Description

IED 520 Desktop w/ Gooseneck Mic

The IED 520 Series Digital Communication Station is a user communication device for initiating audio/visual announcements, messages, and pages with the 500, 505, and 510 Announcement Control Systems. It is a network appliance with its own unique IP address, which simplifies its installation and configuration. The 520 features eight capacitive touch zone group or function selection button plus a large push-to-talk button. The 520 comes in two basic configurations: desktop and wall mount with four different microphone options to suit all installation situations and for use in both paging and intercom (two-way audio communication) applications.

Just like IED's other digital communication stations, the 520 uses a single Ethernet interface for audio and control data. The 520 station is fully compatible with IEEE 802.3af standard for Power over Ethernet (PoE), allowing the 520 to be powered directly from any standard off-the-shelf PoE switch. The processing power for the IED 520 comes from the onboard 32-bit ARM processor. This powerful processor manages the capacitive touch keypad, Ethernet interface, audio signal processing, and self-test diagnostics.

This, and all IED LAN-based 500ACS components, are designed to maximize the benefits of a standard 100 Mbps Ethernet LAN based network, using off-the-shelf switches and structured CAT5e or better cabling. The IED 520 Series Digital Communication Station utilizes CobraNet® technology.

IED 520 Wall Mount w/ Handset

Features

The 520 series digital communication stations provide immediate digitization of audio and full bandwidth transmission over its Ethernet connection. The primary user interface consists of the selection buttons and the various microphone options, which include two-way devices like handsets and headsets.

Buttons

The 520 series digital communication stations feature eight capacitive touch selection buttons, each with an LED that lights when the button is active. These buttons can be configured via the IED Enterprise system software to function in one of two modes: one-touch or combined zone group operation. A 520 station may be configured to have a combination of buttons in these two modes; for example, configured for buttons 1 − 4 as one-touch mode and buttons 5 − 8 as combined zone group mode buttons.
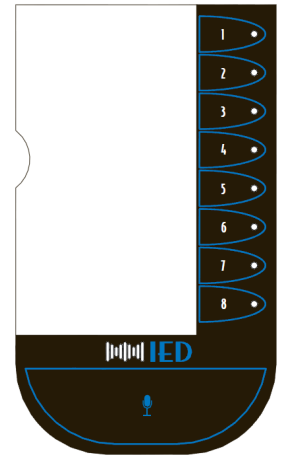
520 Series Button Pad

In one-touch mode, pressing a button selects an action such as:

- A live page to a designated zone group
- A recorded page to a designated zone group
- A permanent message playback to a designated zone group (e.g., customer reminder or emergency message)

In this mode, the user may change his button selection prior to pressing the large push-to-talk (PTT) button at the bottom. Pressing one of the one-touch mode buttons clears a previously selected button.

In the combined zone group mode, more than one button may be selected. When the PTT button is pressed, a live or recorded page to the combination of all selected zone groups is initiated. The user can change selections prior to pressing the PTT button. Repeated presses toggle a combined zone group button between selected and un-selected states.

The functions of the selection buttons may be printed on paper labels that fit under a Lexan cover just to the left of the selection buttons. Whenever these functions are re-configured, new labels can be inserted under the protective cover.

Microphones
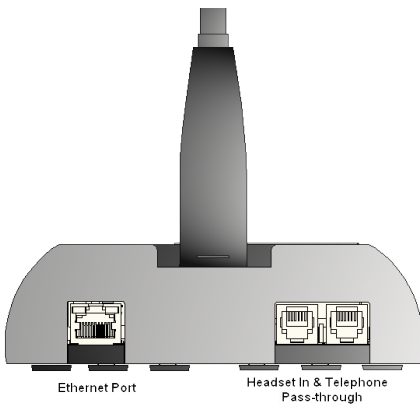
Desktop Station Rear Connectors

The desktop version of the 520 digital communication station can be equipped with a gooseneck microphone. It also can work with a telephone headset provided by the customer. The desktop 520 station has telephone connection in and out jacks on the back, so the headset can be shared between the 520 station and a telephone base. This is particularly useful for telephone operators or command center personnel who have to switch between telephone and paging system communications. The 520 station has relays that switch the headset audio from the pass-through connection and into the paging system whenever the user makes an announcement go active by pressing the PTT switch.

The wall mount version of the 520 digital communication station can be equipped with either a telephone style handset, or with the IED 501HH teardrop handheld microphone. Either a handset hanger or a metal magnet landing area for the 501HH is inserted at the top of the station. The IED-supplied telephone-style handset has a push-to-talk switch in the handset cradle area.

IEDA501HH Handheld Microphone Option

With either the telephone headset or the handset, the 520 digital communication station is capable of two-way audio communication. The station provides digital-to-analog conversion of any incoming routed signal, which is then supplied to the earpiece. With the right system/controller configuration, the 520 series station can be used for intercom communications.

520 Model Numbers	
IEDA520D	Desktop without microphone
IEDA520D-G	Desktop with gooseneck microphone
IEDA520W	Wall-mount without microphone
IEDA520W-T	Wall-mount with telephone handset microphone
IEDA520W-H	Wall-mount with hand-held microphone
IEDA520DTB	Optional desktop mounting base for W models

Network Requirements

The IED 520 Series Digital Communication Stations utilize CobraNet® technology licensed from Cirrus Logic®.

Live audio on the data network is time sensitive and requires minimal latency through the network to ensure uninterrupted audio. The IED 520 Digital Microphone Station and CobraNet operate on Layer 2 (MAC Layer) of the OSI Model. This traffic will not operate on a Layer 3 Router or above. VLAN's (Virtual Local Area Networks) may be required for managing traffic as well as Quality of Service (QoS) and Prioritization configuration of network switches. All connections to the 520 Digital Microphone Stations must be full duplex 100 Mbps Ethernet auto-negotiation.

Specifications

Electrical

Frequency Response ....+0, −1.0 dB
22 Hz - 22 kHz, Input Level = −20 dBu
Total Harmonic Distortion, THD .... <0.1%
−20 dBu input, 22 Hz - 22 kHz
Signal-to-Noise Ratio, S/N .... >85 dB
22 Hz - 22 kHz, −20 dBu Input
Analog-to-Digital Converter, A/D...24 bit
Internal Processing .... 32 bit, Floating Point
Sample Rate ....48 kHz
Latency (Through < 7 network switch hops) .... 5.7 mSec

Mechanical

Desktop Size...................................... 5.25" x 8.18" x 1.58" high (at back)
Wall Mount Size .... 5.41" x 8.29" x 1.74" deep (at thickest point)
Wall Mount mounting......................................Keyhole slots for standard
1-gang electrical box

Standards Utilized

Full-Duplex Operations .... IEEE 802.3x
Fast Ethernet, 100Mbps ....IEEE 802.3u
The 520 Series specifically uses 100Base-TX
Data Terminal Equipment Power .... IEEE 802.3af
via Media Dependent Interface (PoE)

Connecting Cable

Digital Audio/Power/Control .... CAT5e or better
For distances to a maximum of 100 Meters (approximately 300 feet) to the connected switch. Cable installed and tested in accordance with ANSI/TIA/EIA 568B Standards.

Environmental

Operating Temperature Range .... +32˚F to +104˚F (0˚C to +40˚C)
Storage Temperature Range ....−40˚F to +158˚F (−40˚C to +70˚C)

Power Consumption

Supply Power. .... <10 W
Supply Voltage = 48 VDC