



MOTOROLA

The Woodlands, TX

MCC7500 Dispatch Consoles

March 4, 2015

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Motorola Solutions, Inc.
1301 Algonquin Road, Schaumburg, IL 60196



Section 1. High Level System Description

MCC7500 Dispatch Solution

Motorola is pleased to present this quotation to The Woodlands Fire Department (FD) for an additional MCC7500 dispatch console which will be installed in the existing dispatch site at Central Station. An additional MCC7500 dispatch console is proposed at the Montgomery County Hospital District (MCHD) which will include a GGM8000 gateway and LAN switch. This site will serve as a backup dispatch site in an event that the dispatch site at Central Station becomes unavailable. Motorola is also including four (4) 7/800 APX4500 mobile control stations for interoperability with other local municipalities. These mobile control stations will tie into the existing Enhanced Conventional Channel Gateway (ECGGW) to be available as radio resources on the MCC7500 dispatch consoles. Additionally, these proposed APX4500 mobile control stations will reuse the existing control station combiner using four available ports.



The MCC7500 is Motorola's mission-critical, IP-based dispatch solution. It provides a highly scalable solution that can support dispatch centers ranging in size from a single dispatch console up to fifty (50) dispatch consoles. The MCC7500 platform leverages Ethernet/IP technology to provide increased backhaul efficiency to the ASTRO 25 core compared to earlier technologies (e.g. Gold Elite), as well as increased deployment flexibility and interface support.

The MCC7500 Operator Position (pictured right) is based on the same user-friendly Graphical User Interface (GUI) as our previous Gold Elite platform. For users that are migrating, this reduces the necessary dispatcher training as most of the features and functions operate the same between the two platforms.

The following equipment is proposed for Central Station:

- One (1) Motorola MCC7500 Dispatch Console:
 - ◆ Voice Processor Module (VPM) with AES encryption
 - ◆ MCC 7500 accessories including speakers, headset, two headset jacks, gooseneck microphone and dual pedal footswitch
 - ◆ Dual IRR soundcards and software
- Four (4) 7/800 APX4500 Mobile Control Stations
- Additional dispatch licensing

The following equipment is proposed for MHCD:

- One (1) Motorola MCC7500 Dispatch Console:
 - ◆ One (1) Voice Processor Module (VPM) with AES encryption
 - ◆ One (1) Z420 Workstation PC
 - ◆ One (1) 19" LCD Monitor
 - ◆ MCC 7500 accessories including speakers, headset, two headset jacks, gooseneck microphone and dual pedal footswitch
 - ◆ Dual IRR soundcards and software
- One (1) GGM 8000 Router
- One (1) Enhanced CCGW
- One (1) HP2620 LAN Switch

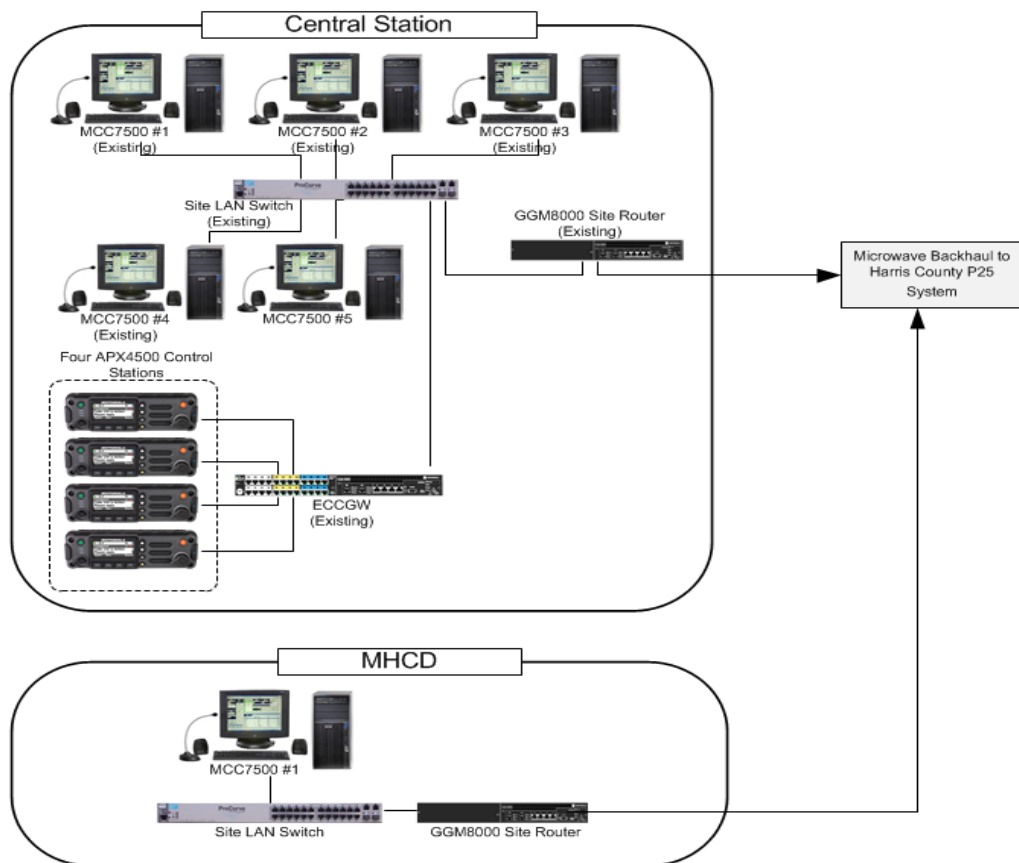


Figure 1: High Level System Diagram



Section 2. Statement of Work

Motorola is proposing the installation and configuration of the following equipment at the specified locations.

