**Full-Duplex Communication That Works Over a Wireless LAN and IP Network**

- Easy system to set up and use
- Up to 100 users can communicate at the same time
- Encryption provides extra security
- Range is only restricted by your IP network coverage
- No licence fee required, no call charges

*Requires either HM-153LS, HM-166LS, HS-102 with OPC-2359 or HS-85 with OPC-2144 for full-duplex operation.*
Wireless LAN System Extends Your Communication Coverage.

**Individual, Group or Area Communication**
Staff spread across an extended site, such as a hotel, can communicate seamlessly.

**Hands-free, Full-duplex Communication**
With an optional earphone-mic or headset HS-102 or HS-85, the IP100H user can talk and receive simultaneously like a phone call. Hands-free operation allows your staff to carry out other tasks at the same time.

**Intra-building Communication**
By deploying access points along the IP network, the IP advanced radio system can communicate all the way from the basement to the top floor. The IP100H can access the nearest access point and can roam between access points.*

*Same SSIDs are required for roaming use.

If connected over an Internet VPN, the IP100H/IP100FS can communicate between dispersed sites such as offices or shops in different cities.

**Dispersed Sites Communication**
Staff spread across an extended site, such as a hotel, can communicate seamlessly.

With an optional earphone-mic or headset HS-102 or HS-85, the IP100H user can talk and receive simultaneously like a phone call. Hands-free operation allows your staff to carry out other tasks at the same time.

**Application examples**
Hotels  Warehouse / Manufacturing  Hospitals  Security  Restaurant / Drive Thru  Supermarkets / Retail Shops

**IP Communication Terminal**
**IP100H**
- IPX7 waterproof (1m depth water for 30 minutes) for outdoor work or places prone to get wet.
- Compact 58×95×26.4 mm body and 205g (approximate) lightweight.
- Vibration alert function for incoming calls.

**Wireless LAN Access Point**
**AP-90M**
- IEEE 802.11 a/b/g/n/ac compliant
- PoE (Power over Ethernet) capability
- Optional RS-AP3, Access point management software

**Remote Communicator**
**IP100FS**
(Supplied with USB flash drive for use as a USB hardware key)
- The IP100FS can communicate with IP communication terminals from a PC.
- The IP100FS can obtain location information of each IP100H based on the access point being used.
- Can be installed on a Windows® based tablet PC as well as a laptop PC.

**Controller**
**IP1000C**
- The IP1000C controls all terminal configurations and voice traffic.
- Capable of controlling up to 100 or 20* terminals (including IP100FS).
- Links up to 11 IP1000Cs over an IP network (Internet VPN) and increases the number of usable IP100H/IP100FS communication terminals to 1100 units.

* Depending on the IP1000C version.
Full-duplex Communication
With an optional earphone-mic or headset HS-102 or HS-85, the IP100H can talk and receive at the same time. All users in the system can communicate simultaneously.

Status and Short Data Messaging
The IP100H/IP100FS can send status and short data messages* to other users.
* The IP100H can send only preprogrammed messages.

High Security
The wireless LAN security protocols (WPA-PSK (TKIP/AES), WPA2-PSK (TKIP/AES)) encrypt your private conversations.

Easy System to Set Up and Use
The IP1000C programs almost all terminal configurations over the air. Individual PC programming via cable connection is not required. (Except initial setup)

The IP communication terminals, radios and telephones can communicate with each other within the doughnut shaped blue ring.

Dispersed sites can be connected over an IP network (VPN).

Deploying the wireless access point over an IP network can expand communication range.

The unique area call function allows you to call any user who is accessing the specified access point.

The wireless access points can be shared for use with wireless devices such as smartphones, tablets and PC.

RoIP GATEWAY

IP Phone and Transceiver Interconnection

With a VE-PG3 RoIP gateway, the IP advanced radio system can interconnect with an IP phone, IDAS™ "NXDN™" Type-D multi-site trunking and conventional system using the IC-FR5000/FR5200H series. IDAS™ dPMR™ Mode 2 digital and analogue transceivers.

When used with an IP phone system, the IP100H can be used as a phone handset for making internal or external calls.1,2

* "NXDN™" Type-D multi-site trunking and conventional system using the IC-FR5000/FR5200H series.
* For interconnection with other equipment, verification tests are required before the installation. The IP100H can call a preprogrammed phone number only. (Cannot manually enter phone numbers to make a call.)

