

FY17

PSAP GRANT PROGRAM APPLICATION





FY17 PSAP GRANT PROGRAM APPLICATION

HOW TO APPLY/DEADLINE

The grant application is available and accessible from VITA ISP's website (<http://www.vita.virginia.gov/isp/default.aspx?id=8578>). Upon completion of the application, it is to be submitted to your Regional Coordinator. Any supporting documentation must also be submitted along with the application, including mandatory budgets for projects (if applicable).

After the close of the grant application cycle, a Grant ID and email receipt notification will be sent to the e-mail address listed on the application received.

All funding requests must be submitted using the grant application. Technical assistance is available from VITA's Public Safety Communications (PSC) staff throughout the grant process. The FY17 PSAP Grant Application Cycle starts July 1, 2015 and concludes on September 30, 2015 at 5:00 pm.

ALL APPLICABLE SECTIONS MUST BE COMPLETED IN ITS ENTIRETY OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE AND NOT ACCEPTED FOR CONSIDERATION.



FY17 PSAP GRANT APPLICATION

PROJECT TITLE

Replacement of FSA/ CAD Component

GRANT APPLICANT PROFILE/PROJECT CONTACT

PSAP/HOST PSAP NAME: City of Hampton Police Emergency Communications Unit

CONTACT TITLE: Captain

CONTACT FIRST NAME: Susan

CONTACT LAST NAME: Canny

ADDRESS 1: 40 Lincoln St

ADDRESS 2: 2T

CITY: Hampton

ZIP CODE: 23669

CONTACT EMAIL: scanny@hampton.gov

CONTACT PHONE NUMBER: 757-727-6585

CONTACT MOBILE NUMBER: 757-817-0208

CONTACT FAX NUMBER: 757-727-6096

REGIONAL COORDINATOR: Lyle Hornbaker

HOST PSAP AND PARTICIPATING PSAPS/LOCALITIES

_____	_____
_____	_____
_____	_____
_____	_____

GRANT TYPE

Individual PSAP

Shared Services



TIER

- Out of Service
- Technically Outdated*
- Not Applicable
- Non-Vendor Supported*
- Strengthen

If technically outdated or non-vendor supported, application MUST include age and/or version of hardware/software.

VERSION:	# YEARS of HARDWARE/SOFTWARE:
<hr/> Motorola FSA 4000	<hr/> 5 years

PRIORITY/PROJECT FOCUS CAD

If "Other" selected, please specify: Only FSA system component

FINANCIAL DATA

Amount Requested: \$ 150,000.00
 Total Project Cost: \$ 333,568.46 approximately

STATEMENT OF NEED



This statement should reference the relationship to the current funding priorities established by the Grant Committee and include evidence of any financial need, along with additional information on the impact on operational services; consequences of not receiving funding; inclusion of project in a long-term or a strategic plan; and local sustainability:

There is currently no money budgeted to replace our current FSA system. Our current Fire Station Alerting component, Motorola FSA 4000, is no longer vendor supported to operate with our current system. We are operating on a make shift system that is having numerous failures, sometimes several times a day. These failures result in Fire stations not being toned and alerted through CAD when an emergency call for service is received. The delay in alerting and getting EMS and Fire equipment responding due to these failures has proven to be life threatening.

Describe how the grant will be maintained and supported in the future, if applicable.

Yearly maintenance, including necessary updates will be incorporated into yearly maintenance contracts paid through city funding.

COMPREHENSIVE PROJECT DESCRIPTION



Identify the longevity or sustainability of the project.

A new FSA system will have a life expectancy of at least 7-10 years.

Describe how this project supports the Virginia Statewide Comprehensive 9-1-1 Plan.

The CAD/ FSA system component will enhance our ability to respond FIRE and EMS to all necessary 911 calls without delay.

SHARED SERVICES (if applicable)



The relationship of the project to the participating PSAPs:

NA

Intended collaborative efforts:

2T

Resource sharing:

2T



How does the project impact the operational or strategic plans of the participating agencies:

2T

Provide a thorough, concise, and complete description of the project, including an outline of the goals and objectives, implementation strategy, and a work plan.

2T

**PROJECT TIMELINE FOR
SHARED SERVICES & INDIVIDUAL PSAP APPLICATIONS:**

For each applicable phase of the project, indicate the estimated completion date. Sample activities for each phase are included.

PROJECT PHASE	ESTIMATED COMPLETION DATE
---------------	------------------------------



<p>X INITIATION (Project approved by appropriate stakeholders)</p> <p>Sample activities: project concept is documented, local board or governing authority approval or endorsement is received, PSAP grant application is filed, local budgets are obtained, appropriated grant funds are approved, and budgetary estimates are obtained</p>	<p>09/29/15</p>
<p>DESIGN/PLANNING (Project, system, or solution requirements are developed)</p> <p>Sample activities: requirements are documented, components to be purchased are identified, and general design is documented</p>	<p>01/01/16</p>
<p>ACQUISITION (Selected system or solution is procured)</p> <p>Sample activities: RFP (or other bid related processes) are drafted, proposals are evaluated, contract is signed, purchase orders are issued, and quotes are obtained</p>	<p>07/01/016</p>
<p><input type="checkbox"/> IMPLEMENTATION (Selected system or solution is configured and installed)</p> <p>Sample activities: purchased components are delivered and installed and training is performed</p>	<p>09/01/16</p>
<p><input type="checkbox"/> TESTING/COMPLETION (Selected system or solution is tested and put in production)</p> <p>Sample activities: performance of system/solution is validated and system/solution goes "live"</p>	<p>09/15/16</p>



BUDGET AND BUDGET NARRATIVE

List the planned expenditures to be made with grant funds. (NOTE: In lieu of a line item breakdown, an itemized cost schedule or detailed vendor prepared quote may be submitted as an attachment. However, budgetary quotes received from a particular vendor(s) during the application process do not commit the PSAP to use that vendor(s) once the grant is awarded.) Briefly explain the reason for each requested budget item and provide the basis for its cost. In addition, if contingency cost has been added, please identify the amount.

