



# NiGMa

## Series L-Band Router

High Performance  
L-Band Router

### Key Features

- Expandable 32 x 32 L-Band Router
- Self Diagnostics & Continuous Monitoring
- Remote Control Available via PC or Link to M&C System
- Simple Installation
- Redundant & Hotswap Power Supplies
- Redundant & Hotswap PSU's
- Hotswap Input and Output Cards (1 per RF port)
- Compact Router Module - 6RU
- Isolation - Typically 55dB
- Flatness  $\pm 2$ dB

### Summary

ATCi strives to provide value and support its customers worldwide, therefore, is pleased to expand its product offerings by becoming the U.S. Master Distributor for all ETL products. ATCi offers end-to-end satellite systems integration, technical services and bilingual customer support direct from the company headquarters in Chandler, Arizona.

The new high performance **NiGMa** (or Enigma) Series sets new benchmarks for the performance of L-band router (matrix switch) and introduces leading edge technologies, the most visible of which is a VGA touch screen interface (which gives an instant view of the routing of the router).

ATCi understands the importance of redundancy and hot swap, as most of its customers use routers in mission-critical applications. The **NiGMa** provides redundancy of power supplies, but more importantly also redundant CPU controllers. Input and output cards, power supplies, CPU controller cards, and the VGA human interface can all be hot swapped. There is one card associated with each input and each output – failure of a card only affects one channel.

The RF performance of **NiGMa** is exceptional, also isolation, frequency response or flatness, and 1 dB GCP all set exciting new limits – helping our customers ensure that their overall RF chain signal performance is optimized.

**NiGMa** features self diagnostics with continuous monitoring (and reporting) of amplifier status, PSU status, and internal communications. Reporting (and remote control) is via serial and ethernet ports.

# Specifications: NiGMa L-Band Router Technical Summary

The Enigma Router makes the ideal building block for larger router systems and can be expanded up to 1024 inputs x 1024 outputs. The Router comes connection ready to allow other modules to be linked & controlled together.

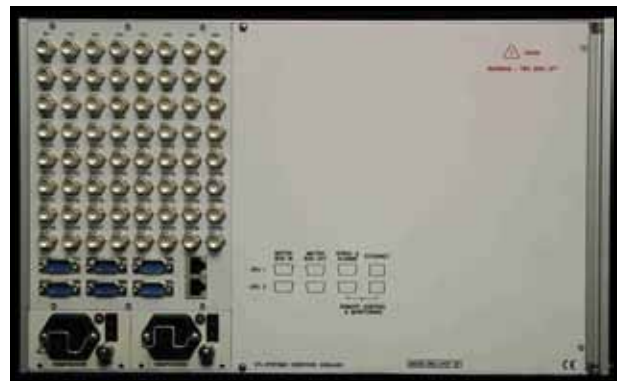
These larger systems will require extra splitters or combiners and the extra router modules will become slaves with no HMI Touchpanel controller.

A full range of Connectors and Impedances are available and cover F-type 75Ω, SMA 50Ω, and BNC 50Ω or 75Ω.

| Parameter                            | NGM Router         |
|--------------------------------------|--------------------|
| Capacity                             | 32 x 32            |
| Frequency                            | 850 - 2150 MHz     |
| Impedance                            | 50Ω or 75Ω         |
| RF Connections                       | F-Type, BNC or SMA |
| Insertion Gain                       | 0 ±2dB nominal     |
| Isolation (I/P to O/P)               | 55 dB typical      |
| Isolation (I/P to I/P)               | >70dB              |
| Isolation (O/P to O/P)               | >60dB              |
| Flatness                             | ±2dB               |
| Input Return Loss                    | 10dB               |
| Output Return Loss                   | 10dB               |
| 1 dB Compression Point (input power) | +3.5dBm (0dBm min) |
| Noise Figure                         | 18dB               |

## Other information

- Touch screen and VGA display for human interface.
- Remote control software is also available.
- Input & Output Card, CPU, PSU change-out from front and rear.
- Distributive matrix (one input may go to many outputs).
- Dual alarmed internal power supplies.
- Retains settings if power fails or if communications with controller fails.
- Power requirement 90/264V AC, 40W, 50/60 Hz
- Weight 30 Kgs
- Color – White (others available)



**NiGMa - Reliability, Security, Performance Building on Heritage, Shaping the Future.**