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شركة إشارة للاتصالات (سجتل) Signal Telecommunications Company (Sig Tel)

س.ت: ١١٠١٢٣٩٧٤ - رقم العضوية: ٥١١٩٥ C.C.No.: 51195

يسر شركة إشارة للاتصالات والأنظمة الالكترونية والأمنية إحدى الشركات الوطنية أن تقدم لسيادتكم خدماتها من (الاستيراد، البيع، التصميم، التركيب، التنفيذ، الصيانة، التدريب) في مجال:

- أنظمة الاتصالات اللاسلكية.
- أنظمة الاتصالات السلكية (ستراتالات).
- أنظمة كاميرات المراقبة التلفزيونية والدوائر المغلقة.
- أنظمة كونسول غرف العمليات.
- أنظمة الحماية من السرقة.
- أنظمة التتبع الأمني بالأسوار.
- أنظمة كاميرات الانكوم للأبواب والمداخل.
- أنظمة التلفزيون المركزي.
- أنظمة الصوت والصورة والعرض المسرحي وتجهيز قاعات الاجتماعات.
- أنظمة الدمج الالكتروني والاتصالات.
- أنظمة الفنادق والأقفال الالكترونية.
- أنظمة شبكات الكمبيوتر والانترنت.
- أنظمة التحكم في الدخول والانصراف.
- أنظمة إنذار الحرائق والأمن والسلامة.
- أنظمة استدعاء الممرضات.
- أنظمة الساعات المركزية.
- أنظمة الطاقة الاحتياطية (UPS).
- أنظمة المصدات الهيدروليكيه والالكترونية للبوابات.
- تركيب وصيانة الأبراج للاتصالات.

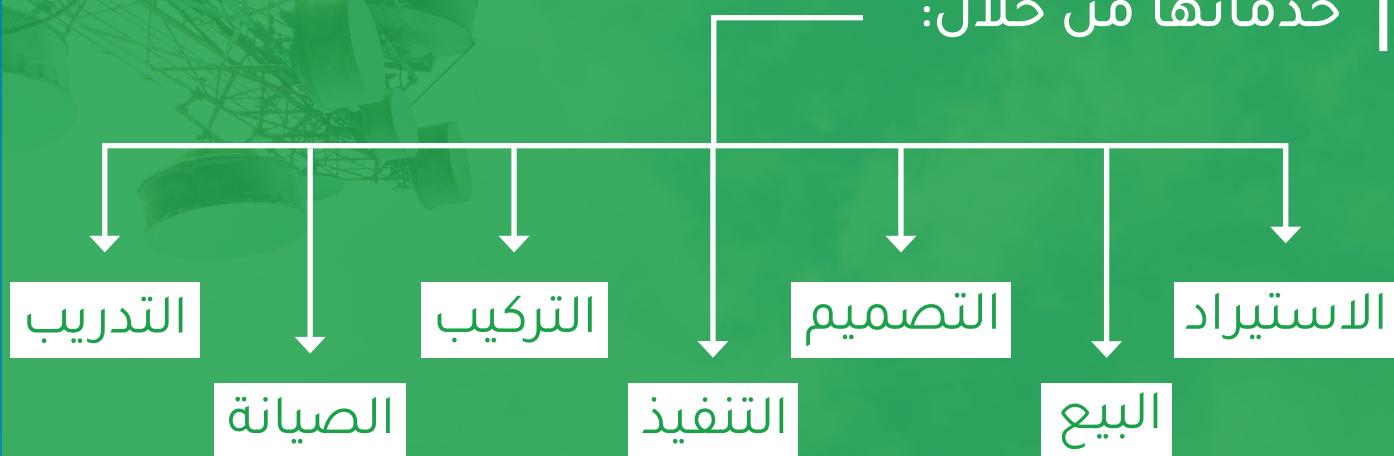
تقبلوا فائق الاحترام،
شركة إشارة للاتصالات



مقدمة

تأسست الشركة عام ١٩٨٥م، وتمتلك الدمج ما بين الطاقات البشرية الخبيرة والمدرية على مدار ٣٢ عاماً.

يسر شركة إشارة للاتصالات والأعمال الالكترونية والأنظمة الأمنية وتكنولوجيا المعلومات أن تقدم لكم خدماتها من خلال:

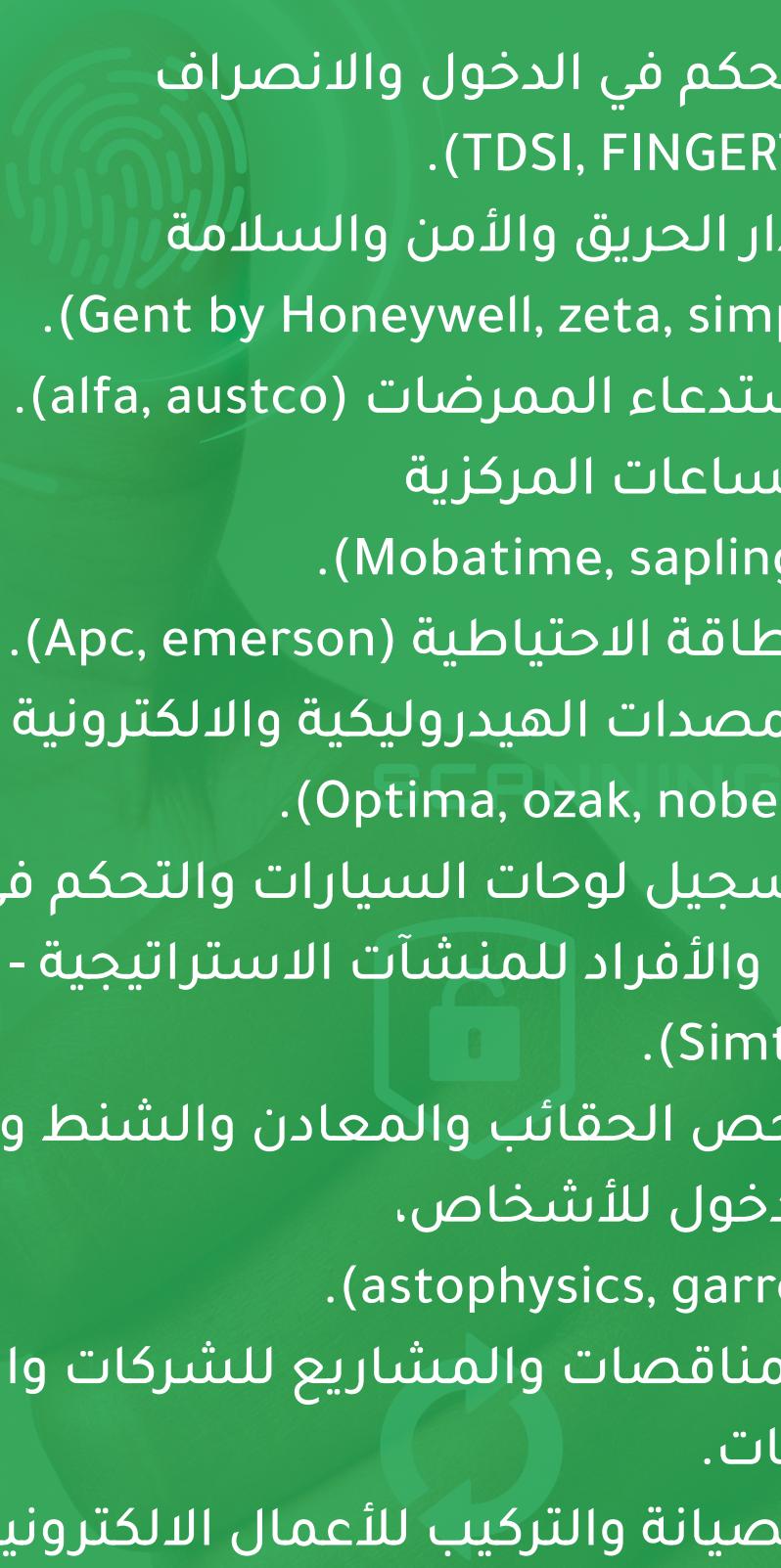


الشركة حاصلة على شهادة تصنيف المقاولين...
مصنفة ومعتمدة لدى الاتصالات السعودية.



وتتخصص الشركة بال مجالات التالية:

١. أنظمة كاميرات المراقبة التلفزيونية والدوائر المغلقة .(PANASONIC, SAMSUNG, DANTE-USA, HONEYWELL)
٢. أنظمة الاتصالات السلكية (سنترالات) .(Panasonic, Avaya, NEC)
٣. أنظمة الحماية من السرقة (Jablotron) .
٤. نظام كاميرات الانتركم للأبواب والمداخل .(Commax, Elvox, iPhone)
٥. أنظمة التلفزيون المركزي (Hierehman,wisi,grunding)
٦. أنظمة الصوت والصورة والعرض المسرحي وتجهيز قاعات الاجتماعات .(Bose, Extron, Bouyer, Ref, Toa)
٧. أنظمة الدمج الالكتروني والاتصالات.
٨. أنظمة الفنادق والأقفال الالكترونية (orbita, fingertec)
٩. أنظمة شبكات الحاسب الآلي (cisco, 3m,tplink)

- 
١. أنظمة التحكم في الدخول والانصراف .(TDSI, FINGERTECK, ZK)
 ٢. أنظمة إنذار الحريق والأمن والسلامة .(Gent by Honeywell, zeta, simplex, bds)
 ٣. أنظمة استدعاء الممرضات .(alfa, austco)
 ٤. أنظمة الساعات المركزية .(Mobatime, sapling, bodet)
 ٥. أنظمة الطاقة الاحتياطية .(Apc, emerson)
 ٦. أنظمة المصدات الهيدروليكيه والالكترونيه للبوابات .(Optima, ozak, nobesco, bds)
 ٧. قراءة وتسجيل لوحات السيارات والتحكم في دخول السيارات والأفراد للمنشآت الاستراتيجية - ANPR .(Simtex, ARH)
 ٨. أجهزة فحص الحقائب والمعادن والشنط وأجهزة فحص الدخول للأشخاص .(astophysics, garrett, ceia)
 ٩. دراسة المناقصات والمشاريع للشركات والتقديم في المناقصات.
 ١٠. خدمات الصيانة والتركيب للأعمال الالكترونية.

