PRODUCT DATASHEET

Ex ia IIC T5 Ga ITS02ATEX2036 **BA488C**

Dual-band ATEX Crane Radio System

Ch **VHF** **UHF** Ch
Vol Ch **8** Ch **P4** Vol
DUTY

VHF / UHF RADIO TX SELECT

Inf TRANSMITTING Set
VHF-8

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HEADSET / GOOSENECK MIC. SELECT

RADIO PTT
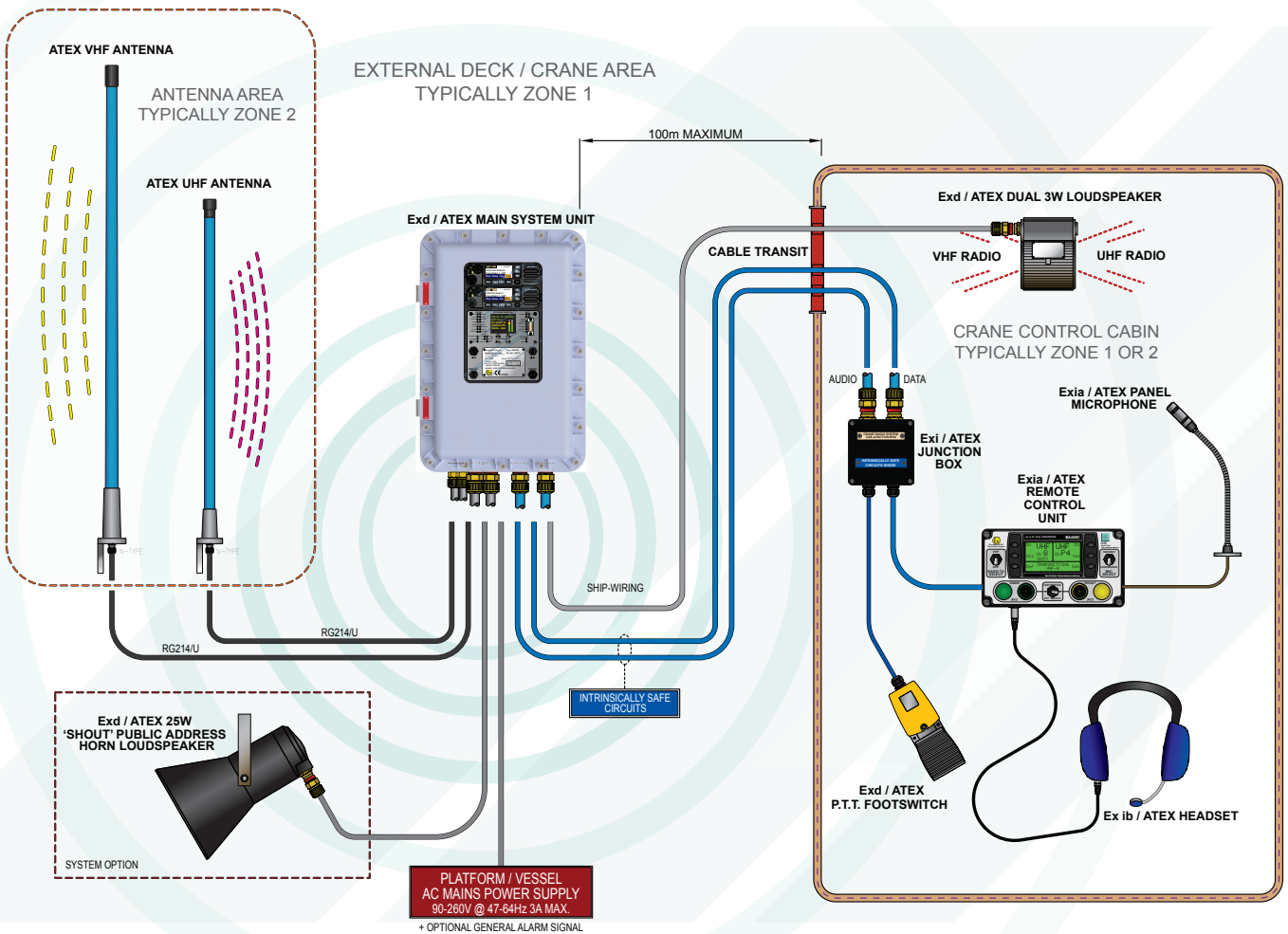
FOOTSWITCH PTT SELECT

'SHOUT' PTT

Dual-band ATEX / Ex Crane Radio System

A fully certified digital two-way marine radio system covering VHF and UHF bands for installation in hazardous areas where Safety is a priority and space is at a premium.

