

## General

High value satellite communication assets require high reliability equipment. Our all new RSX4 is designed to be a drop-in replacement for our field proven 1094xB units in control, capability and performance. Standard features include front panel display, manual buttons, redundant monitored power supplies and is available in dual AC or AC/DC powered versions. It is designed as the "gold standard" in system reliability for critical SatCom applications.

The unit consists of an RSX4 "universal chassis" that features two rear facing slots. Slots (one or both) can be populated by a choice of redundancy modules called "PUC" which can be easily changed or swapped out in the field as your needs change. PUC's can also be located outside the chassis by adding an extension cord (up to 50 feet) between the RSX4 chassis and the PUC element. PUC details are shown on pages 2 and 3.

Compact (1RU) and high performance, the unit provides a simple and cost effective switching capacity for up to four redundancy channels. Complete control and status of the unit is available at the built-in web browser, front panel control/display, alarm inputs (with dry contact), or LXI certified 10/100 Ethernet port.

## Applications

- Ground station and infrastructure facilities
- Communication installations
- ENG trucks and vans
- Airborne surveillance systems
- Teleport and last mile installations
- Receiver routing for transmit or receive

## Features

- High reliability switch technology (relay or solid-state)
- SMA, BNC and other signal connector types
- Impedance 50 or 75 ohm
- Designed for ultra reliability
- Rugged 1RU construction
- Redundant power supplies
- Dual independent AC circuits
- Two slots to install "PUCs"
- Ethernet control port (10/100), IPv4, IPv6
- SNMP, SNMP v1/v2, TCP/IP, and web browser control
- Built-in diagnostics
- Alarm port for external "low" active control
- Dry contact for failure alert
- International AC power input
- LabVIEW drivers available



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**Model RSX4**  
Redundancy Switcher (1RU)



**Made in the USA**

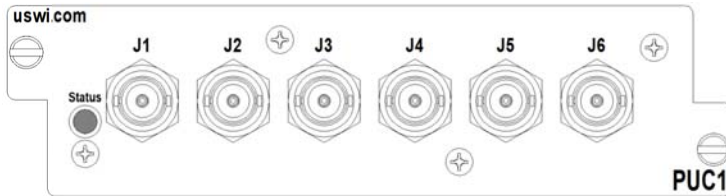
RSX4-001

### Element PUC1-0117C

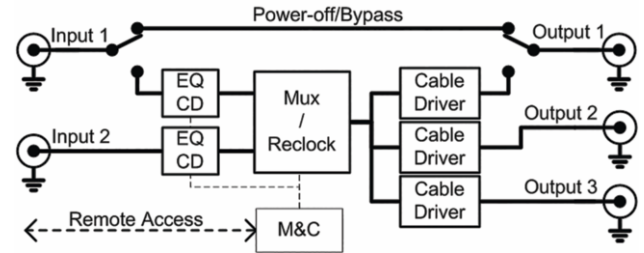
#### SD-SDI and HD-SDI Video Switch and 3-Way Distribution

Function . . . . .Video A/B switch with pass through and distribution  
 Switching technology . . . . .High reliability relays, EQ, reclocker and cable drivers  
 Sections per element . . . . .Single section  
 Capacity . . . . .SD-SDI and HD-SDI video  
 Signal Type . . . . .SMPTE 292M, 424M  
 Video rates . . . . .270Mbps, 1.483Gbps, 1.485Gbps, 2.967Gbps & 2.97Gbps  
 Signal connector . . . . .BNC  
 Impedance . . . . .75 ohm  
 Size . . . . .Single slot

