



# THE ARTIST ECOSYSTEM

32 / 64 / 128 / 1024

# THE ARTIST ECOSYSTEM

**Artist is a decentralized, scalable digital intercom network that provides reliable communications and audio signal distribution for any audio or intercom application.**

An Artist system can be anything from a single Artist frame to a vast, fiber-based and remotely connected network of interconnected nodes. Each modular node contains client cards that accept and distribute different types of signals including SMPTE 2110-30/31 (AES67), VoIP, Dante, AVB, MADI, AES3 and analogue audio. At the present time, Artist is the only intercom platform that talks all audio standards – and its modular architecture allows for the easy accommodation of future standards.

Artist easily scales to fit any application from small theatres to OB vans to multi-national broadcast centers and global events. The non-blocking Artist system can be expanded from 8x8 to 1024x1024 ports and, via inter-node trunking, can connect several thousand subscribers within a single ecosystem. Scaling an Artist system is as easy as adding new client cards to an existing node or adding additional nodes (Artist-32, Artist-64, Artist-128, Artist-1024). This flexibility and modularity make Artist solutions futureproof and enable the system to scale to the demands of any project.

Artist infrastructures natively allow for a high degree of decentralization and the flexible placement of nodes, considerably reducing the wiring and setup costs for any installation. The decentralized network structure also enhances the system's reliability as its dual ring fiber optic network topology provides full redundancy. On top of that, all internal modules within the Artist frames are hot-swappable, the frames themselves have dual power supplies, and the system configuration is stored within each node.

But a comms platform is not just about the nodes. The user experience of any intercom system is defined by its control panels – and Artist is the only intercom

system to employ the SmartPanel concept of app-driven user interfaces. Riedel's SmartPanels provide multiple connectivity options, allow for software-definable workflows, and combine a vast range of features into a single user interface.

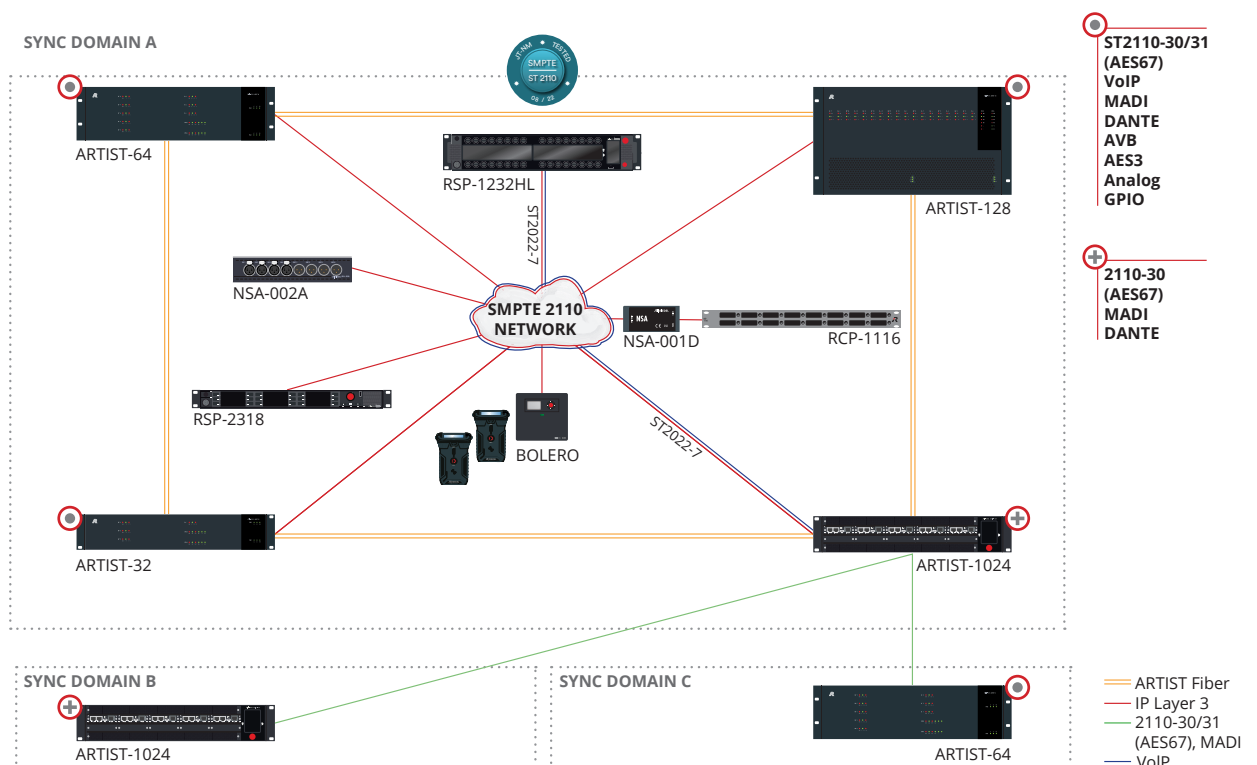
Only Artist seamlessly integrates with the award-winning Bolero wireless intercom system to provide flexible and reliable wireless communications to complement the wired intercom panels. Operating in the license-free 1.9GHz and 2.4GHz bands, Bolero has a global reputation as a top performer with RF performance second to none – and it continues to amaze with its outstanding audio quality.

