

## Series WS 800 I



## IP Wallmount Stations Series WS 800F / WS 800P

The multifunctional master stations of series WS 800F/ WS 800P are made in polycarbonate construction for internal and outdoor areas. Besides communication, the stations can carry out control functions in other systems. The amplifier provides the necessary volume in areas with high ambient noise.

The stations are protected against dust, dirt and water jets, which may occur in industrial environments. The special foil on the front panel has a dirt-repellent effect and can be

quickly and easily cleaned using normal cleaning agents and disinfectants. Large foil-type buttons make operation with protective gloves easy.

### Typical applications:

Series WS 800F: Production areas, workshops, clean rooms, canteen kitchens as well as internal and outdoor areas.

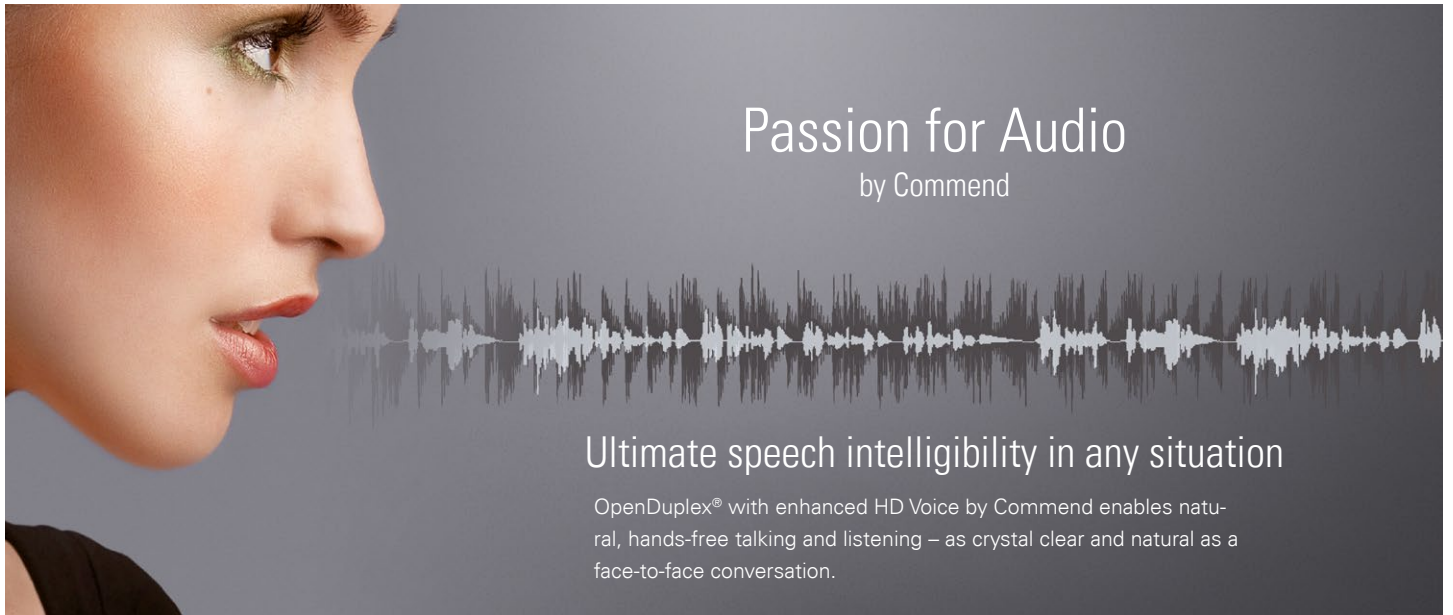
Series WS 800P: Classrooms and social areas, stores, workshops, corridors, as outdoor Intercom station on works premises and parking areas.

### 1. WS 800F I

IP station with monochrome LCD display with white backlight, back-lit alphanumeric full keypad, function buttons, omnidirectional electret condenser microphone with multifunction LED, loudspeakers 2 x 8 Ω, 3 inputs for floating contacts and 2 relay outputs (connection as normally open or normally closed contact), protection classification IP66, polycarbonate construction, front panel with closed-sealed membrane surface.