See attached budgetary quote

EVALUATION

How will the project be evaluated and measured for achievement and success:

Project success will be measured by lack of failures as compared to current system



CONSOLIDATION (Primary or Secondary) - (complete only if applicable)

How would a consolidation take place and provide improved service:

na

How should it be organized and staffed:

2T

What services should it perform:

2T



How should policies be made and changed:

2T

How should it be funded:

2T

What communication changes or improvements should be made in order to better support operations:

2T



The budget cost to convert the existing system from FSA4000 to Mach Alert is \$333,568.46.

The budget cost includes new Server and FEP replacement and modifications to Fire Station RTU's with all services and one-year warranty from completion. This budget quote is valid for one year from 8-15-15 The city would retain all existing installed capabilities. The new software will allow the City to add features such as text – to-speech, Incident display boards and turnout timers.

General System Description

This document describes the general features and options available for the *MACH Alert* Fire Station Automation and Alerting (FSA) system and is not project specific.

Introduction

The *MACH Alert* Fire Station Automation and Alerting (FSA) system serves as a cornerstone for successful operation of the Fire and Rescue alerting process. This microprocessor-based alerting system will help manage resources with proven hardware and software, leading to a reduction in emergency response times, less firefighter stress, and the confidence your stations will be alerted every time.

Fire Services, now more than ever, are facing newer and greater challenges. System operating flaws, breakdowns, problematic interfaces, and alerting delays are unacceptable. Proven technology, communications compatibility, software customization, and an intuitive user interface are mandatory.

DCR Engineering Services, Inc. designed the *MACH Alert* system for fast response, integration with existing infrastructure, redundancy, and the ability to gracefully migrate into the latest technologies and new features. It utilizes innovative design allowing installations to be tailored to your specific Fire and EMS needs.

The *MACH Alert* FSA system does not depend on PC hardware at the stations for its fundamental fire station operation. It utilizes Motorola's new ACE3600 high-performance controller offering unequaled reliability. As the lead component in our fire station alerting system, it meets these challenges head-on. DCR Engineering Services, Inc. has installed and currently maintains over 5000 Motorola controllers for Public Safety and Municipal Utilities.

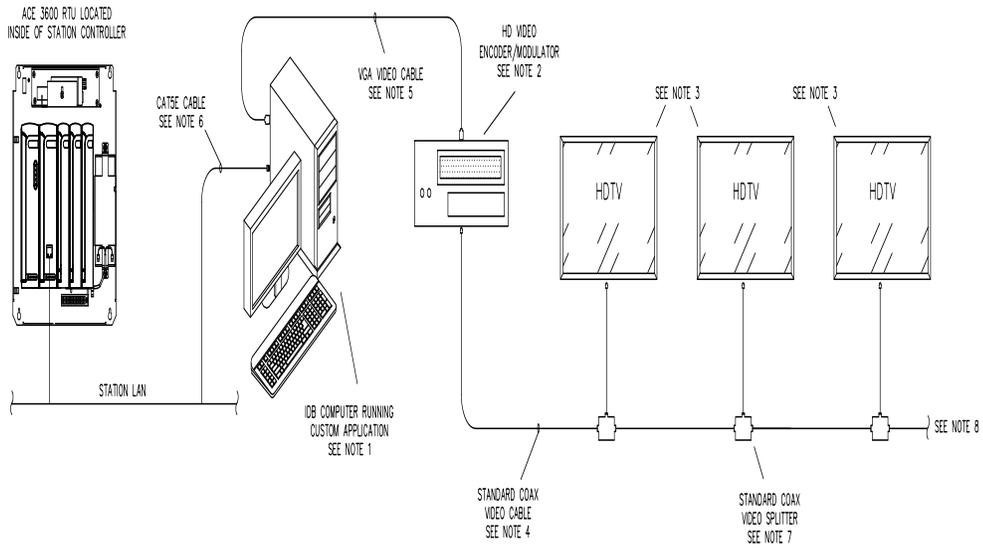
The *MACH Alert* FSA system interfaces with existing CAD systems for providing the primary automated station alerting. *MACH Alert* FSA can also function as a primary means of station alerting if there is no CAD system. At the fire stations, Motorola ACE 3600 PLC-based Station Controllers can provide optional Audio-File-Transfer-Over-IP (AFTOP) text-to-speech (TTS) voice announcements for fast station alerting.

