



URIU

Universal
Radar
Interface Unit



RSI's Universal Radar Interface Unit is an off-the-shelf PC based radar data translator system supporting allied armed forces around the world. The URIU receives radar plot and track messages and employs RSI's Tracker Module to generate correlated track messages for output on selected data link interfaces. The URIU is highly configurable by utilizing RSI's Operational Core user interface package and then layering multiple radar and data link interface translation packages from RSI's Interface Package Library (IPL). New customer application-specific requirements are easily accommodated.

Redondo Systems Incorporated (RSI) has been a leading provider of products and services in the areas of tactical data link and radar interface processing for over 20 years. RSI's product lines include fielded tactical data link and radar communications systems, radar and data link simulation systems, as well as stand-alone software packages and custom hardware solutions. RSI's major customers include:

- ◆ U.S. Army
- ◆ U.S. Air Force
- ◆ U.S. Navy
- ◆ U.S. Marine Corps
- ◆ Raytheon
- ◆ Northrop Grumman
- ◆ Lockheed Martin
- ◆ Rockwell Collins
- ◆ Thomson CSF
- ◆ EADS
- ◆ BAE
- ◆ SAIC



URIU Translation Capabilities Include:

◆ Standard Radar Interfaces

- ◆ AN/TPS-70 (Track Messages)
- ◆ AN/TPS-43 (Plot Messages, Tracker Option required)
- ◆ AN/MPQ-50 (Plot Messages, Tracker Option required)
- ◆ AN/FPS-117 (Plot Messages, Tracker Option required)

◆ Optional Radar Interfaces

- | | |
|--------------|---------------|
| ◆ FAAD/GBS | ◆ AN/ARN-118A |
| ◆ CD2 | ◆ AN/ASN-130 |
| ◆ ASTERIX | ◆ AN/MPQ-57 |
| ◆ AN/APG-71 | ◆ AN/TPS-32 |
| ◆ AS/APS-138 | ◆ AN/TPS-75 |
| ◆ AN/APY-2 | ◆ AN/TPX-46 |
| ◆ AN/APX-76 | ◆ AN/UPX-23 |
| ◆ AN/APX-100 | ◆ AN/UPX-27 |
| ◆ AN/APX-103 | ◆ SPS-96/125 |
| ◆ AN/ARN-118 | ◆ SPS-48C |

◆ Standard Data Link Interfaces

- ◆ IDL

◆ Optional Data Link Interfaces

- | | |
|---|---|
| ◆ Link 16
MIL-STD-6016B
MIL-STD-6016A
JTIDS TIDP
Smart Host and terminal/network emulations:
Class 2H (1553B)
Class 2M (ADDSI)
MIDS (multiple I/Fs) | ◆ NATO Link 1
STANAG 5501 Ed 4
STANAG 5501 Ed 2 |
| ◆ Link 11, Link 11B
MIL-STD-6011B
MIL-STD-6011A
STANAG 5511 Ed5
STANAG 5511 Ed4
JCS Pub 6
TDS and DTS/
network emulations:
NTDS (Parallel)
ATDS (Serial)
MIL-STD-188-203
MIL-STD-188-212 | ◆ ATDL-1
MIL-STD-6013A |
| | ◆ UDL |