Site Name	Major Equipment
Woodland Central Dispatch	1 MCC7500 added to existing dispatch center and 4 APX4500 Control Stations
MCHD Dispatch	1 MCC7500 Console

The document delineates the general responsibilities between Motorola and The Woodlands as agreed to by contract.

2.1 Motorola Responsibilities

Motorola's general responsibilities include the following:

- ◆ Perform the installation of the Motorola supplied equipment described above.
- ◆ Schedule the implementation in agreement with The Woodlands.
- ◆ Coordinate the activities of all Motorola subcontractors under this contract.
- ◆ Administer safe work procedures for installation.
- ◆ Provide The Woodlands with the appropriate system interconnect specifications.

2.2 The Woodlands Responsibilities

The Woodlands will assume responsibility for the installation and performance of all other equipment and work necessary for completion of this project that is not provided by Motorola. The Woodlands general responsibilities include the following:

- ◆ Provide all buildings, equipment shelters, and towers required for system installation
- ◆ Insure communications sites meet space, grounding, power, and connectivity requirements for the installation of all equipment.

- ◆ Obtain all licensing, site access, or permitting required for project implementation as needed
- ◆ Obtain frequencies for project as required (if required).
- ◆ Provide required system interconnections.
- ◆ Customer will provide a dedicated delivery point, such as a warehouse, for receipt, inventory and storage of equipment prior to delivery to the site(s).
- ◆ Coordinate the activities of any other vendors or other contractors.

2.3 Assumptions

Motorola assembled this quotation with the following design requirements and assumptions:

- All console equipment will be installed in existing furniture.
- The MCC7500 dispatch application at The Woodlands Fire Dispatch will cohabitate on the existing MKM 7000 workstation at Central Station therefore no additional PC workstation is included for this location. Additionally, two sound cards are proposed for this existing workstation to allow for Dual Instant Recall Recording (IRR).
- The four (4) APX4500 mobile control stations provided in this proposal will utilize spare ports on the existing control station combiner and will tie into the existing ECCGW.
- The Woodlands FD is responsible for providing 12VDC power for the APX4500 mobile control stations (existing power supply will be used) and 120VAC power for the other equipment listed in this proposal.
- Motorola understands that no phone lines will be integrated into the MCC 7500 dispatch consoles at this time.
- All equipment at each location will be installed in existing racks (no new racks are provided)
- All existing sites or equipment locations will have sufficient space available for the system described as required/specified by R56.
- All existing sites or equipment locations will have adequate electrical power in the proper phase and voltage and site grounding to support the requirements of the system described.
- Any site/location upgrades or modifications are the responsibility of the customer.

- Approved local, State or Federal permits as may be required for the installation and operation of the proposed equipment are the responsibility of the customer.
- Any required system interconnections not specifically outlined here will be provided by the Customer. These may include dedicated phone circuits, microwave links or other types of connectivity.
- Motorola is not responsible for interference caused or received by the Motorola provided equipment except for interference that is directly caused by the Motorola provided transmitter(s) to the Motorola provided receiver(s). Should the Customer's system experience interference, Motorola can be contracted to investigate the source and recommend solutions to mitigate the issue.





Section 3. Equipment List

This section lists the equipment necessary for the proposed solution.

