



DuraFon 1X-System

DuraFon 1X™

Single-Line Industrial System

The DuraFon 1X phone system offers a communication solution for small-medium businesses and large industrial facilities.

The basic system includes one DuraFon 1X receiver/base unit and one DuraFon 1X handset. Because the system is scalable (add base stations and handsets as needed); the DuraFon 1X is an ideal starter phone system for small companies. The DuraFon 1X is also useful when companies need a longer-range communication solution than DECT or Wi-Fi phones can deliver, or as a complementary system to an existing PBX phone system.

Users may include:

- Self-Storage
- Hotels/Motels
- Ranches/Farms
- Luxury Homes

Key Features:

- Long-Range Coverage
- Upgradeable and Scalable System
- Complementary Addition to Any PBX or IP-PBX Phone System
- Versatile Communication Tools
 - Simultaneous Alerts and Broadcasts
 - Intercom and Speakerphone
- Ruggedized Handsets
 - DuraFon 1X Telephone Handsets
 - DuraWalkie (2-Way Radio) Handsets
- No Recurring Costs
- Easy to Program and Install



Extreme Range & Coverage

Up to 12 floors in-building penetration; up to 250,000 sq. ft. of facility coverage; and up to 3,000 acres of property, open land coverage.

Upgradeable and Scalable System

Add up to 9 phone handsets for each base station. Add 2-way DuraWalkie 1X units for expanded user capacity.



Complementary Addition to Any PBX or IP-PBX Phone System

For companies that require a longer-range phone solution than DECT or Wi-Fi can deliver, the DuraFon 1X system can complement an existing system, working behind any analog port (PBX, VoIP, PSTN, FXS, or POTS).

Versatile Communication Tools

Broadcast Page half duplex (Push-to-Talk) between DuraFon & DuraWalkie handsets and wireless full duplex intercom between DuraFon 1X & DuraWalkie 1X handsets. Includes Auto Attendant with call redirect assistance.

Ruggedized Handset

Features a tested, rugged housing specifically designed for work in industrial environments. Finely constructed and drop tested for durability in a variety of environments. Each handset holds up to 6 hours of talk time and up to 50 hours stand-by time when fully charged.

Handset Features

Features	DuraFon 1X Handset	DuraWalkie 1X Handset
Telephone	Yes	No, but can receive calls transferred from a 1X handset
2-Way Radio	Yes	Yes
900 mHz DSS, Frequency Hopping	Yes	Yes
Broadcast/Push-to-Talk	Yes	Yes
Call Hold	Yes	N/A
Call Logs: Dialed & Received	Yes	N/A
Call Transfer	Yes	N/A
Call Waiting	Yes	Yes
Caller ID	Yes	Yes
Headset Jack (2.5mm)	Yes	Yes
Intercom (Handset-to-Handset, No Group Chatter)	Yes	Yes
Keypad Lock	Yes	Yes
Line/Base Select	Yes	N/A
Message Waiting Indicator	Yes	N/A
Mute	Yes	Yes
Phone Book/Speed Dial	30 entries	90 entries
Redial	Yes	Yes
Selectable Handset Grouping (7 Groups)	Yes	Yes
Silent Ring	Yes	Yes
Speakerphone	Yes	N/A
User Handset Naming	Yes	Yes
User-Programmable PBX Functions (9 per Handset)	Yes	Yes
Vibrate Mode	Yes	Yes
Wireless PBX Options Sharing	N/A	N/A
Wireless Phone Book sharing	N/A	N/A

DuraFon 1X System Features

Long-Range
12 Floors In-Building Penetration
250,000 sq. ft. of Facility Coverage
3,000 Acres of Property/Open Land Coverage
Durable
Tested to Withstand 6-Foot Drops, Over 50 Times onto Concrete Floors
Ports
Flexible Port Dedication: Single, Group, or All
PBX Compatible
PTSN (RJ11) Ports: 2 (1 telephone, 1 line)
Call Features
Auto-attendant
Ring Group/Hunt Group Support
Conference Calling
Modifiable Flash and DTMF Timing
Base Station Speakerphone
Base Station Intercom/Broadcast to Handset
Call Box Compatibility (with base expansion - one for phone, one for call box)

Configuration
Talk Paths: 1 per base (4 max)
Supported Handsets per Base: 9
Bases Interlinkable: 4
Total Handsets Supported: 36
Concurrent Calls Per Handset: 1
Simultaneous Calls Per Base Unit: 1
Battery and Charger
Li-Ion technology
Hours of Talk Time: 6
Hours of Stand-By Time: 50
Hours Recharge Time: 4
Handset and Spare Battery Charging Slots
Battery hot-swap with call on hold

