# 2:1 System

Transmit/Receive
Redundancy Control Unit AAV620 Series

Redundancy Control Unit enables 2:1 redundancy configuration for Agilis BUC and LNB, 3 BUC(LNB) units are connected to the RCU Tx(Rx). By controlling two waveguide switches the RCU directs signals to 2 BUCs(LNBs) only, thus only 2 BUCs(LNBs) are in operation at the same time, the 3rd BUC(LNB) stays in standby mode. When a fault occurs in either of the two operating BUCs(LNBs), an alarm will be raised and the RCU will trigger the corresponding switch, switching from the faulty BUC(LNB) to the hot-standby BUC(LNB) automatically.

Indoor rackmount version of RCU Tx available.

## Features

- Support C/X/Ku/Ka-band BUC/LNB

- Redundancy power supply input

- Redundancy 10MHz OCXO (option)

- LED status and alarm indicator

- Monitoring and Control through serial and Ethernet port

- Form C contact closure outputs

- Wide operating temperature -40°C to +60°C for outdoor model

- IP65 Weatherproof

- RoHS Compliant

## Quality Assurance

100% thorough stringent quality checks in addition to well-defined Environmental Stress Screening to ensure operation in harsh outdoor environment conditions. All subjected to seal test for water ingression verification.

## Reliability

Field proven under harsh environment conditions.

Agilis ODUs can withstand temperature ranging from -40°C to +60°C under 100% humidity.

Agilis IDUs can withstand temperature from 0°C to +50°C under 95% humidity.

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## Technical Specifications

### Receive (AAV620xxxx-R)

| LNB | Input Frequency | Output Frequency |
|---|---|---|
| L-Band | 950 – 2150MHz | 950 – 2150MHz |

| | |
|---|---|
| **Insertion Loss** | 3dB max |
| **Gain Flatness** | 1.5dB max full band |
| | 0.5dB max over 40MHz |
| **Isolation** | 30dB min |
| **(Unit-A to Unit-B** | |
| **/Unit-A to Unit-C** | |
| **/Unit-B to Unit-C** | |
| **/IF-1 to IF-2)** | |
| **10MHz Ref (option)** | 0dBm min |
| **22KHz Tone (option)** | -12dBm min |
| **Voltage/Current to LNB** | 14~16Vdc / 0.5A max |
| | 13V / 18V / 0V (optional) |
| **VSWR** | 1.5:1 max @input |
| | 1.5:1 max @output |

### Interface

| | |
|---|---|
| **Input / Output** | N-Type Female 50Ω |

### Transmit (AAV620xxxx-T)

**No RF passing through RCU**

### Monitor & Control

| | |
|---|---|
| **Monitor** | BUC/LNB status alarm |
| | RCU Power Supply alarms |
| **Control** | Gain adjustable (option) |
| | Unit online/offline |
| **Communication Port** | Serial RS232/RS485 |
| | Ethernet (SNMP & HTTP) |

### Environmental

| | |
|---|---|
| **Operating Temperature** | -40°C to +60°C (Outdoor) |
| | 0°C to +50°C (Indoor) |
| **Relative Humidity** | Up to 100% (Outdoor) |
| | Up to 95% (Indoor) |
| **Weatherproof** | IP65 (Outdoor) |

### Mechanical

| | |
|---|---|
| **Dimension** (excluding interface connectors) | L340 x W215 x H90mm (Outdoor RCU) |
| | L13.4" x W8.5" x H3.5" |
| | L483 x W330 x H44mm (Indoor RCU-T) |
| | L19.1" x W13.0" x H1.7" |
| **Weight** | 3.5Kg / 7.7lbs (Outdoor RCU) |
| | 3.5Kg / 7.7lbs (Indoor RCU-T) |