### 2. WS 800P I

IP station with monochrome LCD display with white backlight, back-lit alphanumeric full keypad, function buttons, omnidirectional electret condenser microphone with multifunction LED, loudspeakers 2 x 8 Ω, 3 inputs for floating contacts and 2 relay outputs (connection as normally open or normally closed contact), protection classification IP66, polycarbonate construction.

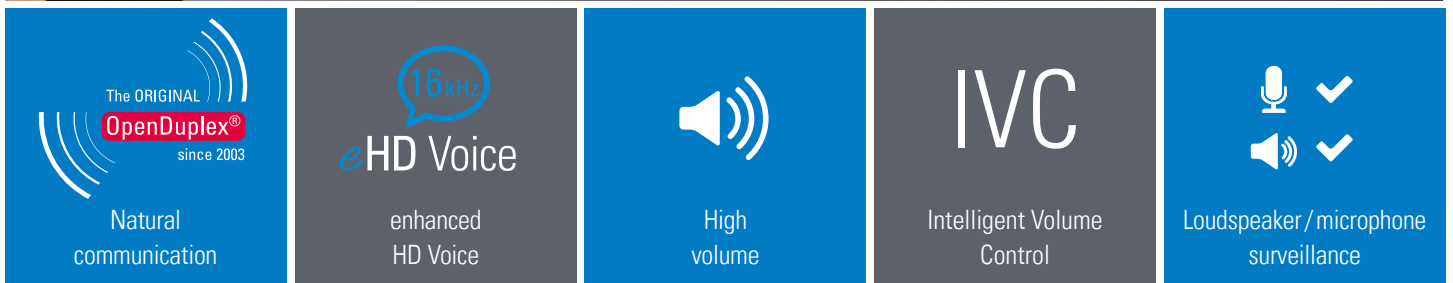


## Passion for Audio

by Commend

### Ultimate speech intelligibility in any situation

OpenDuplex® with enhanced HD Voice by Commend enables natural, hands-free talking and listening – as crystal clear and natural as a face-to-face conversation.



## AUDIO FACTS

- **eHD Voice** – enhanced HD Voice by Commend transfers the audio signal at a bandwidth of **16 kHz**, thus capturing the entire frequency spectrum of the human voice
- **STI** (Speech Transmission Index) **0.96** – measured under acoustic laboratory conditions (STI is a standard measure for speech intelligibility. It has a possible maximum value of 1.00, which corresponds to perfect intelligibility)
- **Loudspeaker/microphone monitoring** – ensures the availability of the Intercom station while reducing the need for manual verification of its functionality
- **Audio monitoring** – fully automated emergency calls triggered by shouting/screaming or pre-defined distress sounds – i.e., more security for users
- **Peer2Peer audio** – reduces network and server load to ensure efficient use of resources
- **Audio recording** and lip synchronous audio/video recording of conversations for documentation and evidence keeping purposes
- **Conference call function** for simultaneous talking with multiple conversation partners
- **Speech activity detection** senses when calls are finished (no microphone signal) and terminates the connection automatically
- **Simplex mode** for applications requiring controlled communication – e.g., security solutions based on the 'push-to-talk/release-to-listen' method
- **OpenDuplex®** for natural for natural, hands-free communication
- **IVC** (Intelligent Volume Control) automatically adjusts the device's volume setting to the ambient noise level
- **Public Address functions**

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## Technical Data – Benefits

