

AN/ARC-210 RT-2036 ANCILLARY EQUIPMENT

• Improve performance and increase versatility



Collins Aerospace

ENHANCED AN/ARC-210 RT-2036 CAPABILITIES

Experience the improved performance and increased versatility of Collins Aerospace ancillary equipment for our AN/ARC-210 RT-2036 integrated communication system.

The AN/ARC-210 receiver-transmitter (RT) is the nucleus of AN/ARC-210. It provides multimode voice and data communications in normal, secure or jam-resistant modes via line-of-sight (LOS) or satellite communication (SATCOM) links. AN/ARC-210 RT is available in several models and may be coupled with a full complement of ancillary equipment.



AN/ARC-210 REMOTE CONTROL UNITS



C-12719A/ARC

Half-size remote control unit



C-12561B/ARC

Full-size remote control unit

CONTROLLABLE RTS

- RT-1939(C), RT-1990(C), RT-1939A(C), RT-1990A(C) and RT-2036(C)

DISPLAY

- 40 x 80 pixel, green NVG display (half-size)
- 128 x 64 pixel green NVG display (full-size)
- 5 V ac or dc, 28 V ac or dc, 115 V ac panel lighting

FEATURES

- Initiated Built-in Test (IBIT)
 - RCU, RT, HPA, LNA and active antenna system
- Continuous Built-in Test (CBIT)
 - RCU, RT, HPA, active antenna and RT's internal batteries
- Field programmable over Ethernet interface

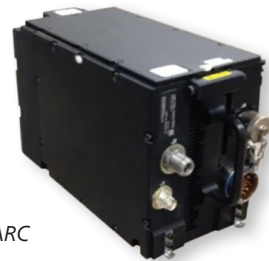
PRESET FUNCTIONS

- Change preset
- Channels
 - 25 Line of sight (LOS) Simplex
 - 25 Electronic counter-countermeasure (ECCM) [any combination of Have Quick (HQ) Second Generation Anti-Jam Tactical UHF Radio for NATO (SATURN) or Single Channel Ground and Airborne Radio System (SINCGARS)]
 - 5 half-duplex (dual frequency)
 - 1 scan (scans 4 preset channels)
 - 10 Legacy SATCOM (dedicated/DAMA/IW)
 - 1 Subnet relay (SNR) channel for Command Activated Sonobuoy System (CASS)/Directional Command Activated Sonobuoy System (DICASS) compatibility for Anti Submarine Warfare (ASW) applications
 - 3 Link 11
 - 10 MUOS SATCOM
 - 57 Maritime (international)
 - 1 SINCGARS cue
 - 1 SINCGARS cold start
 - 1 SATURN hailing

CONTROL FUNCTIONS

- LOS single channel (MAN or PRST)
 - 30-400 MHz
 - AM/FM
 - Tunable in 5 kHz steps
- Civil land mobile modes (MAN or PRST)
 - 400-941 MHz
 - 12.5 and 25 kHz channel spacing
 - Tunable in 1.25 kHz steps
 - CTCSS tone selection
 - CDCSS code selection
- Air traffic control (ATC) modes
 - 118-137 MHz
 - 8.33 and 25 kHz channel spacing
- Maritime (MAR) mode
 - Ship and shore (coast) selection
- SINCGARS
 - Wristwatch time set
 - Electronic remote fill (ERF)
- Have Quick
 - Manual fill of WOD/MWOD/FMT
 - Over the air (OTA) time of day (TOD) updates (send and receive)
- Guard frequency selection (GRD)
 - 121.5 (civil)
 - 243 (military)
- TOD updates
 - Emergency time start
 - Send and receive OTA
 - Manual (wristwatch)
- Zeroize (ZERO)
- Automatic direction finding (ADF)
- Squelch enable/disable

AN/ARC-210 SATCOM ANCILLARY EQUIPMENT



AM-7642/ARC

High power amplifier (HPA)

MODES OF OPERATION

- AM/ASK/FM/FSK
- Legacy UHF SATCOM
- MUOS
- Have Quick
- SATURN

FREQUENCY RANGE (TRANSMIT)

- 225-400 MHz (UHF and Legacy SATCOM)
- 280-320 MHz (MUOS SATCOM)

FREQUENCY RANGE (RECEIVE)

- 30-512 MHz

FEATURES

- Same footprint and functional replacement for AM-7526/ARC or AM-7526A/ARC
- Certified to MIL-STD-188-181B/181C/182A/183A/183B by JITC
- Serial control interface (RS-485)
- System BIT output
- Bypass mode
- Internal cooling fan for continuous transmit duty cycle up to 55° C

