LaON's new generation system, GENIE is the industry-first converged digital intercom system turning into a whole new creativity from a traditional concept of the intercom system. With GENIE SOLO, 6 Remote Antennas, 60 Speaker Stations, 60 Ethernet Beltpacks or 60 Repeaters can all be connected through PoE with a Base Station while having 128 Wireless Beltpacks connections at the same time. By this boundaryless hybrid solution of wired or wireless, GENIE offers a highly scalable and flexible system configurations and capabilities.

GENIE provides easy-to-extend system structure from an initial small system to a large scale system tier by tier upon the requirement.

Also, GENIE Configuration Manager (GCM) supports for an efficient and integrated management of the system by its easy setup and various monitoring functions with full visibility.

License-free 5GHz UNII BAND

5GHz UNII Band, the worldwide license-free frequency band provides approximately up to 29 RF channels depending on the regions as opposed to few RF channels on 2.4GHz ISM band. Therefore, users can enjoy pleasant wireless communications with even less traffics or interferences. With the advantages of high frequency band, the system is also hardly affected by high-power digital equipment such as amplifiers and speakers.

Daisy-chain PoE configurations

GENIE is a daisy-chain connection enabled system that transmits both data and power through PoE. In view of system redundancy, loopback can also be set by building a ring connection. You can easily wire and install complex systems using lightweight Cat-5/6 STP cables with even less workload for the setup.
**BS1000**  
With a Base Station(GENIE SOLO), Ethernet Beltpacks(IBP10) or Speaker Stations(ISS800) or Repeaters(RBS85) are connected within 60 devices, and 128 Wireless Beltpacks(BP850) are also connected at the same time.  
Up to six Remote Antennas (RA100DW or RA100) can be connected to each Base Station and up to 128 Wireless Beltpacks and up to 10 Ethernet Beltpacks or Speaker Stations or Repeaters can be connected to one Remote Antenna. One Remote Antenna supports 10 full-duplex channels. Even while multiple Talk channels of a device such as Speaker Station are in active, it only occupies one full-duplex channel. Thus, one Base Station offers up to 70 full-duplex wireless and Ethernet wired devices with six Remote Antennas simultaneously, it occupies two full-duplex channels.  
System configured by **Base Station BS1000 + Remote Antenna RA100DW or RA100 + Ethernet Beltpack IBP10 + Speaker Station ISS800 + Wireless Beltpack BP850 + Repeater RBS85**  
Ethernet synchronization is applied between devices connected to the Ethernet, avoiding radio interference, packet loss, delay, and jitter among all devices being connected to the Ethernet.  
Three Base Stations(GENIE TRIO) offer up to 210ch full-duplex wireless and Ethernet wired devices. **TRIO system**, with 384 Wireless Beltpacks, and 180 Ethernet Beltpacks, and 180 Speaker Stations.  
**GENIE Configuration Manager(GCM)** is to enable setup and pairing, frequency data spectrum on each device, monitoring of each link and battery status and etc.

**BS850**  
With a Base Station(GENIE SOLO), Ethernet Beltpacks(IBP10) or Speaker Stations(ISS800) or Repeaters(RBS85) are connected within 30 devices, and 128 Wireless Beltpacks(BP850) are also connected at the same time.  
Up to three Remote Antennas (RA100DW or RA100) can be connected to each Base Station. System configured by **Base Station BS850 + Remote Antenna RA100DW or RA100 + Ethernet Beltpack IBP10 + Speaker Station ISS800 + Wireless Beltpack BP850 + Repeater RBS85**  
Ethernet synchronization is applied between devices connected to the Ethernet, avoiding radio interference, packet loss, delay, and jitter among all devices being connected to the Ethernet.  
Three Base Stations(GENIE TRIO) offer up to 120ch full-duplex wireless and Ethernet wired devices. **TRIO system**, with 384 Wireless Beltpacks and 90 Ethernet Beltpacks or 90 Speaker Stations. **GENIE Configuration Manager(GCM)** is to enable setup and pairing, frequency data spectrum on each device, monitoring of each link and battery status and etc.

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### GENIE Devices

<table>
<thead>
<tr>
<th>Description</th>
<th>Model</th>
<th>Talk key</th>
<th>4-Wire or 2-Wire</th>
<th>4-Wire Daisy-Chain PoE</th>
<th>PoE IN</th>
<th>Relay</th>
<th>OPTO Input</th>
<th>Multi-Sync</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Station</td>
<td>BS1000</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>2+(3xPoE)</td>
</tr>
<tr>
<td>BS850</td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Remote Antenna/Daisy-chain</td>
<td>RA100DW</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1+(3xPoE)</td>
</tr>
<tr>
<td>Remote Antenna</td>
<td>RA100</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PoE</td>
</tr>
<tr>
<td>Repeater</td>
<td>RBS85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PoE</td>
</tr>
<tr>
<td>Wireless Beltpack</td>
<td>BP850</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Battery</td>
</tr>
<tr>
<td>Speaker Station</td>
<td>ISS800</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
<td>2+(3xPoE)</td>
</tr>
<tr>
<td>Ethernet Beltpack</td>
<td>IBP10</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2xPoE)</td>
</tr>
</tbody>
</table>