### TECHNICAL DATA

IP rating acc. EN 60529:	IP66
Front panel:	<i>WS 800P I</i> : polycarbonate <i>WS 800F I</i> : polycarbonate with closed-sealed membrane surface
Microphone:	electret condenser microphone polar pattern: omnidirectional speaking distance: max. 7 m (23 ft)
Loudspeaker:	special membrane type for optimal sound quality, sound pressure level: 85 dB/1 W/1 m (3.28 ft), 2 x 8 Ω
Amplifier:	integrated class-D amplifier with 2.5 W
Sound pressure level:	max. 99 dB
Handset, headset:	EM sensitivity: 14 mV <sub>eff</sub> EM impedance: 3.3 kΩ / EM supply: 2.5 V EP level: 850 mV <sub>eff</sub> at 0 dBm0 / EP impedance: 200 Ω
Input:	3 inputs for floating contacts (detection of 5 input states)
Output:	2 relay outputs (switch-over contacts) max. 60 VDC, 2 A, 60 W <sup>1)</sup> expected life: min. 5 x 10 <sup>4</sup> (2 A), 10 <sup>5</sup> (1 A))
Line output:	for connection loudspeaker module
Call indication:	multifunction LED (colours: red, green, blue)
Keypad:	alphanumeric full keypad, white backlight activation force: 3 N, 1 x 10 <sup>6</sup> cycles
Display:	monochrome LCD display, 128 x 64 pixel, white backlight
Transmission bandwidth:	16 kHz
Operating temperature range:	<i>WS 800P I</i> : -20 °C to 70 °C (-4 °F to 158 °F) <i>WS 800F I</i> : -20 °C to 60 °C (-4 °F to 140 °F)
Storage temperature range:	<i>WS 800P I</i> : -20 °C to 70 °C (-4 °F to 158 °F) <i>WS 800F I</i> : -20 °C to 60 °C (-4 °F to 140 °F)
Relative humidity:	up to 95%, not condensing
Connection:	pluggable screw terminals expansion plug for e.g. EB2E2AHE IP Uplink: shielded RJ45 modular jacks
Power supply:	PoE or external supply 12–24 VAC or 15–35 VDC power consumption: max. 4.6 W
Cabling:	min. Cat. 5
PoE (Power over Ethernet):	IEEE 802.3af full power consumption of the terminal device: Class 0 (0.44 W to 12.95 W)
Protocol:	VoIP-Protocol based on UDP/IP
Data rate:	10/100 MBit/s (Full/Half Duplex)
Mounting:	flush mount kit WSFB 50P surface mount kit WSSH 50P
Dimensions (W x H x D):	with flush mount kit: 165 x 280 x 13 mm (6.49 x 11.02 x 0.51 in) with surface mount kit: 165 x 280 x 51 mm (6.49 x 11.02 x 2 in)
Weight incl. package:	approx. 820 g (1.80 lbs)
Colour:	front panel: light-grey (like RAL 7035) front panel frame: graphite-grey (like RAL 7024)

### BENEFITS

- Polycarbonate construction
- Monochrome LCD display
- Back-lit full keypad and function buttons
- Protection classification IP66
- Series WS 800F:  
Closed-sealed membrane surface, detergent and disinfectant resistant
- Supports DSP features such as OpenDuplex®, Audio Monitoring, Microphone/Loudspeaker Surveillance, etc.

### LINE LENGTH IN LAN

The maximum line length of Cat. 5 cabling in a LAN is 100 m (328 ft) – e.g. from switch to Intercom station.

### EXTENT OF SUPPLY

- Intercom station
- Short reference
- Operating instructions

<sup>1)</sup> The relay output may only be connected to a SELV circuit! A SELV circuit as per IEC/EN 60950-1 must be separated safely from a dangerous electrical circuit (e.g. 230 V or 110 V mains power), e.g. by means of double insulation. The SELV circuit must not exceed 60 VDC or 42.4 VAC<sub>peak</sub> (30 VAC<sub>eff</sub>)!

# System/ Network Requirements

## SYSTEM REQUIREMENTS

- GE 800 (min. PRO 800 1.2) with G8-IP (min. G3-8-IP 4.0b01) or
- GE 300 (min. PRO 800 1.2) with G3-IP (min. G3-8-IP 4.0b01) or
- VirtuoSIS/S3/S6
- Configuration software min. CCT 800 1.2
- Configuration software IP Station Config (included in setup of CCT 800 1.2)

## REQUIREMENTS TO THE NETWORK

### IP addresses and ports

- For the WS 800 I, the DHCP functionality is available. If DHCP is not used, the WS 800 I must have a fixed IP address.
- In case of a changing public IP address, dynamic registration of a WS 800 I is possible.
- Communication from the program IP Station Config is done via port 16399 (cannot be configured).
- Communication from the WS 800 I to the Intercom Server (UDP protocol) is done via port 16400 (configurable).