NOTE: All specifications subject to change without notice
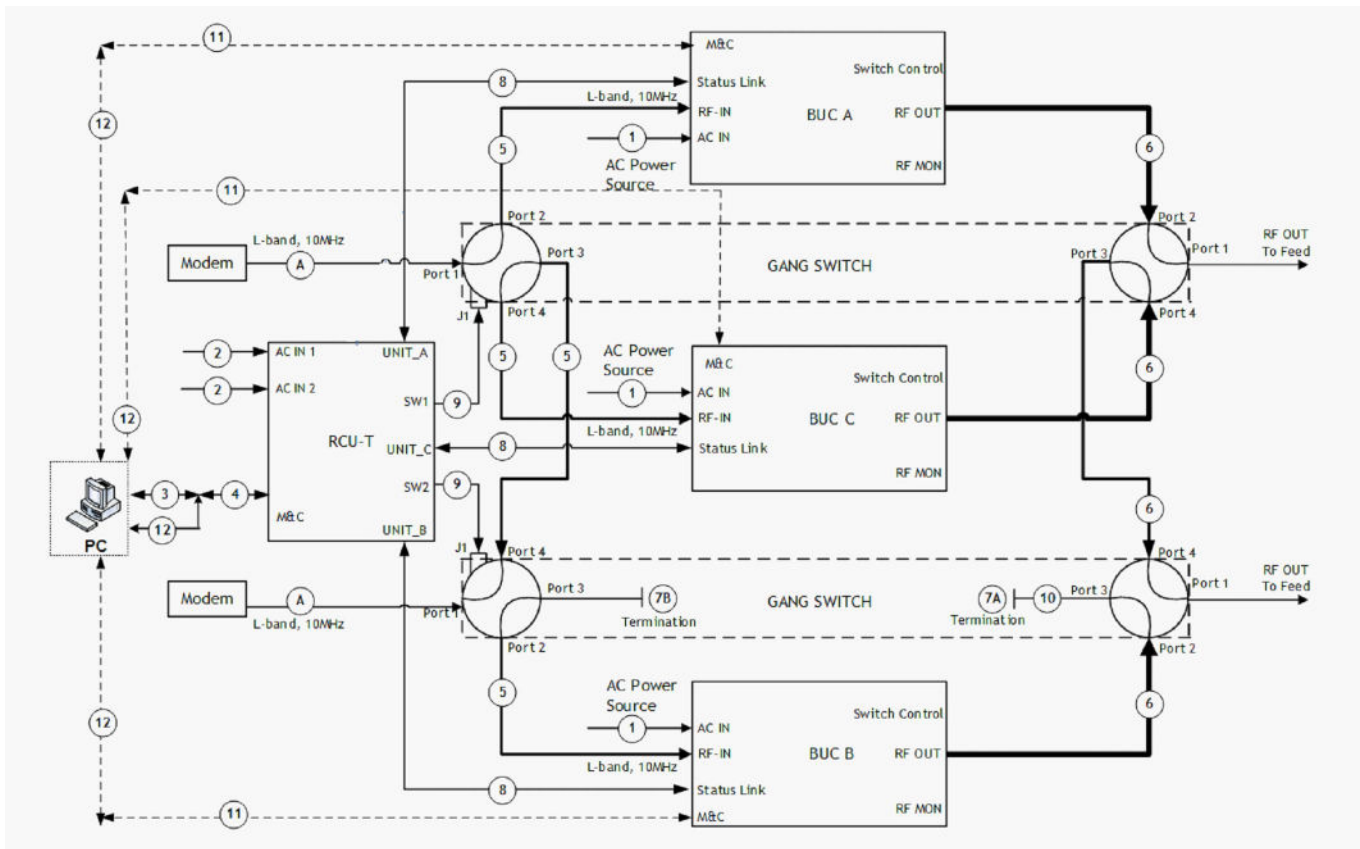B02D25