Hampton Dispatch Center portion of FSA upgrade 10-8-15.xlsx

Location	Type	Item	QTY	Model	Description	UNIT LIST	EXT LIST	Multiplier	Hampton Per Unit	Hampton Extended
Fire Station Alerting										
PSAP	FSA	1	1	TT2506	MACH ALERT RACKMOUNT SERVER HARDWARE FOR UP TO 128 STATIONS	\$ 16,290.00	\$ 16,290.00	1.00	\$ 16,290.00	\$ 16,290.00
PSAP	FSA	2	1	EHW-MASVHW-101/102	EXTENDED HARDWARE WARRANTY FOR SERVER HARDWARE	\$ 3,236.36	\$ 236.36	1.00	\$ 236.36	\$ 236.36
PSAP	FSA	3	1	TT2511	AIC-128 SOFTWARE	\$ 1,830.00	\$ 1,830.00	1.00	\$ 1,830.00	\$ 1,830.00
PSAP	FSA	4	1	EAW-AIC-128W	ANNUAL EXTENDED AIC-128SW APPLICATION SOFTWARE WARRANTY SUPPORT	\$ 236.36	\$ 236.36	1.00	\$ 236.36	\$ 236.36
PSAP	FSA	5	1	DDN1901	AIC Software License to Support ACT Module	\$ 460.00	\$ 460.00	1.00	\$ 460.00	\$ 460.00
PSAP	FSA	6	1	EAW-MAPSL-0025	ANNUAL EXTENDED MAPSL-0025 APPLICATION SOFTWARE WARRANTY SUPPORT	\$ 909.09	\$ 909.09	1.00	\$ 909.09	\$ 909.09
PSAP	FSA	7	1	TT2510	MACH ALERT PRIMARY SOFTWARE LICENSE UP TO 25 STATIONS	\$ 42,770.00	\$ 42,770.00	1.00	\$ 42,770.00	\$ 42,770.00
PSAP	FSA	8	1	EAW-MAPSL-0026	ANNUAL EXTENDED MAPSL-0025 APPLICATION SOFTWARE WARRANTY SUPPORT	\$ 909.09	\$ 909.09	1.00	\$ 909.09	\$ 909.09
PSAP	FSA	9	1	DDN1903	MACH Alert Primary Software License to Support ACT Module	\$ 9,150.00	\$ 9,150.00	1.00	\$ 9,150.00	\$ 9,150.00
PSAP	FSA	10	1	EAW-MACL-ACT	Annual Extended MAPSL-ACT Application Software Warranty Support	\$ 4,254.55	\$ 4,254.55	1.00	\$ 4,254.55	\$ 4,254.55
PSAP	FSA	11	5	TT2507	MACH ALERT CLIENT LICENSE FOR UP TO 25 Stations	\$ 7,010.00	\$ 35,050.00	1.00	\$ 7,010.00	\$ 35,050.00
PSAP	FSA	12	5	EAW-MACL-0025	Annual Extended MAPSL-ACT Application Software Warranty Support	\$ 709.09	\$ 3,545.45	1.00	\$ 709.09	\$ 3,545.45
PSAP	FSA	13	1	F7508	F7508, ACE3600 CPU3680	\$ 1,100.00	\$ 1,100.00	1.00	\$ 1,100.00	\$ 1,100.00
PSAP	FSA	14	1	V212	V212, PLUG-IN ETHERNET 10/100 M PORT	\$ 100.00	\$ 100.00	1.00	\$ 100.00	\$ 100.00
PSAP	FSA	15	1	F75085yr	F7508 Warranty 5 years	\$ 130.00	\$ 130.00	1.00	\$ 130.00	\$ 130.00
PSAP	FSA	15	1	Design Meetings	Motorola System Design review with DCR on site for 2 days review	\$ 36,437.00	\$ 36,437.00	1.00	\$ 36,437.00	\$ 36,437.00
PSAP	FSA	15	1	CAD Integration	Provide CAD vendor with latest supported protocol document. Develop and provide CAD vendor with system specific Interface Control Document. Provide remote support to CAD vendor for protocol implementation assistance. Develop and provide CAD Interface Functional Test Procedure/Checklist and participate in CAD Interface Functional Test.	\$ 20,933.00	\$ 20,933.00	1.00	\$ 20,933.00	\$ 20,933.00
PSAP	FSA	15	1	Design Meetings	DCR Project Review Conference Calls	\$ 11,073.00	\$ 11,073.00	1.00	\$ 11,073.00	\$ 11,073.00
PSAP	FSA	15	1	Operator and technical training	On-site Dispatch Operator Training-1 Day Course (4 hours), and 1 Day Course Technical (4) hours, 10 Attendees Max. On-site classroom to be provided by Hampton.	\$ 12,253.00	\$ 12,253.00	1.00	\$ 12,253.00	\$ 12,253.00
PSAP	FSA	15	1	Operator and technical training	Project Management	\$ 43,637.00	\$ 43,637.00	1.00	\$ 43,637.00	\$ 43,637.00
Total for PSAP portion of the FSA Migration									\$	241,303.91

INCIDENT DISPLAY BOARD

GENERAL SYSTEM BLOCK DIAGRAM



NOTES:

1. IDB COMPUTER. Z420 LOW TIER WORKSTATION, WINDOWS 7 32-BIT. MOTOROLA PART NO. TT2537.
2. IDB VIDEO ENCODER/MODULATOR DCR PART NO. IDB-VIDEO ENCODER.
3. HDTV MUST HAVE MINIMUM 1080P RESOLUTION AND COAX INPUT. PROVIDED BY INSTALLER.
4. STANDARD VIDEO COAXIAL CABLE, RG-6 75 OHM. PROVIDED BY INSTALLER.
5. STANDARD VGA VIDEO CABLE FROM WORKSTATION TO VIDEO ENCODER/MODULATOR. PROVIDED BY INSTALLER.
6. STANDARD CAT5E CABLE CONNECTS WORKSTATION TO THE EXISTING LOCAL AREA NETWORK. CAT5E CABLE PROVIDED BY INSTALLER.
7. STANDARD COAXIAL CABLE SPLITTER. PROVIDED BY INSTALLER.
8. CONTINUE AS REQUIRED UP TO 20 DISPLAYS MAXIMUM.

ALL HDTVS, CABLING, SPLITTERS, AND INSTALLATION OF ALL COMPONENTS BY INSTALLER.