Optional Equipment
30' or 60' Low-Loss LMR-400L Cable
Outdoor Antenna Kit (including antenna & cable)
Lightning Protection Kit (including cable)
Leather Pouch
Belt Clip
Spare Battery
Optimal Performance Handset Antenna
Headset
Antenna Splitter
Audio-in Cable
Value
No Monthly Bill (like Cellular)
No Per Minute Charges (like Cellular)
No Contracts (like Cellular)
No annual FCC licensing fees (like 2-way radios)
No Extensive Infrastructure Installation (like Wireless Networking with Wi-Fi Phones)
No QoS Concerns
No Wireless Network Interference
Meets HIPAA Guidelines for Compliance

Technical Specifications

Physical Specifications	DuraFon 1X Base Unit	DuraFon 1X Handset	DuraWalkie 1X Handset
Buttons	Reset	End/Power	End/Power
	Registration	Left & Right soft keys	Left & Right soft keys
	Volume	Up & Down scrolling keys	Up & Down scrolling keys
	Intercom	Intercom	Intercom
	Broadcast	Broadcast	Broadcast
		Talk/Speakerphone	Talk/Speakerphone
Jack(s)	Phone	Travel charger (on charger)	Travel charger (on charger)
	Line	Headset (2.5 mm, on charger)	Headset (2.5 mm, on charger)
	Audio-In x 1 (3.5 mm)		
	DC In		
LED Indicators	Power		
	In-Use		
	Intercom		
	Broadcast		
Electrical Specifications	DuraFon 1X Base Unit	DuraFon 1X Handset	DuraWalkie 1X Handset
Frequency	902-928MHz	902-928MHz	902-928 MHz
RF Power	Peak: 708mW; Average: 76mW	Peak: 708mW; Average: 76mW	Peak: 708mW; Average: 76mW
Channel Spacing	200 kHz	200 kHz	200 kHz
Number of Channels	128	128	128
Modulation	MSK	MSK	MSK
Multiple Access	Frequency Hopping TDMA	Frequency Hopping TDMA	Frequency Hopping TDMA
Frequency Hopping Rate	100 per second	100 per second	100 per second

Technical Specifications continued

Electrical Specifications continued	DuraFon 1X Base Unit	DuraFon 1X Handset	DuraWalkie 1X Handset
TDMA Frame Length	10 ms	10 ms	10 ms
Number of Talk Paths	1	1 per base (up to 4)	1 per base (up to 4)
Receiver Sensitivity	< -108 dBm (@ BER 10-2)	< -108 dBm (@ BER 10-2)	< -108 dBm (@ BER 10-2)
Antenna Connector	Reverse TNC	Non-standard	Non-standard
Antenna Gain	2 dBi (included); 3 dBi External (optional); 6 dBi External (optional)	0.5 dBi (short antenna); 2 dBi (long antenna)	2 dBi (Long) ; 0.5 dBi (Short)
TX Power Control Range	N/A	708 mW	708 mW
Telephone Interface	RJ11x2	N/A	N/A
VoIP Interface	N/A	N/A	N/A
Default IP Address	N/A	N/A	N/A
Default User Name & Password	N/A	N/A	N/A
SIP Protocol	N/A	N/A	N/A
Speech Coding	8 kbps G.729A	8 kbps G.729A	8 kbps G.729A
Channel Coding	8 kbps Convolutional+CRC	8 kbps Convolutional+CRC	8 kbps Convolutional+CRC
Transmission Data Rate	170.678 kbps	176.678 kbps	170.678 kbps
User Data Rate	128 kbps duplex	128 kbps duplex	128 kbps duplex
Duplex	Time Division Duplex (TDD)	Time Division Duplex (TDD)	Time Division Duplex (TDD)
Voice Quality	TIA/EIA-470B	TIA/EIA-470B	TIA/EIA-470B
Number of System ID	65,536	65,536	65,536
Ring Signal	20-50 Hz, 12-90 Vrms	N/A	N/A
Auto-Attendant Coding	N/A	N/A	N/A
Flash Time	100-900 ms programmable	N/A	N/A
Power Source	120V/12V AC/DC Adapter	3.6V 1700mAh Li-ion Battery	3.7v, 1700mAh Li-ion Battery
Charge Time	N/A	4 Hours (from empty)	4 hours (from empty)
Charge Current	N/A	600 mAh (900mAh for spare battery slot)	500 mA
Battery Talk & Standby Time	N/A	~ 6 hours/50 hours	8 hours/50 hours
Environmental Specifications	DuraFon 1X Base Unit	DuraFon 1X Handset	DuraWalkie 1X Handset
Regulation Compliance	FCC Part 15, Part 68; CAN/DOC RSS210, CS03	FCC Part 15, Part 68; CAN/DOC RSS210, CS03; Hearing Aid Compatible	FCC Part 15, Part 68
Operating Temperature	14°F – 140°F (-10°C – 60°C)	14°F – 140°F (-10°C – 60°C)	14°F – 140°F (-10°C – 60°C)
Storage Temperature	14°F – 158°F (-10 – 70°C)	14°F – 158°F (-10 – 70°C)	14°F – 158°F (-10 – 70°C)
Humidity	20 – 75 %	20 – 75 %	20 – 75 %
IP Rating	N/A	IP 42	IP 42
Dimensions	6.3" x 1.65" x 7.4" (161 x 42 x 188 mm)	2.28" x 1.22" x 6.34" (58 x 31 x 161 mm)	2.28" x 1.22" x 6.34" (58 x 31 x 161 mm) w/short antenna
Device Weight	0.94 lbs. (424g)	0.39 lbs. (175g)	0.39 lbs. (175g)

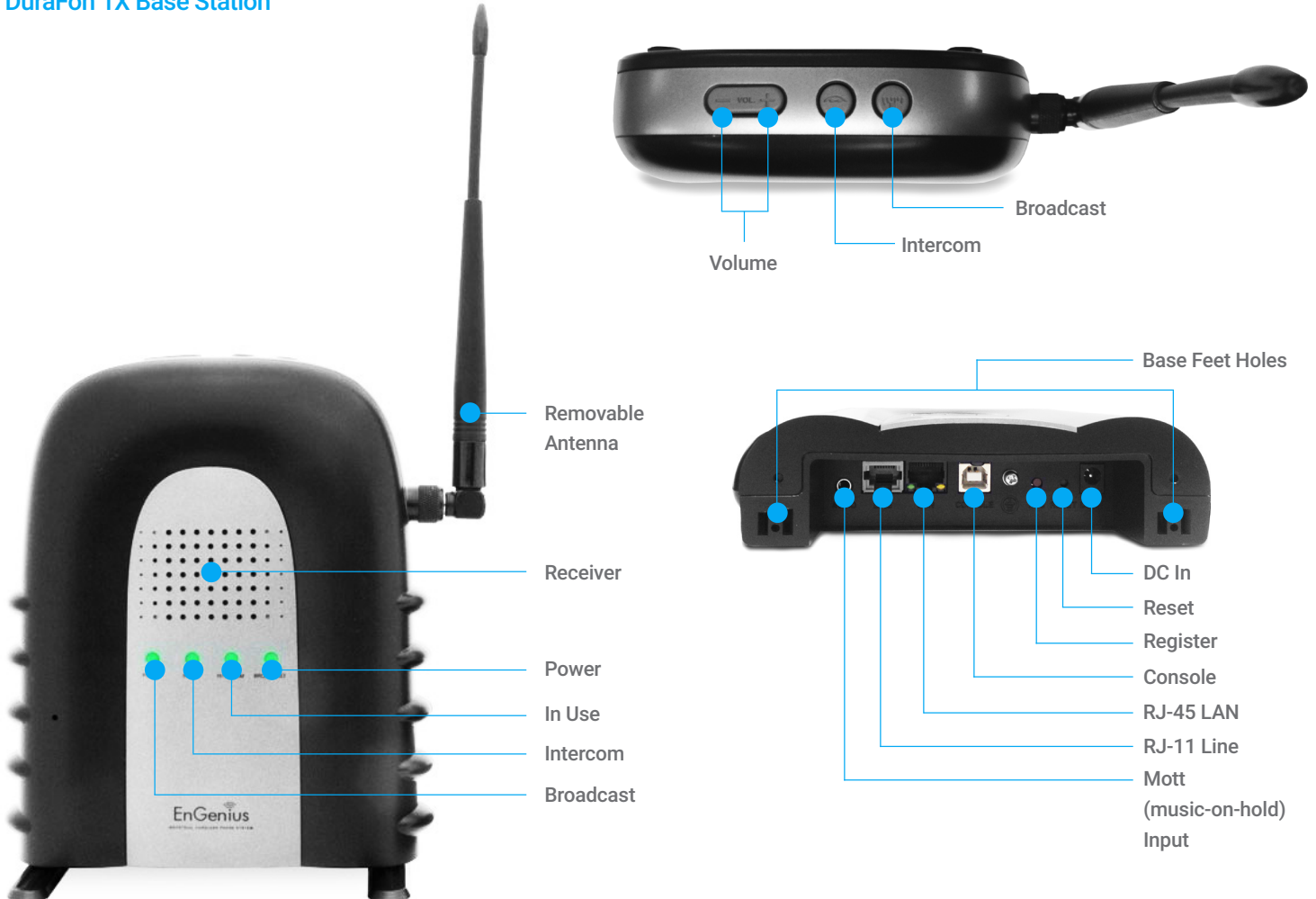
Packaging

	DuraFon 1X	DuraFon 1X-HC Handset	DuraWalkie 1X-HC
Description	Single Line System - Industrial [Base and Handset package]	DuraFon 1X Expansion Handset	DuraWalkie 1X Handset / 2-Way Radio for DuraFon 1X Phone Systems Only
Master Carton			
Quantity	6	6	6
Weight	25.8 lbs.	11.4 lbs.	11.4 lbs.
Dimensions (inches)	24" x 17" x 14"	22" x 11" x 9"	22" x 11" x 9"
Dimensions (cm)	61 x 43.2 x 35.6 cm	55.9 x 27.9 x 22.9 cm	55.9 x 27.9 x 22.9 cm
Contents			
Base Station	1 DuraFon 1X Base Station	N/A	N/A
Base AC/DC Adapter	1	N/A	N/A
Base Antenna	1	N/A	N/A
Handset	1 DuraFon 1X Handset	1 DuraFon 1X Handset	1 DuraWalkie 1X Handset
Handset Antenna	Low Profile Handset Antenna x 1; Optimal Performance Handset Antenna x 1	Low Profile Handset Antenna x 1; Optimal Performance Handset Antenna x 1	Low Profile Handset Antenna x 1; Optimal Performance Handset Antenna x 1
Battery	1700mA Li-ion Battery Pack	1700mA Li-ion Battery Pack	1700mA Li-ion Battery Pack
Desktop Charger	1	1	1
Charger AC/DC Adapter	1	1	1
Telephone Cord	1	N/A	N/A
RJ-45 Cable	N/A	N/A	N/A
Audio In Cable	N/A	N/A	N/A
Belt Clip	1	1	N/A
DuraPouch	N/A	N/A	N/A