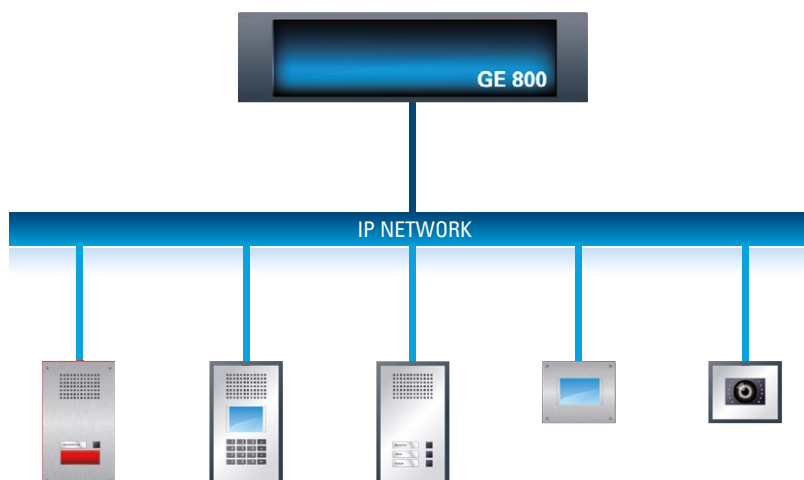
### QoS Requirements

- Maximum one-way delay 100 ms
- Delay-Jitter not above 50 ms
- 0% packet loss for perfect audio quality

### Bandwidth

- Required bandwidth incl. protocol overhead per WS 800 I, for upload/download each: speech and data 96 kBit/s
- Speech is compressed according to G.722 full

## SYSTEM OVERVIEW

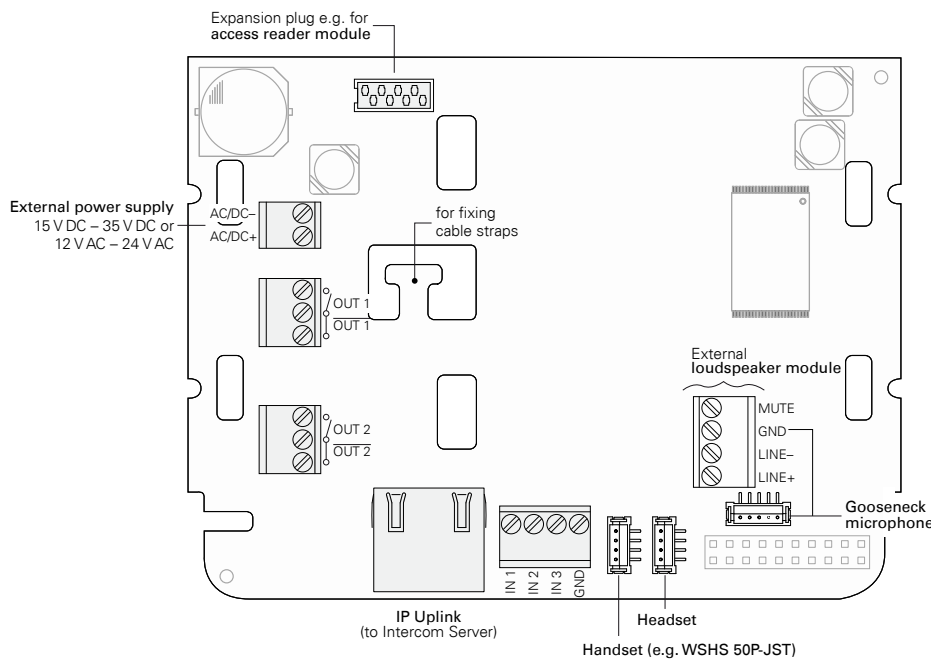


# Installation

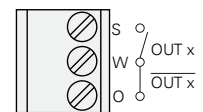
## SAFETY INSTRUCTIONS

- When opening the stations, ESD precautions must be observed.
- The stations may only be opened by authorised service engineers.

## CONNECTION

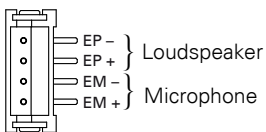


### Connection OUT 1/OUT 2:



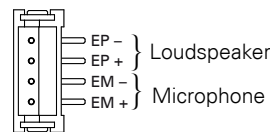
S = NO (normally open)  
 W = C (common)  
 O = NC (normally closed)

### Connection headset:



**Note:** The headset socket has to be activated via an ICX message (see below).

### Connection headset:



### ICX message for connection headset:

Microphone / loudspeaker	Task	Type	Data (variable length)	Server-SW
Switchover microphone / loudspeaker (subscriber)	40	92	TTTT 050Z	Pro 800 2.1