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		A	EXAMPLE	CA	05/20/13	REMOVED	C. ANDERSON	12/13/12	201 FILE
		DSCR BY:	T. GULLI	12/13/12					

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DCR ENGINEERING
FIRE STATION ALERTING
INCIDENT DISPLAY BOARD
GENERAL SYSTEM BLOCK DIAGRAM
DWG NO. _____
REV. # _____



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ASTRO[®] 25 RELEASE 7.14 SUMMARY

RELEASE FEATURE LIST

SYSTEM ENHANCEMENTS

Enhanced Data
Site Selectable Alerts for Trunking
Provisioning Manager Auditing
Private Call Management

EXPANSION, COVERAGE AND INTEROPERABILITY OPTIONS

Trunked GPW 8000 Receiver
Conventional GPW 8000 Receiver Enhancements
ISSI/CSSI 8000 for M1 Cores
150 Trunked RF Sites for M3 Cores
Conventional IP to Circuit Link Converter on GGM 8000

GREATER RESILIENCE AND REDUNDANCY

Geographically Redundant Simulcast Prime Sites
Dynamic System Resilience Enhancements
High Availability Simulcast Time & Frequency Reference Extended Holdover
Hybrid Site Links

CONSOLE AND MOBILE DISPATCH ENHANCEMENTS

Treat Emergency Call Like Normal PTT Call
Enhanced Select Interaction with Patch
Enhanced Alert Tones
MCC 7100 Console Audio Interface Module
MCC 7100 Console Instant Recall Recording

ADDITIONAL UPDATES

Lifecycle Upgrade Automation
Upgrade from ASTRO 25 Releases 7.11 or 7.13 to Release 7.14
Jump Upgrade from ASTRO 25 Release 7.7 to Release 7.14
NIST SP800-131A Compliance
Information Assurance Updates



OPTIONAL FEATURES

The features in this section are optional capabilities that customers have access to order with the ASTRO 25 Release 7.14.

ENHANCED DATA

FEATURE DESCRIPTION

The ASTRO 25 Enhanced Data feature allows customers with an Integrated Data enabled ASTRO 25 Trunking system to increase data efficiency by up to 12X over standard P25 data inbound data services.

- Supports 150 data users per channel at a 30 second cadence, with a message size of 24-36 bytes
- Sites dynamically assign channels
- Allows option to protect data channel pre-emption from voice at a site/system
- Independent agencies operating on the same ASTRO 25 network can share Enhanced Data channels
- Enhanced Data functionality requires use of Data and GPS-enabled APX™ portable or mobile radios
- Enhanced Data is a software enabled feature, and no additional hardware is needed for an ASTRO 25 Integrated Data enabled system with G-Series stations

Optional for new Trunking systems starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

- Software: All ASTRO 25 Core and RF Site system components need to be at ASTRO 25 Release 7.14
- Hardware: For a Customer to adopt this feature, all RF site(s) in the ASTRO 25 network where data will be accessed will need to be deployed with G-Series stations
- Enhanced Data is not backwards compatible to any prior ASTRO 25 Release
- Requires ASTRO 25 systems be equipped with Integrated Data
- APX™ radios, ordered with Data and GPS options, are required for the inbound data utilized in ASTRO 25 Enhanced Data

**OPTIONAL
FEATURE
New Trunking
Systems**
Beginning with
Release 7.14



TRUNKED GPW 8000 RECEIVER

FEATURE DESCRIPTION

Trunked GPW 8000 Receivers enable the integration of a receive-only station into ASTRO 25 Trunking systems. This allows customers on pre-ASTRO 25 Release 7.14 to replace legacy receivers like ASTRO-TAC™ and QUANTAR™, or expand legacy sites with Trunked GPW 8000 Receivers, using v.24 circuit link, without upgrading their entire system to Release 7.14 at once. Trunked GPW 8000 Receivers provide additional receive-only stations in areas where it would otherwise be difficult to receive a signal from a portable or mobile expanding talk-in coverage area. Trunked GPW 8000 Receivers also integrate into Trunking systems that support Simulcast and Single Transmitter Multiple Receiver Voting operation.

The dual slot chassis of the Trunked GPW 8000 Receiver is designed to optimize space efficiency by providing the option to support two receive-only modules in a single 3RU (rack unit) receiver chassis. Trunked GPW 8000 Receivers also support the TDMA feature which helps customers increase their frequency capacity without adding additional frequencies. A single GPW 8000 unit populated with two TDMA-enabled receive modules can support four simultaneous voice or data streams. This is four times the capacity of a single ASTRO-TAC Receiver.

Optional for Trunking systems starting with ASTRO 25 Release 7.14 for IP links and supported in previous releases for circuit based links.

IMPACTS AND DEPENDENCIES

- The Trunked GPW 8000 Receiver integrates into ASTRO 25 Trunking systems that support Simulcast and Single Transmitter Multiple Receiver Voting operation. Customers will need two Reference Distribution Modules standalone models (option CA01536AA on base model T7038A) per site and also an X-Hub standalone model (option CA00884AC on base model T7038A) if there are more than 6-channels per site.
- A Timing Reference is also needed for Simulcast and TDMA for Trunked Rx-only subsites, which can be provided by either GPS Receivers or TRAK devices.
- Receive multi-couplers can be purchased via drop ship to integrate multiple receivers to one antenna.
- Customers with ASTRO-TAC receivers on a pre-ASTRO 25 Release 7.14 Core (Release 6.9 through 7.13) can migrate directly to a Trunked GPW 8000 Receiver using the V.24 circuit link. This will enable the voice feature, but no other Release 7.14 features will be available unless the core is upgraded to Release 7.14. Trunked GPW 8000 Receivers are supported for Release 7.14 and forward on GCM 8000 IP comparator architecture.
- ASTRO-TAC receivers occupy 2 RU's and QUANTAR receivers occupy 5 RU's. This feature will slightly exceed space efficiency provided by legacy products.
- Trunked GPW 8000 Receiver provides parity with the same system interfaces (V.24, 4-wire, GPIO etc.) as legacy QUANTARs and ASTRO-TACs.

