

## ODIN OMNEO Digital Intercom



The ODIN Digital Intercom is a highly scalable intercom system in a 1RU (Rack Unit) package. As your capacity needs to evolve, a single ODIN can grow from 16 ports to a maximum of 128 ports. A maximum of eight ODIN units can be interconnected via an optical Inter-Frame Link 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.

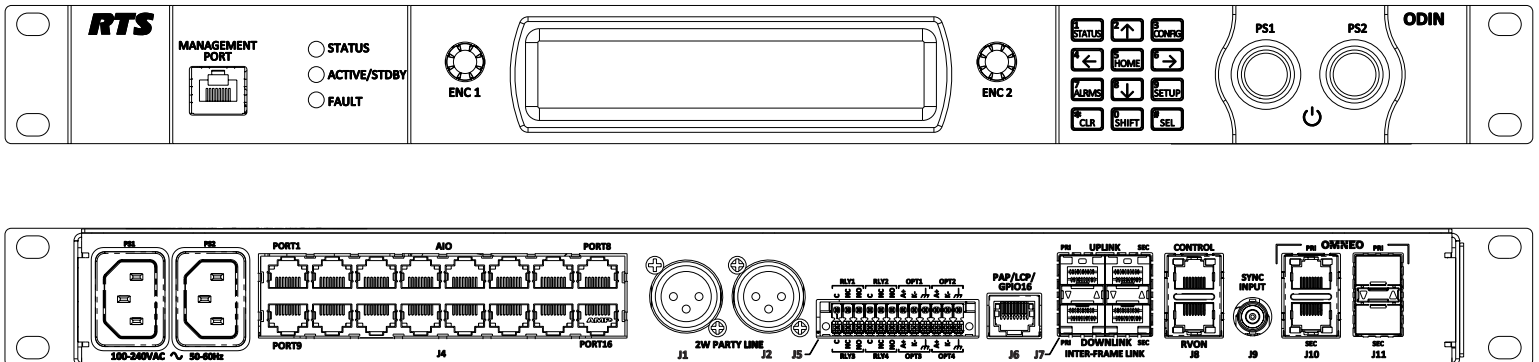
The front panel has been designed to incorporate a User Interface as an alternative option to AZedit that supports the most common setup and configuration tasks. The AZedit and IPedit software applications have been updated to support ODIN.

Featuring connectors for AIO, OMNEO and two-wire technology, ODIN supports keypanel 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 50W of power

## Line Drawing



# Specifications

## Power Supply:

Type..... Locking IE320 C14 style connector  
(2 connectors, fully redundant load-sharing power supplies)  
AC Input..... 100VAC – 240VAC, 60/50Hz,  
0.5A / 0.35A

## Maximum Power

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

**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 Matrix..... 11.5lbs (5.2kg)  
Optional Mounting Bracket ..... 0.86lbs (390grams)

## 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 ..... 24bits  
Max Input Level (balanced) ..... +20dBu w/o clipping  
Digital Input Gain ..... Programmable (-20dB – +20 dB)

## Input Frequency

Response ..... +1dB/-3dB from 200Hz – 20kHz  
THD+N (8dBu input, unity gain) ..... 0.025% non-weighted@1kHz  
<0.075% non-weighted, 100Hz – 20kHz  
Nominal Input Impedance..... >22kΩ  
Nominal Output Level ..... 8dBu  
Digital Output Gain ..... Programmable (-20dB – 20dB)

## Maximum Output

Level (balanced) @ 600 Ohms.....20 dBu w/o clipping  
Output Frequency  
Response ..... +1dB / -3dB from 200Hz – 20kHz  
Output Noise Floor ..... <-70dBu  
Crosstalk Isolation ..... >80dB

## 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 ..... >30dB

## Unbalanced Operation (RTS/Clear-Com)

Output Level ..... 0 dBu (nominal)  
Expected Termination Impedance ..... 200 Ω  
Noise Contribution ..... <-60 dBu  
THD+N (w/ nominal input) ..... <0.5%, 200Hz– 8kHz  
Bridging Impedance..... >10kΩ  
CALL Signaling ..... 20kHz (RTS mode)  
12VDC (Clear-Com mode)  
MIC KILL Signaling ..... 24kHz (RTS mode)

## Balanced Operation (Audiocom)

Output Level ..... 0 dBu (nominal)  
Expected Termination Impedance..... 300Ω  
Noise Contribution ..... <-60 dBu  
THD+N (with nominal input) ..... <0.5%, 200Hz – 8kHz  
Bridging Impedance..... >10 kΩ  
CALL Signaling ..... 20kHz (Audiocom mode)  
MIC KILL Signaling ..... 24kHz (Audiocom mode)

## General Purpose Input/Output Ports:

### Relays

Type..... SPDT  
Contacts ..... Common (C)  
Normally Closed (NC)  
Normally Open (NO)  
Contact Rating..... 1A @ 30 VDC

### 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 / 2.125Gbps  
Single Mode..... Finisar FTLF1421P1BTL  
15km / 2.67Gbps  
Speed ..... 2Gbps  
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  
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  
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.