



## Davicom Cortex Series

### Your Remote Site Management Solution for Alarms, Monitoring & Control

Davicom's new generation of intelligent site management systems is designed to meet the most stringent requirements of the broadcast and wireless telecommunications industries. These best-in-class, stand-alone monitoring and control units interface easily with virtually any type of remote site equipment and sensors, thereby ensuring maximum flexibility and expandability.



# Let the CORTEX be Your Brain at the Site

## Decide & Control

Cortex units can make decisions based on Virtual Logic Gates, automating the control of equipment at the remote site. Based on the readings from the sensors it is connected to, the Cortex series units can control a broad range of equipment in multiple ways.

## Sense Site Status & Environment

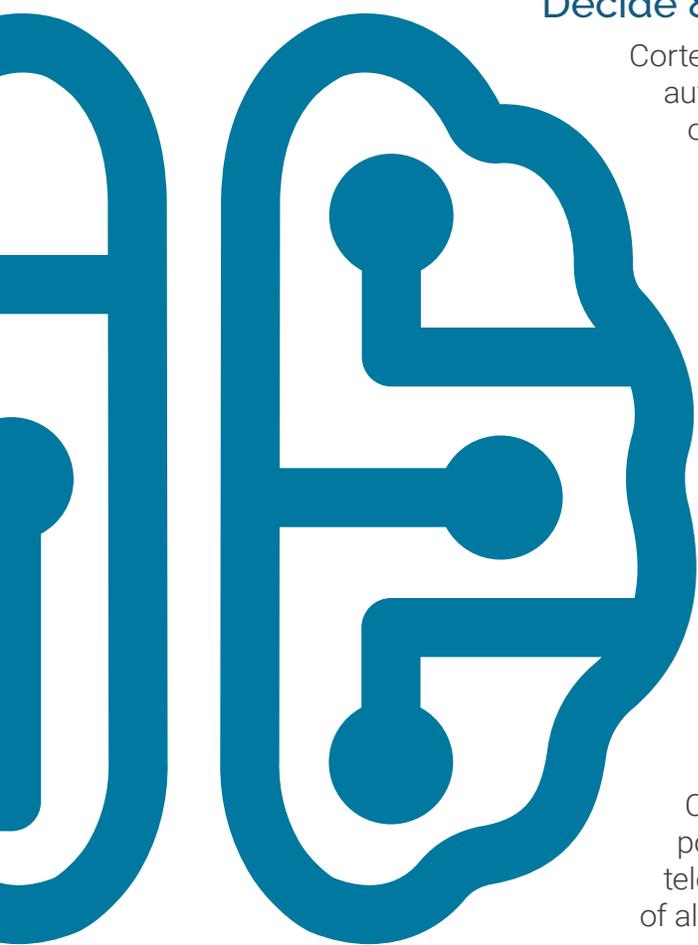
Connect multiple types of sensors to add environmental awareness to your Cortex. Low-cost and widely available MODBUS sensors can also be used.

## 360 °Awareness

Manage your site through a standard dial-up modem connection, by DTMF/voice response or through a network connection. Get situational awareness on any device with the web based interface or let the Cortex tell you what's potentially wrong at your site.

## Listen & Recall

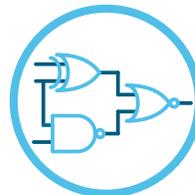
Cortex units can listen to your site audio and warn you of potential silence, or even relay live audio back to you via telephone or IP streaming. It is also capable of keeping track of all conditions and events that happen at your site.



## Your Manager at the Site. Here's Why.

### Design Automation Without a Single Line of Code!

Cortex systems provide automation with decision-making features and commands that go well beyond conventional telemetry systems. Units can for example detect an RF failure; place the standby transmitter on-air to restore the signal, and alert on-call personnel. Engineering staff can then diagnose the problem from the event history log and, using remote measurements, decide on the appropriate course of action.



Virtual Logic Gates



Math Functions



Schedulers



Virtual Relays



Activity Timers



Up/Down Counters



# Connect Any Type of Analog or Status Sensor

Directly connect analog sensors, status sensors and audio feeds. No extra boards to buy!