إشارة للاتصالات

شركة وطنية رائدة في تقديم الخدمات والحلول المتخصصة في عالم الاتصالات وأنظمة الأمن والحماية وتكنولوجيا المعلومات في المملكة العربية السعودية.

تأسست عام ١٩٨٥ م تمتلك الدمج ما بين الطاقات البشرية الخبرة والمدرية على مدار ٣٢ عاماً وهي مصنفة من قبل وزارة الشؤون البلدية والقروية - تصنيف المقاولين في مجال الاتصالات والالكترونيات.

وتعتمد الشركة في عملها على تقديم الحلول المميزة والدراسات التقنية التي تناسب حاجات عملائها في المملكة، وذلك بالتعاون مع كبرى الشركات المصنعة عالمياً، كما تركز الشركة على تقديم أفضل خدمات الدعم الفني والصيانة والتدريب في مرحلة ما بعد البيع.

كما نود ان نعلمكم بوجود فريق خبراء يحتوي نخبه من المهندسين الإكفاء في مجال الاتصالات و حرصاً من الشركة على تلبية متطلبات العملاء في مجالات مختلفة تم تقسيم الشركة الى خمس قطاعات.



وفيما يلي لمحه موجزة عن كل قطاع

أنظمة الاتصالات

• الاتصالات السلكية .

ويختص هذا القسم بتقديم حلول متكاملة ومتطورة في مجال الاتصالات منها:



أنظمة السنترالات التلفونية بكافة أنواعها الأنalog والديجيتال وأنظمة IP (Telephony) ويتعامل هذا القسم مع كبرى الشركات العالمية (باناسونيك اليابانية، AVAYA الأمريكية، NCE اليابانية، GRANDSTREET الأمريكية، IBCM الأمريكية).



نظم الاستدعاء ويختص بأنظمة الاستدعاء المسموعة والمرئية وأنظمة استدعاء الممرضات والموظفين وغيرها ويتعامل مع كبرى الشركات (أيفون اليابانية، تكتون الأمريكية، شركة الفاماكس التركية).



أنظمة توصيل شبكات

• الاتصالات اللاسلكية



يختص في بيع وتركيب وصيانة أجهزة
الراديو القريبة المدى.
(VHF,UHF) DMR Conventional,
Analog Conventional

• غرفة التحكم



نعمل مع شركة ZETRON "زيترون"
في تركيب غرف العمليات التي يتم
توصيل جميع أجهزة الاتصالات
السلكية واللاسلكية والكاميرات
والمرئيات ليقوم المشغلين بالتحكم
بها عن طريق أجهزة زيترون ليتم
التواصل والاتصال بجميع الأجهزة
من جهاز واحد وهو
نوع ZETRON Console System

الأنظمة الأمنية

ويختص هذا القسم بتقديم الحلول المتكاملة في مجال:

• أنظمة كاميرات مراقبة

ويقدم هذا القسم خدماته في مجال كاميرا المراقبة من كبرى
الشركات العالمية (INFINOVA الأمريكية، دانتي الأمريكية، فايكون
الأمريكية، بلکو الأمريكية، باناسونيك اليابانية، سوني اليابانية،
سامسونج الكورية)

• أنظمة تحكم أمني والخاصة بتأمين الحماية والإندار



ويتعامل هذا القسم مع شركات عالمية (أدمو هانيول الأمريكية، وشركة جلبرتون التشيكية)

• أنظمة التحكم بالدخول عن طريق البطاقات والبصمة



ويختص هذا القسم بتقديم أنظمة الدخول عن طريق البطاقات وبصمة اليد والعين وتقنية بصمة الإصبع عن بعد بما يضمن أكبر قدر من الحماية ويتعامل هذا القسم مع كبرى الشركات مثل: E-WORK، DMI، TBS FINGER PRINT الأمريكية، FINGERTIK الماليزية

• أنظمة دخول البوابات



نتعامل مع شركة MAGENTIC AUTO الأمريكية العالمية، وأنظمة CONTROL VATI الكندية

• أنظمة الدخول والخروج والاقفال الالكترونية للفنادق من شركة Orbita, Fingertec

• أنظمة إنذار الحرائق

ويؤمن هذا القسم أنظمة الإنذار ضد الحرائق بكافة أنواعها ومن كبرى الشركات العالمية المتخصصة في هذا المجال (زيتا البريطانية، كوبر البريطانية، هوشبيكي البريطانية، أيسر البريطانية، جنت (Gent) الإنجلزية)



أنظمة الصوت والصورة

ويختص هذا القسم بتقديم الحلول المتكاملة في مجال الأنظمة السمعية والبصرية ومنها:

• نظام الصوتيات

ويقدم آخر الحلول المتكاملة في مجال أنظمة الصوت المركزية وغيرها ونتعامل مع أشهر شركات الصوتيات في العالم المتخصصة في تجهيز RCF الاستوديوهات المركزية، ماركة الإيطالية، EGI الإسبانية، ماركة PIONEER الأمريكية، ماركة BOSE الأمريكية، وماركة INTER M.

• انتركوم أبواب

مسمع ومرئي ويقدم الحلول المتكاملة في مجال الانتركوم حيث أصبح بالإمكان رؤية الشخص خلف الأبواب والتحدث معه في نفس الوقت مما يساعد على التحقق من هويته ويعطي مزيداً من الأمان والحماية والخصوصية في نفس الوقت ويتعامل هذا القسم مع شركات عالمية مثل: (ترينيو الإيطالية، الفوكس الإيطالية، شركة PBT الإيطالية، أيفون اليابانية، وشركة كوماكس الكورية)

• أنظمة توزيع القنوات التلفزيونية

ويختص بتركيب أنظمة الساتلية المركزي والاستقبال الفضائي وأنظمة توزيع القنوات التلفزيونية ونتعامل مع أكبر الشركات العالمية (ويزي الأمريكية، هيرشمان الأمريكية، جرونونج الأمريكية، SNB الألمانية، POLYTRON الألمانية)

• أنظمة الأندين المركزي

ويختص في مجالات الأندين المركزي وهوائيات الاستقبال مثل: موجات الراديو والتلفزيون وغيرها ولدينا علاقة استراتيجية مع أشهر الشركات العالمية المصنعة (ويزي الأمريكية).

أنظمة الاتصال عبر الأقمار الصناعية

دعم الاتصال عبر الأقمار الصناعية

محطات الاتصال بنظام الاتصال الفضائي
(VSAT)

محطات ارضيه بنظام الاتصال الفضائي



أنظمة الساعات المركزي

ويقدم حلوله في مجال الساعات المركزية لمختلف القطاعات سواء التعليمي أو الصحي أو غيرها ويعامل مع كبرى الشركات (بوديت الفرنسية، وشركة ألفا ماكس التركية)

أنظمة شبكات الحاسب الآلي

نقوم بتوريد و تركيب شبكات الحاسب الآلي بمختلف أنواعها السلكية واللاسلكية ويقدم خدماته من خلال كبرى الشركات (سيسكو الأمريكية، 3M الأمريكية، 3 COM الأمريكية).

الصيانة وقطع الغيار

تقوم الشركة بتوريد قطع الغيار المتخصصة في مجال أنظمة الاتصالات السلكية واللاسلكية وكذلك صيانة جميع أجهزة الاتصالات والالكترونيات.