### GENIE System Capacity

<table>
<thead>
<tr>
<th>Description</th>
<th>Base Station BS1000</th>
<th>Base Station BS850</th>
<th>Remote Antenna RA100</th>
<th>Repeater RBS85</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connections of Remote Antenna RA100</td>
<td>6</td>
<td>3</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Connections of Repeater RBS85</td>
<td>60</td>
<td>30</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Connections of Wireless Beltpack BP850</td>
<td>128</td>
<td>128</td>
<td>128</td>
<td>128</td>
</tr>
<tr>
<td>Connections of Ethernet Beltpack IBP10</td>
<td>60</td>
<td>30</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Connections of Speaker Station ISS800</td>
<td>60</td>
<td>30</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Full-duplex channels</td>
<td>70</td>
<td>40</td>
<td>10</td>
<td>10 with RA100</td>
</tr>
</tbody>
</table>

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LaON has developed from the wireless SoC built in the systems to the whole new creativity intercom systems in-company by applying its own proprietary patent-based technologies. Base on the know-how and comprehensive experiences in communication, LaON always finds and offers creative solutions and provides timely service with full flexibilities for customer satisfactions on top priority.
Super-scalable PoE based Remote Antenna (RA100DW or RA100) and Repeater (RBS85) solutions
Remote Antennas and Repeaters support to dramatically expand the coverage zones. Multiple studio spaces or multi-floors can be easily consolidated by adding Remote Antenna or Repeater at each RF space using the standard LAN network configuration. Base Station(BS1000) and Remote Antenna(RA100/RA100DW) provide PoE for a convenience power supply. Automatic roaming is available between a Base Station and Remote Antennas and Repeaters. Up to 128 Wireless Beltpacks, and up to 10 Ethernet Beltpacks or Speaker Stations or Repeaters can be connected to a Remote Antenna. And the Remote Antenna supports additional 10 full duplex channels each.

Ethernet synchronizations
Ethernet synchronization is applied between devices connected to the Ethernet, avoiding radio interference, packet loss, delay, and jitter among all devices being connected to the Ethernet.

Five communication group channels
Single or multiple communication group channels can be assigned to the Base Station, Beltpack, 4-Wire and Auxiliary devices each. GENIE TRIO system supports 15 communication group channels. Base Station BS1000, Speaker Station and Ethernet Beltpack provide 8 Talk channels each. A 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.

Ten full-duplex audio channels per Remote Antenna
Ten full duplex audio channels are assigned for each Base Station or Remote Antenna. Therefore, the Base Station BS1000 provides up to 70 full-duplex Wireless and Ethernet devices along with six Remote Antennas.

Up to 128 Wireless Beltpack connections
You can freely connect 128 Beltpacks to a Base Station, Remote Antennas or Repeaters.

Beltpack in Master mode
The Wireless Beltpack BP850 provides a master function of the Base Station without a Base Station. The Beltpack in Master mode operates as a Master in an independent space from the Base Station.

4-Wire, 2-Wire and Auxiliary I/O interfaces
Up to four Line Input/Output ports are provided for seamless connectivity with wired intercom systems, external audio devices and etc.

Top security with AES 256 bits level 3 encryption
Secures confidential communications with AES 256-bit level 3, the highest encryption technology.

GENIE Configuration Manager (GCM) for setup and monitoring
The GENIE Configuration Manager is to enable setup and pairing for each device over the Ethernet connection. It also provides monitoring capabilities that include the setup value and the connectivity status of each device displaying the radio receive signal strength (RSSI) in the current location of each device. It also shows the battery status and set value of the Wireless Beltpack.

Compact design
A compact wearable Beltpack with internal antennas and comfortable headsets support high level of mobility during the operations even in harsh environments.

Various options on battery
Either LaON provided rechargeable battery pack or AA type Alkaline battery with LaON designated battery Sled can be used for supplying power to the Wireless Beltpack. Also, an appropriate commercial rechargeable battery can be used with the battery Sled.

Efficient 7 or 8 ports chargers
The 7 ports charger provides five bays that can charge the Beltpack with the battery pack inserted. Additionally, there are 2 bays for charging the battery pack. Two bays of these are used to charge the battery of Mobile Station MS150 as well. The 8 ports charger provides 8 bays for charging the battery packs and 8 bays for storing the battery packs.

Converged intercom system - Hybrid Wired and Wireless on one Base Station
GENIE is a reinvented intercom system that enables you enjoy Ethernet wired system and wireless system with one Base Station and offers multiple connection of Ethernet Beltpack or Speaker Station with 128 Wireless Beltpack connections.