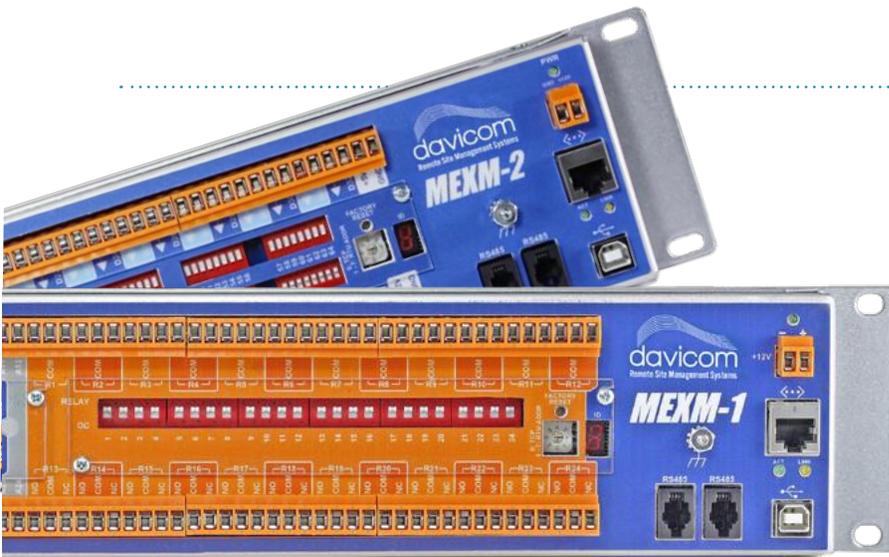
Any I/O can be assigned to an activity monitor that checks for too much, or too little activity on the input. Daily cumulative runtimes are stored and logged.



Use any analog input to turn your Cortex into an audio silence detector.

# Control External Equipment

With its relay outputs, the Cortex can command and control other equipment. From remotely switching to a backup transmitter to turning on the generator when a power outage occurs, the Cortex can take smart decisions to keep your site transmitting.



# Need More I/O?

No worries, MEXM expansion panels or Modbus slaves will let you add up to:



Analogs Inputs



Status Inputs



Relay Outputs

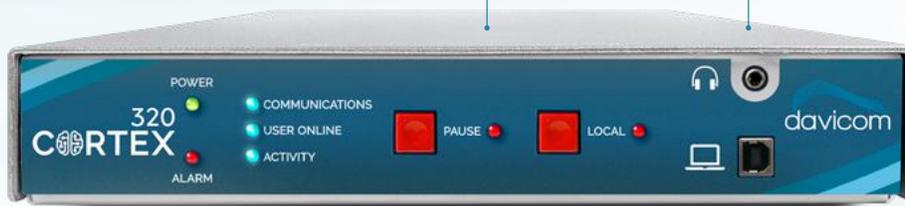
# 320 CORTEx

## Pause & Local buttons

Safeguard on-site personnel by blocking automation & remote access.

## Audio Listening Jack

Access site audio from the front panel jack.



## Health Indicator LEDs

Instantly assess site & unit status with the front panel LEDs.

## Local Connection

USB connector for local connection to laptop computer.

## Audio Input/Output

Connect site audio to the line-in or feed the audio to an external mic input.

## I/O Connectors

Connect all I/O's to the compact DB-25 connectors.

## Power Failure Check

Monitor AC power at your site with the included wall-wart.



## On-board USB hub

Connect up to 2 USB devices (Memory stick or other Davicom products).

## Power input

12 VDC for easy battery backup.

## Ethernet Port

Connect to the outside world and/or to other onsite equipment.

## Phone Line

Connect to the outside world via dial-up modem.

# 360 CORTEx

## Pause & Local buttons

Safeguard on-site personnel by blocking automation & remote access.

## OLED Display

Immediate access to alarms, I/O states & basic configurations.

## Audio Listening Jack

Access site audio from the front panel jack.



## Menu Buttons

Convenient buttons let you navigate through the different menus.

## Local Connection

USB connector for local connection to laptop computer.

## Health Indicator LEDs

Instantly assess site & unit status with the front panel LEDs.

## I/O Connectors

Connect all I/O's to the compact DB-50 connectors.

## Dual Power Supply

Add redundancy by connecting two 10 to 30 VDC power supplies.

## On-board USB hub

Connect 4 USB devices (keyboard, mouse, memory stick or other Davicom products).

## Power Failure Check

Monitor AC power at your site with the included wall-wart.



## Ethernet Switch

Connect to the outside world and/or to other onsite equipment.

## Audio Input/Output

Connect site audio to the line or mic input and feed the audio to an external mic input using line-out.

## Video Output

Connect a flat screen monitor and access the unit through the internal GUI without an on-site computer.

## Serial Connection

Connect to legacy devices or to the outside world through this serial port.

## Phone Line

Connect to the outside world via dial-up modem.

# Simple Network Management Protocol (SNMP)

## SNMP Agent

Cortex units have a built-in SNMP agent to allow monitoring and control from a central SNMP manager. When activated, this agent allows remote SNMP management systems to perform GETs, SETs and to receive traps from Davicom units.

