RACKSHACK™
MODULAR BROADCAST CAMERA
CONNECTION SYSTEM

RACKSHACK™ Modular Conversion System

The RACKSHACK™ is a modular conversion system from multiple SMPTE connectors/ cables to industry standard fibre optic connectors such as ST/SC. The camera end version of the RACKSHACK™ is a 4U high 19-inch chassis, consisting of individual interchangeable modules, allowing for up to 6 cameras of different makes and models to be powered, as well as providing a fibre optic link to the corresponding CCU/ Basestation.

The CCU end RACKSHACK™ is a fixed 1U high 19-inch enclosure. Each channel will receive the camera signals via industry standard fibre optic connectors (ST or SC for example) and transport those signals through to the corresponding CCU via LEMO 3K.93C connectors/cable assemblies.

LEMO

Technical Characteristics

Characteristics	Values
Fibre type	Singlemode
Hybrid connector	LEMO 3K.93C Series
Maximum hybrid cable distance	2 km
Industry standard connector	ST/SC/FC/LC
Temperature range	-20°C to +60°C
EMI/RFI	Complies with 89/336/EEC
Electrical	Complies with EN 61000-6-1, EN 61000-6-2
Laser safety	Complies with class 1 laser product 24 CFR 1040.10 & 1040.11
Return loss	Better than 45 dB per channel
Average insertion loss	0.4 dB per channel
Camera system	Sony® or Grass Valley® (camera specific)

Features

• Converts from SMPTE 304 connectors to industry standard fibre optic connectors (ST/SC)
• Plugs directly into camera/CCU via hybrid camera cable
• Allows connection for up to 6 cameras
• Modular design allowing for a variety of camera models

Advantages

• Plug & play solution
• 19-inch rack mountable
• Standard industry fibre optic cabling is widely available
• Up to 6 cameras can be remotely powered
• Easily reconfigurable for various models of camera

Applications

• Golf, skiing, competition racing, Olympic games and Stadia
• Multiple cameras in remote locations

RACKSHACK camera side

Height: 4U (176 mm)
Width: 19'' front panel (436 mm chassis)
Depth: 365 mm from front panel

Part Numbering System (empty without modules)

R	A	C	.	M	R	.	6	Z

RACKSHACK-X modules

Sony® module:
Height: 155 mm
Width: 60 mm
Depth: 320 mm (including 3K.93C connector)

Part Numbering System

| R | A | C | . | M | R | . | S | X | L |

S = Sony®/**P** = Panasonic®/**G** = Grass Valley®/**H** = Hitachi®

3K.93C connector: **X** = FXW.3K.93C

Fibre optic connectors: **L** = LC/**C** = SC/**S** = SC/**F** = FC

Note: Selection of module is based on the camera brand.

RACKSHACK CCU side

Height: 1U (44 mm)
Width: 19'' front panel (420 mm chassis)
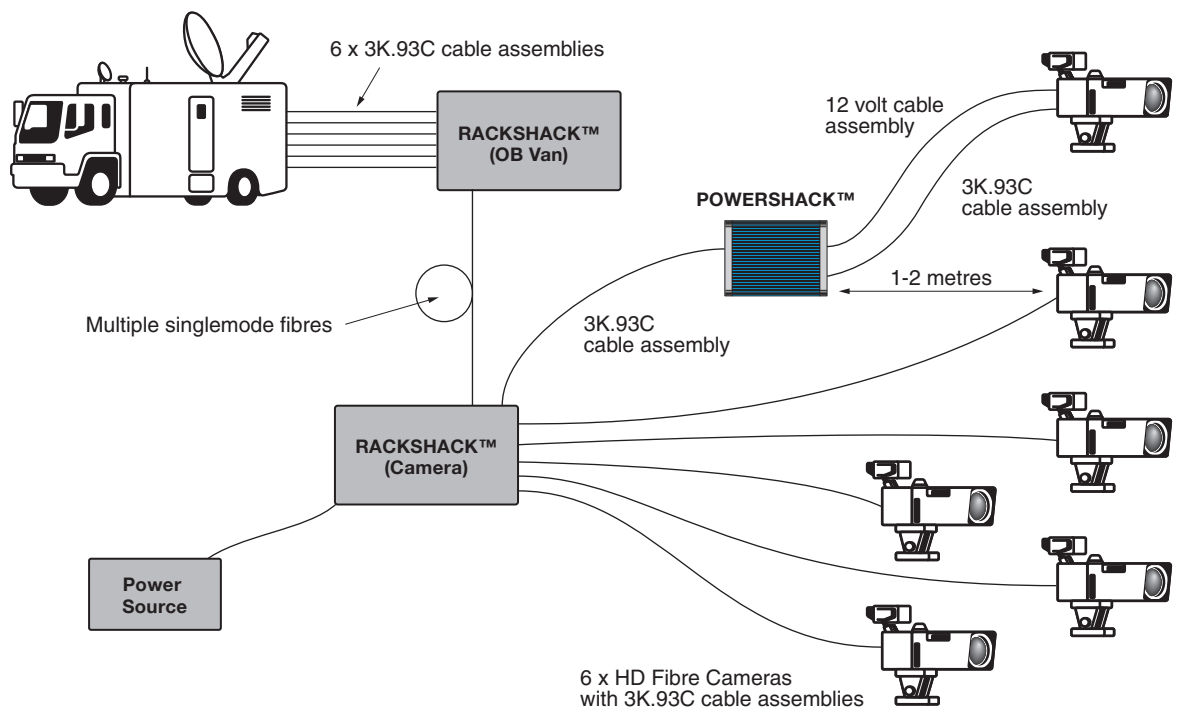Depth: 265 mm from front panel

Part Numbering System

| R | A | C | . | M | R | . | 6 | D | L |

3K.93C connector: **D** = EDW.3K.93C

Fibre optic connectors: **L** = LC/**C** = SC/**S** = SC/**F** = FC

System Schematic Diagram

6 x 3K.93C cable assemblies

RACKSHACK™ (OB Van)

12 volt cable assembly

POWERSHACK™

3K.93C cable assembly

Multiple singlemode fibres

1-2 metres

3K.93C cable assembly

RACKSHACK™ (Camera)

Power Source

6 x HD Fibre Cameras with 3K.93C cable assemblies

Optional -Using Rackshack with any camera brand

POWERSHACK™ Accessory for the RACKSHACK™

The POWERSHACK™ will take the power that would normally be delivered directly to the camera, and instead, step down the voltage to a lower DC value that can then be inserted into the DC input of the camera.

This allows for virtually any make or model of broadcast camera to be powered from a RACKSHACK™ module whilst still being able to communicate remotely to the corresponding CCU/Base station.