01



**PUC1-0117C**  
 SDI video selector, EQ, reclock and 3-way distribution element with bypass.

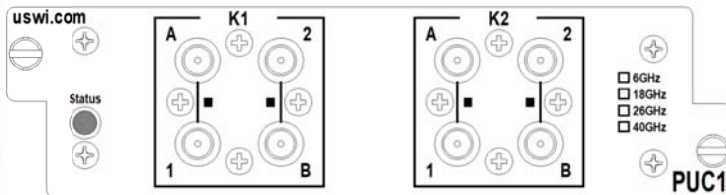


### Element PUC1-0fn5A

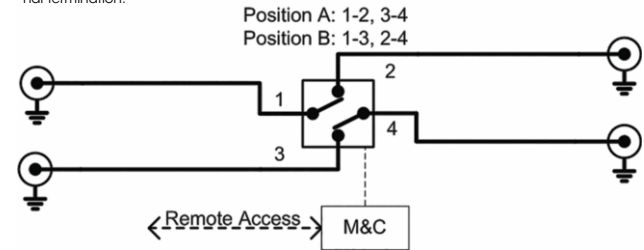
#### DC-6GHz, DC-18GHz and DC-40GHz

Function . . . . .Transfer A/B switch (baseball)  
 Switching technology . . . . .High reliability relays  
 Number per element . . . . .Single (n = 1), or Dual sections (n = 2)  
 Frequency . . . . .DC-18GHz (f = 2), 6GHz (f = 3), 40GHz (f = 4), 26GHz (f = 5)  
 Transmission loss . . . . .<0.5dB  
 Isolation . . . . .>60dB typical  
 Signal connector . . . . .SMA, K-Type for 40GHz version  
 Impedance . . . . .50 ohm  
 Size . . . . .Single slot

02  
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05



**PUC1-0fn5A**  
 One of two independent transfer sections (shown in power off 'A' position). Can also be a self-terminating 1x2 with external termination.

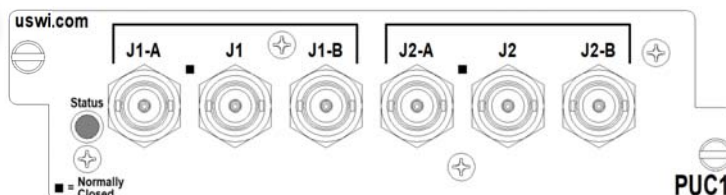


### Element PUC1-06niC

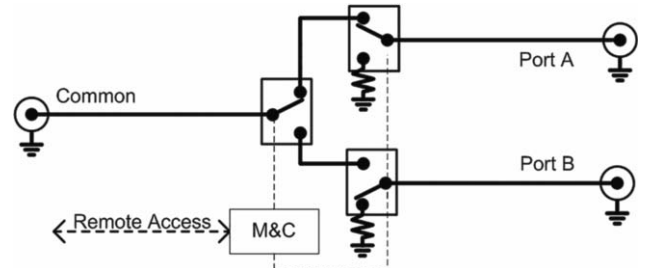
#### DC-1GHz: RF, IF, P-Band

Function . . . . .Redundancy A/B switch with termination  
 Switching technology . . . . .High reliability relays  
 Number per element . . . . .Single (n = 1), or Dual sections (n = 2)  
 Frequency . . . . .DC-1GHz  
 Transmission loss . . . . .<1.0dB  
 Isolation . . . . .>60dB typical  
 Signal connector . . . . .BNC  
 Impedance . . . . .50 ohm (i = 5), or 75 ohm (i = 7)  
 Size . . . . .Single slot

06



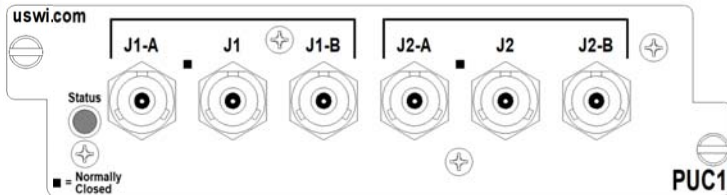
**PUC1-06niC**  
 One of two independent self-terminating A/B redundancy switches.



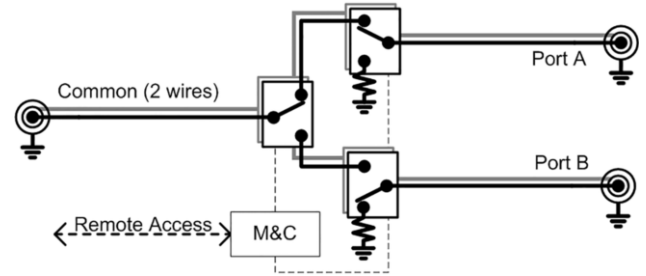
### Element PUC1-07niX Triax and 1553 Redundancy