OPTIONAL FEATURE Trunking Systems

Beginning with
ASTRO 25
Release 7.14 for IP
links and supported
in previous releases
for circuit based links



GEOGRAPHICALLY REDUNDANT SIMULCAST PRIME SITES

FEATURE DESCRIPTION

Geographically Redundant Simulcast Prime Sites enable continued normal wide-area simulcast subsystem operations as a part of the complete ASTRO 25 system, even after a catastrophic prime site failure.

Optional for Trunking Simulcast systems starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

- The system is required to be at ASTRO 25 Release 7.14 and using the IP simulcast infrastructure as defined for this release. For example, the LAN switch type and configuration are different from previous releases. Previously shipped IP simulcast subsystem prime sites will need to be upgraded to this new IP simulcast infrastructure.
- Subsites may be of any presently shipping type and do not need to be based on ESS with dual LAN.
- The subsystem must use Ethernet site link connections for the master and subsites, and have redundant high availability connections with suitable performance between the prime site locations.

DYNAMIC SYSTEM RESILIENCE ENHANCEMENTS

FEATURE DESCRIPTION

Dynamic System Resilience (DSR) adds a geographically separate ASTRO 25 core to protect against a catastrophic failure of the primary master site, and minimizes impact of a failure to customers, as no special training or change in operations is necessary during the switch to the back-up master site. In the event that the remote sites cannot connect with their currently active core, the sites will switch to their alternative core.

DSR enhancements included in ASTRO 25 Release 7.14:

- Support for M1 Cores
- Create multi-zone systems in which some zones have DSR and some do not

Optional for Trunking Core configurations starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

- The system is required to be at ASTRO 25 Release 7.14
- All current generation ASTRO 25 G-Series sites and subsystems are supported
- Legacy circuit simulcast, CENTRACOM™ Gold Elite Dispatch, and SmartX solutions are not supported
- This feature is not backwards compatible to earlier releases

OPTIONAL FEATURE Trunking Simulcast Systems

Beginning with
ASTRO 25
Release 7.14

OPTIONAL FEATURE Trunking Core Configurations

Beginning with
ASTRO 25
Release 7.14



SITE SELECTABLE ALERTS FOR TRUNKING

FEATURE DESCRIPTION

Site Selectable Alerts for Trunking introduces the ability to generate pre-configured pre-recorded voice announcement or tone alerts for affiliated ASTRO 25 two-way radios at selected site(s). Additionally, if equipped, the two-way radio will display the type of alert. These alerts can help system users be informed of impending critical activities and events that could present life safety risks.

Optional for Trunking systems starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

- Infrastructure components must be ASTRO 25 Release 7.14 software for L and M Core configurations
- Integrated Data is not required for the text indication on the radio
- APX™ mobiles and portables only
- Requires Site Selectable Alerts for Trunking to be FlashPort enabled on radio units
- This feature will not be supported on XTS® portables or XTL® mobiles
- ASTRO 25 G-Series products, and Repeater and/or IP Simulcast sites only are supported
- Site Selectable Alerts are only audible or visible on Motorola APX two-way radios, or consolettes. They are not audible or visible on dispatch consoles.

ISSI 8000 FOR M1 CORES

FEATURE DESCRIPTION

ISSI 8000 is a P25 standards based interoperability solution and enables ASTRO 25 customers to connect to other P25 systems regardless of their RF bands, manufacturer type and release versions.

Optional for Trunking M1 Core configurations starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

- ISSI 8000 support on M1 Cores requires ASTRO 25 Release 7.14
- Motorola two-way radios need to be upgraded to Release 7.13 or higher to support roaming and other ISSI 8000 features. Supported Two-Way Radios: XTS 5000, XTS 2500, XTS 1500 BN, XTS 4000, All XTL, All APX (Two-way radio software flash is included with SMA, SUA & SUA II)
- G-Series RF equipment is required for sites affiliation from foreign radios
- VPM based MCC 7500 IP Dispatch Consoles are required for affiliation to foreign talkgroups and display of PTT IDs from foreign two-way radios
- ISSI 8000 is an ASTRO 25 Trunking Option

OPTIONAL FEATURE Trunking Systems

Beginning with
ASTRO 25
Release 7.14

OPTIONAL FEATURE Trunking M1 Core Configurations

Beginning with
ASTRO 25
Release 7.14



CSSI 8000 FOR M1 CORES

FEATURE DESCRIPTION

CSSI 8000 is a P25 standards based interoperability solution based on TIA.102-BACA standards and enables customers to connect a 3rd party P25 CSSI capable console to an ASTRO 25 system.

Features available:

- Group Call, Emergency Call and Individual Call
- Console Priority
- Console Take Over
- Display of Transmission Source Type
- Support for Acoustic Cross Mute
- Notification when console is receiving duplicate audio

Optional for Trunking M1 Core configurations starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

- CSSI 8000 support on M1 Cores requires ASTRO 25 Release 7.14
- CSSI 8000 supports Individual Voice Call and Call Alert functionality to a single CSSI with the same WACN ID and System ID as the ASTRO 25 system. Additional CSSI links or CSSI implementations with a different System ID and WACN ID from the ASTRO 25 system will not support Individual Call and Call Alert functionality
- CSSI 8000 is an ASTRO 25 Trunking option

HIGH AVAILABILITY SIMULCAST TIME & FREQUENCY REFERENCE EXTENDED HOLDOVER

FEATURE DESCRIPTION

A high availability option was introduced in ASTRO 25 Release 7.9 for Simulcast systems providing a redundant time and frequency solution at remote RF sites. High Availability Simulcast Time & Frequency Reference provides a holdover window during which simulcast operation will remain available for 4 hours after GPS signals are lost, so radio operations can continue during this time and until repairs can be addressed.