عملاؤنا



كتالوجات لشركات مصنعة عالمية



unication Specialist

THE FUTURE INTERNET OF THINGS

ODMO



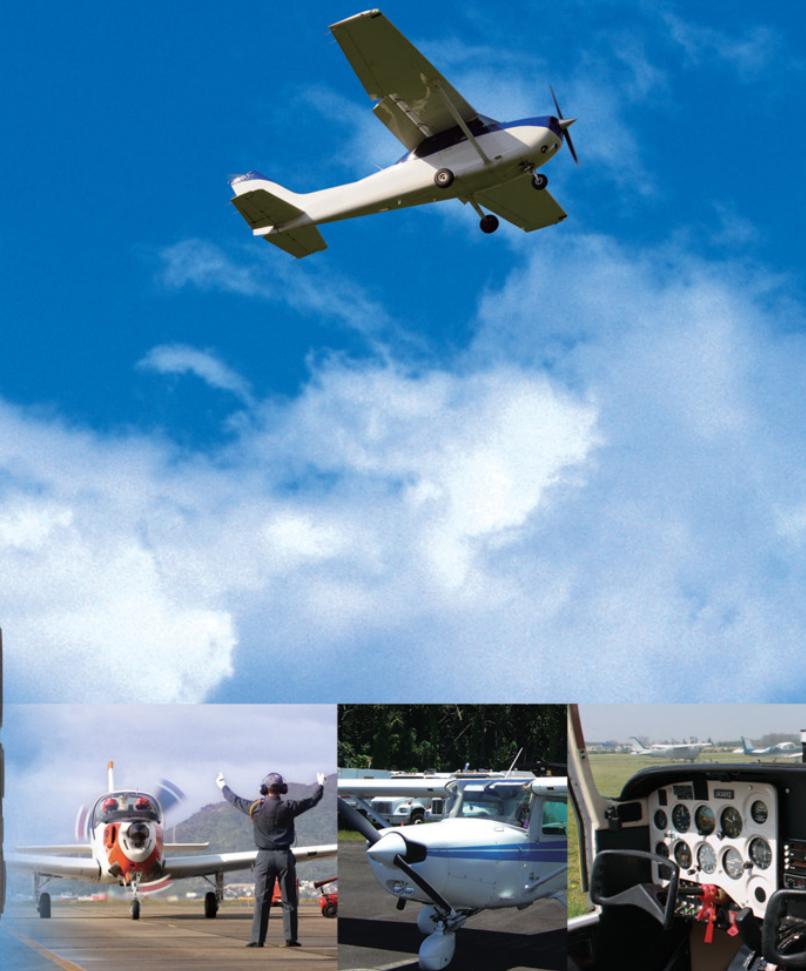
Wireless Commu

RODMO A DARK HORSE FOR TH



AIR BAND TRANSCEIVERS

Product Catalog



YAESU

FTA-750L
Spirit VOR Navigation
GPS

FTA-550L
FTA-550 AA Battery Version
Pro-X VOR Navigation
ILS Navigation (Localizer)

Specifications	FTA-750L Spirit	FTA-550L/FTA-550 AA Battery Version Pro-X
General		
Frequency Range	TX: 118.000 to 136.975 MHz RX: 108.000 to 136.975 MHz (NAV and COM) 161.650 to 163.275 MHz (Weather Channels) 329.150 to 335.000 MHz (Glide Slope)	TX: 118.000 to 136.975 MHz RX: 108.000 to 136.975 MHz (NAV and COM) 161.650 to 163.275 MHz (Weather Channels)
Channel Spacing	25 kHz/8.33 kHz	25 kHz/8.33 kHz
Emission Type	TX: AM RX: AM & FM (FM: for receiving the Weather Channels)	TX: AM RX: AM & FM (FM: for receiving the Weather Channels)
Supply Voltage	6.0 to 9.5 VDC	6.0 to 9.5 VDC
Current Consumption (approx.)	300 µA (power off), 70 mA (battery saver on, saver ratio 50 %) 80 mA (squench on), 300 mA (receive), 0.9 A (transmit 1.5 W Carrier)	300 µA (power off), 70 mA (battery saver on, saver ratio 50 %) 80 mA (squench on), 300 mA (receive), 0.9 A (transmit 1.5 W Carrier)
Temperature Range	+14 °F to +140 °F (-10 °C to +60 °C)	+14 °F to +140 °F (-10 °C to +60 °C)
Antenna Connector	BNC Type	BNC Type
Case Size (WxHxD)	2.4" x 5.2" x 1.3" (62 x 133 x 34 mm) with SBR-12LI	2.4" x 5.2" x 1.3" (62 x 133 x 34 mm) with SBR-12LI
Weight (approx.)	14.5 oz (410 g) with SBR-12LI and antenna	14.5 oz (410 g) with SBR-12LI and antenna
Receiver		
Circuit Type	Double-conversion superheterodyne	Double-conversion superheterodyne
IFs	47.25 MHz & 450 kHz	47.25 MHz & 450 kHz
Sensitivity	Better than 0.8 µV (for 6 dB S/N with 1 kHz, 30% modulation)	Better than 0.8 µV (for 6 dB S/N with 1 kHz, 30% modulation)
Selectivity	Better than 8 kHz/-6 dB	Better than 8 kHz/-6 dB
Adjacent CH. Selectivity	Less than 25 kHz/-60 dB	Less than 25 kHz/-60 dB
AF Output (Internal speaker)	0.8 W @ 16 Ohms, 10% THD	0.8 W @ 16 Ohms, 10% THD
Transmitter		
Power Output	5.0 W (PEP), 1.5 W (Carrier Power)	5.0 W (PEP), 1.5 W (Carrier Power)
Frequency Stability	Better than ±1 ppm (+14 °F to +140 °F [-10 °C to +60 °C])	Better than ±1 ppm (+14 °F to +140 °F [-10 °C to +60 °C])
Modulation System	Low Level Amplitude Modulation	Low Level Amplitude Modulation
Spurious Emission	> 70 dB below carrier	> 70 dB below carrier
Int. Microphone Type	Condenser	Condenser
Ext Mic. Impedance	150 Ohms	150 Ohms
GPS Unit		
Receiver Channels	66 Channels	—
Sensitivity	Less than -147 dBm	—
Time to First Fix	1 minute typical (@ Cold Start) 5 seconds typical (@ Hot Start)	—
Geodetic Datum	WGS84	—

Specifications are subject to change without notice or obligation.

About this brochure: We have made this brochure as comprehensive and factual as possible. We reserve the right, however, to make changes at any time in equipment, optional accessories, specifications, model numbers, and availability. Precise frequency range may be different in some countries. Some accessories shown herein may not be available in some countries. Some information may have been updated since the time of printing; please check with your Authorized YAESU Dealer for complete details.

SUPPLIED ACCESSORIES:

- SBR-12LI* Li-Ion Battery Pack (7.4 V, 1800 mAh)
- SBH-11* Charger Cradle
- SAD-11* AC Charger
- SDD-12 Cigarette Lighter DC/DC Converter
- SRA-13A Helical Antenna
- SHB-11 Belt Clip
- SCU-15 Headset Adapter Cable
- SBT-12 Alkaline Battery Tray
- T9101606 USB Cable

* Not included with the FTA-550 AA Battery Version.

ACCESSORIES & OPTIONS



*1 Requires SSM-10A *2 "B": for 120VAC / "C": for 220-240 VAC / "U": for 220-240 VAC w/UK Plug.

YAESU

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■ **YAESU UK** <http://www.yaesu.co.uk>

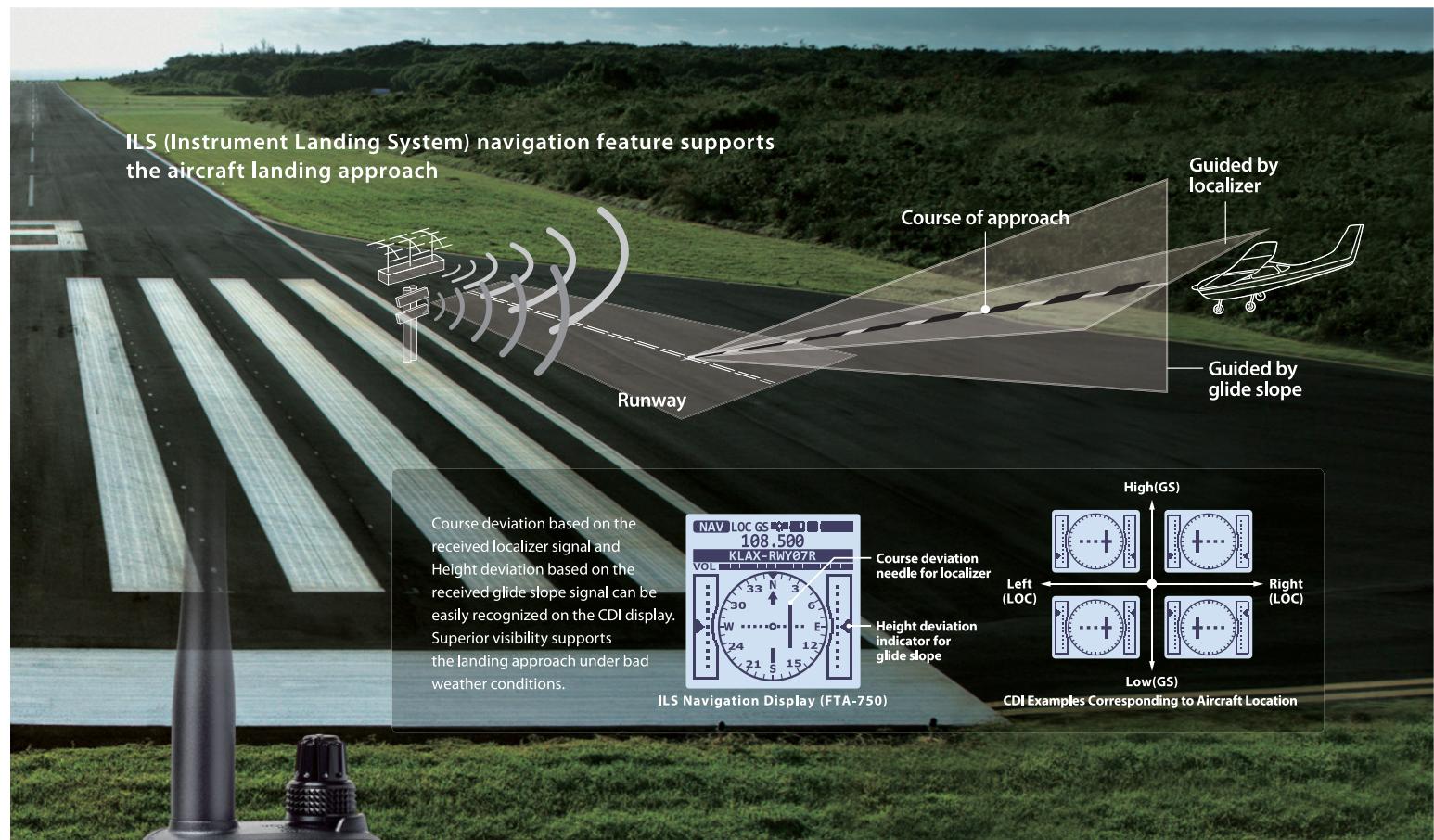
Unit 12, Sun Valley Business Park, Winnall Close
Winchester, Hampshire, SO23 0LB, U.K.