This feature has the added benefit of converting non-SNMP legacy site devices into SNMP-capable equipment through the Cortex's GPIO and SNMP agent.



## SNMP Manager

The Cortex built-in SNMP Manager\* allows it to take readings, set controls and receive alarms from SNMP enabled devices. This monitoring and control is achieved over a simple TCP/IP connection between devices, thus greatly facilitating interface wiring.

## Available SNMP Manager Packages



## Build a Cortex Smart Network

Use the Cortex's SNMP agents and managers to build a complete network of interconnected, interacting and redundant site managers.



## Use network PINGs to debug your network

Ping different network branches or even the outside Internet to map network connectivity and faults.



## Or use this feature as a failsafe to reset flaky network elements!

Have your Davicom automatically reset network components from the remote end of your network link.



## Complete Web-Based Interface

### Clean • Modern • Easy To Use

The Cortex series' web-based workspaces are completely customizable by the user. In addition, each user can have different workspaces on multiple devices (smartphone, tablet or PC). These workspaces have the advantage of being stored directly on the Cortex unit itself, thereby ensuring a uniform look when being accessed by different users. For low-bandwidth communications, workspaces may also be located on your personal computer using our DavLink software.



### Save Two Firmware Versions in the Same Unit

Count on stress-free firmware upgrades thanks to the Cortex's dual firmware memory spaces that ensure fail-over and roll-back operation. Upgrades become virtually unbreakable, even if you pull the plug during an upgrade!



### Top-quality design for Electromagnetic Compatibility

Davicom units have been developed and tested to operate in high-level electric fields and to resist electrostatic discharges. Exactly the type of environment you would expect to find near high power transmitters on a mountaintop with a metal tower!



### Smartphone app for Easy Control and Notifications

The Dav2You APP brings you the exact information you need, when you need it and where you need it. Whether on the road, at the office or at the site, you can connect to any Cortex unit or receive notifications and get critical site information within seconds.

# All Davicom units have the following features

- USB device port on front panel
- Secure IP over Ethernet or Internet
- Automatic action on conditions or events
- Voice response/DTMF over phone
- FAX transmission capability
- Automatic detection of PSTN dial-tone
- Compatible with DavNet NOC software
- Integrated Web Server
- 100 ms sampling interval on inputs
- Individual Relay pulsing to 0.1s resolution
- 16 alarm-call lists, with 10 recipients per list
- Configurable delays on individual alarms
- Hysteresis on metering inputs
- 4 simultaneous users
- Automatic commands between remote Davicom units
- Alarms via E-Mail with HTML and XML file attachments
- Alarms via SMS
- Alarm transmission to multiple Pagers
- Vocal descriptions from 400-word vocabulary
- Sync to NTP & ACTS servers
- Battery Discharge Test
- Internal Battery Backed RTC
- PSTN Caller ID placed in log
- RF immunity to 10V/m
- Electro Static Discharge immunity to 12kV
- User configurable screens
- Multiple workspaces
- Operation from 12 VDC supply
- Automatic Day-Night settings from Latitude & Longitude
- Modbus I/O expansion capability in TCP or RTU modes
- Logging to: System log (1024 events), Custom log (1024 events), EAS log (1024 events), Data logs (millions of events at 1 Hz rate)
- Automatic VSWR calculation
- Linearization of sensor inputs
- No moving parts (Cooling Fan nor HDD)

Specifications	320 CORTEX	360 CORTEX
Metering (Analog) Inputs	12* (single ended/unipolar)	8 (differential/bipolar)
Status (Digital) Inputs	4	16
Audio Inputs for remote listening	1	2
Outputs (Command Relays)	6	8
Network Monitoring Pings	32	64
Virtual Logic Gates	128	128
Event schedulers	64	128
Math Functions	16	32
Unit to Unit Commands	128	128
Counters	16	32
SNMP Agent	Yes	Yes
SNMP Manager	No (options available)	Yes
USB Host Ports (hub)	2	4
Ethernet ports (switch)	1	4
Power Supply	12VDC, single	10-30VDC, dual redundant inputs – 48VDC option
Front Panel Display	7 Status LEDS	Scrollable OLED display
Digital Video Output	No	Yes
Operating Temperature	0° to -70°C (-40° to +70°C optional)	-40° to +70°C
Dimensions	15.5" x 11" x 1.75"	19" x 12" x 1.75"
Rack Space	1 RU, half width	1 RU
Weight	2.42 lbs	4 lbs

\*Can be used as status inputs



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