Turbine Compact IP Stations
Getting Started for AlphaCom

turbine **STENTOFON VINGTOR**

The information in this document pertains to the Turbine Compact IP Stations TCIS-1/TCIS-1-V, TCIS-2, TCIS-3, TCIS-4, TCIS-5, TCIS-6, TKIS-1.

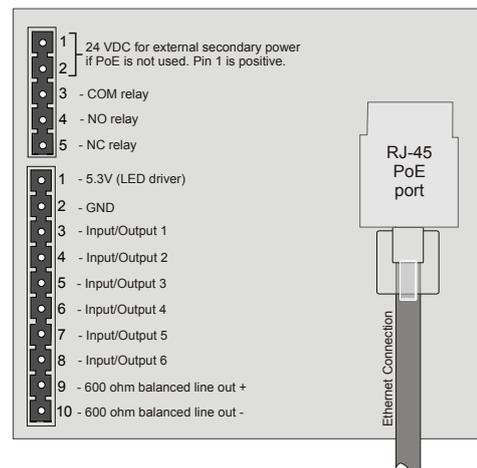## Turbine TCIS-1/TCIS-1-V Station Keys & Functions

- Loudspeaker
- Manual Speech Direction Control
- Cancel
- Call Button
- Microphone

Turbine TCIS-6 Station Keys & Functions

- Loudspeaker
- PMOLED Display
- Scroll Down
- Scroll Up
- Call Button
- Cancel
- Microphone

1 Station Connections

1.1 External Connectors

Pin	Description
1	24 VDC for external secondary power if PoE is not used. Pin 1 is positive.
2	
3	COM relay
4	NO relay
5	NC relay
1	5.3V (LED driver)
2	GND
3	Input/Output 1
4	Input/Output 2
5	Input/Output 3
6	Input/Output 4
7	Input/Output 5
8	Input/Output 6
9	600 ohm balanced line out +
10	600 ohm balanced line out -

RJ-45 PoE port

Ethernet Connection

The following table is an overview of the main connectors involved when installing the Turbine IP Stations.
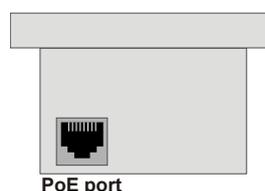
Ethernet/Power	10/100 Mbps Ethernet RJ-45 port for LAN (uplink) connection. Supports PoE (802.3af). Draws power from either spare line or signal line.
Secondary Power	24 VDC (16 – 48 V) secondary power is provided from an external adapter.
Relays	There is one Double Throw relay contact with 60W switching power. COM, NO, NC contacts are provided. Max: 250VAC/220VDC, 2A, 60W.
Input/Output	6 general purpose I/Os are available. Each I/O can be configured as either button input or LED driver.
Audio Line Out	A balanced 600 ohm audio line out with induction loop signal

1.2 Power Supply

The Turbine Station supports Power over Ethernet (PoE, IEEE 802.3 a-f) where power can be drawn from either the spare line or signal line.

If PoE is not available, the Turbine Station can be connected to a 24 VDC local power supply.

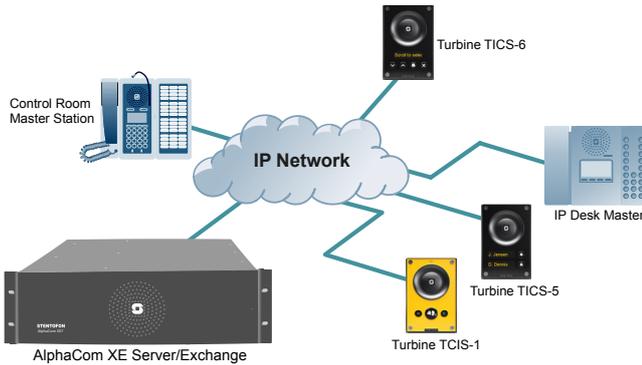## 1.3 Network Connection

PoE port

There is one RJ-45 port located on the Turbine station that is used as the PoE/LAN port.

1.4 Input/Output Connections

There are 6 I/O connection options for the Turbine Station. These connections are used as relay contacts for door lock control and external I/O devices.

2 Station Configuration

Control Room Master Station

IP Network

Turbine TICS-6

IP Desk Master

Turbine TICS-5

Turbine TCIS-1

AlphaCom XE Server/Exchange

2.1 Logging into the Turbine Station

The Turbine Station features an embedded web interface which allows users to log in via a standard web browser.

To do this, your PC and the Turbine IP station have to be connected together via a PoE switch using network cables:

1. Connect the PC to the PoE switch
2. Connect the PoE port on the station to the PoE switch

When the Turbine Station is connected to the network, the **IP address** of the station is automatically obtained in one of two ways:

1. IP address obtained from a **DHCP server**
2. If there is no DHCP server, an IP address in the range **169.254.x.x** will be assigned.

To make the station speak its IP address:

● Press the **call button** on the station
  - when the station is not yet registered

Access the station by logging into the web interface using a standard web browser:

1. Open a web browser
2. In the browser's address bar, type the station IP address and press the ENTER key
   - The station login page will be displayed.

To log into the station:

1. Click **Login**
2. Enter the default User name: **admin**
3. Enter the default password: **alphaadmin**

2.2 Station Main Settings

● Click **Station Main** > **Main Settings** to access the page for configuring station mode and IP parameters.

Station Mode

● Select the **Use Alphacom** radio-button

Turbine Frontboard

Depending on the type of Turbine Compact station, select one of the options from the drop-down box:

- **Kit**
- **Normal (TCIS-1, TCIS-2, TCIS-3)**
- **OLED Labels (TCIS-4, TCIS-5)**
- **Scrolling Station (TCIS-6)**

Registration Settings

● Enter the IP address of the AlphaCom server/exchange in which the IP station is to be a subscriber in the **AlphaCom IP-address** field.
● Enter the directory no. of the station in the **Directory Number** field.
- If a directory number is not entered, the station will register with its MAC address. The MAC address is found on the **Station Information** page and needs to be entered into AlphaPro.

