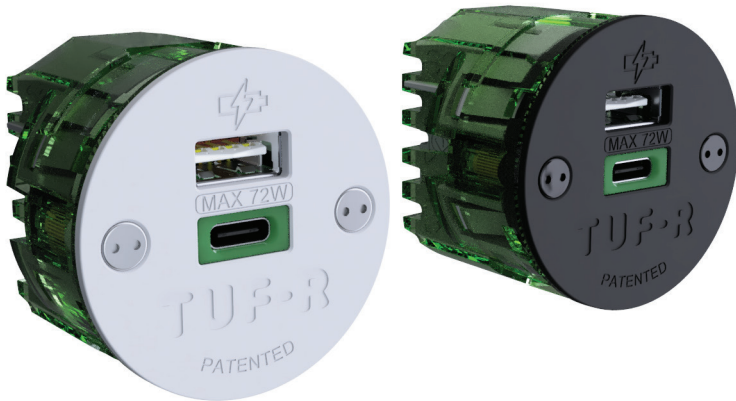


# TUF-R®/HP Cartridge

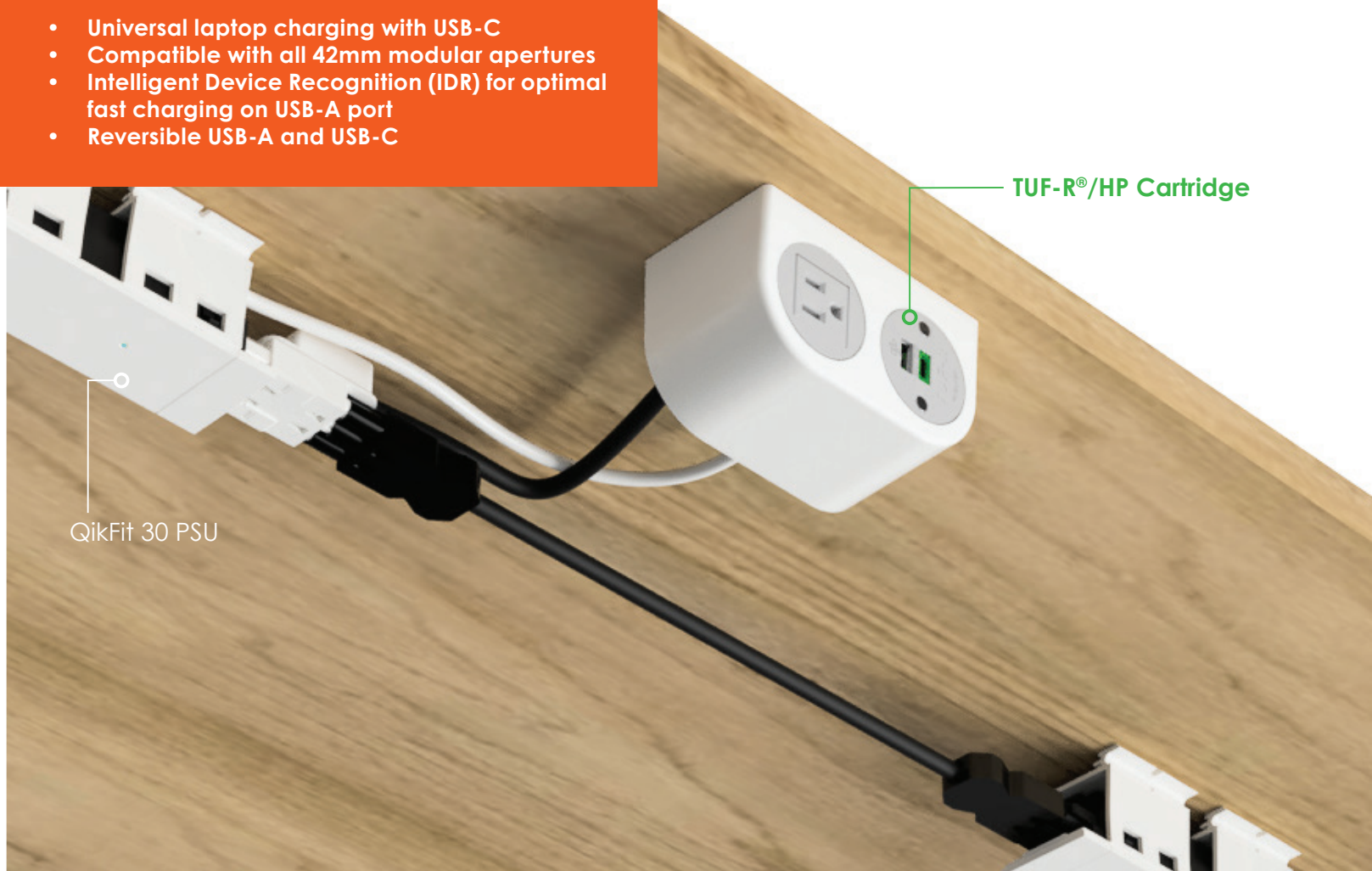
**TUF-R®/HP** is OE's latest evolution in high power USB charging. With up to 60W available through the USB-C port it provides power delivery (PD) laptop charging capability, while still providing up to 12W fast charging over the USB-A for tablets and phones.