Starting in ASTRO 25 Release 7.14, customers will have the option of adding a TRAK 9100 or TRAK 8835-3M unit at a high availability remote Simulcast RF site to extend the holdover from the 4 hours offered today to a minimum of 72 hours. This provides additional time for a maintenance team to reach a site and address any issues before system functionality is impacted.

Optional for Trunking Simulcast systems starting with ASTRO 25 Release 7.14, and backward compatible to Release 7.9.

IMPACTS AND DEPENDENCIES

This solution will be backwards compatible on ASTRO 25 Releases 7.9, 7.11 and 7.13 provided the latest version of Reference Distribution Module (RDM) software is installed.

OPTIONAL FEATURE Trunking M1 Core Configurations

Beginning with
ASTRO 25
Release 7.14

OPTIONAL FEATURE Trunking Simulcast Systems

Beginning with
ASTRO 25
Release 7.14 and
backward compatible
to Release 7.9



CONVENTIONAL IP TO CIRCUIT LINK CONVERTER ON GGM 8000

FEATURE DESCRIPTION

In ASTRO 25 Release 7.14, GGM 8000 will have the ability to interface a GCM 8000 IP Comparator to a Digital Interface Unit (DIU). This allows customers to begin updating their radio technology and start migrating from their analog Conventional solution to digital ASTRO 25, at the technology refresh and financial pace they desire. Customers with CENTRACOM or MCC 5500 Dispatch Consoles can replace or expand their simulcast or voting channels with G-Series based solutions without giving up their legacy consoles. As a result, customers can begin their system migration at the RF channel and upgrade their consoles at a later date. The GGM 8000 can also enable use of G-Series based voting and simulcast channels on legacy Conventional systems.

Optional for Conventional systems starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

- Conventional IP to Circuit Link Converter on GGM 8000 requires that customers either have an existing DIU in place or are able to purchase one through the refurbish program
- The assumption is that customers who have networks comprised of COTS equipment, and not Motorola provided routers and switches, can configure their network. If they are unable to do so, they may contract the Motorola Advanced Service Team for this purpose
- Conventional IP to Circuit Link Converter on GGM 8000 will be used on a circuit-based Conventional 3.1 system and will not have an ASTRO 25 Release 7.X Core. Therefore, none of the field RF site equipment will require upgrades to ASTRO 25 Release 7.14
- For digital channels, the GGM 8000 Gateway will convert the AIS/IP to AIS/v.24, and for mixed mode will convert the G.728/IP to 4-wire

MCC 7100 CONSOLE INSTANT RECALL RECORDING

FEATURE DESCRIPTION

MCC 7100 Console Instant Recall Recording provides the user with instant access to recently recorded conversations consistent with functionality found in the MCC 7500 Dispatch Console solution.

- Records and replays both transmit and received audio traffic
- Instant record retrieval
- Configurable limits of hard drive storage up to 4 GB
- Variable speed replay at faster, slower speeds
- Automatic purge removes older files
- User can add, remove, configure and minimize the visual presentation of the GUI to suit their preferences

Optional for Trunking and Conventional systems with MCC 7100 Dispatch Console starting with ASTRO 25 Release 7.14 and backward compatible to 7.11.

IMPACTS AND DEPENDENCIES

- A software license is required to enable this feature
- Backwards compatible to ASTRO 25 Releases 7.11 and 7.13

OPTIONAL FEATURE Conventional Systems

Beginning with
ASTRO 25
Release 7.14

OPTIONAL FEATURE Trunking and Conventional Systems with MCC 7100 Dispatch Consoles

Beginning with
ASTRO 25
Release 7.14 and
backward compatible
to 7.11



MCC 7100 CONSOLE AUDIO INTERFACE MODULE

FEATURE DESCRIPTION

MCC 7100 Console Audio Interface Module is a peripheral hub which provides console connectivity for the Motorola microphone footswitch and headset jack and support for the same Motorola accessories as the MCC 7500 Dispatch Console. Local Aux I/O's, a second supervisor headset and an External Paging Encoder are also supported. Customers can eliminate the duplication of equipment and manage telephone and radio conversations on one headset through an External Phone Interface.

Optional for Trunking and Conventional systems with MCC 7100 Dispatch Console starting with ASTRO 25 Release 7.14, and backward compatible to Release 7.11.

IMPACTS AND DEPENDENCIES

- MCC 7100 Console Audio Interface Module requires a desktop or laptop computer capable of USB connection and meeting the necessary minimum specifications, which are published on the MCC 7100 Dispatch Console Spec Sheet (R3-13-2017A)
- Backwards compatible to ASTRO 25 Releases 7.11 and 7.13

OPTIONAL FEATURE Trunking and Conventional Systems with MCC 7100 Dispatch Consoles

Beginning with ASTRO 25 Release 7.14 and backward compatible to 7.11

STANDARD ENHANCEMENTS

The features below are standard with the ASTRO 25 Release 7.14. Users who purchase a new system or upgrade their system to Release 7.14 will automatically receive these features.