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Kwun Tong, Kowloon, Hong Kong



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The YAESU FTA-550 is an Airband Transceiver with ILS (Localizer) and VOR Navigation

Features

- 5 Watts TX Output Power (Air Band: AM 5W P.E.P. typ, 1.5W carrier)
- Huge 1.7" x 1.7" (43.2 x 43.2 mm) Full-Dot Matrix Display (160 x 160 dots)
- ILS Navigation Display (Localizer)
- VOR Navigation Display
- NOAA Weather Channel Receive* • NOAA Weather Alert*
- 200 Memory Channels with 15 alphanumeric characters
- Back-lit Keypad and Display with Dimmer
- Water Protection – IPX5 Rating
- Loud Audio (800 mW)
- Includes High-Capacity Rechargeable Li-Ion Battery Pack (7.4 V 1800 mAh)
- Includes Alkaline Battery Tray (6 x AA)

* Only available in NOAA weather service areas.

FTA-550L

Pro-X VOR Navigation
ILS Navigation
(Localizer)

Supplied accessories:

- Li-Ion Battery Pack
- Charger Cradle
- AC Charger
- Cigarette Lighter DC/DC Converter
- Antenna
- Belt Clip
- Headset Adapter Cable
- Alkaline Battery Tray
- USB Cable

FTA-550

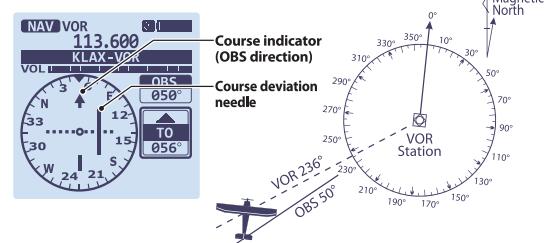
AA Battery Version

Supplied accessories:

- Cigarette Lighter DC/DC Converter
- Antenna
- Belt Clip
- Headset Adapter Cable
- Alkaline Battery Tray
- USB Cable

VOR NAVIGATION SCREEN

When the FTA-550 receives a VOR signal, the display will automatically switch to the NAV band screen which shows a CDI based on the received signal.





The YAESU Spirit FTA-750 and Pro-X FTA-550 incorporate an advanced user interface featuring a Full-Dot matrix display, ensuring intuitive operation and optimizing performance.



The YAESU FTA-750 is an Airband Transceiver with ILS (Localizer & Glide Slope), VOR Navigation and GPS receiver

Features

- 5 Watts TX Output Power (Air Band: AM 5W P.E.P. typ, 1.5W carrier)
- Huge 1.7" x 1.7" (43.2 x 43.2 mm) Full-Dot Matrix Display (160 x 160 dots)
- ILS Navigation Display (Localizer and Glide Slope)
- VOR Navigation Display • Integrated 66 Channel WAAS GPS receiver
- Waypoint Navigation • Available GPS Position Logging operation*¹
- NOAA Weather Channel Receive*² • NOAA Weather Alert*²
- 200 Memory Channels with 15 alphanumeric characters
- Back-lit Keypad and Display with Dimmer
- Water Protection – IPX5 Rating • Loud Audio (800 mW)
- Includes High-Capacity Rechargeable Li-Ion Battery Pack (7.4 V 1800 mAh)
- Includes Alkaline Battery Tray (6 x AA)

*1 The YCE01 PC Programming Software (available online) is required to view the GPS Log data. *2 Only available in NOAA weather service areas.

FTA-750L

Spirit VOR Navigation
ILS Navigation

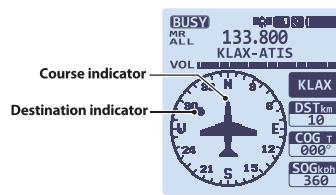
GPS

Supplied accessories:

- Li-Ion Battery Pack • Charger Cradle • AC Charger • Cigarette Lighter DC/DC Converter
- Antenna • Belt Clip • Headset Adapter Cable
- Alkaline Battery Tray • USB Cable

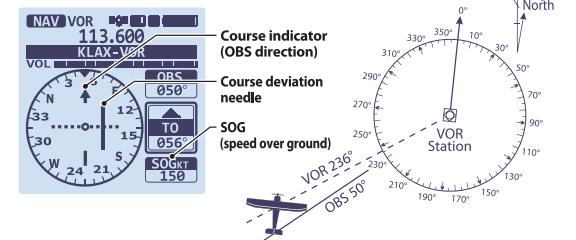
WAYPOINT NAVIGATION SCREEN

The navigation feature of the FTA-750 is presented as a compass that helps you to determine the destination and your bearing at a glance.



VOR NAVIGATION SCREEN

When the FTA-750 receives a VOR signal, the display will automatically switch to the NAV band screen which shows a CDI based on the received signal. The SOG (speed over ground) is displayed only when the internal GPS unit is activated and receives a fix in the FTA-750.



VDL 6000

AIS Class A_S Secure (Sealed) System

The **VDL 6000 AIS Class A_S Secure (Sealed) System** provides data link communication covering static, voyage-related and dynamic data, which gives all vessels in an area increased situational awareness and improves safety at sea for the individual ship. The system also supports secure communication.

Features

The SOTDMA technology is used in the AIS transponder which transmits and receives information on all vessels within VHF coverage. This information includes position, identity, and course over ground, heading, and rate of turn as well as navigational status and the destination of the ship. The information received from, and provided to, the ships is easily plotted on any ARPA radar or electronic chart system. The screen presentation of the call signs of other ships enables a ship to make direct contact with conflicting vessels. The system includes a transponder mounted in a waterproof casing and a water resistant Minimum Keyboard Display.



VDL 6000 AIS Class A_S (Sealed) System

Configuration and interfaces

The AIS Class A transponder is easy to install onboard any ship by connecting it to a GPS and VHF antenna. To maximize the benefit of the investment, the AIS Class A transponder is delivered with a USB interface that may be used together with an electronic chart system and/or ARPA radar.

Secure communication module

The VDL 6000 AIS Class A_S (Sealed) System includes the secure communication module supporting three different configurable operational modes:

- Standard mode (AIS Class A)
- Silent mode
- Secure mode

Standard mode

The transponder is BSH-certified and provides SOLAS compliance operating with all AIS Class A features. The datalink communication covers the required static, voyage-related and dynamic data, which gives all vessels in an area increased situational awareness and improves safety at sea for the individual ship. Positive identification and positioning of all ships in the vicinity reduces the unnecessary "ship on my port bow" calls. Less information overload greatly enhances safety at sea.

Information on draught, type of cargo and destination could also be used to make decisions related to maneuvering.

Silent mode

The transponder receives all messages in the same way as in 'Standard mode', but does not transmit.

Secure mode

The transponder supports secure communication, which provides encryption of all transmit data and decryption of received (encrypted) data. At the same time, the transponder receives all standard AIS data sent from other AIS transponders within radio range.

The basic encryption concept includes the DES encryption algorithm, where a 56-bit key is used to encrypt/decrypt a 64-bit block of data.

The advanced encryption concept includes the AES 128 bit encryption (subject to export control if exported from the European Union).



AIS Class A Transponder – Secure Communication Module

Technical Specifications

Power

Input voltage 12 V DC (8.4 – 15.6 V DC)

Radio

Transmitter output power (adjustable)	1 and 12.5 W, 50 Ohm load
Bandwidth	25 kHz
Channel access method	TDMA (AIS)
Baud rate	9600 bps (AIS) / 1200 bps (DSC)
Modulation	GMSK (AIS) / FSK (DSC)
Frequencies	156.025 MHz – 162.025 MHz
Default channels	87B (161.975 MHz), 88B (162.025 MHz), 70(156.525 MHz)
Number of receivers	3 (2 AIS TDMA, 1 DSC)
Receiver sensitivity	Better than -107 dBm at 20% MER

GNSS Receiver

GNSS receiver	GPS L1, 16 parallel channels, 1 Hz update
DGNSS support	Yes (SBAS, EGNOS, WAAS, MSAS, and via msg 17)

Transponder Interfaces

VHF antenna	N female, 50 Ohm
GPS antenna	TNC female, 50 Ohm
Power	3-pole male, connected with 'External Power Cable'
MKD Interface	Connected with 'External MKD Cable'
Data Port (external display)	B-type USB, version 1.1 and 2.0
Sensors (IEC 61162-1 or -2)	-
Pilot (IEC 61162-2)	-
Long-range (IEC 61162-2)	-

Standards

IEC 60945 (environmental)
ITU-R M.1371-4
IEC 61993-2
IEC 61162-1, 2
IMO Resolution A.694 (17)
IMO Resolution MSC.74 (69) Annex 3
ITU-R-M.825-3
ITU-R M.1084-3
IEC 61108-1
IEC 62288
RTCA/DO 178B (SW development)
IPC-A-610 (Manufacturing)