Any comms solution is only as good as its configuration software – and the Director software is just one more differentiator that sets Artist apart from the rest. Powerful and user-friendly, Director offers industry-leading configuration upload times and an intuitive interface with drag-and-drop simplicity that gets people talking right out of the box. With Director, Artist is the only intercom that can load a full configuration in just a few seconds – even in large systems with hundreds of users.

Artist has seen countless additions to its feature set, on both the hardware and software side, as it has continued to evolve in response to industry developments. And now, its modular structure has facilitated a swift reaction to the paradigm shift from baseband to IP-based media infrastructures, making Artist the first fully SMPTE 2110-30/31 compliant intercom system available on the market.

Artist-1024 is extremely compact yet features the high port densities and advanced features that IP-based production environments demand. An evolution of our Artist line of solutions, the Artist-1024 is just one more tool to help clients tackle any communications challenge whether today, or in the years to come.

Artist-1024 is the culmination of close to two decades of continuous customer-driven development. But the Artist story is far from over...



# THE NEXT PIECE OF THE PUZZLE



## ARTIST-1024

**Artist-1024 is the next evolutionary step in the continuous development of the Artist intercom ecosystem. This new node complements the Artist family, expanding its capabilities with a focus on IP-based installations and higher port densities. With Artist-1024, full compatibility is guaranteed. The node can be effortlessly added into any Artist fiber ring and, just like its siblings Artist-32, Artist-64, and Artist-128, is easily and intuitively configured within the Director software environment.**

As its name suggests, the Artist-1024 node boasts 1024 non-blocking ports in just a 2RU frame size. This unparalleled port density significantly reduces rack space requirements and creates powerful efficiencies in any application where space is a critical factor. This latest addition to the Artist ecosystem introduces a range of technical innovations centered around a software-definable Universal Interface Card, the UIC-128-II. This entirely new type of interface card combines networking, mixing, and management and can be configured to act as a SMPTE 2110-30 (AES67), MADI or Dante subscriber card, or as an Artist fiber/router/processor card. Changing the connectivity type is as easy as reconfiguring the UIC-128-II with the click of a button in Director, Artist's powerful configuration software. With Director, this reconfiguration is completed within seconds! The physical SFP modules are also changed with ease, e.g. from fiber to copper.