Function . . . . .Redundancy A/B switch with termination  
 Switching technology . . . . .High reliability relays  
 Number per element . . . . .Single (n = 1), or Dual sections (n = 2)  
 Frequency . . . . .DC-100MHz  
 Transmission loss . . . . .<1.0dB  
 Isolation . . . . .>60dB typical  
 Signal connector . . . . .Triaxial (Trompeter BJ77 Type)  
 Impedance . . . . .50 ohm (i = 5), or 75 ohm (i = 7)  
 Size . . . . .Single slot

07



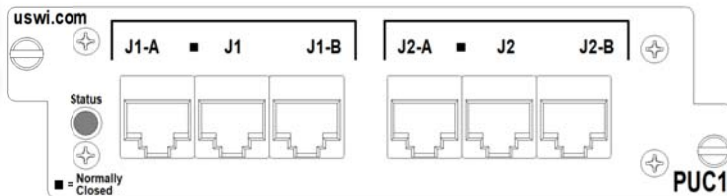
**PUC1-07niX**  
Triaxial redundancy switch with termination for 1553 type signals.



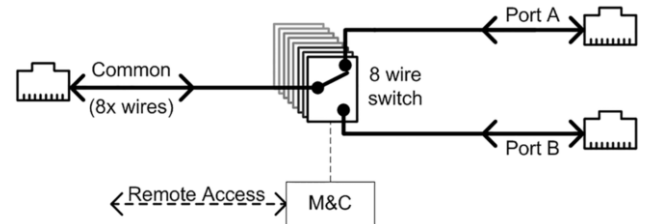
### Element PUC1-0fn0J Ethernet redundancy 100Mbps, 1Gbps

Function . . . . .Redundancy A/B switch  
 Switching technology . . . . .High reliability relays  
 Number per element . . . . .Single (n = 1), or Dual sections (n = 2)  
 Frequency . . . . .100Mbps (f = 8), 1Gbps (f = 9)  
 Transmission loss . . . . .N/A  
 Isolation . . . . .N/A  
 Signal connector . . . . .RJ45  
 Impedance . . . . .100 ohm  
 Size . . . . .Single slot

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09



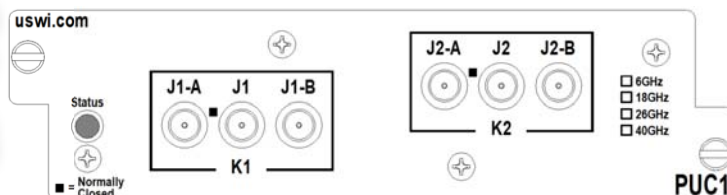
**PUC1-0fn0J**  
One of two independent redundancy sections (shown in power off "A" position).



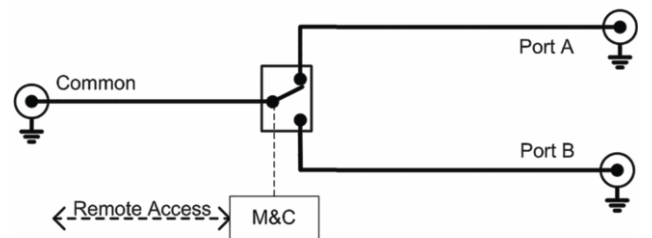
### Element PUC1-ffn5A DC-18GHz, DC-6GHz

Function . . . . .Redundancy A/B switch (failsafe)  
 Switching technology . . . . .High reliability relays  
 Number per element . . . . .Single (n = 1), or Dual sections (n = 2)  
 Frequency . . . . .DC-18GHz (ff = 18), 26GHz (ff = 17), 6GHz (ff = 16)  
 Transmission loss . . . . .<0.5dB  
 Isolation . . . . .>60dB typical  
 Signal connector . . . . .SMA  
 Impedance . . . . .50 ohm  
 Size . . . . .Single slot

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**PUC1-ffn5A**  
One of two independent normally open redundancy relays.