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# 2:1 System

## Transmit/Receive Redundancy Control Unit AAV620 Series

### Standard Part List for Transmit 2:1 System, BUC

| ITEM | PRODUCT NAME | OPTION | PART NUMBER | QTY | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | RCU | Transmit | | 01 | Redundancy Control Unit |
| 2 | BUC | | | 03 | BUC |
| 3 | Prime Power Input Cable | 220Vac | 1001520980 | 02 | Transient Protection Box 12-3S to Unterminated 220Vac 5A 3M |
| 4 | Cable M&C | Serial/ETH | 2502041169 | 01 | C/A M&C Serial/ETH 12-8P to DB9 (F) 2M |
| 5 | Cable M&C | ETH | 2502041166 | 01 | C/A M&C ETH-DB9 (M) to RJ45 2M |
| 6 | Converter | RS485 | 6103480008 | 01 | Converter USB to RS485 |
| 7 | TPB | | 1001522412 | 03 | TRANSIENT PROTECTION BOX 220VAC 10A |
| 8 | Cable M&C | Serial/ETH | 2502041256 | 03 | C/A S/P M&C CIR 14-19P TO DB9 ETH/485 |
| 9 | Cable RF | | 6202040155 | 04 | C/A FOR RCU IF IN/OUT TO SPT IN/OUT |
| 10 | Cable Control | | 2502040155 | 02 | C/A Switch RCU Control 10-6S to 10-6P 3M |
| 11 | Cable Control | | 2502041469 | 03 | C/A STATUS LINK RCU 2+1 TO BUC |
| 12 | Termination Coaxial | | 5704090015 | 01 | TERMINATION N-TYPE COAXIAL |
| 13 | WG S/W & Accessory Set | | | 01 | 2x Wave guide gang switch and accessories including E-bend/H-bend and termination load |
| 14 | Mounting Accessory Set | | | 01 | Mounting accessories including brackets, screws, studs, gasket for flange WR137 |

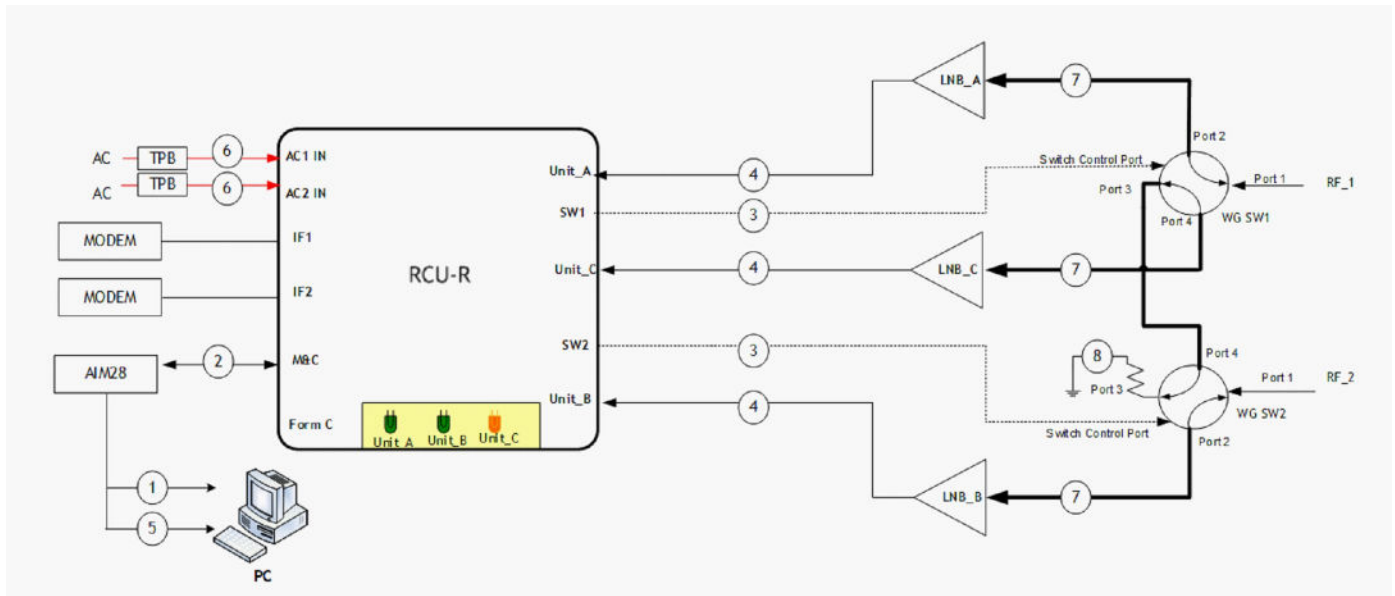### Setup Diagram  - Transmit 2:1 System, BUC

