

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Advanced Simulation Technology RIU* at our website: *Click HERE*

ASTi Remote Interface Unit (RIU)

Remote Audio & Digital I/O Interface Solution



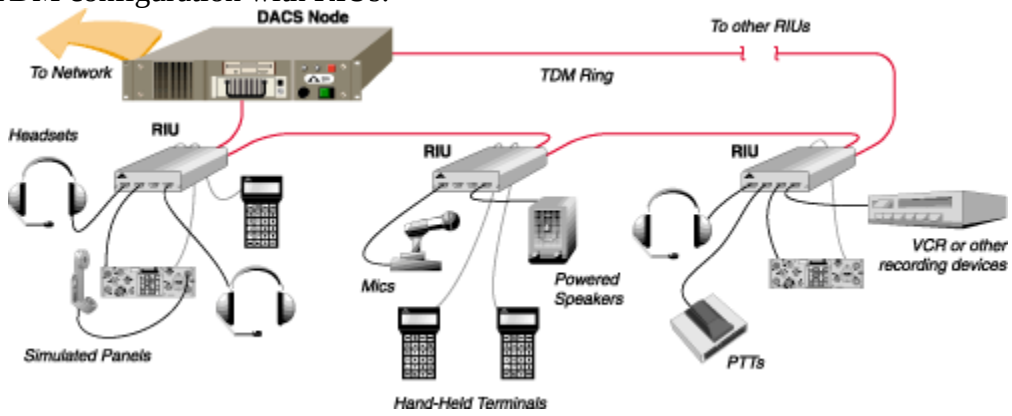
The Remote Interface Unit (RIU) is a small, DSP-based, networked device providing remote audio and digital I/O sampling and conversion for multiple operators in communications networks. Used in conjunction with ASTi's DACS processing equipment and Time Division Multiplex (TDM) technology, the RIU is used to create an easily scalable network of stand-alone communication nodes. This flexible architecture addresses both audio and I/O distribution problems encountered in large, multi-user applications.

In a typical configuration, operator headsets, speakers, communication panels, and other equipment are all connected to the RIU. Multiple RIUs are connected along standard network cable to form a high-speed TDM ring. Digital audio and control information are passed back and forth between each RIU and a centrally located DACS processing node.

A DSP-based TDM master, resident in the DACS, provides TDM network control and real-time mixing of any combination of RIU audio channels, as well as synthesized or recorded sounds. Radio effects such as noise injection, fade, frequency matching, squelch, and occulting are also handled. Signals are switched and routed based on both a user-defined model resident in the DACS processing node, and control data from simulated communications panels or Hand-Held Terminals connected directly to the RIUs.

Depending on the application, up to 14 RIUs or 24 voice channels can be supported by a single TDM ring. Up to three TDM rings are supported in a single, central DACS processing node. DACS units can also be networked, providing a highly scalable architecture suitable for applications with just a few operators to applications involving a large number of remote operators.

Typical TDM configuration with RIUs:



ASTi RIU Features

Audio I/O

- Four audio Inputs/Outputs provide support for multiple operators and audio equipment at a single remote node
- Balanced line-level Inputs and Outputs for increased noise immunity and ease of interfacing
- 16 bit delta/sigma converters for superior sound quality
- Can drive military headsets directly
- Capacitively-coupled or direct-coupled output
- Easily configurable input gains

Digital I/O

- Digital Input supplied with each audio channel for direct connection of PTT, reducing delays and voice cutoff
- Opto-Isolated Digital Output supplied with each audio channel for equipment or driving LEDs

Serial I/O

- Two serial ports for interfacing to simulated communications panels, ASTi Hand-Held Terminals, and general purpose I/O modules
- Supports multi-dropped I/O modules

TDM Ring/RIU Architecture

- Up to 14 RIUs and/or 24 voice channels supported on a single digital TDM ring providing multiple user interfaces and a highly scalable architecture
- Convenient RIU installation at remote locations close to operators and equipment
- RIU and digital TDM ring reduces cabling requirements and noise susceptibility typically encountered with analog solutions

Packaging

- Small, self-contained prepackaged unit fits easily on the desktop or can be 19" rackmounted with available mounting kit
- Board-level units available at request for embedding in customer equipment

General

- DSP based for maximum signal processing capability and future feature enhancement
- Combined with ASTi's DACS and state machine software, the RIU is the distributed audio conversion building block for constructing small and large, stand-alone communications simulation and conferencing networks

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ASTi RIU Specifications

Audio Inputs (per channel)	
Input Impedance:	> 10 kOhm, Balanced
Input Level:	+/- 2.25V peak max
Input Gain:	User configured 0-60 dB
Audio Outputs (per channel)	
Output Impedance:	Balanced
Output Level:	+/- 2.25V peak max
Output Power:	1W RMS into 8 Ohm bridged load, 250mW into 8 Ohm single ended
Digital Inputs	
Quantity:	One per audio channel
Configuration:	2 pins each audio connector (ground and sense pin)
Digital Outputs	
Quantity:	One per audio channel
Configuration:	Opto-Isolated, 120mA, 2 pins on each audio connector
Serial Ports	
Quantity:	Two
Type:	RS-422
Connection:	Standard RJ12 Jack (6 pin)
TDM Ring	
Connection:	Standard RJ45 Jacks (8 pin)
Mechanical	
Approximate Size:	5.5"W x 1.5"H x 7.5"D
Mounting:	Desktop, 19" rackmount kit available
General	
Power:	+5VDC, 1.1A max, fuse protected (plug-in AC/DC converter supplied with each unit)
Audio Connection:	9 pin female sub-min "D" (1 audio input/output and 1 digital input/output each connector)
TDM Ring:	Maximums - 300 ft. length, 14 RIUs/ring, 24 operators/ring
TDM Cabling:	Standard 4 pair, Category 5 twisted pair network cable

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP