Unication

A New Generation of Two-Way Radio!




U3

THE ACTIVE MULTI-MODE ANALOG / DIGITAL

Unication Proudly Introduces

Database Application
- Missing People
- Stolen Vehicle Search
- Criminal Suspect

Live Site Data Transmissions
- Photos, Text and Voice
- GPS Location Info.

GPS Capability
- Actual Location
- Team Member Location
- Site Map

U3 Analog

Digital radio capabilities available in an analog radio

- Send voice, text, photos and GPS location information on your existing analog system.
- Uses an advanced voice-compression technology that provides for a clear, digital-like voice quality on an existing analog system.
- Multiple databases used to search for missing people, suspects and stolen vehicles directly. Information is updated through a computer or Unication Console.
- GPS mapping with group members locations highlighted.
- Ensures a high level of security using 256 bit AES encryption.

U3 Active Multi-Mode

The best choice when transitioning to digital

U3 Active Multi-Mode offers both Analog and Digital systems capabilities.

- Supports analog and digital technologies SIMULTANEOUSLY.
- The U3 radio minimizes the cost of analog to digital system transition.
- The U3 model offers important analog features and next generation digital features.

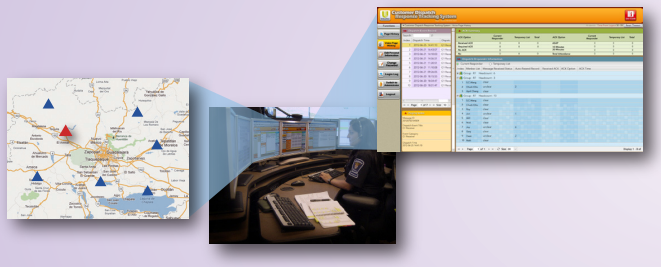
U3 Digital

The smart choice for analog systems transitioning to digital or new digital systems

The U3 Digital offers features and capabilities that are needed in today's communications environment.

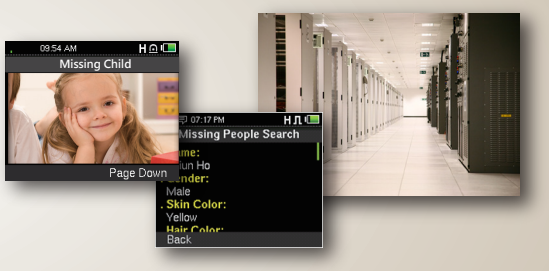
- Photo, Text, Location & Voice Transmissions
- Repeater Model To Extend The Coverage Area
- Database Access
- Bluetooth Interface

A picture can more accurately describe the situation. With the U3 one has the ability to transmit multiple types of data including pictures, voice, texts and GPS location information.



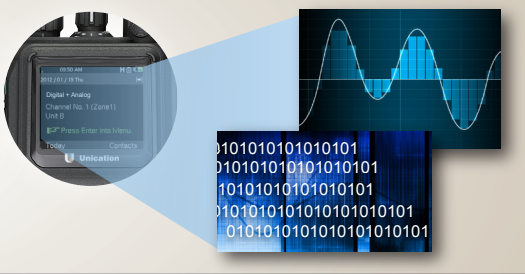
Team members locations can be displayed on the radio screen. The GPS Inform function allows the user to send location information or emergency alerts to the dispatch center of other group members.

The U3 has a database capability that can be used for assisting in tracking and finding missing people, criminal suspects and stolen vehicles.



AES-256 Digital Encryption insures secure, private communications when required.

The U3 supports both digital and analog technologies; it automatically detects the type of signal and switches the receiving mode. No reprogramming is required.



U3 portable radio R&R model (Radio and Repeater) can be used as a portable repeater to extend the communication range.

SPECIFICATIONS

Features

- Mixed Signaling Support
- Protocol Specific Features
- TX Power Control
- Channel Announcement
- Status Icons
- Front Panel Programming
- Customized Menu
- Language Selection Support
- Reverse Channel Signaling
- Voice Calls
- Talkaround
- One Touch Call
- Squelch Support
- Voice Call Related Timers
- Voice Encryption
- Voice Recording and Playback
- Voice Scrambling
- Telephone Call Connectivity (PSTN)
- Scanning
- Monitor/Sticky Monitor
- 2-way Data Transport
- File Transfer
- Image Transmission
- Image Applications
- GPS 2-way Transmission
- GPS Mapping
- GPS Positioning
- Emergency Services
- Time and Date
- Contact Lists
- Contact Group
- Alarm Clock
- Alert Tones
- Backlighting
- Battery Monitoring
- Battery Saver
- Busy Channel Lockout
- Enhanced Audio
- Folder Management
- Hot Microphone
- Identity Receive List
- Keypad Locking
- People/Item List
- Quick Key Override
- Radio Check
- Remote Monitor
- Signal Strength
- Speaker/Microphone Audio Control
- Splash Screen
- Bluetooth™ Data Link
- Bluetooth™ Voice
- USB Communications Link
- USB On-the-Go
- Portable to Portable Cloning
- Programmable Functions (for Function Keys)
- Over the Air Programming (OTAP)
- VOX

SPECIFICATIONS

General Specifications

	U3VL	U3VH	U3UH
Zone & Channel Capacity	Up to 1024 Channels & 64 Zones		
Frequency Range (MHz)	30-88MHz	VHF, 136-174MHz	UHF, 330-520MHz
Antenna Options	≥ 150cm ≥ 120cm ≥ 80cm ≥ 45cm	136-150 MHz 148-161 MHz 161-174 MHz 136-174 MHz(Future)	330-400MHz 403-470MHz 450-520MHz
Dimensions (HxWxT) without Battery	167±10 x 68±10 x 45±10mm		
Weight (with Li-Polymer/ Battery)	≤ 580g		
Power Supply	7.4 V nominal		
FCC ID		LEA-U3-VHF	LEA-U3-UHF-MID
IC ID		3819A-U3-VHF	3819A-U3-UHF-MID
Average battery life at 5 / 5 /90 duty cycle with standard 2400mAh Li-Polymer battery, transmitter in highpower, carrier squelch mode:			
Display: OFF GPS : OFF Bluetooth™: OFF	Analog: 10.5 hours Digital: 12 hours	Analog: 12 hours Digital: 14 hours	Analog: 10.5 hours Digital: 12 hours
Display: ON for 2 hours per day GPS : OFF Bluetooth™: OFF	Analog: 9.5 hours Digital: 11 hours	Analog: 11 hours Digital: 13 hours	Analog: 9.5 hours Digital: 11 hours
Display: ON for 2 hours per day GPS : ON (1 fix per second) Bluetooth™: OFF	Analog: 9 hours Digital: 10 hours	Analog: 10 hours Digital: 11.5 hours	Analog: 9 hours Digital: 10 hours
Display: ON for 2 hours per day GPS : ON (1 fix per second) Bluetooth™: ON	Analog: 8 hours Digital: 9 hours	Analog: 9 hours Digital: 10.5 hours	Analog: 8 hours Digital: 9 hours

SPECIFICATIONS

Transmitter

	U3VL	U3VH	U3UH
Frequencies	30-88MHz	VHF, 136-174MHz	UHF, 330-520MHz
Channel Spacing	12.5 kHz, 25 kHz		
Frequency Stability over Temp (-30°C to +60°C)	≤ 3 ppm	± 0.5 ppm	
Power Output Low Power High Power	≥ 1 W ≥ 2 W	≥ 1 W ≥ 5 W	≥ 1 W ≥ 4 W
Modulation Limiting	± 2.5 kHz @ 12.5 kHz ± 5 kHz @ 25 kHz		
FM Hum and Noise	12.5 kHz: > 43 dB 25 kHz: > 48 dB		
Conducted / Radiated Emission	Less than -37 dBm		
Adjacent Channel Power	12.5 kHz: 65 dB min 25 kHz: 70dB min		
Audio Response	TIA 603		
Audio Distortion	Better than 2%		
FM Modulation (analog)	12.5 kHz: 11K0F3E 25 kHz: 16K0F3E		
FM Modulation (DVOA™)	12.5 kHz: 5K41F2E 25 kHz: 8K87F2E		
4FSK Digital Modulation (ETSI TS 102 361-1, -2, -3)	Voice & Data : 7K60FXW Voice : 7K60FXE Data : 7K60FXD		
4FSK Digital Modulation (P25 Phase 1)	Voice : 8K17FIE Data : 8K17FID		
Digital Vocoder Type	ETSI TS102 & DVOA™ : Unication Proprietary with backgroud noise suppressor P25 Phase 1: P25		
Digital Protocol	ETSI TS102 (361 -1, -2, -3) , DVOA™ , and P25 Phase I		

SPECIFICATIONS

Receiver

	U3VL	U3VH	U3UH
Frequencies	30-88MHz	VHF, 136-174MHz	UHF, 330-520MHz
Channel Spacing	12.5 kHz, 25 kHz		
Frequency Stability over Temp (-30°C to +60°C)	+ 0.5 ppm		
Analog Sensitivity (12 dB SINAD)	0.4 µV, 25 kHz BW	0.17 µV, 12.5 kHz BW 0.19 µV, 25 kHz BW	0.18 µV, 12.5 kHz BW 0.2 µV, 25 kHz BW
Digital Sensitivity	5% BER : 0.4 µ V	5% BER : 0.2 µ V	5% BER : 0.22 µ V
Adjacent Channel Selectivity , TIA603B (12.5 kHz) TIA603B (25 kHz) TIA603C (12.5 kHz) TIA603C (25kHz)	 65 dB 74 dB 58 dB 73 dB	 67 dB 74 dB 58 dB 74 dB	 65 dB 74 dB 58 dB 73 dB
Spurious Rejection (TIA603C) minimum	70 dB min		
Rated Audio	0.5 W		
Audio Distortion @ Rated Audio	< 2 %		
Hum and Noise	43 dB, 12.5 kHz 49 dB, 25 kHz	44 dB, 12.5 kHz 50 dB, 25 kHz	43 dB, 12.5 kHz 49 dB, 25 kHz
Audio Response	TIA603C		
Conducted Spurious Emission (TIA603C)	Better than -57 dBm		

SPECIFICATIONS

Bluetooth™ (Option)

Integrated Bluetooth radio for use with Unication Bluetooth accessories

Motion Sensor (Option)

Integrated Motion sensor for “Man-down” and Lone worker alarming

GPS (Option)

Accuracy specs are for long- term tracking (95th percentile values > 5 satellites visible at a nominal - 130 dBm signal strength)

TTFF(Time To First Fix) Cold Start	< 40 sec typ.
TTFF(Time To First Fix) Hot Start	< 1 sec typ.
Horizontal Accuracy	< 3 m typ.

Environmental Specifications

Operating Temperature	-30° C to +60° C (Radio only)
Storage Temperature	-40° C to +85° C
Water Intrusion	IP 67
Thermal Shock	Per MIL-STD-810G
Packaging Test	Per 810D and E
Humidity	Per MIL-STD-810G
ESD	IEC 6100 - 4 - 2

Note : 1. DVOA : Digital Voice over Analog
2. Specification changes without notification

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