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# 2:1 System

## Transmit/Receive Redundancy Control Unit AAV620 Series

### Standard Part List for Receive 2:1 System, LNB

| ITEM | PRODUCT NAME | OPTION | PART NUMBER | QTY | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | RCU | Receive | | 01 | Redundancy Control Unit |
| 2 | LNB | | | 03 | LNB |
| 3 | Prime Power Input Cable | 220Vac | 1001520980 | 02 | Transient Protection Box 12-3S to Unterminated 220Vac 5A 3M |
| 4 | Cable M&C | Serial/ETH | 2502041169 | 01 | C/A M&C Serial/ETH 12-8P to DB9 (F) 2M |
| 5 | Cable M&C | ETH | 2502041166 | 01 | C/A M&C ETH-DB9 (M) to RJ45 2M |
| 6 | Converter | RS485 | 6103480008 | 01 | Converter USB to RS485 |
| 7 | Cable Control | | 2502040155 | 02 | C/A Switch RCU Control 10-6S to 10-6P 3M |
| 8 | Cable RF | | 2502040137 | 03 | C/A RF N (M) to N (M) 3M |
| 9 | AIM (Optional) | Indoor | | 01 | Agilis Indoor Monitoring Panel |
| 10 | WG S/W & Accessory Set | | | 01 | Wave guide switches and accessories including E-bend/H-bend and termination load |
| 11 | Mounting Accessory Set | | | 01 | Mounting accessories including brackets, screws, studs, gasket for flange WR137 |

### Setup Diagram  - Receive 2:1 System, LNB
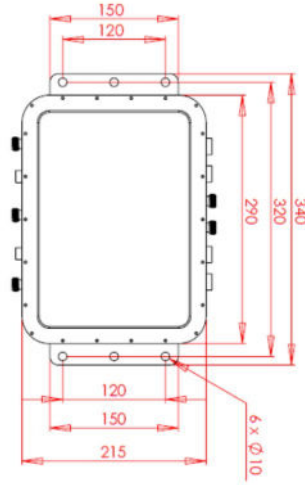
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## Transmit/Receive Redundancy Control Unit AAV620 Series

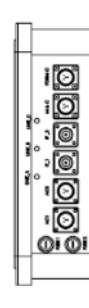### Mounting Dimension Drawing
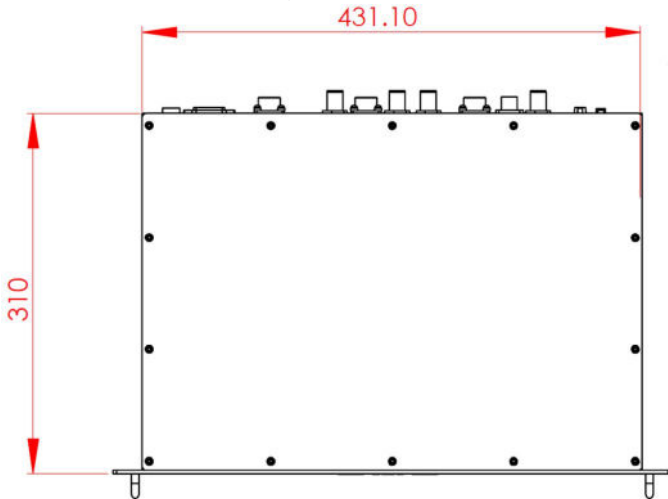
Side View – Outdoor RCU Unit
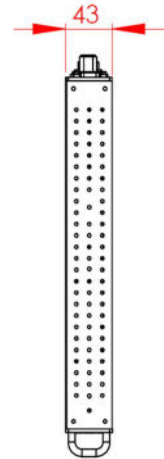
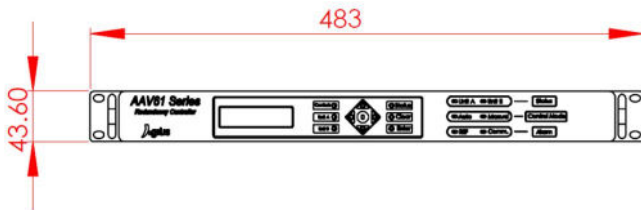Top View – Outdoor RCU Unit

Side View – Outdoor RCU Unit

Top View – Indoor RCU-T Unit

Side View – Indoor RCU-T Unit

Front View – Indoor RCU-T Unit

Rear View – Indoor RCU-T Unit

NOTE: Part list and drawing subject to change without notice
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