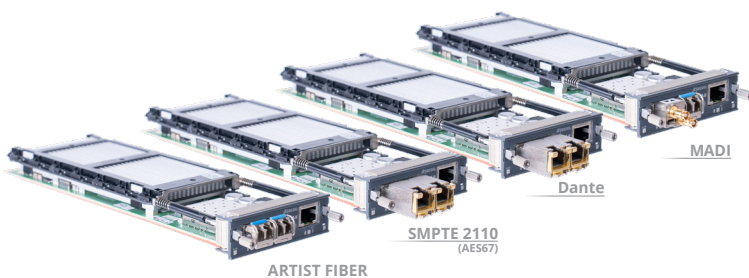
The frame provides ten bays for UIC-128-II, with two being reserved solely for routing and networking UICs. The remaining eight bays can be flexibly equipped with UICs of various configurations to provide subscriber connectivity. The integral mixer on each subscriber card can be scaled from 8 to 128 bidirectional ports per card and can access all 1024 channels of the Artist backbone. Since UICs support internal sample rate conversion, each card can be connected to a different clock environment (MADI, PTPv2).

Artist-1024 also introduces a new customer-friendly, flexible licensing scheme with frame-level licensing instead of connectivity-type licensing. Each node starts with a Virtual Artist Matrix (VAM) license which includes a defined number of ports (16 to 1024) that can be freely distributed across the node's subscriber cards. Besides these node-locked licenses, there are also flexible licenses that allow for fast (re)configuration of the system by simply moving capacities between nodes. Since the licensing model does not involve connectivity, systems can be freely altered to meet any connectivity requirement.

Artist-1024 has been architected with redundancy at its core. By supporting multiple redundancy schemes including manual N+1, NIC, and SMPTE 2022-7, it can provide an unprecedented degree of robustness and reliability. In addition to SMPTE 2022-7-compliant audio and control data stream redundancy, there are several redundancy mechanisms in place to avoid single points of failure: The manual N+1 subscriber redundancy scheme includes a hot spare card that can take over the configuration of any other subscriber card. With RRCS, it is now possible to fully provide automatic N+1 redundancy in any third-party driver. The NIC scenario allows a seamless handover between the two routing cards of a single node. As expected from a professional system, all control logic and data links within the frame are redundant. The advanced frame design provides additional security with two load-sharing PSUs and a fan module with redundant fan units. The sum of these measures equals the most comprehensive comms safety net available on the market.

The frame design is rounded off by an e-ink display that provides configuration and licensing information, even when powered off. Artist-1024 also offers flexible mounting options: The frame can be mounted with an offset of 0, 25, 50 or 75mm and can be rotated in the rack. If required, the ventilation can be reversed to provide efficient cooling in any situation.

Artist-1024's universal interface card (UIC) concept and its versatile licensing scheme give you unprecedented universal interface card (UIC) flexibility, scalability, and capability. With the ability to move ports between subscriber cards and flexibly assign connectivity types as needed, you can easily customize individual nodes, and the entire system, to fit the needs of your specific application. With Artist-1024 you get more than just full IP standards compliance and massive port densities. What you get is the full power of the sophisticated Artist intercom ecosystem, a versatile and future-proof solution that continues to evolve with industry developments and standards. With Riedel, you have a partner on your IP journey who is committed to push the boundaries of innovation and is passionate about shaping the future of production communications.



One client card, many connectivity types:  
The software-definable Universal Interface Card (UIC) with flexible licensing