License-free 5GHz UNII BAND
5GHz UNII Band, the worldwide license-free frequency band provides approximately up to 29 RF channels depending on the regions as opposed to few channels on 2.4GHz ISM band. Therefore, users can enjoy pleasant wireless communications with even less traffics or interferences. With the advantages of high frequency band, the system is also hardly affected by high-power digital equipment such as amplifiers and speakers.

Industry-top level audio quality
23ms low latency and 7.2KHz audio bandwidth demonstrate high quality audio performance. GENIE is a perfectly tuned professional intercom system for uses in large, congested and diverse site environments.
GENIE system using Remote Antennas and Repeaters

- Three or six Remote Antennas can be connected to each Base Station. And up to ten Repeaters or Ethernet Beltpacks or Speaker Stations can be connected to a Remote Antenna. With the industry standard LAN network configuration, multiple studio spaces or multi-floor sites can be easily consolidated.

- Remote Antenna RA100DW is a PoE and Daisy-chain connection enabled antenna solution that provides extra efficiencies in wiring system.

- A seamless wireless roaming is available while moving across each area of Base Station, Remote Antenna and Repeater.

- The system allows various types of network connection such as optical fiber cable, PoE and Daisy-chain ring connections. And Star or Tree linking topologies are also available.

- A redundancy system can easily be configured upon project requirements.
**GENIE|TRIO Configuration**

**BS1000**  Three Base Stations offers up to 210 full-duplex wireless and wired devices. With 384 Wireless Beltpacks and 180 Ethernet Beltpacks or 180 Speaker Stations, Beltpacks (BP850, IBP10) and Speaker Stations (ISS800) are flexibly connected to any of three Base Stations.

**GENIE|DUO**

**Power and Data redundancy System**

**BS1000** If any failure occurs on either Base Station or Remote Antenna during the operation, ISS800, IBP10 and BP850 will be automatically connected to another Base Station or Remote Antenna by configuring redundancy system with the GENIE Configuration Manager.
01 Power switch 02 Loudspeaker 03 MIC on/off button (LED) 04 Loudspeaker on/off button (LED) 05 MENU button 06 Master Volume and select DIM, CUT, Sidetone 07 RMK button (LED) 08 SA button (LED) 09 TTA button (LED) 10 CH1 Volume, push to call 11 CH1 Talk button (LED) 12 CH2 Volume, push to call 13 CH2 Talk button (LED) 14 Display screen 1 15 CH3 Talk button (LED) 16 CH3 Volume, push to call 17 CH4 Talk button (LED) 18 CH4 Volume, push to call 19 CH5 Volume, push to call 20 CH5 Talk button (LED) 21 CH6 Volume, push to call 22 CH6 Talk button (LED) 23 Display screen 2 24 LEDs for LAN status 25 CH7 Talk button (LED) 26 CH7 Volume, push to call 27 CH8 Talk button (LED) 28 CH8 Volume, push to call 29 Gooseneck microphone connector 30 Headset connector 31 Antenna mounting hole 32 Ear for rack mounting 33 Lamp supply/USB

01 Antenna connector 02 2-Wire intercom NULL control 03 2-Wire intercom channel A connector 04 2-Wire intercom channel A connector 05 2-Wire intercom channel B connector 06 2-Wire intercom NULL control 07 4-Wire intercom channel A connector 08 4-Wire intercom channel B connector 09 4-Wire intercom channel C input connector 10 4-Wire intercom channel C output connector 11 Auxiliary input connector 12 Auxiliary output connector 13 SA connector 14 Multi-Sync connector 15 Antenna connector 16 PC PROG connector 17 7 GPO Relays and 2 OPTO inputs connector 18 POE input connector 19 Daisy-chain POE LINE1 connector 20 Daisy-chain POE LINE2 connector 21 Power input connector 22 Power input connector for duplex
GENIE Configuration Manager (GCM) is a convenient tool that lets you quickly and easily create or edit configurations. You can fully utilize GCM software whenever you extract, edit and restore any configurations for each device of Base Station, Speaker Station, Remote Antenna and etc. GCM also helps to restore the system setup value in the event of a system failure.

To install a system, the Base Station, Remote Antenna, Repeater and Beltpack must initially be set up and paired by using the GCM tool. The GCM configures and pairs each device over an Ethernet connection. It also provides monitoring capabilities such as pairing data and connectivity status of each device. It shows the battery status of Wireless Beltpack and the radio reception signal strength (RSSI) in the current location.

Windows Compatible
Base Station BS1000
Remote Antenna/Daisy-chain RA100DW
Repeater RB585
Ethernet Bellpack IBP10

Base Station BS850
Remote Antenna RA100
Speaker Station ISS800
Wireless Bellpack BP850