

NOMAD Wireless Intercom - AP-1000



The RTS Nomad Wireless Intercom System is an integrated digital wireless communications system consisting of belt packs and access points communicating over DECT (Digital Enhanced Cordless Telecommunications) wireless technology. Communication between the access points and the Matrix uses OMNEO technology, the Dante-based platform for high-quality audio over IP. DECT is a license-free, globally accepted standard for wireless communication.

The AP-1000 can be mounted in a variety of methods from wall mounting, handrail, poles and microphone stands (ordered separately). The AP-1000 provides radio coverage for multiple belt packs. The coverage area varies according to the environment and placement of the AP-1000. Coverage areas vary based on the environment, with a maximum indoor range of approximately 200 meters and a maximum outdoor range of about 300 to 500 meters.

The solid design of the RTS Nomad Wireless Intercom System is matched by the strength and flexibility of the communication system it supports. Integrating effortlessly with digital wired and legacy analog systems, Nomad redefines team coordination by wirelessly providing 16 channels of encrypted glitch-free audio and control to intercom users wherever they may roam.

- ▶ Designed to seamlessly integrate into your existing matrix or party-line system without disruption and expand as needs evolve.
- ▶ Supports two RJ45 and two SFP fiber connections for ease of deployment and redundancy.
- ▶ POE, battery, or local powering of the access point supports a wide range of applications.
- ▶ IP65 rated for outdoor installation.

Technical specifications

General

	AP-1000 Access Point
Audio	BV32 wideband audio
Max. belt packs per AP-1000	Up to 10
Max. access points in a system	120
Ethernet type	100BASE-T or GigE
Protocols / standards	OMNEO ST-2110/ST2022-7 DECT
Ethernet cabling required	UTP CAT-5e or better
Input voltage (VDC)	
DC Power supply	+12 VDC, 4-pin XLR input (optional)
DC Battery	14.2 VDC, Anton Bauer, via 4-pin XLR input (optional)
PoE	Class 3 device (compatible with PoE, PoE+, or PoE++)
Power consumption	8.5 W, typical
LED indicators	4 (power, fault, connectivity, location)

Environmental

	AP-1000 Access point
Operating temperature (°F)	-4 °F – 131 °F
Operating temperature (°C)	-20 °C – 45 °C
Storage temperature (°F)	-4 °F – 158 °F
Storage temperature (°C)	-20 °C – 70 °C
Dimensions (H x W x D) (in)	9.02 x 7.60 x 3.00 (with bracket) 9.02 x 7.60 x 2.64 (w/out bracket)
Dimensions (H x W x D) (mm)	229 x 194 x 76 (with bracket) 229 x 194 x 67 (w/out bracket)
Weight (lb)	4.72 (with bracket) 4.14 (w/out bracket)
Weight (kg)	2.14 (with bracket) 1.88 (w/out bracket)
Ingress Protection (IP)	IP-65

Connections

	AP-1000 Access Point
Ethernet connectors	2 x EtherCon RJ-45 jacks
Power connector	1 x 4-pin XLR-F Jack (accepts power supply or battery supply)
Optical connector	2 x SFP
GPO connector	2 x GPO relay ports

DECT Communications

	AP-1000 Access Point
RF frequency range (MHz)	1,920 MHz - 1,930 MHz (US, Canada) 1,880 MHz - 1,900 MHz (EU = Europe, Asia, Australia) 1,894 MHz - 1,906 MHz (Japan) 1,910 MHz - 1,930 MHz (Mexico, South America)

	AP-1000 Access Point
Frequency selection	Automatic via DCS (Dynamic Channel Selection)
Modulation	DBPSK
Antennas	Dual, internal dipole antennas
High Difficulty DECT RF environments	Next generation DECT channel compensation
Maximum peak RF output power (mW) (dBm)	100 mW (20 dBm) (US, Canada, Malaysia) 250 mW (24 dBm) (Europe, Mexico, South America, Japan)
Average power (US, Canada, Malaysia) (dependent on the number of belt packs)	4 mW - 42 mW
Average power (Europe, Mexico, South America, Japan) (dependent on the number of belt packs)	10 mW - 105 mW

Bluetooth Low Energy Communications

	AP-1000 Access Point
BLE frequency range	2400 - 2483.5 MHz
Communication protocol	BLE 5.3 (Bluetooth Low Energy)
Modulation	GFSK
Antenna	Internal ¼-wave
Maximum output power	1 mW

Ordering information**AP-1000 EU Access point EU**

IP-65 wireless access point providing communications to TR-1000 beltpacks

Order number **AP-1000 EU | F.01U.425.681**

AP-1000-GRY EU Access point (grey) EU

IP-65 wireless access point providing communications to TR-1000 beltpacks

Order number **AP-1000-GRY EU | F.01U.436.414**

NOMAD Wireless Intercom - TR-1000



The RTS Nomad Wireless Intercom System is an integrated digital wireless communications system consisting of belt packs and access points communicating over encrypted DECT (Digital Enhanced Cordless Telecommunications) wireless technology. Communication between the access points and the Matrix uses OMNEO technology, the Dante-based platform for high-quality audio over IP. DECT is a license-free, globally accepted standard for wireless communication.

The TR-1000 provides access to user select full duplex audio channels (or a mix of audio channels) with call features and flexible programming via the belt pack and RTS Intercom software. Belt packs are able to “roam” between remote transceiver (access point) locations with seamless communication.

The solid design of the RTS Nomad Wireless Intercom System is matched by the strength and flexibility of the communication system it supports. Integrating effortlessly with digital wired and legacy analog systems, Nomad redefines team coordination by wirelessly providing 16 channels of encrypted glitch-free audio and control to intercom users wherever they may roam.