# ARTIST

## The Advanced Communications Platform

### Artist-1024

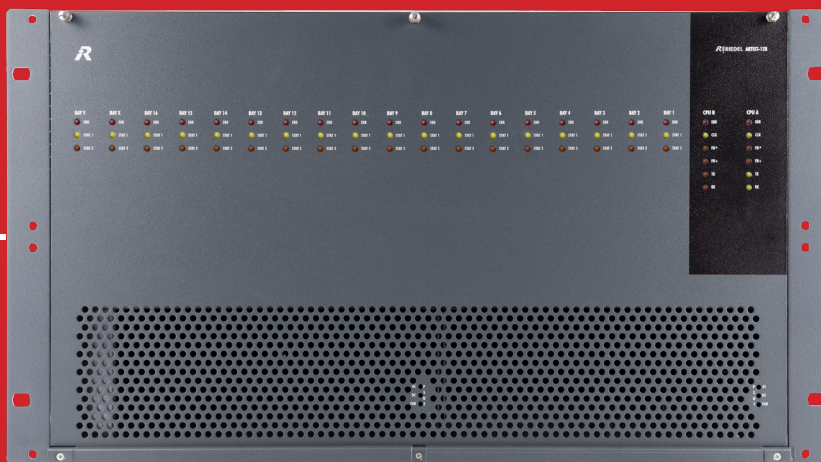
- 2 RU frame with up to 1024 ports
- Flexible licensing scheme
- Multiple independent sync domains per node
- SMPTE 2022-7 and N+1 redundancy schemes
- E-ink display
- Reversible front-to-rear cooling

### UNIVERSAL INTERFACE CARD (UIC)

- Software-defined hardware that can be used as a router/processor, Artist fiber, MADI or Dante
- SMPTE 2110-30 (AES67) device
- Scalable from 8 to 128 ports

### Artist-32 / 64 / 128 / 1024

- Decentralized architecture with a fiber ring allowing rapid merging
- Seamless integration of Bolero
- SmartPanel user interface
- Supports current IP standards and architecture will support future standards
- Fastest configuration software
- Richest feature set (key functions, logics, options, etc.)
- Powerful configuration tools (MCR, RRCS, SNMP, Trunking)



### 32 / 64 / 128

- Unparalleled connectivity
- SMPTE2110-30/31 (AES67)
- VoIP
- MADI
- Dante
- AVB
- AES3
- Analogue
- GPIO


## INTERCOM SYSTEM

|  |                            |
|--|----------------------------|
| Product name                           | Artist Intercom            |
| Non-blocking subscriber ports per ring | 1024                       |
| Artist nodes per ring                  | 50+                        |
| Trunked Artist rings                   | 25+                        |
| Subscriber ports in trunked systems    | 6000+                      |
| Redundant fiber switchover             | Fully automatic & seamless |

## INTERCOM NODES

|                                       |                      |                      |                      |  |
|---------------------------------------|----------------------|----------------------|----------------------|--|
| Product name                          | ARTIST-32            | ARTIST-64            | ARTIST-128           | ARTIST-1024  |
| Subscriber ports per node (min - max) | 8-32                 | 8-64                 | 8-128                | 16-1024  |
| Subscriber ports per card (min - max) | 8                    | 8                    | 8                    | 8-128  |
| CPU / NIC card bays                   | 2                    | 2                    | 2                    | 2  |
| Client / subscriber card bay          | 4                    | 8                    | 16                   | 8  |
| GPIO card bays                        | Client card bays     | Client card bays     | Client card bays + 2 | -  |
| Sync card / module bays               | 2                    | 2                    | 2                    | -  |
| Display                               | -                    | -                    | -                    | E-ink  |
| Mounting options                      | 19" Rack Ears        | 19" Rack Ears        | 19" Rack Ears        | "19" Rack Ears<br>(offset 0,2,4,5,7,5cm)<br>180° rotatable |
| Width                                 | 19" / 483mm          | 19" / 483mm          | 19" / 483mm          | 19" / 483mm  |
| Height                                | 2RU / 88mm           | 3RU / 130mm          | 6RU / 264mm          | 2RU / 88mm   |
| Depth                                 | 370mm                | 370mm                | 370mm                | 404mm  |
| Weight (inc. PSUs and fan units)      | 5,15kg               | 5,6kg                | 11,8kg               | 6,3kg  |
| Airflow direction                     | side-to-side         | side-to-side         | front-to-rear        | front-to-rear (reversible)                                 |
| Redundant PSUs                        | ✓                    | ✓                    | ✓                    | ✓  |
| Hot swappable PSUs                    | ✓                    | ✓                    | ✓                    | ✓  |
| Load-sharing PSUs                     | -                    | -                    | -                    | ✓  |
| Input voltage                         | 90-264 VAC, 50/60 Hz | 90-264 VAC, 50/60 Hz | 90-264 VAC, 50/60 Hz | 85-264 VAC, 50/60 Hz                                       |
| Power consumption                     | max. 200W            | max. 250W            | max. 400W            | max. 225W  |