CONVENTIONAL GPW 8000 RECEIVER ENHANCEMENTS

FEATURE DESCRIPTION

Newly designed dual slot chassis optimizes space efficiency by providing the option to support two receive-only modules in a single 3RU receiver chassis. Prior to this, Conventional GPW 8000 Receivers could accommodate only 1 receiver module in the 3RU chassis.

Standard feature for Conventional systems starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

- There is no system compatibility difference between the prior version of Conventional GPW 8000 and the newly designed Conventional GPW 8000 with dual chassis
- Post ASTRO 25 Release 7.14 all GPW 8000 Receivers will ship with the newly designed dual slot chassis
- Customers operating with a Release 7.14 and later ASTRO 25 Core will have a choice to pick one or two receiver modules in a single chassis. However, customers with the pre-Release 7.14 version of Conventional GPW 8000 cannot convert to a dual slot chassis without buying a new GPW 8000 Receiver
- Customers operating with a pre-Release 7.14 ASTRO 25 Core can only utilize one receiver module in the chassis until they upgrade to Release 7.14 or later

STANDARD FEATURE Conventional Systems

Beginning with ASTRO 25 Release 7.14



TREAT EMERGENCY CALL LIKE NORMAL PTT CALL

FEATURE DESCRIPTION

Treat Emergency Call Like Normal PTT Call enables customers to configure talkgroups and channels on a MCC 7100 or MCC 7500 Dispatch Console in a special way for Emergency Calls and Emergency Alarms.

Emergency Call: When enabled, Emergency Calls will be treated as normal PTT calls. The dispatch console will display the PTT ID of the radio and will play the radio's audio in the speaker/headset, but no visual or audible emergency indications will be generated.

Emergency Alarm: When enabled the dispatch position will not display any PTT IDs or provide any visual or audible indications for any emergency alarms.

Standard feature for Trunking and Conventional systems with MCC 7100 and/or MCC 7500 Dispatch Consoles starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

ASTRO 25 system and MCC 7100 and/or MCC 7500 Dispatch Consoles must be at ASTRO 25 Release 7.14 software.

ENHANCED SELECT INTERACTION WITH PATCH

FEATURE DESCRIPTION

Enhanced Select Interaction with Patch improves patch operation for dispatchers who use MCC 7100 or MCC 7500 Dispatch Console in two key areas:

- The audio from an Emergency Call on an unselected talkgroup that is part of a patch on a MCC 7100 or MCC 7500 Console does not move from the dispatcher's headset or select speaker to the unselect speaker
- Dispatchers can hear all members of a patch group in their headset or select speaker without opening a multi-select group that mirrors the patch group

The console will treat all members of a patch group as if they are selected if at least one member is already selected. If no members of the patch group are selected, then the console will treat them all according to normal unselect operation.

Standard enhancement for Trunking and Conventional systems with MCC 7100 and/or MCC 7500 Dispatch Consoles starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

ASTRO 25 system and MCC 7100 or MCC 7500 Dispatch Consoles must be at ASTRO 25 Release 7.14 software.

STANDARD FEATURE

Trunking and Conventional Systems with MCC 7100 and/or MCC 7500 Dispatch Consoles

Beginning with
ASTRO 25
Release 7.14

STANDARD FEATURE

Trunking and Conventional Systems with MCC 7100 and/or MCC 7500 Dispatch Consoles

Beginning with
ASTRO 25
Release 7.14



ENHANCED ALERT TONES

FEATURE DESCRIPTION

The Enhanced Alert Tones feature provides dispatchers with access to up to 15 customizable alert tones on their MCC 7100 and MCC 7500 Dispatch Consoles, instead of the three previously available.

The Enhanced Alert Tones feature allows different dispatch centers, or different dispatchers within a dispatch center, to have access to new and different sets of alert tones.

Standard enhancement for Trunking and Conventional systems with MCC 7100 and/or MCC 7500 Dispatch Consoles starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

MCC 7100 or MCC 7500 Dispatch Consoles must be using ASTRO 25 Release 7.14 software.

STANDARD FEATURE Trunking and Conventional Systems with MCC 7100 and/or MCC 7500 Dispatch Consoles

Beginning with
ASTRO 25
Release 7.14

150 TRUNKED RF SITES FOR M3 CORES

FEATURE DESCRIPTION

ASTRO 25 Customers can expand the Trunking RF site capacity, including repeater sites, simulcast subsystems, SmartX Converters, ISSI.1 Gateways and HPD sites up to 150 sites per zone for M3 Cores achieving scalability needs of larger systems. Prior to Release 7.14, ASTRO 25 M3 Core configurations limited RF Site capacity per zone to 100 sites.

Standard feature for Trunking M3 systems starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

- Validate customer's capacities with your Motorola Sales and Technical Representative
- The increased RF Site capacity limit will be available to customers starting Release 7.14
- Customers who need this capacity increase will need to upgrade or migrate to Release 7.14

STANDARD FEATURE Trunking M3 Core Systems

Beginning with
ASTRO 25
Release 7.14

PROVISIONING MANAGER AUDITING

FEATURE DESCRIPTION

Provisioning Manager Auditing provides the capability to audit changes made in the Provisioning Manager by a user to speed up troubleshooting when identifying problems due to improper configuration. This auditing capability will also enable stricter enforcement of system governance policies by providing trail and evidence of user's access to system data.

Standard for Trunking and Conventional systems starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

- System must be at Release 7.14

STANDARD FEATURE Trunking and Conventional Systems

Beginning with
ASTRO 25
Release 7.14



PRIVATE CALL MANAGEMENT

FEATURE DESCRIPTION

Private Call Management provides a mechanism to control how many resources can be assigned and dedicated for private calls at a Trunking RF site on an ASTRO 25 Trunking system.

