

## ODIN

### OMNEO Digital Intercom



The ODIN Digital Intercom is a highly scalable intercom system in a 1RU (Rack Unit) package. As your capacity evolves, a single ODIN can grow from 16 ports to a maximum of 128 ports. Up to eight ODIN frames can be interconnected via optical Inter-Frame Links creating a single matrix with up to 1024 ports. The total number of licensed ports may be allocated freely to any port hardware type supported by the unit.

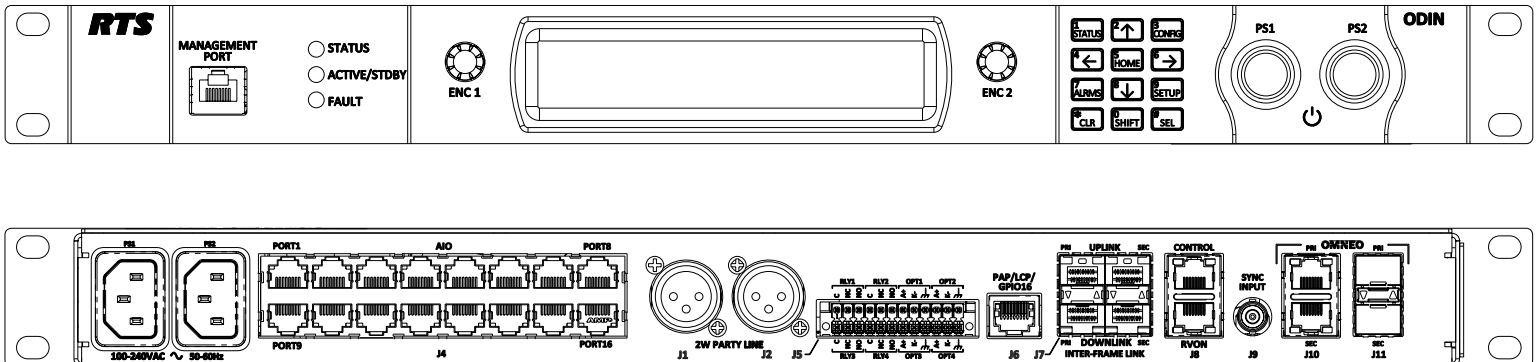
The front panel has been designed to incorporate a User Interface as an alternative option to AZedit that supports the most common setup and configuration tasks.

Featuring connectors for AIO, OMNEO and TW (two-wire) technology, ODIN supports keypad technology going forward and, as always, RTS legacy keypanels. OMNEO is standard on RJ-45 connectors or is available using optional Optical Fiber SFP connectors.

## Features

- A robust digital matrix in a compact 1RU space
- Built-in OMNEO technology
- Redundant power supplies
- Front panel user interface gives easy access to the most common configuration tasks to allow quick modifications to the system
- Energy-efficient design, uses less than 50 W of power

## Line Drawing



# Specifications

## Power Supply:

Type.....Locking IEC 320 C14 style connector  
(2 connectors, fully redundant load-sharing power supplies)  
AC Input..... 100 VAC – 240 VAC, 60/50 Hz,  
0.5 A / 0.35 A

### Maximum Power

Consumption ..... 47 W (based on 120 VAC)

**Note:** Lighted power buttons on front panel control DC voltage feed to internal circuitry; they do not disconnect AC from the internal power supplies. Power cords must be fully removed from unit to safely disengage internal power.

## Environmental:

### Operating

Temperature ..... 32° F – 113° F (0° C – 45° C)

### Storage

Temperature ..... -4° F – 158° F (-20° C – 70° C)

## Dimensions:

19" w/ rack ears (17.3" w/o rack ears) W x 1.7" H x 14.3" D (including connectors)  
(482.6 mm w/ rack ears [439 mm w/o rack ears] W x 43.7 mm H x 363.5 mm D [including connectors])

## Weight:

ODIN frame ..... 11.5 lbs (5.2 kg)

Optional Mounting Bracket ..... 0.86 lbs (390 grams)

## AIO 4-Wire Analog:

Connectors ..... 16 RJ-45 connectors  
Signal Format ..... Differential RX/TX audio with differential RS-485 control data

Wiring Scheme ..... Both 568B & USOC supported  
A/D and D/A Resolution ..... 24 bits

Max Input Level (balanced) ..... +20 dBu w/o clipping  
Digital Input Gain ..... Programmable (-20 dB – +20 dB)

### Input Frequency

Response ..... +1 dB/-3 dB from 100 Hz – +20 kHz

THD+N (8dBu input, unity gain) ..... 0.025% non-weighted@1 kHz  
<0.075% non-weighted, 100 Hz – +20 kHz

Nominal Input Impedance ..... >22 kΩ

Nominal Output Level ..... 8 dBu

Digital Output Gain ..... Programmable (-20 dB – +20 dB)

### Maximum Output

Level (balanced) @ 600 Ohms.....20 dBu w/o clipping

### Output Frequency

Response ..... +1 dB / -3 dB from 100 Hz – +20 kHz

Output Noise Floor ..... <-70 dBu

Crosstalk Isolation ..... >80 dB

## 2-Wire Party Line Analog:

Connector ..... two 3-pin female XLR connectors

Modes/Port supported ..... RTS CH1, RTS CH2

Audiocom (1 channel)