## INTERFACE / SUBSCRIBER CARDS

|                       |  |            |            |                       |
|-----------------------|--|------------|------------|-----------------------|
| Artist Fiber          |  CPU-128F | CPU-128F   | CPU-128F   | UIC-128 or UIC-128-II |
| SMPTE 2110-30 (AES67) | AES67-108  | AES67-108  | AES67-108  | UIC-128 or UIC-128-II |
| MADI                  | MADI-108   | MADI-108   | MADI-108   | UIC-128 or UIC-128-II |
| VoIP                  | VoIP-108   | VoIP-108   | VoIP-108   | -                     |
| Dante                 | Dante-108  | Dante-108  | Dante-108  | UIC-128-II            |
| AVB                   | AVB-108  | AVB-108    | AVB-108    | -                     |
| AES3                  | AES-108  | AES-108    | AES-108    | -                     |
| ANALOG                | ANALOG-108   | ANALOG-108 | ANALOG-108 | -                     |
| GPI/O                 | GPI-108  | GPI-108    | GPI-108    | -                     |

## REDUNDANCY

|                 |   |   |   |   |
|-----------------|---|---|---|---|
| CPU / NIC       | ✓ | ✓ | ✓ | ✓ |
| Dual Fiber Ring | ✓ | ✓ | ✓ | ✓ |
| N+1 Redundancy  | - | - | - | ✓ |
| SMPTE 2022-7    | - | - | - | ✓ |

## IP NETWORKING & CONNECTIVITY

|                                     |                        |                        |                        |                 |
|-------------------------------------|------------------------|------------------------|------------------------|-----------------|
| SMPTE 2110-10 / -30 / -31           | ✓ / ✓ / ✓              | ✓ / ✓ / ✓              | ✓ / ✓ / ✓              | ✓ / ✓           |
| SMPTE 2110-30                       | Level A & B            | Level A & B            | Level A & B            | Level A & B & C |
| PTP                                 | IEEE 1588:2008         | IEEE 1588:2008         | IEEE 1588:2008         | IEEE 1588:2008  |
| ST-2059-2 / Media Profile / AES R16 | ✓ / ✓ / ✓              | ✓ / ✓ / ✓              | ✓ / ✓ / ✓              | ✓ / ✓ / ✓       |
| IP Layer3 WAN                       | VoIP, SMPTE 2110-30/31 | VoIP, SMPTE 2110-30/31 | VoIP, SMPTE 2110-30/31 | SMPTE 2110-30   |
| IGMPv3 / SSM                        | ✓ / ✓                  | ✓ / ✓                  | ✓ / ✓                  | ✓ / ✓           |
| JT-NM TR-1001:1                     | ✓                      | ✓                      | ✓                      | ✓               |
| DHCP                                | ✓                      | ✓                      | ✓                      | -               |
| DNS                                 | ✓                      | ✓                      | ✓                      | -               |
| NMOS IS-04 / -05                    | ✓ / ✓                  | ✓ / ✓                  | ✓ / ✓                  | ✓ / ✓           |
| SDP import / export                 | ✓ / ✓                  | ✓ / ✓                  | ✓ / ✓                  | ✓ / ✓           |
| In-band / out-band control          | - / ✓                  | - / ✓                  | - / ✓                  | ✓ / ✓           |



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