Physical characteristics, Transponder

Dimensions	230 x 111.5 x 400.5 mm (W x H x L)
Weight	2.7 kg (transponder), 7.0 kg (sealing box incl. internal cabling)
Cooling	Not required
IP rating	IP66

Physical characteristics, Minimum Keyboard and Display

Power requirements	24 V DC, from Transponder
Dimensions	120 x 180 x 45 mm (W x H x L)
Weight	1.2 kg

Accessories included

External Power Cable, 5 m
External MKD Cable, 5 m

Compliance

BSH Statement of Conformity

CNSS-14-1326-A_April 2014

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FEATURES

- Digital communications console system
- IP connected dispatch positions
- Integrates telephone call handling and radio dispatch
- Resilient distributed architecture
- 30 definable ports for lines and operators to a maximum of 16 operators
- Supports and integrates analogue radio, MPT 1327, NEXEDGE®, FleetSync®, iDEN®, MOTOTRBO™, and TETRA voice and data
- Screen-based, configurable Graphical User Interface (GUI) with intelligently integrated call queuing feature and caller ID aliasing.
- Multilingual operator presentation
- Range of operator and audio interface options

INTRODUCTION

The DCS-5020 Digital Console System is designed to meet the needs of the small to medium-sized operations control room. Combining telephony and both digital and analogue radio control to either direct wired or IP connected dispatch positions, the DCS-5020 meets a range of professional applications for public safety, transportation, utilities, oil, gas, mining and private industry. Offering many of the features of a traditional console system, the DCS-5020 is based on a distributed architecture which removes the requirement for a central switch, and also allows IP connected dispatch positions to be placed anywhere on an associated IP Network. This ensures a fully scalable solution down to a single operator position and provides a high level of system resilience for mission critical applications.

DESCRIPTION

The DCS-5020 integrates telephony and radio, call handling, monitoring and logging functions into a single operator interface. The system supports up to 30 ports, with each assignable to either operator, telephone or radio circuits. There are up to 16 operator positions possible, each comprising a host PC and video monitor, with desktop speakers, connected to the main control equipment either direct wired or via an IP Network. Optional accessories include headset, gooseneck/desk microphone, PTT footswitch, and keyboard.

The host PC runs Zetron's Windows®-based IntegratorDCS™ software, providing a graphical user interface (GUI) presenting the telephone/radio channels and system functions available to the operator. The video monitor can be full-size, compact LCD or part of an inbuilt panel PC to fit control room requirements. Touchscreen and/or mouse/trackball control is available. The operator GUI is extensively configurable and screen operation can be provided in a range of languages.

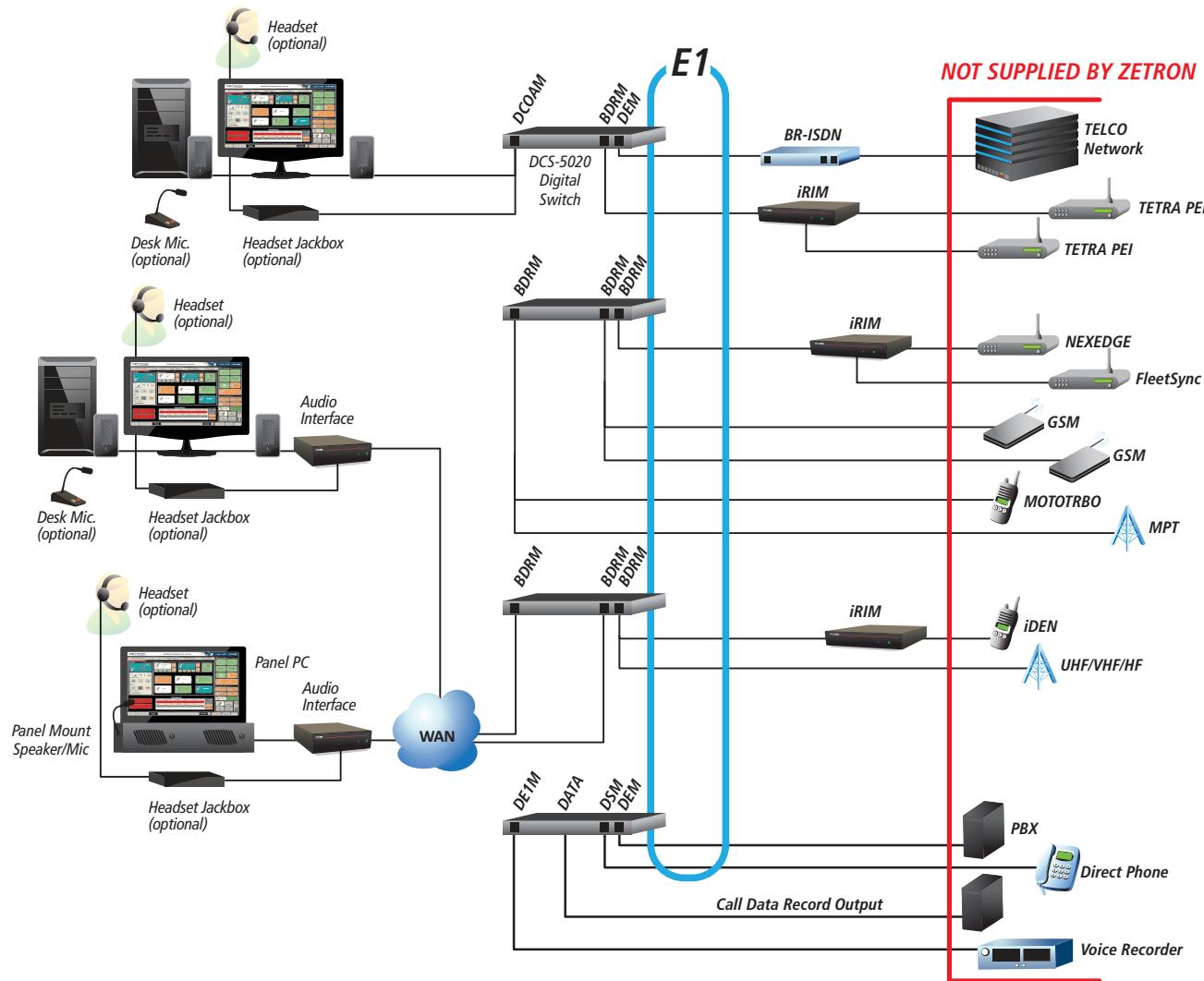
The desktop speakers and headset can be used to minimize desktop space requirements. The speakers—each with a volume control—are for active conversation (select) audio and monitored (unselect) audio and come in either desktop or panel mount options. Optionally the DCS-5020 can include an integrated Instant Recall Recording (IRR) capability that allows operator audio to be logged on the console PC with playback controlled from the GUI.

The control interface to the telephone and radio channels is through the compact DCS-5020 Digital Switch. Each Digital Switch supports up to six interface ports with additional system ports provided by linking Digital Switches together using fibre, coaxial or twisted pair cable. The system architecture supports flexible system layout with operator positions and system resources being local to or remote from each other via traditional connection or IP Networks. Each interconnected Digital Switch and the interface ports on the switch are accessible from any other Digital Switch, meaning the radio and telephone resources on each switch may be shared in common with all positions in the system. In the unlikely event that a single Digital Switch fails, the only impact is on those operator, telephone and radio resources connected to that switch. All other shared resources continue to be available to the remaining positions. If a switch is isolated due to link failure it will still operate autonomously with any connected consoles and resources until its connection to the main system is re-established.

By networking the operator console PCs, operators may gain access to corporate phone directories, databases, and web-based services such as third party Call ID information or web based video feeds.

ZETRON

SAMPLE SYSTEM ARCHITECTURE



DIGITAL SWITCH – MODULAR DESIGN

The required interfaces determine the choice of plug-in modules in the Digital Switch. Modules are currently available for the following:

- Analogue subscriber line or PABX extension level (or GSM networks with suitable gateway)
- Direct telephone connection or hot line circuits
- Conventional radio via 2/4-wire direct or Tone Remote Control (TRC), 5/6 Tone or FleetSync
- MPT 1327 via MAP27 interface or direct connect to Zetron MPT infrastructure
- Digital trunked Radio - TETRA (compatible with Motorola, EADS/Nokia, Sepura), iDEN, NEXEDGE and MOTOTRBO
- HF radio via an interface to Codan transceivers
- Analogue or E1 interface to long term voice logger
- Serial or NTP interfacing to Real Time Clock

System installation and configuration is through the Digital Console Management System (DCMS) software. DCMS is used to set levels, download new firmware, and monitor the health of the system. Full time connection is required only if continuous monitoring is desired.

OPERATOR FUNCTIONS

Operator screen layouts can be configured to individual requirements, with on-screen graphics presenting line, function and status keys.