Clear-Com (1 channel)

4W/2W Echo Return Loss ..... >30 dB

## Unbalanced Operation (RTS/Clear-Com)

Output Level ..... 0 dBu (nominal)

Expected Termination Impedance ..... 200 Ω

Noise Contribution ..... <-70 dBu

THD+N (w/ nominal input) ..... <0.5%, 200 Hz – 7.3 kHz

Bridging Impedance ..... >10 kΩ

CALL Signaling ..... 20 kHz (RTS mode)

12 VDC (Clear-Com mode)

MIC KILL Signaling ..... 24 kHz (RTS mode)

## Balanced Operation (Audiocom)

Output Level ..... 0 dBu (nominal)

### Expected Termination

Impedance ..... 300 Ω

Noise Contribution ..... <-70 dBu

THD+N (with nominal input) ..... <0.5%, 200 Hz – 7.3 kHz

Bridging Impedance ..... >10 kΩ

CALL Signaling ..... 20 kHz (Audiocom mode)

MIC KILL Signaling ..... 24 kHz (Audiocom mode)

## General Purpose Input/Output Ports:

### Relays (4 Relays)

Type ..... SPDT

Contacts ..... Common (C)

Normally Closed (NC)

Normally Open (NO)

Contact Rating ..... 1A @ 48 VDC

### Inputs (4 Inputs)

Type ..... Optically Coupled

Input Voltage ..... 5 VDC – 12 VDC on A+

**Note:** A+ is internally pulled to +5 VDC. Connect K- to chassis ground to activate.

## PAP/LCP/GPIO Port:

Connector ..... RJ-45

Format ..... RS-485 control data only (no audio)

## Inter-Frame Link Port

### (2 UPLINK/2 DOWNLINK):

**Note:** Supports expansion and connection of up to eight ODIN frames.

Fiber Connector Type ..... Small Form

Factor Pluggable (SFP)

Multimode ..... Finisar FTLF8519P3BNL

500m / 2.125 Gbps

Single Mode ..... Finisar FTLF1421P1BTL

15km / 2.67 Gbps

Speed ..... 2 Gbps

LED Indicator ..... Optical Signal Present

**Note:** SFF-8472 fiber diagnostics supported

## Control Port:

Connector ..... RJ-45

Format ..... IEEE 802.3 compliant

Speed ..... 10/100/1000 Mbps

LEDs ..... Speed and Link/Activity

## Sync Input Port:

Connector ..... BNC

Termination Impedance ..... 75 Ω

Input Frequency Range ..... 48 kHz ±25 ppm

Input Level ..... 5V TTL Compatible

## OMNEO Port (primary and secondary):

Maximum Capacity ..... 128 Full-duplex ports

Copper Connector Type ..... RJ-45

Format ..... IEEE 802.3 compliant

Copper Ethernet Speed ..... 100/1000 Mbps

LEDs ..... Speed and Link/Activity

Fiber Connector Type ..... Small Form

Factor Pluggable (SFP)

Multimode ..... Finisar FTLF8519P3BNL

500m / 2.125Gbps

Single Mode ..... Finisar FTLF1421P1BTL

15km / 2.67Gbps

Fiber Speed ..... 100/1000Mbps

LEDs ..... Speed and Link/Activity

LED Indicator ..... Optical Signal Present

**Note:** SFF-8472 fiber diagnostics supported

## TFT Display:

Active Area ..... 120.10 mm (wide) x 18.77 mm (high)

Dot Resolution ..... 576 x 90 pixels

Color Resolution ..... 16-bit (64K) RGB color

View Angle ..... 80° (typical, all directions)

Protective Lens ..... Anti-Glare / Anti-Reflective

## Front Panel Management Port:

Connector ..... RJ-45

Format ..... IEEE 802.3 compliant

Speed ..... 10/100/1000 Mbps

LEDs ..... Speed and Link/Activity

## Agency Compliance:

### Emissions (Class A)

- EN 55032:2012/AC:2013
- KN32 w RRA Public Notification 2016-26 & RRA Announce 2016-79
- AS/NZS CISPR 32:2015
- VCCI-CISPR 32:2016
- ICES-003, Issue 6:2016, Updated April 2017
- FCC Part 15 Subpart B
- Chinese National Standard 13438 (2008)

### Immunity

- EN55024:2010
- KN32 w RRA Public Notification 2016-26 & RRA Announce 2016-79

### Safety

- UL 60950-1 and CAN/CSA C22.2 No.60950-1-07
- UL 62368-1
- Japanese PSE compliance

# Order Information

Order No.	Description
ODIN16NOCORD	ODIN 16 no cord
ODIN32NOCORD	ODIN 32 no cord
ODIN64NOCORD	ODIN 64 no cord
ODIN128NOCORD	ODIN 128 no cord

Order No.	Description
ODIN16PORTUPG	ODIN 16 port upgrade
OM-SM SFP ODIN	Fiber module single mode ODIN
OM-MM FIBER	Multimode Fiber Module

The specification information is subject to change without notification. Brand names mentioned are the property of their respective companies.