ATEX / Ex Dual-band Crane Radio System

For over 20 years NET are experts in manufacturing Ex Dual-band Crane Radio Systems, providing best in class reliability and safety to support offshore operations.

This latest generation is a fully certified radio solution from an ISO9001 accredited supplier offering unrivalled support and service throughout the product life-cycle. Designed specifically for offshore cranes located in hazardous areas up to Zone 1 to provide crystal clear communications, ATEX safety compliance, ergonomics and ease of use.

ATEX VHF ANTENNA

ANTENNA AREA TYPICALLY ZONE 2

EXTERNAL DECK / CRANE AREA TYPICALLY ZONE 1

ATEX UHF ANTENNA

100m MAXIMUM

Exd / ATEX MAIN SYSTEM UNIT

Exd / ATEX DUAL 3W LOUDSPEAKER

CABLE TRANSIT

VHF RADIO   UHF RADIO

CRANE CONTROL CABIN TYPICALLY ZONE 1 OR 2

AUDIO   DATA

Exia / ATEX PANEL MICROPHONE

Exi / ATEX JUNCTION BOX

Exia / ATEX REMOTE CONTROL UNIT

SHIP-WIRING

RG214/U

RG214/U

INTRINSICALLY SAFE CIRCUITS

Exd / ATEX 25W 'SHOUT' PUBLIC ADDRESS HORN LOUDSPEAKER

Exd / ATEX P.T.T. FOOTSWITCH

Ex ib / ATEX HEADSET

SYSTEM OPTION

PLATFORM / VESSEL AC MAINS POWER SUPPLY 90-260V @ 47-64Hz 3A MAX.

+ OPTIONAL GENERAL ALARM SIGNAL

- Compact cab Remote Control Unit

- Integrated hands-free 25W 'Shout' PA system

- Certified turnkey system with installation specific documentation

- VHF + UHF radios, system controller and antennas outside the cab

- Latest Motorola radios and enhanced audio processing for user comfort

- Designed for ease of installation. Supported 24/7/365 by the manufacturer

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North East Telecommunications Ltd

Contact

133 & 133A Victoria Street, Dyce, Aberdeen, AB21 7BJ
T : 01224 775717 (24 hours) **E :** info@netltd.co.uk

netltd.co.uk

Trusted Partner

North East Telecommunications has been supplying marine two-way radio systems to the offshore industry for over 25 years with thousands of radio systems in constant operation worldwide in a variety of safe and hazardous area applications.

As a Motorola Platinum Partner and the second largest reseller of ATEX Motorola radio equipment in the UK, NET has access to the latest technologies and support networks from Motorola and can supply, install and maintain systems from individual radios to the latest complex turnkey digital infrastructures.

NET have been manufacturing and supplying similar ATEX / Ex crane radio systems for over 20 years, with this latest product building on a proven pedigree and experience to offer Customers the latest digital technologies to enhance operations and safety.

EXD MAIN SYSTEM UNIT – ALL CONNECTIONS ON THE BASE

Benefits

TO THE OWNER:

- Integrates with latest digital radio systems being deployed offshore with the latest safety features.
- Integrates with latest digital radio systems being deployed offshore.
- Assured and trusted supply partner with unrivalled support and service pedigree.
- Providing best in class reliability and safety to support critical offshore lifting operations.
- Knowledge that operators are provided with best ergonomics and comfort.
- Comprehensive documentation, system certification and drawing package – including turnkey installation specific drawing set.
- Online user competency training and familiarisation provided – with accessible user training record / certificate.
- Comprehensive Warranty included.

TO THE USER:

- Easy to use.
- Reduces stress through low-noise clear audio performance.
- Full adjustability of listening volumes from all sources, managed dynamically.
- Adjustable 'ambient' sound included in headset audio for local awareness / monitoring.
- Quick selection of which radio has transmit 'duty' (VHF / UHF).
- Quick selection of configurable 'Home' and Emergency channels for simplified use.
- Selectable footswitch for hands-free radio / P.A. control during critical operations.
- User 'Profile' can be saved and recalled for each operator to reduce setup time and complexity at the beginning of shift.
- Simple on-line video-based competency training / familiarisation provided.