1. **Line** keys are assigned to individual ports—telephone, PABX, radio, intercom or pre-programmed working groups. Examples are:
 - Analogue telephone line
 - Telephone hunt group
 - Conventional radio
 - MPT 1327 radio/Zetron MPT 1327 infrastructure
 - iRIM radio (TETRA, NEXEDGE, FleetSync, iDEN or MOTOTRBO)
 - Direct Intercom line

- 2. Function** keys allow the operator to select the specific operation, and include:

 - Dial and Memory dial
 - Answer next
 - Clear
 - Hold
 - Multiline call
 - Call transfer
 - Radio/Radio and Radio/Telephone patch
 - Monitor/unselect
 - Volume control
 - Radio selcall 5/6 tone, FleetSync
 - Radio priority/busy channel marker
 - Radio self repeat
 - Individual/group call
 - Emergency call
 - Trunked mode (TMO)/Direct mode (DMO)
 - Send/receive status messages
 - Encryption calls (TETRA)
 - Scan (TETRA, MOTOTRBO)
 - Stun, revive (MOTOTRBO, NEXEDGE)
 - Kill (NEXEDGE, FleetSync)
 - Radio check (MOTOTRBO)
 - IRR playback
 - Monitor digital inputs (e.g. external alarms)
 - Control digital outputs (e.g. door latches)

3. The **status** area displays information about the console such as:

- Communications with the Digital Switch
 - Audio mode—speakers/headset
 - Date and Time

4. The **Call Stack** area displays lists of calls in various formats. One or more call lists can be setup for display and include various data fields including time, date, call direction, call type, caller ID, unit status and call priority. Features include:

- Call Log list, showing a history of past calls.
 - Unit Status list, showing the last transmission from each field unit.
 - Call Queue list, showing field units who are requesting dispatcher attention.
 - Optional buttons may be used to scroll through, remove calls from, and answer calls from the list.
 - Field headers at the top of the list may be clicked to change the list sorting.
 - List sorting by simply clicking on the desired field headers at the top of the stack.
 - Configurable highlighting and text colour coding to simplify and enhance usability.

Call History							Prev	Next
Name	Priority	Dir	Date	Time	Console	Mis...		
Sepura	Emer...	Incoming	02/20/09	02:10:59 PM	System	Yes		
Sepura	Emer...	Incoming	02/20/09	02:09:21 PM	Console 2	Yes		
Radio	Normal	Outgoing	02/20/09	02:08:58 PM	Console 2	No		
Sepura	Normal	Incoming	02/20/09	02:08:28 PM	Console 2	Yes		
Phone 1	Normal	Incoming	02/20/09	02:08:13 PM	Console 2	No		

5. The **HTML** browser is a powerful feature which allows access to additional operator services and third party information such as:

- AVL application and Geographic Information Systems (GIS)
 - Network files, e.g. procedures, directories and training
 - Video streams, e.g. door access or CCTV
 - Audio streams, e.g. voice logger
 - Web or HTML based services, e.g. HAZMAT, weather
 - MDC1200 ANI decode

All of the above can incorporate HTML dial tags to quickly dialing from the HTML page.

FLEXIBLE USER INTERFACE

Key to the DCS-5020's operational benefits is the flexibility of the GUI.

The Console Design tool allows the GUI to be designed to provide the required functionality and presentation format to meet the clients unique operational needs.

The GUI can be designed based on button, graphical and/or HTML presentation or a combination thereof. For example:



Thumb TABs allow multiple pages to be provided. More frequently used buttons/information can be placed on the main screen/front page while lesser used resources can be placed behind. This and other GUI design resources allow the DCS-5020 GUI to be customised to provide the most effective and efficient GUI possible.

Operator screens can be set up to support local language display such that functions, controls and UI messages may be displayed in the native language of the installation location.

APPLICATIONS

The combination of telephony, conventional radio, MPT, and Digital Radio supports a range of console applications.

Small Control Rooms

The DCS-5020 is an economic solution for small control rooms for public safety, oil and gas, mining, events, industry, ports and harbours. It brings many of the features of a large control centre into the smaller control room environment. The integrated radio and telephone functionality allows the operator to perform both call taking and dispatch functions. It can be employed as an incident control room without impacting on the role of the primary control centre.

Mobile Command Centre

Mobile command centres can be established for special events, accidents or other major incidents by deploying the DCS-5020 as a transportable package. The operator can have access to multiple radio working groups, conventional radio channels or telephone circuits to manage incident personnel. For truly transportable applications, the telephone ports may be fitted with GSM terminals for mobile telephony service. Digital radio connectivity is done through a number of fixed digital radios rather than direct to the infrastructure, providing a quick deployable solution.

Fallback Control Centres

The DCS-5020 has a specific application for digital radio operators to ensure basic communications are maintained in the event of failure of key elements of the infrastructure. Failures of the network controller, links to repeater sites, or the primary control room are addressed by the DCS-5020 fallback solution which maintains critical communications between control room and field personnel via wireless interfacing to the network. A wireless console is preferred in these situations where connection to the infrastructure is not suitable for application, too expensive or not possible due to the location of the control room.

Command and Control Centres

with Mixed Technologies - Patching

For operators migrating from conventional to digital radio, the DCS-5020 provides a bridge enabling operators to manage both networks from a single position. Additionally, the operator can set up an interconnection or "patch" between the two networks so field personnel on one network can speak directly with the other. The patch can also be set permanently using the maintenance terminal.

SPECIFICATIONS

PHYSICAL

Digital Switch:	45 mm (1.75") High (excluding 13 mm rubber feet)
	430 mm (17") Wide (excluding 19" rackmount brackets)
	240 mm (9.5") Deep (excluding cable exits)

ENVIRONMENTAL

Operating Temperature:	0 to 50 degrees C
Storage Temperature:	-10 to 60 degrees C
Humidity:	95% RH at 45 degrees C, non-condensing
Power:	85 to 260 Vac, 47 to 63 Hz. 96 VA max per device 12/24 VDC and 48VDC versions available

HOST PC REQUIREMENTS FOR INTEGRATOR DCS AND DCMS

Processor:	Intel Pentium® IV or equivalent x86-class CPU, 2GHz
Operating system:	Microsoft Windows XP Professional Service Pack 2 Microsoft Windows 7 Professional
Memory:	512 MB
Video:	1024 x 768 resolution with a 16-bit colour depth (65,536 colours)
Input Device:	Keyboard, 2-button mouse
CD Drive:	Required for installation
Network:	10/100 Ethernet Connection (TCP/IP network protocol must be enabled) Only required for application features that support network operations
.NET Framework:	Microsoft .NET Framework (included on installation media)
DirectX:	Microsoft DirectX 9.0c or later
PDF Reader:	Adobe Acrobat Reader 8.0 or better (included on installation media) required for accessing electronic documentation

NETWORK REQUIREMENTS

Device Payload:	1 Kbps idle, 104 Kbps active (136Kbps Ethernet) using G.711 per channel.
Network Loading:	< 40% (< 30% mission critical). Bandwidth Ratio of IP bearer should be 2 to 3 times actual payload to ensure optimum voice quality
Packet Loss:	< 0.1%
Packet Error:	< 0.01%
Packet Delay:	< 400 ms (< 40 ms mission critical)
Packet Jitter:	< 50 ms (< 20 ms mission critical)
Network Type:	Fully switched Ethernet, full-duplex, capable of passing unicast UDP. Sharing the network with other IP traffic may negatively impact voice quality and therefore should not be considered for mission-critical applications.



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See Zetron price list for option pricing.
Specifications subject to change without notice.
www.zetron.com

005-1343M May 2013



BARRETT
COMMUNICATIONS

2050 HF SSB transceiver



- **Software Defined Transceiver Core**
- **Advanced Digital Signal Processing (DSP)**
- **Lightweight and compact design**
- **Detachable front panel for remote extended control operation**
- **Secure Digital Voice options**

The Barrett 2050 HF transceiver, the centrepiece of the 2000 series of HF communications equipment, combines current technology with the intuitive "ease of use" that has become synonymous with Barrett Communications equipment. When teamed with other 2000 series products the versatile Barrett 2050 transceiver provides secure email, data and telephone connectivity within a HF network and onwards to both the international telephone network and the internet.



www.barrettcommunications.com.au





BARRETT
COMMUNICATIONS

New Software Defined Core

The new software defined core provides a much improved memory capacity and extends the life cycle and upgradability of the 2050. The software based architecture enables the user to maintain their radio transceiver equipment with the latest transceiver software releases taking advantage of the latest product enhancements and features as they become available.

Advanced calling features

The 2050 transceiver is fully interoperable with a number of advanced digital selective calling systems commonly used by many peacekeeping and non-government organisations. The 2050 transceiver provides for multi-standard four and six digit selective Call features, including; telephone interconnect, SMS text, GPS tracking, status calling, point to point and/or Multipoint Secure Call and remote transceiver disable capabilities.



Barrett 2050 HF transceiver front panel

Automatic Link Establishment (ALE) (optional)

The 2050 is available with full MIL-STD-188-141B 2G ALE (JITC certified) and FED-STD 1045 ALE. When selected, the 2050 offers full interoperability with all other military and commercial equipment complying with this standard plus enhanced telephone interconnectivity.

Detachable Front Panel

The 2050's Front control panel detaches from the transceiver unit enabling full remote and extended control operation up to 150m, allowing both convenient remote operation when deployed as a base station and trunk mount operation in a vehicle.



Barrett 2050 HF transceiver rear panel

Enhanced DSP noise reduction

The new digital signal processor (DSP) provides clear intelligible voice communications on analogue circuits through the digital removal of background noise and interference

The standard DSP noise reduction system provides outstanding voice quality by reducing radio frequency interference (RFI), and the effects of electrical interference by enhancing audio signals to provide easier listening.

Digital Voice

Barrett digital voice options provide the highest level of digital quality clear speech between similarly equipped transceiver equipment regardless of the prevailing HF conditions.

Secure Communications (optional)

The 2050 can be fitted with a variety of scrambling and digital encryption options for voice and data security.

