ASTRO 25 CORE

PROVEN. SCALABLE. MISSION-CRITICAL READY.

When the call comes in, an effective response requires a radio communication system tailored to your needs. A system its users can trust to provide immediate and always available communication, regardless of their location, while keeping everyone safe. This is why we've created ASTRO™ 25 radio systems.

Designed to meet the demands of public safety organizations, ASTRO 25 systems are proven dependable under the most challenging conditions and when lives are on the line. They are the most widely used Project 25 (P25) compliant communication systems in the world.

As the central source of system control, the ASTRO 25 Core is designed to give you complete control of your mission-critical communications and maximum flexibility to adapt as your needs change.

CAPABILITIES

Call Types

- Analog Conventional
- P25 Digital Conventional
- P25 FDMA & TDMA Trunking
- Integrated Voice and Data
- Mutual Aid

Channel Types

- IP Digital Trunking
- IP Digital Conventional
- Digital Conventional (v.24)
- Analog Conventional (4-wire)
- Mixed Mode
- P25 Conventional Talkgroup
- Digital Fixed Station Interface (DFSI)

Site Topologies

- Repeater
- IP Simulcast
- Voting
- Multicast

Dispatch Solutions

- MCC 7500E IP Dispatch Console
- MCC 7500 IP Dispatch Console
- CommandCentral AXS

Interoperability

- APCO P25 ISSI via Critical Connect
- APCO P25 CSSI

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INTEROPERABILITY

A single connection to our Critical Connect service can provide interoperable voice and data communications with users on other two-way radio and broadband PTT systems.

SCALABILITY

Easy to deploy software licenses scale the ASTRO 25 Trunking Core from a local coverage solution to a statewide multi-zone configuration with thousands of subscriber radios.

SECURITY

Bad actors are continuously testing your systems for vulnerabilities. Our holistic approach to cyber security is designed to protect the network as well as the sensitive information it carries.

MIXED FLEET

The core supports both trunked and conventional communications in single-zone or multi-zone configurations. This allows you to support a mixed fleet of radios, support mutual aid activities and manage the transition of radios from one generation to the next.

REDUNDANCY OPTIONS

All core hardware, including servers and transport equipment, comes in pairs. Software redundancy and geographic (DSR) redundancy are also available. To protect against hardware and software failures, software redundancy option installs a second instance of applications on the paired hardware while geographic redundancy provides maximum protection against a catastrophic event.

WIDE-AREA SERVICE

From local to statewide, ASTRO 25 systems are highly scalable to provide reliable P25 coverage across almost any size jurisdiction. With SmartConnect and properly equipped APX radios, ASTRO 25 can extend coverage indoors and beyond P25 by rerouting voice and data over LTE, Wi-Fi and satellite services.

SYSTEM MANAGEMENT

For daily operation of the system and radios, the ASTRO 25 Core contains a set of native system management applications including fault management, configuration management and performance tools. CirrusCentral Management provides greater access and usability through our secure, cloud-based service.

DESIGNED TO YOUR NEEDS

Motorola Solutions design engineers will customize the configuration to best align with the goals of your organization. Because of the inherent flexibility of the architecture and the ability to add new functionality as needed, you can be confident that the configuration you select now can adapt and grow with your needs.

INFRASTRUCTURE SERVICES

Whether for everyday routines or crisis situations, your communication equipment must be ready to respond. From basic phone support and repair to a complete transfer of day-to-day operations, we offer multiple levels of service to help keep your equipment operating at peak performance.

HARDWARE COMPONENTS

The ASTRO 25 Core consists of various pieces of electronic equipment, all mounted within a single open rack or enclosed cabinet.

- **Server** - Hewlett Packard Enterprise Proliant DL 380
- **Direct Attached Storage** - Seagate (Dot Hill) 4525 DAS
- **LAN Switch** - Hewlett Packard Enterprise Aruba 2930F-48 port
- **Backhaul Switch** - Hewlett Packard Enterprise Aruba 2930F-24 Port
- **Edge Router** - Juniper SRX 1500
- **Firewall** - Fortinet 101E

SERVERS

Commercial-off-the-shelf (COTS) servers host ASTRO 25 radio call management, data control, authentication, security and system management applications. For redundancy purposes, servers and data storage units are deployed in pairs.

TRANSPORT

A combination of routers and switches provide the necessary connectivity to RF sites and subsystems, dispatch consoles, feature applications and other P25 systems. For redundancy purposes, transport equipment is deployed in pairs. Additional transport equipment may be needed depending on each system's unique transport configuration.

KEY HARDWARE SPECIFICATIONS		
	HPE PROLIANT DL 380 GEN 10	**DOT HILL 4525 DAS**
Dimensions (H x W x D)	8.7 x 44.5 x 67.9 cm (3.44 x 17.54 x 26.75 in)	8.79 x 44.3 x 63.0 (3.47 x 17.44 x 24.8 in)
Weight	23.6 kg (51.5 lb)	30 kg (66 lb)
Operating Temperature	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3,050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).	5ºC to 35ºC (41ºF to 95ºF)
Non-operating Temperature	-30°C to 60°C (-22°F to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).	-40ºC to 70ºC (-40ºF to 158ºF)
Operating Relative Humidity	8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.	20% to 80%, non-condensing
Operating Altitude	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).	0 to 3045 m (0 to 10,000 ft)
Non-operating Altitude	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).	-305 to 12,192 m (-1,000 to 40,000 feet)
AC Power	100-240 VAC, 50-60 Hz	100 to 240 VAC, 50/60Hz
Power Consumption	800W @ 120 VAC 800W @ 240 VAC	580W @ 120 VAC 580W @ 240 VAC
Input Current Drain	9.1A @ 100 VAC 4.4A @ 200 VAC	6.18A @ 100 VAC 3.23A @ 230 VAC

For more information, please visit us on the web at: www.motorolasolutions.com/astro25

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Motorola Solutions, Inc. 500 West Monroe Street, Chicago, Il 60661 U.S.A. **motorolasolutions.com**