other end of the CBL-PWR-0016 cable to the IMPERX camera.
4. If applicable, connect Trigger and/or Strobe cables to external devices.

CAUTION

When disconnecting the I/O cable from the PS12V10 power adapter, pull on the plug. Do not pull on the cable. Doing so may result in damage to the cable.

PS12V16A Power Supply Connection Diagram



Power Supply Specifications

Specifications	Description
Input	
Voltage	100–240 V AC
Frequency	50–60 Hz
Current	1 A max
Inrush Current	70 A max / 230 V AC (cold start @ 25 °C, full load)
Efficiency	Eff (av) ≥ 87.4 % (at 115 V AC & 230 V AC) Eff ≥ 78.303 % (at 230V/50Hz input @10% load for CoC Tier2)
Output	
Voltage	11.4 V to 12.6 V DC, 12 V DC nominal
Current	3 A max
Load Regulation	± 5%
Ripple & Noise	1% Vpp max for Output Voltage @ full load
Total Power	36 W Max
Protection	
Over-Voltage Protective (OVP)	V out * 180% (max)
Short-Circuit Protective (SCP)	Automatic recovery after short circuit fault being removed
Over Current Protection (OCP)	I out * 200% (max)
Safety, EMI and EMC Requirement	
Safety	UL, CUL, GS, PSE, BSMI, CB, RCM, CCC, KC, LPS
Dielectric Strength	10 mA max. cut off current (1) Primary to Secondary: 3000 V AC for 1 minute (2) Primary to Frame Ground: 1500 V AC for 1 minute
Insulation Resistance	(1) Primary to Secondary: 10 MOhm for 500 V DC (2) Primary to Frame Ground: 10 MOhm for 500 V DC
EMI Requirement	CE, FCC Class B, Conduction and Radiation meet
Leakage Current	Less than 3.5 mA
Grounding Test	Resistance 0.1 Ohm max @ 32 A
Environmental	Operating: 0 °C to +40 °C Storage: -20 °C to +80 °C
Relative humidity	Operating: 20% to 80% non-condensing Storage: 10% to 90% non-condensing
Regulatory	DoE VI, ErP (Lot 7), GEMS, NRCAN, CEC, RoHS
Cable Length	
Supplied AC power input cable (IEC)	1.8 m (6')
Power supply output (+12 V)	1.75 m (5') ± 15 cm (6"), connector HIROSE #HR10A-10P-12S
Strobe	12.5 cm (5") ± 1 cm (0.4") connector BNC male
Trigger	10 cm (4") ± 1 cm (0.4") connector BNC male
RS232 Cable	2 m (6.6'), connector DB9