The IP communication terminals, radios and telephones can communicate with each other within the doughnut shaped blue ring.
### SPECIFICATIONS

**IP100H**

<table>
<thead>
<tr>
<th>Wireless standards</th>
<th>IEEE 802.11 b/g/n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency range</td>
<td>2.4–2.4835 GHz, 5.15–5.35, 5.47–5.65 GHz</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>58 x 96 x 26.4 mm</td>
</tr>
<tr>
<td>Weight (approx.)</td>
<td>205 g, 0.72 oz (with BP-271 and antenna)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>More than 20 hours (with BP-271)</td>
</tr>
<tr>
<td>LaF output power</td>
<td>Less than 10 mW/MHz</td>
</tr>
<tr>
<td>Voice Codec</td>
<td>G.711-law (64 kbps)</td>
</tr>
<tr>
<td>AF output power (unmodulated)</td>
<td>Internal SP 450 mW (typ., 16 Ω load), External SP 200 mW (typ., 8 Ω load)</td>
</tr>
<tr>
<td>Security</td>
<td>WEP (64/128-bit), WPA-PSK (TKIP/AES), WPA2-PSK (TKIP/AES)</td>
</tr>
<tr>
<td>Operating temperature</td>
<td></td>
</tr>
</tbody>
</table>
- 0 °C to +40 °C; 32 °F to +104 °F |
| Weight (approx.) | 250 g, 0.55 lb (Main unit only) |

**Supplied accessories**

- BP-271 Li-ion battery pack
- MD-17 belt clip
- Hand strap
- Antenna
- Antenna cap

**IP100FS (System requirements)**

**Operating system**

- Windows® 10 (32-bit/64-bit), Windows® 8 (32-bit/64-bit)
- Windows® 7 (32-bit/64-bit) SP1 or later, Windows Vista® (32-bit/64-bit) SP1 or later (Except for Windows® RT)

**CPU**

- Intel® Core® 2 Duo Processor E8600/2.4 GHz or better

**Memory**

- 2 GB or higher

**Hand disk space**

- 1 GB of disk space (for saving log files)

**Audio**

- DirectSound compatible audio (Frequency response up to 25 kHz, sampling rate 48 kHz)

**Display resolution**

- 1360×768 pixel recommended

**Other**

- USB 2.0 port, 10 Mbps or faster Ethernet interface, speaker, microphone or headset

**Power supply**

- 100–240 V AC (with supplied AC adapter)

**Operating temperature**

- 0 °C to +40 °C; 32 °F to +104 °F

**Dimensions (W x H x D) | 232 x 38 x 168 mm, 9.1 x 1.5 x 6.6 in**

**Weight (approx.) | 750 g, 1.6 lb (Main unit only)**

**LAN**

- RJ-45 connector x 4

**USB**

- Standard A receptacles x 2

**Maintenance console**

- RS-232C (RS-11) connector

**Supplied accessories**

- BC-207S AC adapter
- Cushion sheets
- Fibre core

### OPTIONS

**For IP100H**

- **Headsets (Full-duplex operation)**
  - HS-102 Earphone type, OPC-2359 is required.
  - HS-85 Over-the-head type, OPC-2144 is required.

- **Supplied accessories**
  - MB-17 belt clip
  - OPC-2144: Slim L-Type plug adapter cable.

**For IP100FS**

- **Headsets (Simplex operation)**
  - HS-94 Earhook type
  - HS-95 Behind-the-head type
  - HS-97 Throat type

**Supplied accessories**

- OPC-2006LS: Required when using either HS-85, HM-153 or HM-166.
- OPC-2066L: Plug adapter cable
- OPC-2328: PTT switch cable

**For IP1000C**

- **Supplied accessories**
  - HS-85
  - OPC-2359 when using HS-85.

**For AP-90M**

- **AC adapter**
  - BC-207S

- **Access point management software**
  - Security Dashboard
  - RS-AP3

**For AP-90FS**

- **PTT microphone adapter**
  - BC-271

- **Earphone-microphones**
  - HS-271

- **Speaker-microphones**
  - HS-272

**For IP1000C**

- **Supplied accessories**
  - HS-85
  - OPC-2359 when using HS-85.

**For IP1000FS**

- **Supplied accessories**
  - OPC-2006LS: Required when using either HS-85, HM-153 or HM-166.
  - OPC-2066L: Plug adapter cable
  - OPC-2328: PTT switch cable

**For IP100H**

- **Supplied accessories**
  - OPC-2144: Slim L-Type plug adapter cable.

- **For AP-90M**

- **Supplied accessories**
  - OPC-2066L: Plug adapter cable
  - OPC-2328: PTT switch cable

**For IP100FS**

- **Supplied accessories**
  - OPC-2006LS: Required when using either HS-85, HM-153 or HM-166.
  - OPC-2328: PTT switch cable

**For IP1000FS**

- **Supplied accessories**
  - OPC-2006LS: Required when using any of these headsets.

- **Supplied accessories**
  - OPC-2359: PTT switch cable
  - OPC-2328: PTT switch cable

**For AP-90M**

- **Supplied accessories**
  - OPC-2006LS: Required when using either HS-85, HM-153 or HM-166.