This next generation USB charging solution when combined with our QikFit 30 PSU, separates the USB outlets from AC/DC supply allowing flexibility for location of the power supply unit.

**TUF-R®/HP** replaceable high power USB cartridge goes wherever power is needed. With multiple enclosure options enabling on-surface, in-surface, under-surface, and in-panel options, **TUF-R®/HP** is the smart choice for USB DC power. By locating the AC to DC QF30 PSU remotely from the **TUF-R®/HP** cartridge, you gain added safety by only providing DC at the user interface. Remotely positioning the PSU allows safe USB installation in locations where previously electrical safety issues may have precluded it, such as cafes, public spaces, and educational environments.



- Universal laptop charging with USB-C
- Compatible with all 42mm modular apertures
- Intelligent Device Recognition (IDR) for optimal fast charging on USB-A port
- Reversible USB-A and USB-C



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# TUF-R<sup>®</sup>/HP Cartridge

Technical

USB Charging Outlets	1 x Type C (Reversible) 1 x Type A (Reversible)
Power In connector	Male GST08 DC connector
Rated Total Output Power	72W MAX
Output Voltages & Currents	<b>TYPE C:</b> MAX 60W 20V/3A, 15V/3A, 9V/3A, 5V/3A (PD3.0) 3.3 - 11.0V / 3.2A (PD PPS Mode) QC 2/3.0 5V/3A, 9V/2A, 12V/1.5A <b>TYPE A:</b> MAX 12W 5V / 2.4A IDR BC1.2, Apple 12W Mode Samsung Fast Charge
Input Voltage	24 - 30V DC
USB Connector Min. Insertions	Type A, 10,000 Type C 10,000
Over Current Protection	Yes. Digital control at 3.3A. Auto reset with LED flash.
Short Circuit Protection	Yes. Digital control at 3.3A. Auto reset.
Over Temperature Protection	Auto Power Reduction to PD 45W Mode. 20V/2.25A, 15V/3A, 9V/3A, 5V/3A
Rated Operating Temperature	32°F TO 77°F (0°C TO 25°C)
Certifications – Safety	IEC 62368-1 : 2018
Certifications –EMC	EN61204 : 2018 EN 50121-3-2 (railway) FCC part 15 (B)
Certifications ROHS	EU 2015/863
User Replaceable USB module	Yes

## Construction

High strength fire retardant polycarbonate mouldings

## Colors

Cartridge – Gray  
Housing - Green  
Fascia - Black or Gray

## Power cord options:

**TUF-R<sup>®</sup>/HP** - GST08 cable or internally wired within the unit  
QikFit 30 PSU - NEMA plug to GST Starter cord

## Installation:

Removable fascia with snake eye screws

## Quality & Testing

All **TUF-R<sup>®</sup>/HP** canisters are manufactured using ISO9001 quality controlled components and practices and are 100% tested before dispatch:

- Visual: Configuration and appearance
- Power sockets: Continuity, polarity, insulation & earth
- USB charger: Output voltage and resistance
- Wireless charger: Charging current in test receiver

**“We test every pin on every connection in every socket”**

## Certifications

- cTUVus Listed - UL962A/CSA22.2
  - FCC Part 15 (B)
- International certifications available upon request

**Dimensions** (only for installation in OE Power module - not for individual sale)

