High Quality Reinvented Wireless Intercom System

5GHz Digital
Wireless Intercom System

LaON
Technology

System Features

LaON Technology('LaON')'s patented technology based digital wireless intercom system offers the best audio quality with an excellent clarity by using **5GHz UNII band, triple diversity** - frequency, time and antenna, and frequency interference avoidance technologies. It guarantees the system stability even in the large congested site environments where various A/V and wireless equipments are co-located. Super-scalable IP based repeater, Remote Station enables the system transfer the power and audio data on a **daisy-chain connection**. With the **multiple Remote Stations deployment**, the wireless coverage can be amazingly extended. Also, with a **redundancy backup system solution**, the system reliability will considerably be improved and under control.

KEY FEATURES

■ License-free 5GHz UNII Band frequency

The worldwide license-free 5GHz UNII Band provides approximately up to fifteen (15) RF channels depending on the regions as opposed to three (3) channels on 2.4GHz ISM band. And users are able to enjoy pleasant wireless communications with even less traffics or interferences. Due to high frequency band, the system is also hardly affected by high-power digital equipments such as amplifiers and speakers.

■ Super-scalable IP based repeater solution

Remote Station (RBS) supports to dramatically extend the wireless communication coverage. Multiple studio spaces or multi-floors can be easily consolidated by adding Remote Station at each space using the standard LAN network configuration. It provides PoE (Power of Ethernet) function for the convenient power supply and connections and, an automatic handoff is available between the stations.

■ Industry top level high quality audio performance

Less than 23ms low latency and up to 7.2KHz audio frequency guarantee the wired-like high quality audio performance with extra clarity. LaON LT series are perfectly tuned professional intercom systems for using in various loud and congested site environments.

■ Five (5) communication group channel

Single or multiple communication group channels can be assigned to the Base Station, Belt Pack, 4-Wire and AUX devices each and those group channels can be used in single, multiple or all together at the same time. With this flexible grouping capability, one (1) Base Station covers IFB communication as well as IC and ISO communications without an additional IFB system which is 'more with less' cost efficient solution.

■ Eleven (11) full-duplex simultaneous audio channel

Up to eleven (11) full-duplex audio channels (1 BS + 10 BPs) are offered with a Base Station. By making the full use of this with multiple group channels, a number of independent teams are practically able to have IFB and wireless communications in one (1) system respectively.

■ Up to 128 Belt Pack connections

One hundred and twenty eight (128) Belt Packs can be registered into a Base Station and Mobile Station.

■ Belt Pack in master mode

A Belt Pack can play a role as a master where there is no Base Station or the Base Station is located far from the actual Belt Pack operation area.

■ Full connectivity with external devices

The Base Station provides 4-Wire and Auxiliary In/Out interfaces for seamless connections with other wireless intercom systems or external audio devices.

■ Comfortable, compact and classy design

Comfortable headset and compact Belt Pack with internal antenna support high wearability with mobility even at the tough broadcasting or event sites.

■ Various battery options

Either LaON provided rechargeable battery or AA type Alkaline battery can be used for supplying power to the Belt Pack.

■ System monitoring function

Various data can be monitored such as the link status of each device, frequency in use and RSSI(Received Signal Strength Indication) level, battery level and microphone gain level of the Belt Pack.

■ AES 256bit level 3 encryption

Top level encryption technology is applied to secure confidential wireless audio communications.

■ Efficient seven (7) bay charger

There are five (5) bays for charging the Belt Pack batteries which are equipped in the Belt Packs and, two (2) bays for charging the Belt Pack batteries which are separated from the Belt Packs.

■ LaON in-house technologies and solutions

LaON has developed from the wireless SoC built in the systems, to the wireless intercom systems in-company by applying its patent base technologies. Base on the know-how and comprehensive experiences in wireless technology, LaON offers timely and prompt service with full flexibilities for customer satisfactions with a top priority.

System Line-up

LT750 SYSTEM

LT750 is high range professional system that offers exceptional features for using at large venues, stadiums, stations, OB trucks and etc.

- One hundred twenty eight (128) Belt Pack connections
- Ultra high quality audio with up to 7.2KHz audio frequency
- Eleven (11) full-duplex audio channels with five (5) communication group channels
- Ten (10) Remote Station connections
- 4-Wire and Auxiliary In/Out interfaces
- Daisy-chain connection of Remote Station and redundancy backup system solution
- Belt Pack in master mode
- Frequency monitoring

LT550 SYSTEM

LT550 Expert system is perfectly fit for various applications including broadcasting, musical, theatre, concert and industrial sites.

- One hundred twenty eight (128) Belt Pack connections
- Eleven (11) full-duplex audio channels with five (5) communication group channels
- Five (5) Remote Station connections
- 4-Wire and Auxiliary In/Out interfaces

REMOTE STATION, RBS25

Super-scalable IP based repeater to enable huge extension of the wireless coverage and consolidation of wide area in one

- PoE enabled repeater
- Standard LAN network configuration
- Multiple studio spaces or multi-floors can be consolidated in a wireless coverage through easy wiring
- Automatic and natural handoff as well as manual handoff
- Up to one hundred twenty eight (128) Belt Pack link a Remote station
- Shares the full-duplex audio channels and group channels with Base Station

System Line-up

BASIC SYSTEM

LT250 SYSTEM

Basic system, LT250 is a slim system but still supports for intelligent communications. Good for medium sized venues such as house of worship, school, hospital and enterprise.