- ▶ IP-65 Rating for Outdoor Use
- ▶ Glitch-free and Redundant Audio & Control
- ▶ Full-duplex embedded microphone and front speaker with AEC for hands-free communication
- ▶ Bring your own headset - Multiple XLR pin-outs and 3.5mm headset jack

Technical specifications

General

	TR-1000 Beltpack
Audio	BV32 wideband audio
Bandwidth (over DECT)	20 Hz - 7.5 kHz
Backlit display	Color, 240 x 240 pixel, TFT
Removable battery pack	Li-Ion pack, 3.7 VDC, 6840 mAh
Typical battery life	18 hours
Wireless encryption	AES256

Environmental

	TR-1000 Beltpack
Operating temperature (°F)	14 °F - 104 °F
Operating temperature (°C)	-10 °C - 40 °C
Storage temperature (°F)	-4 °F - 140 °F
Storage temperature (°C)	-20 °C - 70 °C
Dimensions (H x W x D) (in)	5.63 in x 3.90 in x 2.17 in
Dimensions (H x W x D) (mm)	143 mm x 99 mm x 55 mm
Weight (lb)	1.23 lb

	TR-1000 Beltpack
Weight (kg)	0.56 kg
Ingress protection (IP)	IP-65

Controls

	TR-1000 Beltpack
Level controls	Two rotary encoders
Talk/Listen control	4 top panel talk buttons (listen function programmable)
Full-Duplex audio paths	Up to 16
Number of assignment pages	4
Call waiting control	Reply and Clear functionality
Main menu sub-menus	Beltpack, Audio, Favorites, Setup, Pre-sets, Status

Connections

	TR-1000 Beltpack
Headset connectivity	XLR-5F, XLR-4F, XLR-4M (User replaceable) 3.5mm
XLR	
Microphone	Dynamic or Electret (auto-detect)
Headset impedance	150 Ω nominal (32 Ω - 600 Ω)
3.5mm	
Microphone	Electret only
Headset impedance	32 Ω - 600 Ω
Aux in	1 Vrms (nominal), 20 Hz - 20 kHz (+0/-1 dB)
Aux out	1 Vrms (nominal), DECT: 20 Hz - 7.5 kHz
USB-C	
In-beltpack charging jack	Yes
Firmware update jack	Yes
Lanyard	Integrated lanyard clip connection points

Internal Microphone

	TR-1000 Beltpack
Type	Embedded
Typical input	80 dBSPL
Max. input	100 dBSPL
Bandwidth	20 Hz - 20 kHz (+0/-3 dB) 20 Hz - 5 kHz (+0/-1 dB)

Internal Speaker

	TR-1000 Beltpack
Nominal output	84 dBSPL (1 kHz @ ½ meter)
Max. output	94 dBSPL (1 kHz @ ½ meter)
Frequency range	350 Hz - 6 kHz (+0/-3 dB)

DECT Communications

	TR-1000 Beltpack
RF frequency range (MHz)	1,920 MHz - 1,930 MHz (US, Canada) 1,880 MHz - 1,900 MHz (EU = Europe, Asia, Australia) 1,894 MHz - 1,906 MHz (Japan) 1,910 MHz - 1,930 MHz (Mexico, South America)
Communication protocol	DECT
Frequency selection	Automatic via DCS (Dynamic Channel Selection)
Modulation	DBPSK
Antennas DECT	Dual, internal inverted F antennas
Delay-spread and multi-path RF protection	Next generation DECT channel compensation
Maximum peak RF output power (mW)	100 mW (20 dBm) (US, Canada, Malaysia) 250 mW (24 dBm) (Europe, Mexico, South America, Japan)
Average power (US, Canada, Malaysia)	4 mW
Average power (Europe, Mexico, South America, Japan)	10 mW

Bluetooth Low Energy Communications

	TR-1000 Beltpack
BLE 5.3 frequency range	2400 - 2483.5 MHz
Communication protocol	BLE 5.3
Modulation	GFSK
Antenna	Internal ¼-wave
Maximum output power	1 mW

Ordering information

TR-1000 EU 4F Belt pack EU, 4F

IP-65 wireless beltpack providing up to 16 full-duplex audio channels with call features. Requires AP-1000.
Order number **TR-1000 EU 4F | F.01U.425.696**

TR-1000 EU 4M Belt pack EU, 4M

IP-65 wireless beltpack providing up to 16 full-duplex audio channels with call features. Requires AP-1000.
Order number **TR-1000 EU 4M | F.01U.425.695**

TR-1000 EU 5F Belt pack EU, 5F

IP-65 wireless beltpack providing up to 16 full-duplex audio channels with call features. Requires AP-1000.
Order number **TR-1000 EU 5F | F.01U.425.697**

Accessories

BP-1000 TR-1000 spare battery

state-of-art Li-Ion, prismatic, rechargeable battery
Order number **BP-1000 | F.01U.425.739**

TR-1000-XLR4F XLR cartridge 4-pin female

XLR4F XLR Cartridge 4 Pin Female
Order number **TR-1000-XLR4F | F.01U.425.711**

TR-1000-XLR4M XLR cartridge 4-pin male

XLR4M XLR Cartridge 4 Pin Male
Order number **TR-1000-XLR4M | F.01U.425.710**

TR-1000-XLR5F XLR cartridge 5-pin female

XLR5F XLR Cartridge 5 Pin Female
Order number **TR-1000-XLR5F | F.01U.425.712**

CB-1000 Charging bay

5-bay charger providing users with a full-featured intelligent charger designed specifically for TR-1000 beltpacks and associated BP-1000 batteries.
Order number **CB-1000 | F.01U.425.738**