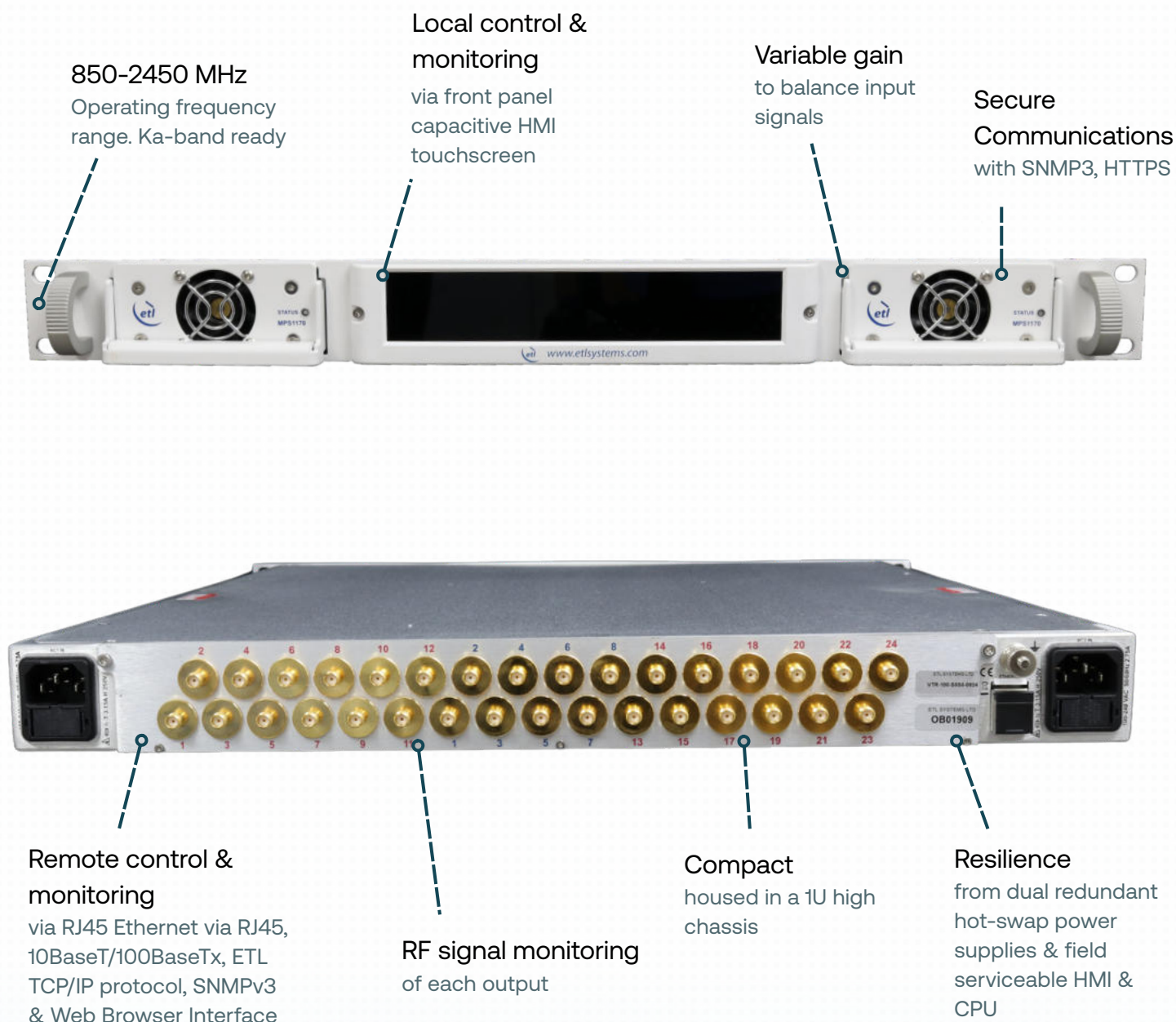


# Victor Series Switch Matrix/Router

## 16 x 16 Combining L-band

VTRC-102 is an extended L-band 16 x 16 combining matrix in a compact 1U chassis with output RF detection.



| RF Parameters                 |                    |                                                                                                |          |                                                |             |
|-------------------------------|--------------------|------------------------------------------------------------------------------------------------|----------|------------------------------------------------|-------------|
| Capacity                      |                    | Up to 16 inputs x 16 outputs                                                                   |          |                                                |             |
| Routing                       |                    | Combining, non-blocking                                                                        |          | Many inputs can be routed to each output       |             |
| Frequency Range               |                    | 850-2450 MHz                                                                                   |          |                                                |             |
| Switching Time                |                    | < 50ms (From receipt of a command to implementation of path change)                            |          |                                                |             |
| RF Detect                     |                    | -35 dBm to +10 dBm RF power detection at each output port (RF reported power, indicative only) |          |                                                |             |
| RF Connectors                 |                    | 50 Ω SMA                                                                                       | 50 Ω BNC | 75 Ω BNC                                       | 75 Ω F-type |
| Flatness                      | Full Band          | ±1.75 dB                                                                                       | ±1.75 dB | ±2.0 dB                                        | ±2.0 dB     |
|                               | 850-2150 MHz       | ±1.25 dB                                                                                       | ±1.25 dB | ±1.5 dB                                        | ±1.5 dB     |
|                               | Any 36 MHz         | ±0.3 dB                                                                                        | ±0.3 dB  | ±0.5 dB                                        | ±0.5 dB     |
| Input Return Loss             | Typ.               | 20 dB                                                                                          | 20 dB    | 14 dB                                          | 14 dB       |
|                               | Min.               | 14 dB                                                                                          | 14 dB    | 10 dB                                          | 8 dB        |
| Output Return Loss            | Typ.               | 20 dB                                                                                          | 20 dB    | 14 dB                                          | 14 dB       |
|                               | Min.               | 14 dB                                                                                          | 14 dB    | 10 dB                                          | 8 dB        |
| Gain                          | Gain               | 0 ± 2 dB                                                                                       |          | Typical, mean across band                      |             |
|                               | Gain Control       | 0 to +5 dB                                                                                     |          | Settable at each input                         |             |
|                               | Gain Steps         | 0.25 dB                                                                                        |          |                                                |             |
| 1 dB GCP                      | Full Band          | +10 dBm                                                                                        |          | Output power                                   |             |
|                               | 850-2150 MHz       | +13 dBm                                                                                        |          |                                                |             |
| OIP3                          | Full Band          | 20 dBm                                                                                         |          | Typical                                        |             |
|                               | 850-2150 MHz       | 25 dBm                                                                                         |          |                                                |             |
| OIP2                          | Typ.               | 36 dBm                                                                                         |          | 2nd order intercept point                      |             |
|                               | Min.               | 34 dBm                                                                                         |          |                                                |             |
| Isolation                     | I/P - O/P          | 60 dB                                                                                          |          | Minimum between any 2 ports                    |             |
|                               | I/P - I/P          | 75 dB                                                                                          |          |                                                |             |
|                               | O/P - O/P          | 75 dB                                                                                          |          |                                                |             |
| Group Delay                   |                    | ≤ 1 ns                                                                                         |          |                                                |             |
| Noise Figure                  | Typ.               | 20 dB (Typical with one input routed to one output)                                            |          |                                                |             |
|                               | Max.               | 22 dB (Typical with one input routed to one output)                                            |          |                                                |             |
| Input RF Power                |                    | +20 dBm                                                                                        |          | Absolute maximum                               |             |
| Spurious                      | Carrier Related    | -65 dBc                                                                                        |          | Excluding harmonics. Max. Carrier level -10dBm |             |
|                               | Carrier Un-related | -85 dBm                                                                                        |          | Within operating frequencies                   |             |
| Environmental                 |                    |                                                                                                |          |                                                |             |
| Temperature                   |                    | Operating: 0 to 45°C    Storage: -20°C to +75°C                                                |          |                                                |             |
| Location / Humidity           |                    | Indoor use only / 20 to 90% non-condensing                                                     |          |                                                |             |
| Altitude                      |                    | 10,000 feet AMSL (Operational)<br>30,000 feet AMSL (Storage)                                   |          |                                                |             |
| Gain Stability vs Temperature |                    | 0.05 dB/°C                                                                                     |          |                                                |             |



| Power                       |             |                                                                                        |
|-----------------------------|-------------|----------------------------------------------------------------------------------------|
| PSU Power                   |             | Fused 2A                                                                               |
| AC Consumption              |             | Max. consumption at steady state, no load                                              |
| PSU                         |             | Diode OR                                                                               |
| MTBF                        | Chassis     | > 250,000                                                                              |
|                             | Matrix card | > 100,000                                                                              |
| System Control              |             |                                                                                        |
| Local Control & Monitoring  |             | HMI                                                                                    |
| Remote Control & Monitoring |             | Ethernet via RJ45, 10BaseT/100BaseTx<br>ETL TCP/IP, SNMPv3, HTTPS, Built in Web Server |
| Alarms                      |             | Via Ethernet (RJ45) or HMI                                                             |
| PSU Redundancy              |             | Dual Redundant & Alarmed                                                               |
| Physical                    |             |                                                                                        |
| Dimensions                  |             | 1U high x 650mm deep x 19" wide                                                        |
| Weight                      |             | 10 kg                                                                                  |
| Colour                      |             | RAL 9003 semi-matte (white)                                                            |
| Spec. Version               |             | 1.0                                                                                    |

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.

Note 3: Typical parameters are guide figures and measured data may deviate from the quoted figures. ETL endeavours to exceed the quoted typical parameters where practically possible.