IP Settings

● **DHCP** – Select this option if the IP station shall receive IP Settings from a DHCP server.
● **Static IP** – Select this option if the IP station shall use a static IP address. Enter values for:
- **IP-address**
- **Subnet-mask**
- **Gateway**
- **DNS Server 1** (optional - for network administration)
- **DNS Server 2** (optional - for network administration)
- **Hostname** (optional - for network administration)

Read IP Address

● Check the **Read IP Address** box to enable an unregistered station to speak the IP address when the call button is pressed.

Click **Save** followed by **Apply** to apply the new configuration settings.

2.3 Audio Settings

To configure audio settings:

- Select **Advanced Alphacom** > **Audio** from the menu

Microphone Sensitivity

- Select the sensitivity level in the range 0 to 7 from the drop-down box. The default setting is 5.

Automatic Volume Control

- Check box to enable automatic volume control that is adjusted according to the noise level

Debug Automatic Volume Control

- Check box to show current volume level on OLED display

Conversation Mode

- **Full Open Duplex**: Normal mode with echo cancellation
- **Robust Duplex**: Option used when open duplex fails due to excessive speaker loudness, microphone overload or very high nonlinear distortions.
- **Half Duplex Switching**: Switches speech direction depending on who speaks the loudest
- **Push-To-Talk**: Half-duplex communication. Initially the microphone is shut off. Push the M-button to open the microphone, and release to listen. (TCIS-1 station only)
- **Open**: Full Open Duplex without echo cancellation

Line Out Source

Plays audio either from VoIP signal (**Speaker**) or direct from **Microphone**.

2.4 I/O Settings

- Select **Advanced AlphaCom** > **I/O Settings** from the menu

- Select either **Input** or **Output** options from the drop-down box for **I/O Pins** 1 to 6.

2.5 OLED Labels

ⓘ *Note that only Turbine stations configured with **OLED Labels** (TCIS-4, TCIS-5) under **Main Settings** will have this menu option.*

- Select **Advanced AlphaCom** > **OLED Labels** from the menu

OLED Display Text

- Enter display text in the relevant fields for OLED 1 and OLED 2.

OLED Font Size

- The font size can be either **12** or **16**

OLED Brightness

- Brightness: **Default**, **Bright**, **Extra Bright**

2.6 Address Book

ⓘ *Note that only the Turbine station configured as a **Scrolling Station** (TCIS-6) under **Main Settings** will have this menu option.*

- Select **Advanced AlphaCom** > **Address Book** from the menu

Default Display Text

- The idle text shown in the display may be changed. The default text is: **Scroll to Select**

Font Size

- The font size can be either **12** or **16**

OLED Brightness

- Brightness: **Default**, **Bright**, **Extra Bright**

Start Scrolling After

- Set the time in minutes after which scrolling should start

Upload Address Book

A CSV file consisting of directory numbers and display text with the semi-colon character (;) as delimiter may be uploaded.

- Click **Browse** to upload a CSV file

2.7 Sound Detection

- Select **Advanced Alphacom** > **Sound Detection** from the menu

Sound Detection Settings

Here you can set the minimum amplitude and duration of the audio, the DAK to activate, etc.

3 LEDs on Station Front Plate

Status LEDs

- **Bell icon** lights **yellow** when a call is placed and ringing
- **Talk icon** lights **green** when a call is active and in conversation
- **Door icon** lights **red** when the door is unlocked or relay is active

Talk Icon: Flashing at 1 second intervals

- Station has no connection to the AlphaCom server/exchange.
  Possible reasons:
- No connection to Ethernet
- Wrong AlphaCom XE IP address configured
- Invalid IP address
- No gateway or wrong gateway to the AlphaCom server/exchange

Talk Icon: Flashing at 5 second intervals

- Station connected but NOT registered in the AlphaCom server/exchange.
  Reason:
- Station has not been programmed in AlphaPro

4 Restoring Default Settings

4.1 Reset to Default with Activated DHCP

To reset:

1. While **pressing any button**, power up the station by connecting to a PoE switch.
2. Hold the button until the station audio starts counting, and release the button on **count 1**.
3. Press and hold the button on **count 5** and release on **count 0**.
4. Press the **call button** to make the station speak its IP address.

Default values

- Station IP address: (determined by DHCP server)
- Username: **admin**
- Password: **alphaadmin**

4.2 Reset to Default with Static IP

To reset:

1. While **pressing any button**, power up the station by connecting to a PoE switch.
2. Hold the button until the station audio starts counting, and release the button on **count 1**.
3. Press and hold the button on **count 3** and release on **count 0**.
4. Press the **call button** to make the station speak its IP address.

Default values

- Station IP address: **169.254.1.100**
- Username: **admin**
- Password: **alphaadmin**

5 Station Software Upgrade

1. Start the TFTP server program and click **Browse** to select the folder containing the software image files
2. Log on to the IP station web interface
3. Select **Station Administration** > **Manual Upgrade**

4. Enter the IP address of the **TFTP server** (your PC's IP address)
5. Enter the prefix (e.g. **tsi-3.x.x.x**) to the software image files in the **Image file** field
6. Click **Save settings** to store the data
   - The station will now try to contact the TFTP server. If the response is *TFTP_CONN_OK* the settings are saved, and the **Upgrade** button will appear.
7. Click the **Upgrade** button to upgrade the software on the IP station.
   - The upgrade procedure takes about 3 minutes.