

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.

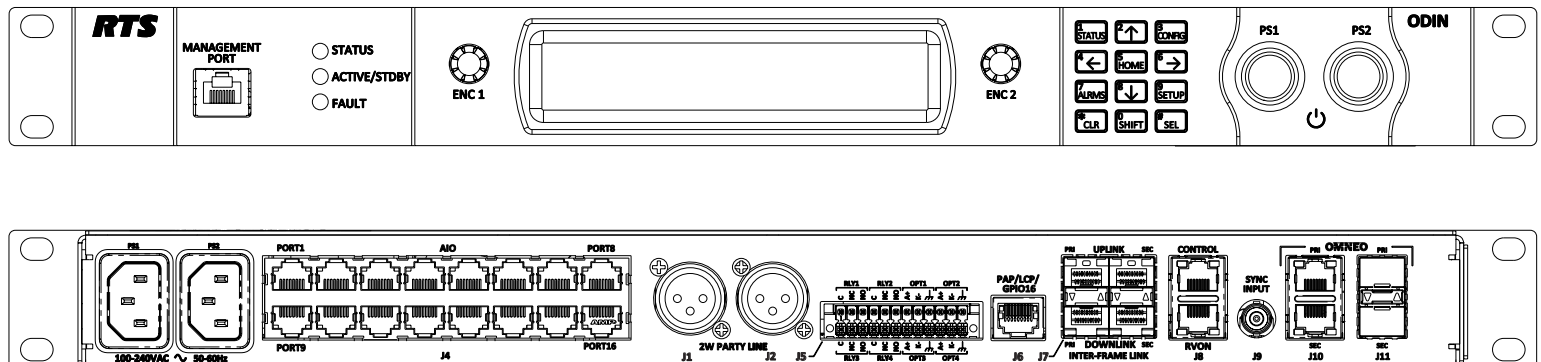
The front panel has been designed to incorporate a User Interface as an alternative option to AZedit that supports the most common setup and configuration tasks.

Featuring connectors for AIO, RVON, OMNEO and TW (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 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

Consumption47 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

Temperature32° 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 frame11.5 lbs (5.2 kg)

Optional Mounting Bracket0.86 lbs (390 grams)

AIO 4-Wire Analog:

Connectors16 RJ-45 connectors
Signal FormatDifferential RX/TX audio with
differential RS-485 control data

Wiring SchemeBoth 568B & USOC supported
A/D and D/A Resolution24 bits
Max Input Level (balanced)+20 dBu w/o clipping
Digital Input GainProgrammable
(-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 Level8 dBu

Digital Output GainProgrammable
(-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:

Connectortwo 3-pin female XLR connectors
Modes/Port supportedRTS CH1, RTS CH2

Audiocom (1 channel)

Clear-Com (1 channel)

4W/2W Echo Return Loss>45 dB

Unbalanced Operation (RTS/Clear-Com)

Expected Termination Impedance200 Ω

Noise Contribution<-70 dBu

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

Bridging Impedance.....>10 kΩ

CALL Signaling20 kHz (RTS mode)

12 VDC (Clear-Com mode)

MIC KILL Signaling24 kHz (RTS mode)

Balanced Operation (Audiocom)

Expected Termination Impedance300 Ω

Noise Contribution<-70 dBu

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

Bridging Impedance.....>10 kΩ

CALL Signaling20 kHz (Audiocom mode)

MIC KILL Signaling24 kHz (Audiocom mode)

General Purpose Input/Output Ports:

Relays (4 Relays)

Type.....SPDT

ContactsCommon (C)

Normally Closed (NC)

Normally Open (NO)

Contact Rating1A @ 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:

ConnectorRJ-45

FormatRS-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 TypeSmall Form

Factor Pluggable (SFP)

MultimodeFinisar FTLF8519P3BNL

500m / 2.125 Gbps

Single Mode.....Finisar FTLF1421P1BTL

15km / 2.67 Gbps

Speed2 Gbps

LED Indicator.....Optical Signal Present

Note: SFF-8472 fiber diagnostics supported

Control Port:

ConnectorRJ-45

FormatIEEE 802.3 compliant

Speed10/100/1000 Mbps

LEDs.....Speed and Link/Activity

Sync Input Port:

ConnectorBNC

Termination Impedance75 Ω

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

Input Level5V TTL Compatible

OMNEO Port (primary and secondary):

Maximum Capacity128 Full-duplex ports

Copper Connector TypeRJ-45

FormatIEEE 802.3 compliant

Copper Ethernet Speed100/1000 Mbps

LEDs.....Speed and Link/Activity

Fiber Connector TypeSmall Form

Factor Pluggable (SFP)

MultimodeFinisar FTLF8519P3BNL

500m / 2.125Gbps

Single Mode.....Finisar FTLF1421P1BTL

15km / 2.67Gbps

Fiber Speed100/1000Mbps

LEDs.....Speed and Link/Activity

LED Indicator.....Optical Signal Present

Note: SFF-8472 fiber diagnostics supported

RVON

Compression	Bit Rate	Coding Delay	Playout Delay	Bandwidth	Sample Rate
G.711	64 kbps	125 μs	20-60 ms	160-224 kbps	8 k
G.729AB	8 kbps	10 μs	20-120 ms	32-112 kbps	8 k
G.722	64 kbps	4 μs	20-60 ms	160-224 kbps	16k

* Data rate depends codec selection

Note: The Playout Delay and Bandwidth depend on
the configured amount of audio per packet.

TFT Display:

Active Area120.10 mm (wide) x 18.77 mm (high)

Dot Resolution576 x 90 pixels

Color Resolution16-bit (64K) RGB color

View Angle80° (typical, all directions)

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

Front Panel Management Port:

ConnectorRJ-45

FormatIEEE 802.3 compliant

Speed10/100/1000 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.