# electronic designs

### 528 Series Expansion Stations

IEDA528SK-H / IEDA520FME-H / IEDA528E / IEDA528EAO

#### Description

The capability of the 528 Series Digital Communication Stations is expandable through the use of a variety of available expansion options. The IEDA528E expansion board provides an interface for up to three (3) expansion microphone stations. Each station functions as a slave to the parent microphone station to increase the number of paging locations while reducing cabling cost. The slave stations use the parent station's CPU and Ethernet interface to send announcements through the system. The IEDA528EAO expands the capability of a 528 series microphone station by providing a local analog audio output from the station.

#### IEDA528SK-H

The IEDA528SK-H Sidekick is a 4-button expansion station that interfaces to a 528 series microphone station through an IEDA528E expansion board. Up to three (3) Sidekick stations can be connected to a parent station to expand paging capability of the system. Each Sidekick connects to its parent station using Category 5e or better cabling and utilizes the parent station's CPU and Ethernet interface to transmit announcements through the system.



Each of the four (4) available buttons on each Sidekick are independently configurable in the announcement controller configuration software. Each button is capable of initiating a live announcement, recorded announcement, or launching a pre-recorded message. Each station also has a Push-to-Talk (PTT) switch located on the hand-held microphone. This PTT switch is directly tied to the PTT switch on the parent station so the PTT functions are identical between the parent and all slave stations. A user can go to the parent 528 series station or any of the expansion stations and achieve the same announcement results by simply picking up and keying the microphone. The IEDA528SK-H can be mounted in a standard 2-gang electrical box or a standard 4-gang electrical box. It can also be mounted to a 528 series backbox or a standard 4-gang electrical box using the IEDA528SKA adapter plate. The optional IEDA528SKBB backbox can be purchased to mount the unit on a standard single-gang electrical box or on the IEDA520DTB desktop base for desktop mounting.

#### IEDA520FME-H

The IEDA520FME-H is an expansion station that interfaces to a 528 series microphone station through an IEDA528E expansion board. Up to three (3) expansion stations can be connected to a parent station to expand paging capability of the system. Each expansion connects to its parent station using Category 5e or better cabling and utilizes the parent station's CPU and Ethernet interface to transmit announcements through the system.



Each expansion station has a push-to-talk (PTT) switch located on the hand-held microphone. This PTT switch is directly tied to the PTT switch on the parent station so the PTT functions are identical between the parent and all slave stations. The PTT switch can be configured to initiate a live or a recorded announcement. A user can go to the parent 528 series station or any of the expansion stations and achieve the same announcement results by simply picking up and keying the microphone.

The IEDA520FME-H can be mounted in a standard 2-gang electrical box or a standard 4-gang electrical box. It can also be mounted to a 528 series backbox or a standard 4-gang electrical box using the IEDA528SKA adapter plate. The optional IEDA528SKBB backbox can be purchased to mount the unit on a standard single-gang electrical box or on the IEDA520DTB desktop base for desktop mounting.

## INNOVATIVE ED

#### IEDA528E

The IEDA528E is a 3-port expansion board that mounts to most 528 series microphone stations to provide three (3) expansion ports that can interface with any combination of IEDA528SK-H Sidekicks or IEDA520FME-H expansion stations. It also contains an analog output that can be used to provide the same functions as the IEDA528EAO, thus allowing the 3-port expansion capability and the emergency analog backup.



The IEDA528E can be retrofitted to existing IEDA528VFM-H or IEDA528HFM-H microphone stations. It can be retrofitted with the IEDA528HDT-H or IEDA528VDT-H with modification to the box. It is not compatible with the IEDA528HDT-G, IEDA528VDT-S or IEDA528SRME-H stations.

The following part numbers are used for ordering a 528 series microphone station with the IEDA528E pre-installed.

- IEDA528VFME-H
- IEDA528HFME-H
- IEDA528VDTE-H
- IEDA528HDTE-H

#### IEDA528EAO

The IEDA528EAO is installed on a 528 series microphone station to provide a single analog output at the station's location. This board can be configured to provide one of two functions. It can provide an analog output of a CobraNet<sup>®</sup> channel using the host 528 station's Ethernet capability. This function is ideal for feeding analog audio to a local monitor loudspeaker that is used as part of the system's supervision function as is the case of the IEDA528SRME-H microphone station. The second use of the board is to provide a direct analog output of the microphone that allows it to function in an emergency backup mode. If the network connection to the announcement controller is lost, then the microphone will route audio to the analog output that can then be used with a local power amplifier for emergency paging.



#### SPECIFICATIONS

#### Electrical

| The following electrical specifications are measured from the micro-<br>phone station input to the amplifier input in the T9160 Power Amplifier |
|---|
| Mainframe, and include the performance of both the microphone   |
| station and the T9160 Power Amplifier Mainframe.  |
| Frequency Response+0, -1.0 dB   |
| 22 Hz - 22 kHz, Input Level = –20 dBu   |
| Total Harmonic Distortion, THD < 0.1 %  |
| 22 Hz - 22 kHz, Input Level = –20 dBu   |
| Signal-to-Noise Ratio, S/N  |
| 22 Hz - 22 kHz, Input Level = –20 dBu   |
| Maximum Input +6 dBu  |
| Maximum Output +7 dBu   |
| Gain  |

#### Mechanical

| IEDA528SK-H / IEDA52 | 8FME-H                                       |
|----------------------|--|
| Height               | 5.0 in (12.7 cm)                             |
| Width                | 5.0 in (12.7 cm)                             |
| Depth                | 1.1 in (2.8 cm)                              |
| Mounting Options     | 2-gang electrical box or                     |
|                      | 528 Series backbox using optional IEDA528SKA |
| IEDA528E             |  |
| Height               |  |
| Width                |  |
| Depth                | 0.72 in (1.8 cm)                             |
| IEDA528EAO           |  |
| Height               |  |
| Width                |  |
| Depth                | 0.5 in (1.3 cm)                              |

#### **Connecting Cable**

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                               | ) |
|---|---|
| Storage Temperature Range40 °F - +158 °F (-40 °C - +70 °C | ) |

Innovative Electronic Designs, LLC 9701 Taylorsville Road Louisville, KY 40299, USA +1.502.267.7436 phone +1.502.267.9070 fax www.iedaudio.com



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