Variable TTTT → 4-digit call number of the subscriber  
 Variable Z → 0 = deactivate; 1 = activate; 2 = toggle

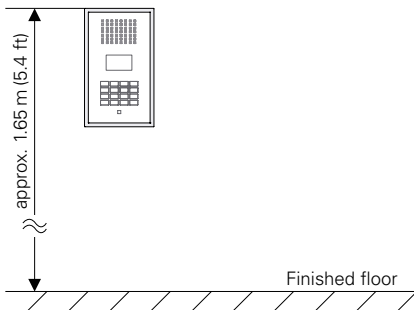
# Installation

## MOUNTING INSTRUCTIONS

- Do not expose the station to extreme temperatures (see "Technical Data" on page 3).
- For flush mounting, a flush mount kit WSFB 50P (available separately) is required.
- For surface mounting, a surface mount kit WSSH 50P (available separately) is required.

### Recommended mounting height

The upper edge of the station approx. 1.65 m (5.4 feet) from the finished floor. Adapt the mounting height to the individual needs.



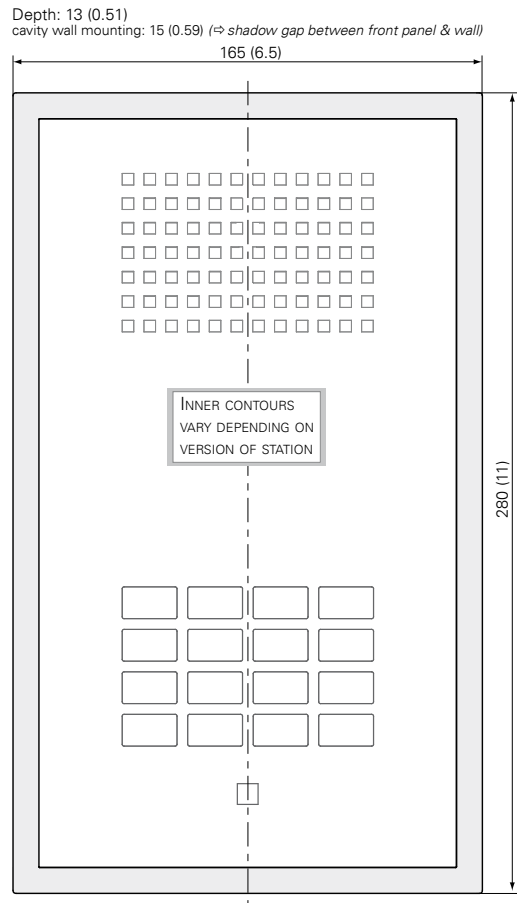
### Mounting recommendations WS 800F

Due to sealed microphone and loudspeaker openings, closed-sealed membrane surface stations have acoustic limitations. For that reason, consider the recommendations below when planning the system (see also page 7).

- Ideally, the station is mounted close to the speaker.
- The optimal speaking distance is between 0.3 m to 1 m.
- If it is not possible to mount the station in the recommended position (e.g. due to constructional limitations), a remote microphone can be installed in order to enhance speech quality.
- In case of high ambient noise (>75 dB) or great speaking distances, it is recommended to install additional loudspeakers (e.g. WSLM 52F or WSLM 56F).