Standard feature for Trunking systems starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

Private Call Management settings are resource, not call-based, so that the system administrators can accurately manage call resources. For example, two resources mean two TDMA calls, or one FDMA call on a dynamic channel.

STANDARD FEATURE Trunking Systems

Beginning with
ASTRO 25
Release 7.14

HYBRID SITE LINKS

FEATURE DESCRIPTION

Hybrid Site Links allows customers to use both T1/E1 & Ethernet to connect from an ASTRO 25 site to an ASTRO 25 Core/Master site.

Standard for Trunking and Conventional systems starting with ASTRO 25 Release 7.14.

IMPACTS AND DEPENDENCIES

- System must be at Release 7.14

STANDARD FEATURE Trunking and Conventional Systems

Beginning with
ASTRO 25
Release 7.14

ADDITIONAL UPDATES

The offerings below are available with ASTRO 25 Release 7.14.

LIFECYCLE UPGRADE AUTOMATION FROM ASTRO 7.14

Maximizes the value of ASTRO 25 systems over the long run:

- Reduces the duration of most upgrades
- Simplifies the upgrade process to keep the ASTRO 25 system current
- Leverages modern IT technology and tools
- Facilitates regular upgrades to ensure access to the latest capabilities and features with each release after Release 7.14

ADDITIONAL UPDATE Systems

Beginning with
ASTRO 25
Release 7.14

UPGRADES FROM ASTRO 25 RELEASES 7.11 AND 7.13 TO RELEASE 7.14

ASTRO 25 Release 7.14 includes upgrade support from Release 7.11 and 7.13.

System Upgrade Agreement (SUA) and SUA II Lifecycle subscriptions provide complete upgrade coverage that includes ASTRO 25 Release software, 3rd party software & security updates, certified hardware and implementation costs associated with a system upgrade.

ADDITIONAL UPDATE Systems

Beginning with
ASTRO 25
Release 7.14



JUMP UPGRADE FROM ASTRO 25 RELEASE 7.7 TO RELEASE 7.14

FEATURE DESCRIPTION

ASTRO 25 Jump Upgrade enables customers to move to the current ASTRO 25 system release with far less disruption than before. The system upgrade on site will take approximately the same time as a traditional N-2 upgrade, where N is the current release and minus two referring to two releases back on the release schedule; however the upgrade will be engineered and streamlined, and therefore less cumbersome and less disruptive for the customer and their users.

IMPACTS AND DEPENDENCIES

- Customers may upgrade from earlier releases to ASTRO 25 Release 7.7 to take advantage of this Jump Upgrade.
- IP Simulcast customers with Layer 2 Ethernet connections will experience 7-14 minute outages for many configurations during the upgrade. Standard upgrades are an alternative if this down time is unacceptable. IP Simulcast customers with T1 or Layer 3 Ethernet connections will experience normal upgrade impacts.

NIST SP800-131A COMPLIANCE

National Institute of Standards and Technology (NIST) is the federal technology agency that works with industry to develop and apply technology, measurements, and standards. By meeting NIST 800-131A requirements, ASTRO 25 is using the latest recommended guidelines for cryptographic algorithms for key strength as set by NIST to ensure cryptographic integrity.

INFORMATION ASSURANCE UPDATES

ASTRO 25 Release 7.14 provides updates to the system infrastructure to include the most current information assurance standards.

ADDITIONAL UPDATE Systems

Beginning with
ASTRO 25
Release 7.14

STANDARD FEATURE Systems

Beginning with
ASTRO 25
Release 7.14

STANDARD FEATURE Systems

Beginning with
ASTRO 25
Release 7.14

Specifications subject to change without notice.

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Motorola FSA4000 Fire Station Alerting Product Announcement

OVERVIEW

Motorola announces that the last supported release of the FSA4000 product is ASTRO A7.14. FSA4000 is the Motorola Fire Station Alerting solution.

MODELS / OPTIONS

The following model numbers are for the ASTRO A7.14 release.

Model	Description	Last Supported ASTRO Release
F5629A	FSA4000 Configuration Application S/W & Doc. V9.0	A7.14
F5639A	FSA4000 Configuration S/W & Doc Upgrade V6.x to V9.0 & V7.x to V9.0	A7.14

REPLACEMENT PRODUCT

The MACH Alert FSA system replaces the FSA4000 system.
The MACH Alert FSA system has been available to order since 2Q2012.
Migration from FSA4000 to MACH Alert is supported.
Refer to "Price Pages" ECAT

NOTES:

- There are no immediate plans to cancel the FSA4000 software.
- FSA 4000 software is still available for expansions and add-ons to existing ASTRO systems
- Technical support continues to be available on FSA4000.
- Defect repair will continue to be provided for applicable SER releases.
- The ACE3600 RTU used with the FSA4000 solution has no cancellation plans and continues to be supported.

CUSTOMER END OF SUPPORT IMPACT

Customers who are upgrading from A7.14 to a higher release will be required to migrate their FSA4000 solution to the MACH Alert solution.



SERVICE IMPLICATIONS

Aftermarket Product support will be available for the ACE3600 RTU's and applicable HP Servers via commercially reasonable efforts through the Customer Fulfillment Centers (CFC).

CONTACT INFORMATION

For questions regarding the FSA4000 end of support contact: Jim McDonell YMTK05

Motorola Solutions Customer Fulfillment Center

In the US, call 1-800-422-4210

In Canada, call 1-800-543-3222

In Latin America, Asia, Middle East, and Europe, call 1-847-538-8023

Federal Inquiries, call 1-800-826-1913