QTY	NOMENCLATURE	DESCRIPTION
		WOODLANDS FD DISPATCH CENTER
		ONE (1) MCC7500 (ADD ON TO EXISTING DISPATCH CENTER)
1	B1905	MCC 7500 ASTRO 25 SOFTWARE
1	B1933	MOTOROLA VOICE PROCESSOR MODULE
1	CA01642AA	ADD: MCC 7500 BASIC CONSOLE FUNCTIONALITY SOFTWARE LICENSE
1	CA01643AA	ADD: MCC 7500 / MCC 7100 TRUNKING OPERATION
1	CA01644AA	ADD: MCC 7500 /MCC 7100 ADV CONVL OPERATION
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
1	CA00182AB	ADD: AES ALGORITHM
1	CA00245AA	ADD: ADP ALGORITHM
1	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
1	T7448	WINDOWS SUPPLEMENTAL FULL CONFIG
2	B1912	MCC SERIES DESKTOP SPEAKER
2	B1913	MCC SERIES HEADSET JACK
1	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
1	RLN6098	HDST MODULE BASE W/PTT, 15' CBL
1	RMN5077B	SUPRAPLUS SINGLE MUFF HEADSET
1	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH FOR USE WITH MOTOROLA MCC 7500 DISP
1	T7885	MCAFEE WINDOWS AV CLIENT
1	DDN1611	DUAL IRR SW USB HASP WITH LICENSE (V46)
1	DDN1895	SOUND BLASTER AUDIGY RX SOUND CARD
1	CDN6673	CREATIVE LABS INSPIRE A60
		MCHD BACKUP DISPATCH CENTER
		ONE (1) MCC7500 DISPATCH CONSOLE SITE
1	B1905	MCC 7500 ASTRO 25 SOFTWARE
1	B1933	MOTOROLA VOICE PROCESSOR MODULE
1	CA01642AA	ADD: MCC 7500 BASIC CONSOLE FUNCTIONALITY SOFTWARE LICENSE
1	CA01643AA	ADD: MCC 7500 / MCC 7100 TRUNKING OPERATION
1	CA01644AA	ADD: MCC 7500 /MCC 7100 ADV CONVL OPERATION

1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
1	CA00182AB	ADD: AES ALGORITHM
1	CA00245AA	ADD: ADP ALGORITHM
1	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
1	DS019BLK	19 INCH NON-TOUCH MONITOR, BLACK
1	TT2538	Z420 LOW TIER WORKSTATION WINDOWS 7
1	T7448	WINDOWS SUPPLEMENTAL FULL CONFIG
2	B1912	MCC SERIES DESKTOP SPEAKER
2	B1913	MCC SERIES HEADSET JACK
1	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
1	RLN6098	HDST MODULE BASE W/PTT, 15' CBL
1	RMN5077B	SUPRAPLUS SINGLE MUFF HEADSET
1	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH FOR USE WITH MOTOROLA MCC 7500 DISP
1	T7885	MCAFFEE WINDOWS AV CLIENT
1	DDN1611	DUAL IRR SW USB HASP WITH LICENSE (V46)
1	DDN1895	SOUND BLASTER AUDIGY RX SOUND CARD
1	CDN6673	CREATIVE LABS INSPIRE A60
1	CLN1856	2620-24 ETHERNET SWITCH ?
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02086AA	ADD: HIGH DENSITY ENH CONV GATEWAY
		ASSOCIATED LICENSES
1	SQM01SUM0239	MASTER SITE CONFIG UPGRADE
1	CA00996AK	NM/ZC LICENSE KEY 7.13
1	CA00997AK	UCS LICENSE KEY 7.13
1	CA02105AA	MCC7500/MCC7100 CONSOLE LIC
		FOUR (4) APX 4500 CONTROL STATIONS (7-800)
4	M22URS9PW1 N	APX4500 7/800
	QA02756	ADD: 3600 OR 9600 TRUNKING BAUD SINGLE SYSTEM
	QA01648	ADD: ADVANCED SYSTEM KEY - HARDWARE KEY
	GA00804	ADD: APX O2 CONTROL HEAD (Green)
	G444	ADD: APX CONTROL HEAD SOFTWARE
	G66	ADD: DASH MOUNT O2 WWM
	G174	ADD: ANT 3DB LOW-PROFILE 762-870
	B18	ADD: AUXILARY SPKR 7.5 WATT
	W947	ADD: ASTRO 25 INTEGRATED VOICE & DATA
	G996	ADD: PROGRAMMING OVER P25 (OTAP)
	G24	ENH: 2 YEAR REPAIR SERVICE ADVANTAGE
	GA00580	ADD: TDMA OPERATION
	GA01767	ADD: APX MOBILE RADIO AUTHENTICAT
	W22	ADD: PALM MICROPHONE
	W969	ADD: MULTIKEY

	G843	ADD: AES ENCRYPTION APX
4	HKN4192	POWER CABLE, 20 FOOT TO 12V BATTERY



Section 4. Pricing

The Woodlands MCC7500	
Woodlands Fire MCC7500 Add On (Qty 1)	\$ 33,511.00
Includes VPM, Speakers, Gooseneck Mic, Footswitch, Qty 2 Headset Jacks and Instant Call Check software. Will re-use current PC at operator position.	
MCHD MCC7500 New Site (Qty 1)	\$ 51,875.00
Includes VPM, Speakers, Gooseneck Mic, Footswitch, Qty 2 Headset Jacks and Instant Call Check software and PC. Server Room equipment includes Ethernet Switch, Site Router and Enhanced Conventional Channel Gateway.	
Master Site Licenses	\$ 5,705.00
License required for additional MCC7500 operator positions.	
APX 4500 Control Stations (Qty 4)	\$ 10,182.00
Control Stations for use at Woodlands fire dispatch.	
Equipment Sub-Total	\$ 101,273.00
System Integration	\$ 54,941.00
Includes Project Management, System Engineering, Installation, Commissioning and Testing.	
System Integration Sub-Total	\$ 54,941.00
SYSTEM TOTAL	\$ 156,214.00