TO THE TECHNICAL TEAM:

- Ease of installation and integration within existing infrastructure.
- Pre-installation survey available. Approved survey and installation procedures supplied.
- Comprehensive and fully controlled documentation package with Customer / site specific installation drawings, procedures and information.
- System uses the latest digital technology with full diagnostics and monitoring.
- Advanced warning of any system issues presented at operator Remote Control Unit and at external Main System Unit.
- Access to system configuration, status monitoring, event history and diagnostics without the need to open Main System Unit Exd enclosure.
- Configurability to match existing infrastructure and equipment, supporting future upgrades.
- Wireless local access to system with comprehensive diagnostic software running on ATEX tablet.
- 24/7/365 onshore support available.

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Ch10 Control Room
Crane Radio 1 - VHF
Chan Setup Info Emrg

Ch8 Inter-Vessel 1
Crane Radio 2 - UHF
Chan Setup Info Emrg

STATUS   SYSTEM INFORMATION   WI-FI
VHF Ch. 10 - TX active
UHF Ch. 8
Rx volume 14
Sidetone 35%
Alarms - clear

Dual-Band Crane   Type: CR3301
Radio Master Unit   Ser. No.: 00417
North East Telecommunications Ltd

II 2 GD   Tamb -40°C to +40°C
Ex d IIC T4 Gb
Ex t IIIC T125°C Db IP66   90-260V AC
CESI A01 ATEX 06   48-63Hz 1.5A
WARNING : DO NOT OPEN WHEN ENERGISED

CANCEL   ENTER

Ex CE 0722

System Description

A certified digital two-way marine radio system covering VHF and UHF bands for installation on cranes located in hazardous areas and where space in the control cab is at a premium.

The latest technology is used in the optimised design for critical communications between crane operators and deck personnel or vessel crew attending the installation. The system provides a fully certified ATEX / IECEx solution allowing use with cranes located in hazardous areas up to Zone 1 gas group IIB + H2.

The crane operator has a compact Zone 1 rated Remote Control Unit (RCU) within easy reach and view to make system adjustments such as selecting between VHF or UHF radio for transmit, adjusting radio channels and setting speaker or headset volume. Several different mounting bracket types are available to ensure optimal placement of this unit.

A dual loudspeaker and gooseneck panel microphone can be used instead of the ATEX headset, depending on operator preference and environmental conditions such as ambient noise levels.

The system includes a 2-channel 25W 'Shout' public address system allowing the crane operator to make announcements immediately to deck personnel – particularly important during critical lifting operations where the operator may have better view of the deck area and can warn others at risk.

Hands-free operation of the transmit function is provided by a footswitch and/or connection to an existing crane control joystick button.

Up to 15 dedicated channels can be programmed into each radio, selectable by the crane operator with quick access to a 'home' or 'calling' channel. Radio channels can be either analogue or digital to integrate with any infrastructure and provide the facility for both analogue and digital private line calling schemes (TPL or DPL).

The system can integrate with a General Alarm or Shutdown Alarm to either limit transmit power or prevent all radio transmissions in the event of a critical situation. This safety feature can allow higher transmit power use in normal conditions.
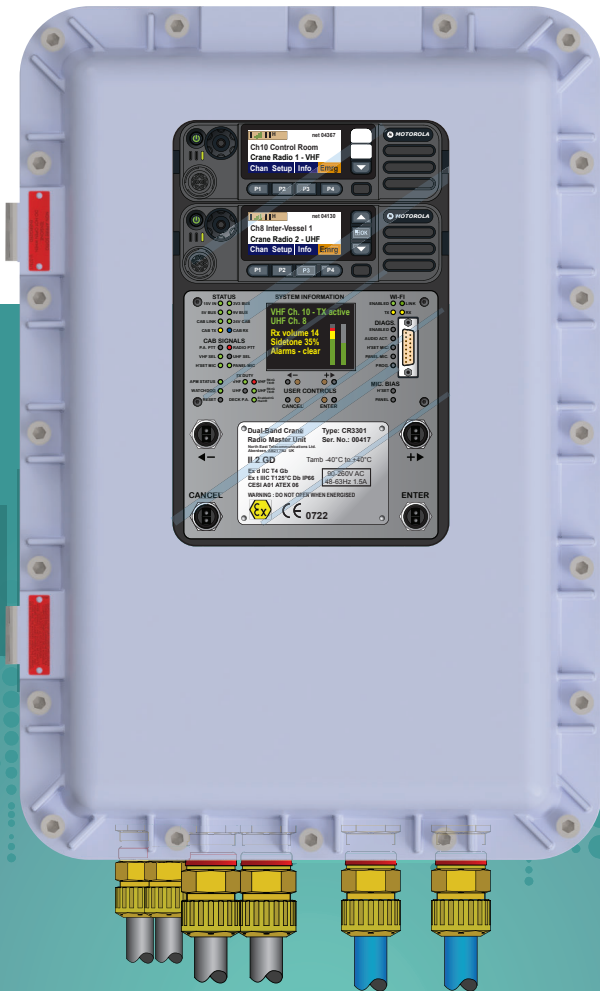
Applications

- Offshore cranes located in hazardous areas.