## DIMENSIONS FRONT PANEL

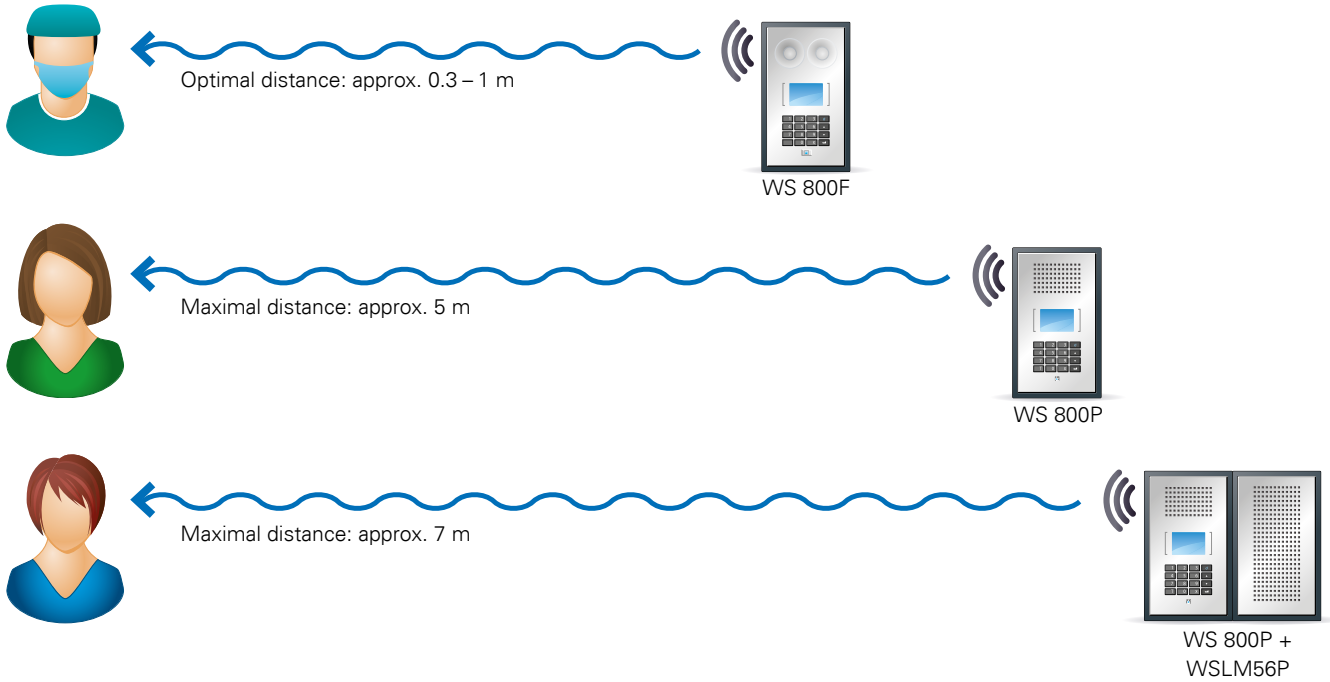
Measuring units in mm (inch), not to scale!



# Installation

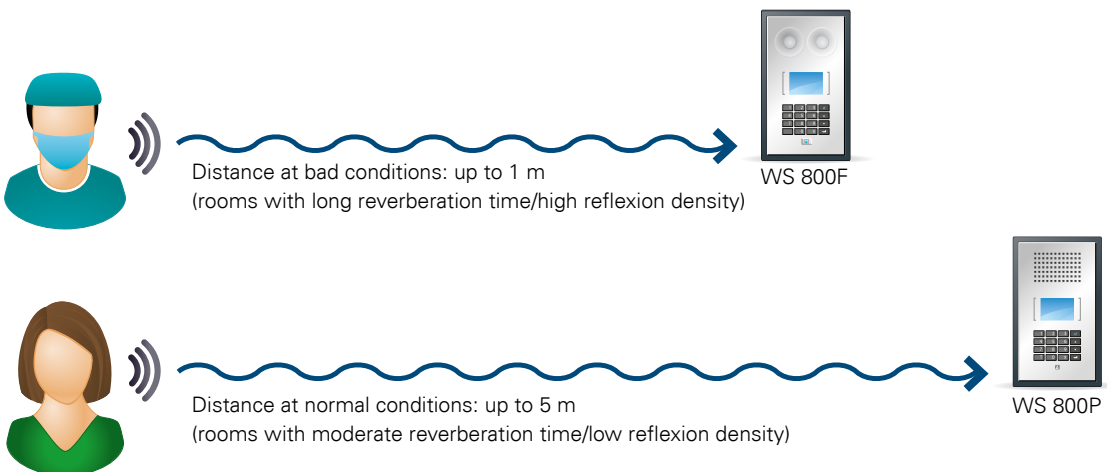
## LISTENING DISTANCE

Depending on the station's version, consider the following listening distances.



## SPEAKING DISTANCE

Depending on the station's version, consider the following listening distances.



## QUALITY TESTED. RELIABLE. SMART.

COMMEND products are developed and manufactured by Commend International in Salzburg, Austria.

The development and manufacturing processes are certified in accordance with **EN ISO 9001:2015**.

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## A STRONG WORLDWIDE NETWORK

COMMEND is represented the world over by local Commend Partners and helps to improve security and communication with tailored solutions.

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