IDAS™
ICOM DIGITAL ADVANCED SYSTEM

IDAS is Icom's digital land mobile radio system using the NXDN™ common air interface and offers a complete system of handheld radios, mobile radios, repeaters, network interface/trunking controller, IP-based virtual radio, various accessories and a complete system solution.

IDAS™ system features

Digital/analog mixed mode operation

IDAS radios can receive both analog mode and digital mode signals on a single channel. You can partially introduce the IDAS radios while using your existing analog radios in a system. The IDAS system allows you to scale migration to narrow band digital at your own pace and needs, while running your existing analog system. It is a cost efficient way to obtain the next generation in two way radio technology, while protecting your current system investment.
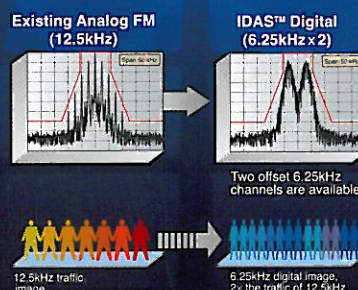
Peer-to-peer communication with FDMA

When compared to a TDMA (Time Division Multiple Access) 6.25 equivalent system, the FDMA (Frequency Division Multiple Access) enables "peer to peer" communication between radios in 6.25kHz digital mode. It ensures communication with no reduction in channel capacity, even if a repeater site is not available, or goes down.

Spectrum efficiency

The IDAS system doubles the capacity of the current 12.5kHz channel allocation. Icom provides a solution to overcrowded airwaves.

Spectrum efficiency

Existing Analog FM (12.5kHz) → IDAS™ Digital (6.25kHz x 2)

Two offset 6.25kHz channels are available

12.5kHz traffic image → 6.25kHz digital image, 2× the traffic of 12.5kHz

Digital signal advantage

When comparing digital with analog FM, the audio quality of analog FM gradually deteriorates with static noise as the distance increases. On the other hand, the digital audio provides noise-less, stable audio for longer until the fringes of the communication range.

Analog vs Digital Coverage

Audio quality / Excellent / Poor — Signal strength / High level / Low level — Better audio quality / Better distance coverage / IDAS / Analog FM / Minimum required audio quality