



## All Digital High Reliability 100% Non Blocking

### APPLICATIONS

The PROCOM-1800 Series Integrated Voice Communication Switching Systems (VCSS) provide audio switching and control of radios, landlines, interphone and intercom for:

- Air Traffic Control Communications
- Mobile Tactical Control Communications
- Command Center Communications
- Marine Traffic Control Communications
- Communications Training and Simulation
- Emergency Services Dispatch - Fire, Police, Disaster Communication

### FEATURES

- Systems consist of modular components
- All digital audio processing
- Up to 28 interface ports
- Full Non-blocking and Conferencing with multiple access to ICOM, TELCO, CRYPTO, RADIO, P.A. and AUX audio devices
- On-site reconfigurable and upgradeable
- Digital link to Operator Stations (OpS)
- RS-232 Data Port available on OpS link
- Independent record ports.
- DC source powered per MIL-STD-1275
- Built to meet MIL-STD-461 EMI/RFI standards
- Small form factor for the switch node
- Easily mounted in standard 19" EIA rack or console
- Optional Red/Black capability
- Industry standard RJ-45/RJ-11 connectors for communications interfaces

### OVERVIEW

PROCOM-1800 Series Communication Control Systems are integrated using modular building blocks, to meet the user's exacting needs. A low profile (1U) central node provides 28 port interface capacity as a stand-alone system. Nodes can be interconnected to a larger system such as the Telegenix PROCOM-2000.

Color or monochrome Touch Screen Operator Stations or traditional push button stations provide intuitive, easy to use access to all the interfaces of the system. Circuit selector button functions are fully programmable. The system remembers each user/function's station preferences, and recalls them for rapid station reconfiguration. Operator positions can be located 6 km away on a simple 2-wire line, or remoted to another continent using standard communication systems.

The PROCOM-1800 is built on Telegenix years of experience in providing high reliability, non blocking communication control systems. System software closely parallels the larger PROCOM-2000 transportable system in use worldwide.

This Commercial Off-the-Shelf (COTS) system was developed from the ground up for quick and simple installation. Easy system integration is assured through the use of standard enclosures and standard RJ-45 connectors. Simply plug radios, user stations, and land lines into the unit, and configure the system. A fully documented Windows® based System Administration tool provides for either on-line or off-line configuration and optimization of the system.

**Audio Signals**

Frequency Response	Less than +/-0.5 dB, 300 to 3400 Hz.
Distortion	Less than 2% THD, 300-3400 Hz
Signal to noise ratio	More than 50 dB at 1020 Hz.
Idle channel noise ratio	Less than -60 dBm at 3000 Hz
Crosstalk Isolation:	Better than 90 dB between channels, 100 Hz to 10 kHz



Rear view of PROCOM1800 Node

**Signal Capacity**

All signals in the PROCOM 1800 switching nodes are digitally processed, switched and combined. External analog audio is digitized by Line Interface Units. Each switching node has internal switching capacity for 64 channels. The PROCOM 1800 can act as a local node in a high capacity, PROCOM 2000 system.

**External Interfaces**

External signals are processed by interface specific Line Interface Units. The signals are converted, processed, synchronized and assigned to internal channels. The available interfaces are:

ISDN	BRI (Basic Rate Interface) PRI (Primary Rate Interface) Modes S / U / UDLT
Analog	4-wire E&M with PTT Facility Intercom/Public Address 2-wire Central Office / PBX
Telephone	2-wire POTS Local Battery systems
Digital	E1 / T1 Ethernet LAN TCP/IP RS-232/485 VOIP (future) RS-530 (64k) channel
Recording: (Built in)	(1) E1 recorder interface (31 channels) (14) common ground or (8) independent Analog recorder interfaces (600 ohm)

**Key Advantages**

- Real Time Operating System
- Full DSP Audio Processing
- Intercom and Interphone Operation
- Fully Programmable Keys
- Touch Entry Displays
- Front Panel Status Indicators
- Windows® based Network Administration Tools

**Environmental**

Temperature:	0°C to +50°C (operating) -40°C to +70°C (nonoperating)
Altitude:	0 to +10,000 feet (operating) 0 to +50,000 feet (nonoperating)
Humidity	10% to 90% (noncondensing)
Environment	Intended for fixed base installations (Contact Telegenix about mobile installations)

**Power Requirement**

System Node	No Interfaces	10 watt
(All slots full, & two OpS powered locally.)	+24 VDC (+20%, -15%)	90 watts
OpS (Operator Station)	14 watt (standard) 20 watt (Hi Bright)	
CAU-1548	4 / 12 watt (normal / maximum)	
CAU-2000	30 (maximum)	
Basic OpS	10 watt	

**Dependability**

MTBF Critical	Better than 100k hours
Availability:	> .99999
MTTR	< 30 minutes
Other	99% BIT failure detection

**Dimensions & Weight**

Switch Node	19"W x 1.6"H x 18"D (14 lb) (1U) 480 x 43 x 460 mm (6.3 kg)
Standard OpS (Desktop)	10.6"W x 7.9"H x 3.7"D (3.9 lb) 267 x 199 x 94 mm (1.7 kg)
(Console)	12"W x 9.0"H x 3.7"D (4.7 lb / 2.1 kg)
(Rack mount)	19"W x 10.5"H x 3.7"D (9.1 lb / 4.1 kg)
Basic OpS	9"W x 6"H x 8"D (3 lb / 1.4 kg) 229 x 152 x 203 mm
CAU-2000	4.6"W x 7.5"H x 3.25"D (8.8 lb) 117 x 190 x 83 mm (4 kg)
CAU-1548 (48 button)	19"W x 5.25"H x 9"D (7 lb.) 480 x 133 x 233 mm (3.2 kg)