Options include Barrett's unique Secure Call feature, an innovative narrow band voice scrambler providing secure Selcall initiated point to point or point to multipoint communications on both open and pre-encrypted voice channels, regardless of base level network encryption employed enabling secure point to point or multipoint communication within a secure network.

Secure voice and data operation is further assured with a variety of internal and external encryption options for both voice and data communications, from 128 bit keyed FTT voice scramblers to DES 56 and export controlled AES 256 digital encryption standards, all interoperable with Barrett's patented frequency hopping providing instant access with no late entry synchronisation delay

Additionally, the 2050's rear panel connectors provide an auxiliary interface for external OEM voice crypto devices enabling operators to maintain interoperability between multi-vendor sourced security solutions.

Advanced frequency hopping (optional)

The unique, easy to use frequency hopping option (subject to export controls) requires no central synchronisation station, has no entry or late entry time delay and requires no handshaking. Hopping rates of 5 or 25 hops per second, using a 10 digit hopping encryption key, and with a user selectable hopping bandwidth to suit a variety of antenna types.

The system provides excellent protection against electronic warfare (EW) attacks and can be operated for extended periods in theatre without synchronisation.

Internal data modems - Clover 2500 or STANAG 5066 stack (optional)



2050 HF SSB transceiver



Barrett 2050 HF transceiver with 2023 modem, 2022 Power supply and notebook PC running the Barrett 2020 Email fax and data system software

The 2050 can be fitted with either the field proven Clover 2500 or STANAG 5066 internal data modems supporting high speed secure data and email transmission, with effective data rates in excess of 14,400 bps.

Clover data modems are supplied with our advanced email and file transfer solution, which has been designed for HF operation. With full ALE control, voice call and typed text GUI proving short text messaging functions and on air live chat. Military standard data modem solutions are provided with Barrett's RC50 STANAG 5066 based communications suite providing for full ALE based automatic secure mail delivery.

All data modems are available as internal or external fit according to deployment requirements.

Integrated GPS interface

Barrett's GPS interface supports connection into any NMEA0183 external GPS receiver antenna for tracking applications. This interface provides emergency call features and position information on all deployed equivalently equipped HF assets.

Intuitive operation

Barrett's well known intuitive operator interface ensures the 2050 is very simple to operating. Principal key functions are performed using a large six key cluster on the advanced handset. The operator is guided by a large 128 x 64 LCD graphics display with adjustable backlighting ensuring the maintenance of night vision or high levels of luminescence in poor visibility. Network station addresses and telephone numbers are stored in easily accessible address and phone books and as little as two key strokes will initiate a call.

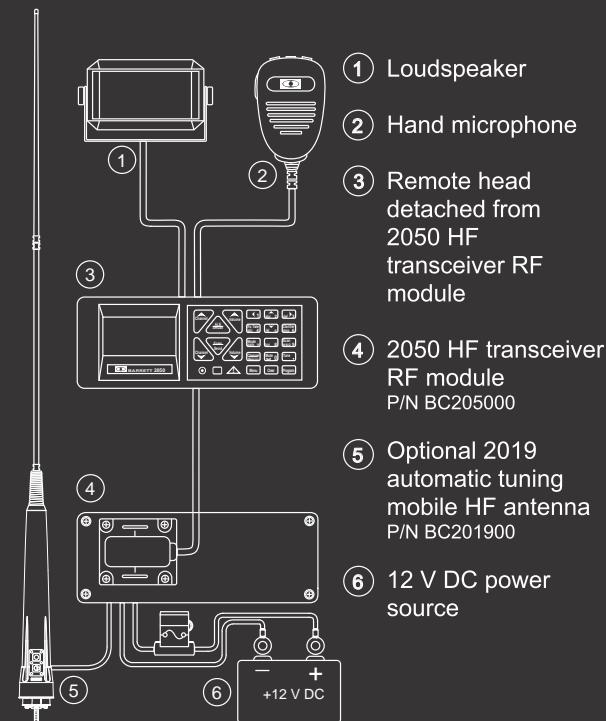
Second antenna connector

Allows each channel to select one of two antennas - ideal when long and short distance antennas are used.

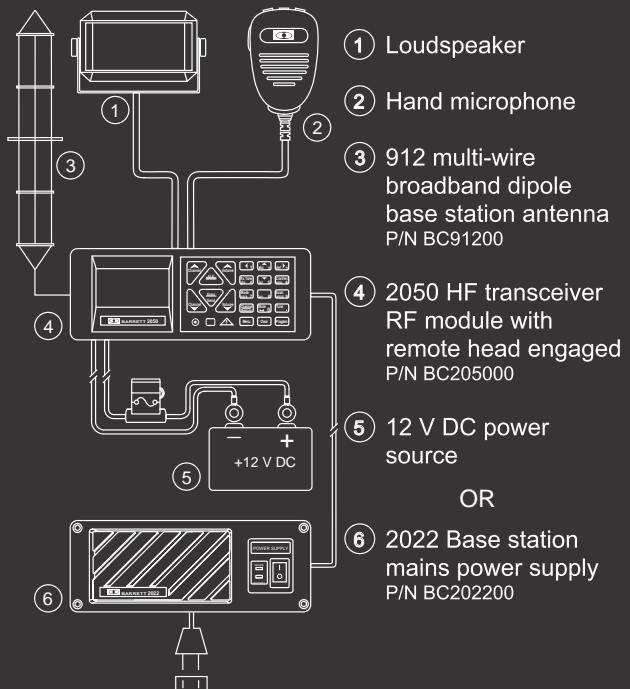
Lightweight and Compact Design

Using the latest lightweight alloys the 2050 weighs just 2.58kg. Its small physical size, one of the smallest on the market makes it easy to deploy anywhere as a base station or configure in a vehicle for mobile operation simplifying logistics of stocking the right transceiver for the right application. The 2050 meets MIL-STD 810G for drop, dust, temperature, shock and vibration.

Typical 2050 HF transceiver mobile configuration example



Typical 2050 HF transceiver base station configuration example





General specifications

Transmit frequency range	1.6 MHz to 30 MHz (continuous)
Channel capacity	Up to 500 programmable channels
Frequency stability	±0.5 ppm (±0.3 ppm optional)
Receive frequency range	250 kHz to 30 MHz (continuous)*
Frequency resolution	1 Hz tunable receiver
Operating modes	J3E (USB, LSB) - H2B (AM) - J2A (CW) J2B (AFSK) Optional J2B (AFSK) with narrow filter
Operating temperature	-30°C to +70°C humidity 95% relative, non condensing
Frequency hopping	25 or 5 hops per second
Supply voltage	2050 -13.8 V DC (negative ground) polarity protected. Over voltage protected
Selcall system	Based on CCIR 493-4, four and six digit systems
Current consumption	470 mA standby (muted, back lighting off) Voice average less than 9 Amps typical Two tone less than 12 Amps typical
Sensitivity	-120 dBm (0.224 uV) for 10 dB SINAD - J3E Mode
RF output power	125 W PEP voice ±1.5 dB or 30 W PEP voice ±1.5 dB or 10 W PEP voice ±1.5 dB 100% two tone input signal with fan option
Duty cycle	RS232 FCC approved – Part 90 Exceeds/complies with Australian/New Zealand standard AS/NZS 4770:2000 and AS/NZS 4582:1999 EMC and vibration standard IEC 945 Complies with MIL-STD 810G for drop, dust, temperature, shock and vibration NTIA Approved
Programming Standards	

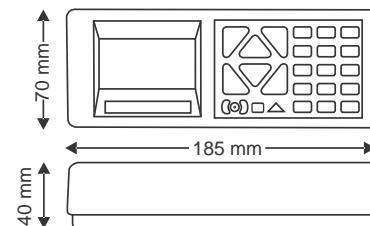
**(reduced sensitivity 250 kHz to 500 kHz)*

Specifications are typical. Equipment descriptions and specifications are subject to change without notice or obligation.

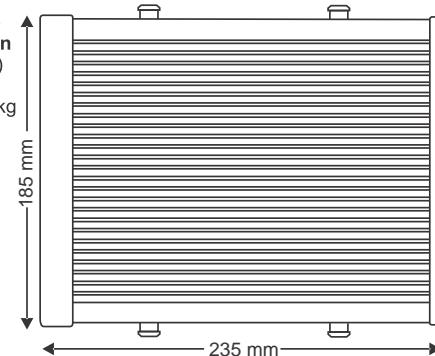
Summary of features and options

- Software Defined Core
- Advanced calling features
- Detachable Front Panel
- Enhanced DSP noise reduction
- Automatic Link Establishment (ALE) MIL STD 188-141B
- Internal High Speed Data modems options
- Secure Digital Voice, Data Encryption and scrambling options
- Advanced frequency hopping (optional)
- Lightweight and Compact Design
- BITE - Built-in Test Equipment
- Second antenna connector
- Direct dial telephone calls via the Barrett 2060 Automatic telephone Interconnect
- "SMS Pagecall" short text messaging
- 1.6 to 30 MHz continuous
- Intuitive and user-friendly interface
- 3 year warranty (Standard)
- Independent of all other communications' networks
- Free to air - no call costs

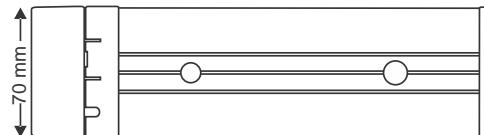
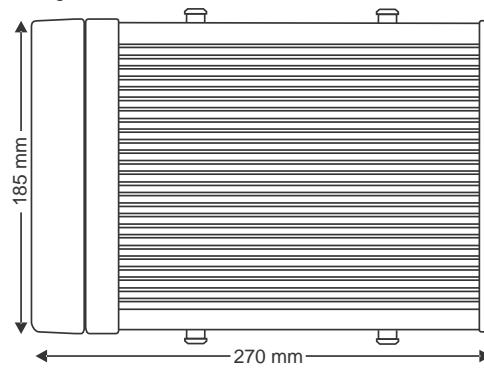
2050 remote control head
(trunk mount configuration)
Weight 0.22 kg



2050 remote configuration
(trunk mount)
main unit
Weight 2.36 kg



2050 local control configuration
Weight 2.58 kg



BCB205001/27



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SWE-DISH DA150K Compact Drive-Away



A high performing, easy to use and rugged satellite system.