- Space constrained crane control cabs.

- Upgrade of existing systems to higher performance, safer equipment.

- Digitalisation of legacy analogue installations.

- Offshore production platforms, drilling rigs, FPSOs & Well Intervention vessels.

- Zone 1 drilling control rooms.

System Description cont.

An important safety feature incorporated into the system is continuous monitoring of radio transmit power. ATEX regulations specify the maximum radiated power allowed for different gas groups, but this is normally never checked or monitored meaning that a system fault could cause dangerous transmit power levels presenting a serious risk to safety. The NET system has an independent 'safety processor' that monitors transmit power levels continuously and ensures safe operations.

The Main System Unit (MSU) is based on an Exd ATEX enclosure which is located outside the crane cab in a suitable position. This unit houses the two radio transceivers which are the latest generation of Motorola DM4601e transceivers, programmable for analogue or digital operation and with output power levels from 1W to 25W.

The MSU enclosure also houses the System Controller which manages the radios and the crane cab Remote Control Unit. This is a state of the art design using advanced digital signal processing techniques to provide highest quality audio signals that ensure crystal clear communications. The audio levels are dynamically adjusted and controlled with dedicated settings configurable for up to 6 different users. This allows each crane operator to set and save their own preferences for recall at the start of their shift.

A window in the MSU front cover allows technicians to monitor the system status and make configuration changes without disturbing crane operations. A Wi-Fi link also allows the technician to perform full configuration and diagnostics using a suitably certified ATEX tablet without the need to open the Exd enclosure.

Two separate ATEX certified antennas are used, each with its own lightning surge arrestor inside the MSU. Antennas are mounted in a suitable position on the crane to give optimised coverage of the deck areas and approaching vessels.

A single AC mains power supply is required and this can be connected from the crane power distribution panel or other suitable source.
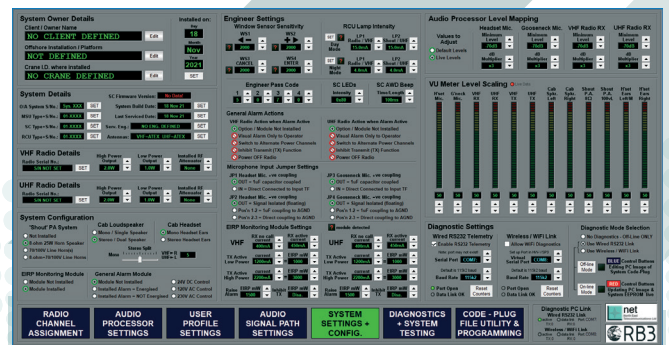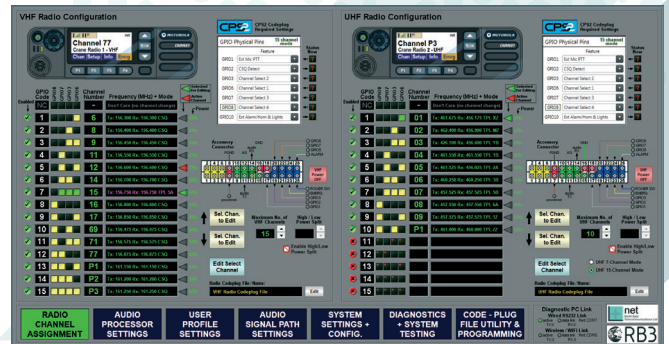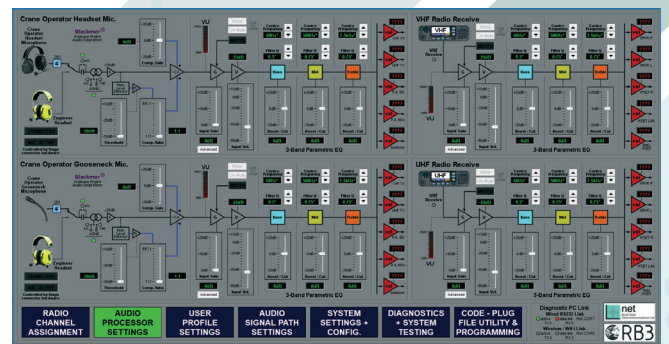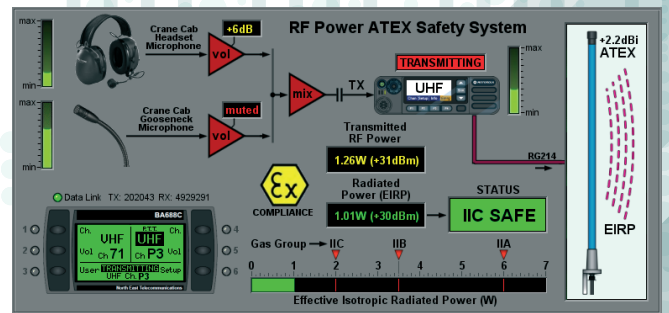
Specifications *(Specifications subject to change without notification)*

