



VOICE COMMUNICATION SYSTEMS



ATC VCCS

VOICE SWITCH **TCS990** RELIABLE AND SCALABLE
FOR MAIN SYSTEMS OR LAST RESORT SYSTEMS



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The TCS990 digital switch is designed for traffic controllers who guard critical situations around the clock. The design is the result of over twenty years experience in Voice Switches. The switch supports external IP-networks, telecom networks, remote line interfaces and a variety of consoles. Our powerful Content Management System (CMSpro) makes installation, control and maintenance effortless.

THE VCCS SYSTEM

complies with the Eurocontrol procurement and CAP670 guidelines. The EUROCAE ED-137 is available. The VCCS system can be delivered with a wide variety of operator positions. They are available in different sizes from 5.7", 12", and 15". Unlike other designs which use separate display and control units all components are housed in one compact unit. All panels are equipped with wide angle high brightness LED TFT displays which make them perfectly readable under all conditions. The ruggedized construction, resistive touch and LED illuminated display make a 10 year maintenance free operation possible.

VALUE FOR MONEY

The TCS990 design is designed to be very compact, extremely flexible and with special attention to reliability. This guarantees high availability, long life span, easy expandable and low service costs.



TCS990

SOME TCS990 FEATURES

- Cost effective flexibility through its HW and SW modularity (easy to fulfil end-user demands)
- A gateway for all kinds of voice communications, radio, telephone, intercom and PA
- Integration of long- and short-term voice logging (versatile PABX)
- Easy to configure and serviced by using CMSpro tool
- Inter-switch connectable
- Integration of receiver diversity and COOC (CLIMAX) optional based on GPS
- Support for analogue lines CB (FXO+FXS), LB RIRO, leased lines M1030, AC15, ATS R2 and ATS No5
- Support for digital lines ISDN BRI, ISDN PRI and VOIP SIP
- Support for integrated radio monitoring by serial connection (RS485/RS422 or RS232)
- Easy firmware upgrades by CMSpro

There are three types of standard operator consoles available:

- **STP990 For small or EVCS systems.**

A 19" mountable unit with a 5.7" VGA TFT touch screen, built-in loudspeaker, microphone, volume control, touch PTT switch and headset/handset connectors.

- **TCP990 For standard VCCS systems.**

This 12" unit can be built into a desk. It is a single unit that has a wide angle XGA high bright TFT touch screen. This unit has no internal speaker(s) microphone or PTT button. It connects to a TCU990 (loudspeaker/handset) or ACU990 (headset box)

- **TBP990 For standard VCCS systems with integrated audio.**

This 15" unit is for desktop use. It can be mounted on a VESA standard or a desktop mounting set. It is a single unit that has a wide angle XGA high bright TFT touch screen. It connects to a TCU990 (loudspeaker/handset) or ACU990 (headset box).

MEP is dedicated to fulfill all customer requirements. All electronics and firmware are designed and built by MEP, giving us the possibility to adapt the VCCS system to applications needed by our customers.

LOUD AND CLEAR, ALWAYS

CENTRAL EQUIPMENT

The central equipment consists of a 3U 19" rack. One rack can accommodate 16 system cards. If more cards are needed, extra racks can be added to expand the system. Up to four racks can be connected together. The VCCS is based on a TDM system bus with integrated redundancy. The VCCS transports audio as well as data over the same bus. The system has a distributed switch architecture; this means that the switch has exactly the size that is needed. Most VCCS systems are built from a central switch and line replaceable units (LRU). The TCS990 integrates the LRU into the switch. This approach saves the number of units and cables making it more reliable. Only one type of system card and line card is used to build the entire VCCS with great savings on the costs of spare parts.

REMOTE EQUIPMENT

Remote Line Interface, CVS990

The CVS990 is suitable for locations with a maximum of 32 voice channels, i.e. 16 transceivers. It consists of a 1U 19" unit, including a dual power supply and connections for battery back-up. By adding the appropriate module, different line types can be connected. Implementation of COOC (CLIMAX) functionality is possible by fitting a GPS module in this housing. Delays and transmitter frequency stability are based on this GPS module (standard option).

INTERCONNECTION

Standard E1 (CAS) or Ethernet (IEEE 802.3 10/100 base T) is used to interconnect the central equipment with the operator consoles. All kinds of standard telecom lines are supported to connect each or a cluster of remote sites with the central equipment: Ethernet, E1, ISDN-2, ISDN30, etc.

BENEFITS

The benefits of the TCS990 are:

- **Optimum cost performance ratio**
high quality at unmatched cost level
- **Reliability**
proven technology with large installed base and years of experience
- **Flexibility by design**
versatility, scale ability, client specific adaptability, configuration ability
- **Simple Serviceability**
build-in self testing modules, one type of system card, hot swappable, remote diagnoses and maintenance, etc.

MEP

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