User's Manual	1	N/A	1
Quick Guide	1	1	N/A
Warranty	1 Year; Extended 3 Year (optional)	1 Year; Extended 3 Year (optional)	1 Year; Extended 3 Year (optional)
FCC Certified	FCC Part 15	FCC Part 15	FCC Part 15

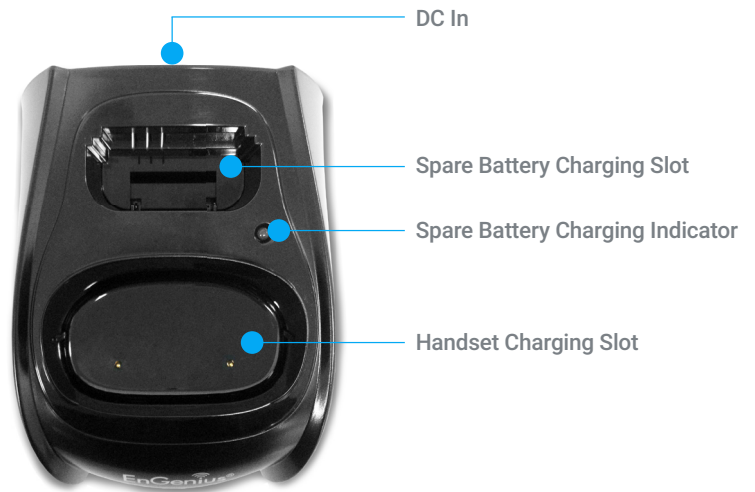
DuraFon 1X Handset



DuraFon 1X Base Station



DuraFon 1X Charger



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference, the user is encouraged to try to correct the interference, see User Manual for additional information. Base Station: This equipment complies with FCC radiation exposure limits and should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Handset: This equipment complies with FCC radiation exposure limits. End users must follow the specific operating instructions for satisfying RF exposure compliance, to do this, please follow operation instruction as documented in the User Manual. This device complies with RSS-210 of the Industry Canada Rules and with IC radiation exposure limits.



EnGenius Technologies | 1580 Scenic Ave. Costa Mesa, CA 92626
Email: partners@enginustech.com | Phone: 888-735-7888 | Website: enginustech.com

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