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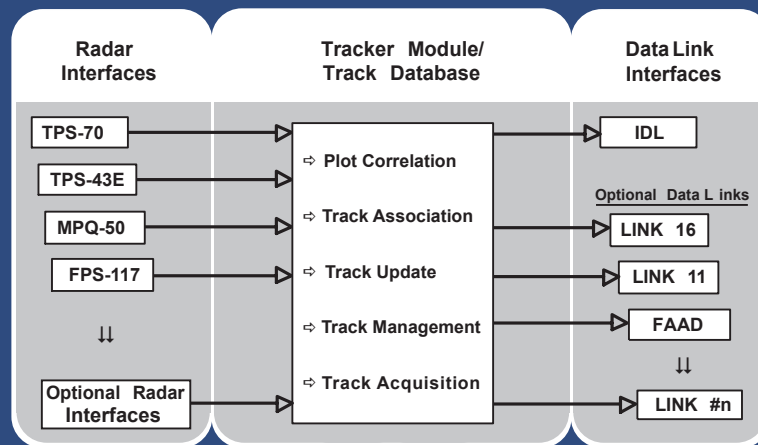
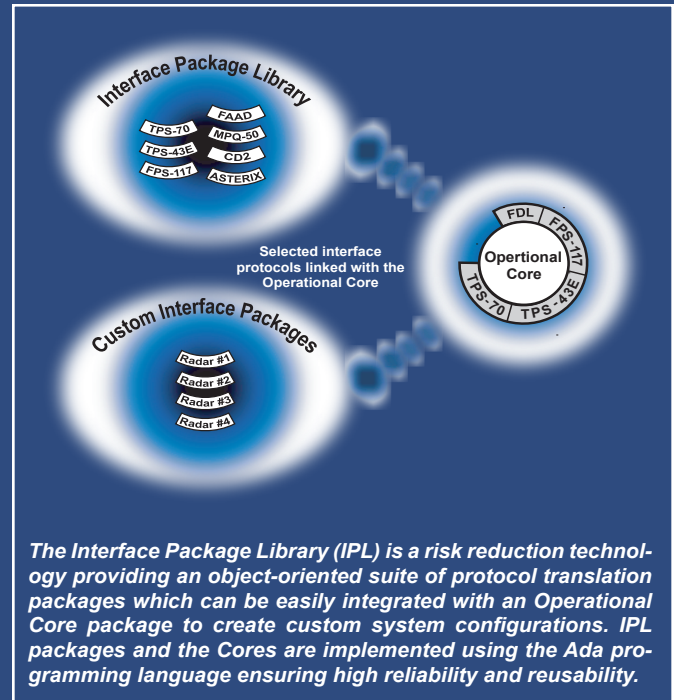
URIU System Features

- ◆ **User Interface**
 - ◆ Multiple tactical displays
 - ◆ Multiple hook readouts
 - ◆ Operator input dialogs
 - ◆ System operational status
- ◆ **Hardware Configuration**
 - ◆ Ruggedized chassis
 - ◆ Rack mount option
 - ◆ Off-the-shelf I/O cards
 - ◆ Dual display monitors
- ◆ **Track Database**
 - ◆ 2000 objects (minimum)
- ◆ **Network Support**
 - ◆ Multiple workstations
 - ◆ Distributed processing
 - ◆ Integrated situation awareness
- ◆ **GPS Interfaces**
 - ◆ GPS Sync, IRIG-B
- ◆ **Automatic Initialization**
 - ◆ Turn-key operation
 - ◆ User defined adaptation parameters
- ◆ **Chassis Details**
 - ◆ Rack mounted
 - ◆ Dimensions (W x H x D) 19.00x6.95x17.06in
 - ◆ Weight 31.5lbs
 - ◆ Multiple power supply options
- ◆ **Operating Environment**
 - ◆ Temperature: 10 to +50°C
 - ◆ Humidity: 8 to 90% RHNC
- ◆ **Storage Environment**
 - ◆ Temperature: -40 to +60°C
 - ◆ Humidity: 8 to 90% RHNC
- ◆ **Agency Approvals**
 - ◆ FCC Conformity with 47 CFR Part 15, Subpart B, Class A
 - ◆ CE Conformity with EU EMC Directive 89/336/EEC, EU Low Voltage Directive 72/23/EEC
 - ◆ UL Recognized to UL 1950, 2nd Ed: 1993, cUL/CAN/CSA-C22.2 No.950-93

URIU System Description

URIU is a PC based radar data translation system that uses ruggedized, commercial off-the-shelf hardware configurations for enhanced reliability and durability. Once installed and configured, the URIU will automatically begin servicing translations for the configured radars and data links. Subsequent system restarts require no operator interaction making the URIU a complete turn-key system.

The URIU receives input radar plot and track messages from the configured radar interfaces. Input track messages (e.g. TPS-70 radar) are translated directly to each configured output data link protocol. Input radar plot messages are first processed by RSI's Tracker Module to correlate received raw radar data into established tracks in the track database. The Tracker Module is a fully configurable radar target tracker allowing control of azimuth and range error tolerances, IFF azimuth error tolerance, minimum plot range, and track number assignment blocks. External data link interfaces configured into the URIU independently scan the Track Database both on a periodic and on-demand basis to generate the appropriate messages for each object. Message generation and processing is based on the requirements of the associated specification for each configured external interface.



URIU is normally configured as a single workstation supporting multiple data link and radar interfaces. The number of external interfaces supported by a single workstation is virtually unlimited. When more external interfaces are required, the URIU can be configured as a distributed network supporting multiple integrated workstations and

processing nodes. Additional processing nodes can easily be added when elements of the system are physically separated. A single display option is available for standalone, turn-key applications.