## Modular: Plug-in "PUC" Elements

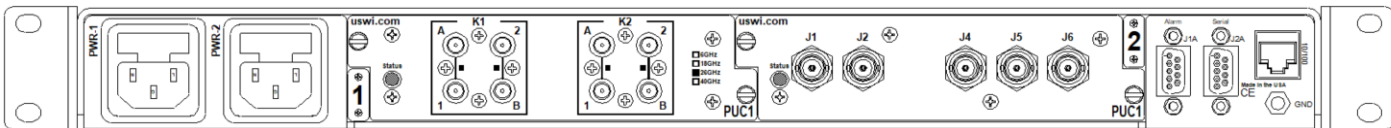
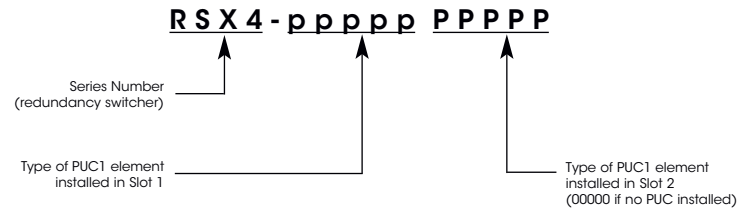
The RSX4 has two rear facing slots that accept one or two PUC1 elements. They can be mixed and matched to your requirement, or to reconfigure as your needs change. The details of the PUC1 elements are shown on pages 2 and 3.

PUC's can also be located outside the chassis by adding an extension cord between the chassis and the PUC. You might need this to located a switch function close to your source to keep cable lengths short.



## System Number Assignment

The RSX4 can be ordered complete with the quantity and type of PUC1 elements you need. When ordering a system, the unit comes with the RSX4-D80 chassis with dual 80W supplies, the UC1-AK-115 accessory kit, and one or two PUC1 elements of your choice. The unit is fully assembled, tested and burned in. See definition to the right. If you need assistance, contact your local representative or the factory.



**Example System Model: RSX4-0525A0117C**  
Rear view shown with Slot-1 having PUC1-0525A element, and Slot-2 with the PUC1-0117C element.

Model	Description
RSX4-D80	RSX4 chassis with redundant 80W power supplies, no PUCs
RSX4-000	RSX4 chassis without power supplies
PSAUC1-080	Power supply assembly: 80W
UC1-AK-115V	Accessory kit with rack flanges, dual 115VAC cords, cable retainer bracket
UC1-AK-220V	Accessory kit with rack flanges, dual 220VAC cords, cable retainer bracket
CA-UC1-xxx	PUC1 extension cable assembly (001 to 050 feet)
FPUC-001	Filler plate for one PUC slot

### System RSX4 Specifications

Capacity . . . . .Two PUC1 elements  
 Switching technology . . . . .Relay or solid-state available  
 Type of system . . . . .Redundancy (A/B)  
 Architecture . . . . .Modular  
 Signal connector location . . . . .Rear panel

\*\* NOTE 1: If special or unique performance or features are required, the base model number is used plus a unique 5-digit suffix.

### General Specifications

Switching speed . . . . .<10ms  
 Power supply section . . . . .Redundant  
 Power supply monitoring . . . . .Included  
 Ethernet port . . . . .10/100, SNMP v1/v2 and TCP/IP  
 Serial port . . . . .RS-232C/422A/485 (DE-9S)  
 Alarm port . . . . .4-channel alarm TTL input & dry contact  
 Status LED's . . . . .Front panel  
 Front panel display . . . . .LCD  
 Configuration memory . . . . .FLASH  
 Cooling . . . . .Convection  
 AC power requirements . . . . .90-264VAC, 47-440Hz, <80 Watts  
 AC inlets . . . . .Two (independent)  
 Optional DC input . . . . .Available  
 Line protection . . . . .Fuses @ AC inlets  
 Weight . . . . .<12 lbs  
 Size . . . . .1.72H x 16.50D x 19.00W (1RU)  
 Operating temp . . . . .0 to +60C  
 Non-operating temp . . . . .-20 to +85C  
 Humidity . . . . .0 to 95% (NC @ +25C)  
 MTBF . . . . .>115,000 hours (estimated)  
 Warranty . . . . .2 years  
 Certifications . . . . .CE EN61010

Universal Switching's policy is one of continuous development. Consequently, the company reserves the right to vary from the descriptions and specifications shown in this publication.