The Rockwell Collins SWE-DISH DA150K Compact Drive-Away is a small size antenna only concept for vehicle mounted antenna systems. The standard antenna pod had been made shorter by replacing the fairing with a hard protective cover to protect the antenna base. The shorter pod enables the DA150K Compact Drive-Away to be mounted on any vehicle. Fitting to the rooftop is easy thanks to a supporting frame that distributes the load of the antenna.

High performing antenna

The key component of the DA150K Drive-Away satellite antenna is the high performing elliptical 1.5m Gregorian offset antenna. Thanks to the Gregorian offset design the antenna has an unprecedented antenna efficiency of >80%. The dual optics and accurate carbon fiber reflector surface provide exceptional low side lobes and good cross-polar performance. The antenna mount is a large diameter turntable, totally backlash free in both elevation and azimuth.

Straightforward integration

The rooftop integration capabilities are unsurpassed. You can have anything from a 20 W SSPA giving 56 dBW, to the high power configuration 200 W or 400 W TWTA's - beaming up to 66 dBW and 69 dBW EIRP towards the bird.

Ease of use and quick deployment

Operation is extremely easy if the GPS/compass option is fitted. Using the SWE-DISH ACU3000, the operator simply chooses the satellite and the antenna automatically aligns. Typically within

10 minutes you are on the air, ready to transmit back to base. The proven Easy Control & Monitoring (ECM025) unit, step by step, helps the not-so-well-trained operator to configure and set up the system during line up towards the satellite.

Rugged design

During transportation the DA150K Compact Drive-Away has a low profile, giving low drag and good appearance. The fully encapsulated pod protects the antenna mechanism including feed arm and RF components, and reduces wear and tear from brushes or dust during transportation. At the same time all parts are easily accessible for repair. This improves the antenna reliability and durability. The DA150K Compact Drive-Away is a high performing, easy to use and rugged satellite system.

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KEY FEATURES

- Low drag and nonconspicuous – low profile
- Small and compact – aluminum frame distributes the weight, fits any vehicle
- Rugged – all equipment is totally encapsulated during transportation
- High EIRP supports simultaneous HD and SD, IP streaming or DVB-S2, contribution channels
- Wide choice of configurations – automatic alignment with GPS, step tracking, single thread, redundant, phase combined, integrated aircon system
- Gregorian offset – high performance antenna, giving >80% efficiency gain
- FCC compliant, Intelsat/Eutelsat compliant, station approvals

SPECIFICATIONS

Antenna performance

Antenna model	SWE-DISH 150K EDD
Antenna concept	Gregorian type dual optics antenna. Elliptical main reflector in carbon fiber with size 1.5 x 1.35m (59.1 x 53.1 in) folding feed arm and sub reflector
Side lobe performance	29-25 Log Ø dBi
Polarization	Linear orthogonal, <1° accuracy
Polarization performance	XPD >35 dB

Transmit performance

Transmit frequency	13.75 to 14.50 GHz
Transmit gain at mid-band	45.0 dBi

Receive performance

Receive frequency	10.70 to 12.75 GHz
Receive gain	43.2 dBi
G/T	23 dB/K at 20° elevation and 20°C (68°F), clear sky

EIRP capability

DSNG EIRP capability	69 dBW with 400 W TWTA
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Antenna control unit ACU3000 capabilities

Lowest level of operation	Automatic stow and deploy movements. Two speed manual jog in azimuth, elevation and polarization with position readouts.
Next level of operation	Select preset locations (Lat/Long), enter vehicle heading, select "Locate" for automatic antenna pointing – without GPS or fluxgate compass
Fluxgate compass	Select preset locations (Lat/Long), vehicle heading is given by fluxgate compass option
Normal level of operation	GPS and fluxgate compass options are included, allowing automatic antenna pointing towards selected satellite

General characteristics – Antenna travel range

Azimuth range	+/- 180°
Azimuth drive	Worm-gear driven turntable
Resolution:	0.05°
Fast mode:	2.0°/s
Slow mode:	0.3°
Elevation range	0° to 90°
Elevation drive	Harmonic drive gear
	Resolution: 0.05°

Deployment and stow

Antenna sensors

Fast mode: 2.0°/s

Slow mode: 0.3°/s

Automatic, by command from Antenna Control Unit ACU3000 True elevation inclinometer in elevation, multi-turn sensor in azimuth. Antenna position displayed on ACU.

Environmental specification

Ambient temperature	Operational: -20°C to +55°C (-4°F to +131°F) Storage: -30°C to +70°C (-22°F to +158°F)
Solar radiation	Operational up to 1,200 W/m²
Wind speed	Operational up to 15 m/s (33 mph) Survival stowed up to 150 km/h (93 mph)
Rainfall	Maximum 100 mm/h (4 in/h), excluding link budget effects
Operating humidity	Up to 100% condensing
Sealing	All parts/units are sealed to IP65
Altitude	Operational: up to 3,000 m (9,850 ft) Survival: up to 10,000 m (32,800 ft)

Mechanical

Finish, paint system	Pod in glass-fiber reinforced polyester
Interface to vehicle	The DA150K Drive-Away sub-frame can be permanently or temporarily attached to standard vehicle roof rails or directly to vehicle roof
Weight	110 kg (242.5 lbs)
Dimensions	196.4 x 154.2 x 45.1 cm (77.3 x 60.7 x 17.8 in)

Approvals

- Eutelsat/Intelsat compliant, station approvals
- FCC compliant

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

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Rockwell Collins delivers smart communication and aviation electronic solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

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REL2900PRO

SKVA - 30KVA (3:3)

PF 0.9 /PF 1

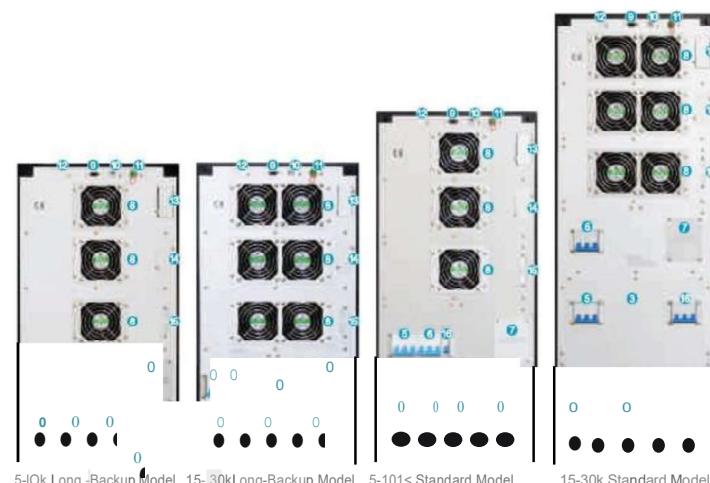


Features

- DSP digital control technology
- Active power factor correction (APFC), input power factor up to 0.99
- Output power factor 0.9
- Cold start
- Dual input
- Wide input voltage range (190V - 485V)
- Auto sensing frequency
- 50 / 60Hz frequency conversion mode
- Work efficiency up to 98% in ECO mode
- Auto control fan speed when loads varies
- Auto power ON/OFF according to the load capacity set by users
- Flexible battery configuration for using 14/16/18/20 pcs batteries
- Compact internal layout, miniaturized the complete unit for small footprint
- LCD+LED display, multi-functional keys operation, friendly human-machine interface
- Powerful background software for parameters configuration and online updating
- Doubling the battery charging speed, 90% capacity restored in 4 hours (standard model UPS)
- Linear derating in low voltage input, reducing battery discharging times, extending the service life of battery
- Advanced battery management (ABM), automatic floating / equalizing charge control, charger dormancy control
- Configurable switching time from battery mode to mains mode when mains power is restored, reducing the impact on power grid or generator
- Effective software and hardware protection function, powerful self-diagnostic function, abundant historical records
- Standard emergency power off (EPO)
- Standard maintenance bypass
- Standard RS232/USB communication port
- Optional RS485 / SNMP / AS400 communication port and SMS alarms
- Optional N+X redundancy parallel up to 6 units
- Optional battery temperature compensation EMD environmental sensors

Rear Panel

1. Mains Input
2. DC Input
3. Bypass Input
4. Output
5. Mains Input Breaker
6. Bypass Input Breaker
7. Maintenance Bypass
8. Fan
9. RS232
10. USB
11. EPO
12. Battery Temperature Compensation (Optional)
13. Intelligent Slot 1 (SNMP / AS400 / AS485 Optional)
14. Intelligent Slot 2 (SNMP / AS400 / RS485 Optional)
15. Parallel Card (optional)
16. Battery Breaker



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