- One hundred twenty eight (128) Belt Pack connections
- Nine (9) full-duplex audio channels with three (3) communication group channels
- One (1) Remote Station connection
- Auxiliary In/Out interface

MOBILE SYSTEM

LT150 SYSTEM

Mobile system, LT150 provides the equivalent professional audio quality to LT750 system. Station can either be fixed or mobile. It fits for smaller sites and where the portability is required.

- Adapter or battery powered Mobile Station
- Ultra high quality audio with up to 7.2KHz audio frequency
- One hundred twenty eight (128) Belt Pack connections
- Five (5) full-duplex audio channels with two (2) communication group channels
- Auxiliary In/Out interface
- Belt Pack in master mode

MAIN ACCESSORIES

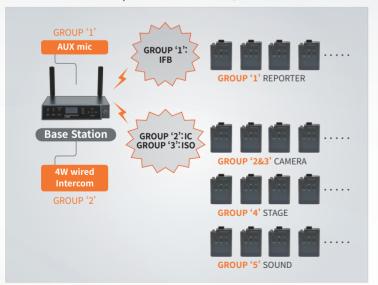**LTWI-BATCHG125 Charger**

LSH-S125

LMH-125

LMH-125D

LMH-12

LMH-10

PTE-850

System Usage

Stand-Alone operation

BP1 BP2 · · · BP64 · · · BP127 BP128

Base Station BS750

AUX device

Mobile Station MS150
in Belt Pack mode

Belt Pack, BP750 or BP150 in Master Mode

Communication Group allocation and IFB, IC/ISO communication

GROUP '1'

AUX mic

GROUP '1': IFB

GROUP '1' REPORTER

Base Station

GROUP '2': IC GROUP '3': ISO

GROUP '2&3' CAMERA

4W wired Intercom

GROUP '2'

GROUP '4' STAGE

GROUP '5' SOUND

System Scalability with the Remote Station and matrix intercom

Base Station

CAT-5 cable

Network Switch (LAN)

RBS

RBS

Matrix Intercom

CAT-5 cable

Network Switch (LAN)

RBS

SPECIFICATION

High Quality Reinvented Wireless Intercom System

BASE STATION SPECIFICATION

Feature		BS750	BS550	BS250	MS150	RBS25
RF Frequency		5GHz UNII Band (No License Required)				
Antenna & Connector Type		+6dBi Dipole & SMA Type				
Transmit	Type	Frequency / Time Diversity				
	Effective Radiated Power	17dBm(50mW) @ antenna port				
	Modulation Type	QPSK				
	Frequency Stability	± 2ppm				
Receiver	Type	Antenna / Frequency / Time Diversity				
	RF Sensitivity	-85dBm for 5 BER				
	Frequency Stability	± 2ppm				
Audio Frequency Response		200Hz-7.2KHz	200Hz-3.5KHz		200Hz-7.2KHz	NA
Audio Communication Group		5	3		2	NA
Full-duplex channel		11	9		5	11/9
Headset Connector		6-Pin, Mini Din male				NA
Microphone Type		Dynamic or Electret				NA
Latency		One-way system latency less than 23ms direct				
Communication Security		256bits key AES level 3 Encryption				
Auxiliary Input		XLR-3F/ ¼"(6.35mm) combo jack, 600Ω balanced, level adjustable			6.3ø Phone Jack, 600Ω balanced, level adjustable	NA
Auxiliary Output		XLR-3M, 600Ω balanced, level adjustable			6.3ø Phone Jack, 600Ω balanced, level adjustable	NA
4-Wire I/O		10pin spring clamp connector, 600Ω balanced level adjustable		NA		
Remote Station		10	5	1	NA	NA
Front Panel Display (OLED Resolutions)		128 x 64			128 x 32	NA
Front Panel Button		Touch Buttons			Push buttons	NA
Power Input		100-240VAC, 47-63Hz, 11.4-12.6VDC				
		-				PoE from the Network Switch
		-			7.2V 2450mA Rechargeable NiMH Battery or 6 AA alkaline batteries	

BELT PACK SPECIFICATION

Feature		BP750	BP550	BP250	BP150
RF Frequency		5GHz UNII Band			
Antenna Type		+3dBi Internal			
Transmit	Type	Antenna/Frequency/Time Diversity			
	Effective Radiated Power	17dBm(50mW) @ antenna port			
	Modulation Type	QPSK			
	Frequency Stability	± 2ppm			
Receiver	Type	Antenna/Frequency/Time Diversity			
	RF Sensitivity	-85dBm for 5 BER			
	Frequency Stability	± 2ppm			
Audio Frequency Response		200Hz-7.2KHz	200Hz-3.5KHz		200Hz-7.2KHz
Audio Communication Group		5	3		2
BeltPack In Master Mode		O	X		O
Headset Connector		6-Pin, Mini Din male			
Microphone Type		Dynamic or Electret			
Latency		One-way system latency less than 23ms direct			
Communication Security		256bits key AES level 3 Encryption			
Display (OLED Resolutions)		128 x 32			
Button		Push Buttons			
Battery requirement		2.4V 2450mA Rechargeable NiMH Battery or 2 AA alkaline batteries			

LaON Technology

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