Hazardous Area Certification (complete system):

ATEX / IECEx Zone:	Zone 1, Equipment Category 2
Gas Group:	IIB + H2 (optional IIC)
Temperature Class:	T4 (-20°C < Ta < +55°C)

Power Requirements:

Power supply input:	Single-phase AC 90-260V @ 47-63Hz 100W max.
Supply Current:	Typical 0.5A, 1.1A @ 90V max. Inrush 4A max.

Radio Transceivers:

VHF Operating Frequency Range:	136-174 MHz
UHF Operating Frequency Range:	403-470 MHz
Programmable Channels per band:	15
Power level groups per band:	2
Transmit power adjustment range:	1W to 25W in 0.1W increments
Channel Spacing:	12.5kHz / 25kHz
CTCSS Signalling:	Analogue TPL, 50 standard EIA/TIA tones
	Digital DPL, 83 standard TIA codes

Audio Systems:

Operator Selected Mic. Inputs:	ATEX Headset boom microphone or
	ATEX dynamic gooseneck microphone
Cab Loudspeaker:	2-channel 3W each, configurable VHF/UHF
Audio Processing:	4-channel, 3-band EQ, microphone compressor
	Dynamic level controls & mixing, settings saved
Headphones:	Mono or Stereo channels

'Shout' Public Address (PA) System:

Rated power output:	2 x 25W channels, adjustable level
Operating Mode / Voltage:	Channel 1 - 70/100V line, Channel 2 - 8 ohm

Weights & Dimensions:

Main system Unit (MSU):	H 567mm, W 388mm, D 298mm (excluding glands)
	Installed weight 45kg
Remote Control Unit (RCU):	H 120mm, W 220mm, D 110mm (excluding bracket)
	Installed weight 2kg
Crane Cab Junction Box:	H 160mm, W 160mm, D 90mm
	Installed weight 2kg

Environmental Specification:

Main system Unit (MSU):	IP66 protection
	ambient temperature -20°C to +55°C
Remote Control Unit (RCU):	IP66 (headset connected)
	ambient temperature -20°C to +60°C

ISO 9001 CERTIFIED
UKAS MANAGEMENT SYSTEMS 8289
British Assessment Bureau

Achilles
FPAL
Member
10044591

MOTOROLA SOLUTIONS
PLATINUM CHANNEL PARTNER
Professional and Commercial Radio

CORE SYSTEM DELIVERABLES:

- Dual-band CRS Main System Unit (MSU)
- Crane Cab Remote Control Unit (RCU) & mounting bracket
- Crane Cab Junction Box
- ATEX VHF Marine Antenna & mounting bracket
- ATEX UHF Marine Antenna & mounting bracket
- ATEX wired headset with boom microphone
- ATEX gooseneck microphone & mounting bracket
- ATEX Press to Talk Footswitch
- ATEX Dual-channel 3W Loudspeaker
- Documentation Package

OPTIONAL / CONFIGURED SYSTEM COMPONENTS:

- 'Shout' Public Address horn loudspeaker (70/100V line or 8-ohm)
- General Alarm signal interface module
- RCU mounting brackets / system options
- GRP weather protection enclosure for MSU
- ATEX certified diagnostic tablet PC

INSTALLATION MATERIALS:

- Shipwiring fixed installation cables
- ATEX Barrier cable glands for MSU entries
- Cable supports, transits & identification labels
- Installation specific equipment mounting brackets / fixtures

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