

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.

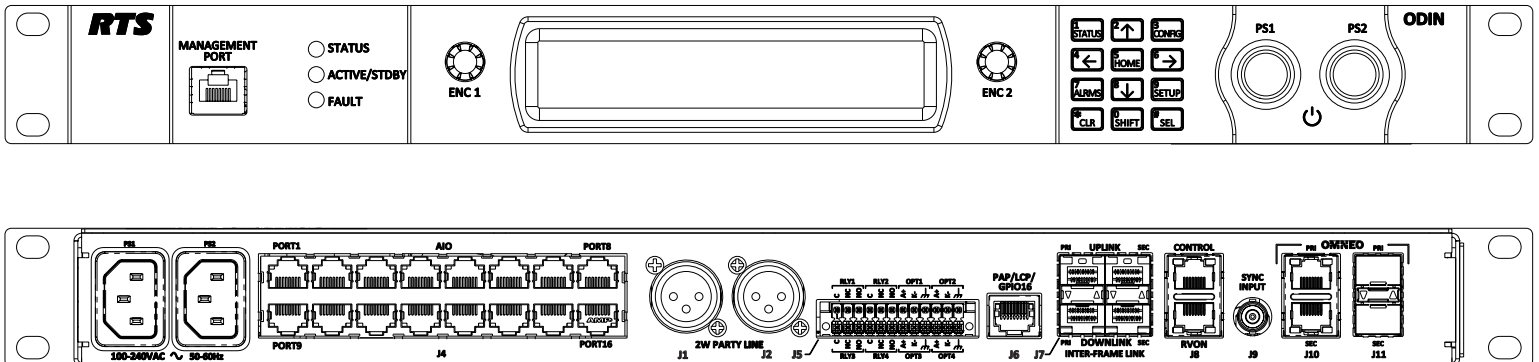
The front panel has been designed to incorporate a User Interface as an alternative option to AZedit that supports the most common setup and configuration tasks.

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 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 >45 dB

Unbalanced Operation (RTS/Clear-Com)

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)

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 @ 30 VDC

Inputs (4 Inputs)

Type.....Optically Coupled Input
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

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 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

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