SPECIFICATIONS

- Size: 6.50" H, 5.00" W, 10.00" D
- Weight: 15 lbs. maximum
- Power consumption: 700 watts maximum @ + 28 VDC
- RF output power: 40 watts AM minimum, 90 watts FM minimum, 125 watts Legacy SATCOM minimum, 50 watts MUOS average
- Qualification: MIL-STD-461F, MIL-STD-810F, MIL-STD-704F
- Operating temperature range: - 40° C to 71° C



MX-12366/ARC

Low-noise amplifier/triplexer (LNA/T)

MODES OF OPERATION

- Legacy UHF SATCOM (diplexer function)
- MUOS (triplexer function)
- Built-in test for receive path testing

LEGACY SATCOM FEATURES AND SPECIFICATIONS

- Receiver preamplifier/bandpass filter
 - Frequency range: 243-270 MHz
 - Gain: 23.5 dB minimum
 - VSWR: <1.68:1
- Transmitter high pass filter
 - 291 MHz
- Certified to MIL-STD-188-181B/181C/182A/183A/183B by JITC
- Same footprint and functional replacement for MX-11641/ARC and MX-11745/ARC

MUOS FEATURES AND SPECIFICATIONS

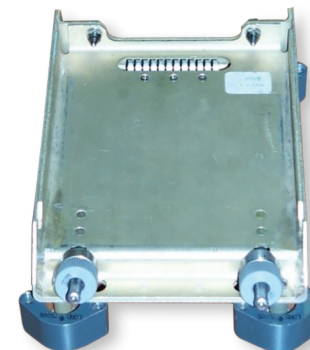
- Receive performance
 - Gain: 30 dB minimum
 - VSWR: <1.8:1
- Frequency range
 - Receive: 243-270 MHz (legacy SATCOM)
340-380 MHz (MUOS SATCOM)
 - Transmit: 280-320 MHz (legacy and MUOS SATCOM)
- Full-duplex operation

ADDITIONAL SPECIFICATIONS

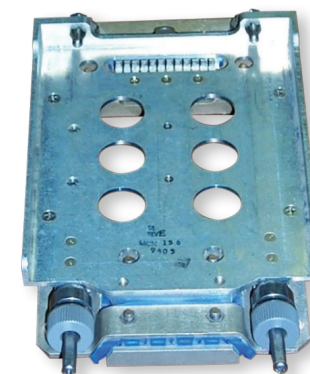
- Size: 3.15" H, 5.55" W, 7.38" D
- Weight: 3.75 lbs.
- Power consumption: 580 mA @ +28 VDC
- Qualification: MIL-STD-461F, MIL-STD-810F, MIL-STD-704F
- Operating temperature range: - 40° C to 71° C
- Insertion loss: 1.2 dB maximum
- Transmit VSWR: <1.63:1

AN/ARC-210 MOUNTS

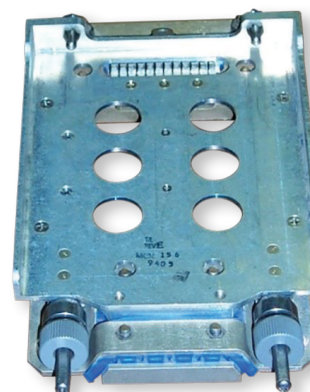
RT mounts



MT-4935 isolated mount

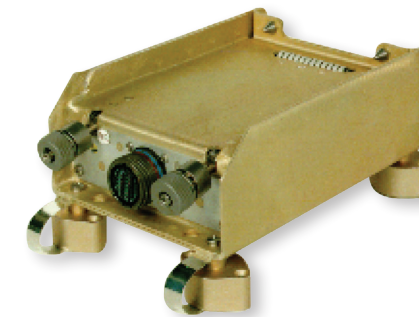


MT-6567 low-profile mount



994M-16 low-profile mount

Link 11 "smart mount"



994M-4A
isolated mount

- MIL-STD-188-203-1A compatible interface
- Link 11 mode configured from a single selection point (preset selection)
- Baseband audio may be shared with other equipment
- Operating temperature range of - 54° C to 71° C
- + 28 VDC power per MIL-STD-704D

HPA mount



MT-7006 HPA solid mount

AN/ARC-210 REPROGRAMMING & CONTROL

RRS-200 reprogramming kit



- Ruggedized travel case
- Provides a hardware and software interface to load and verify Operational Flight Program (OFP) software into the following LRUs:
 - Legacy receiver/transmitters (RT-1794(C), RT-1824(C), RT-1851(C), and RT-1851A(C))
 - Generation 5 receiver/transmitters (RT-1939(C), RT-1939A(C), RT-1990(C), and RT-1990A(C))
 - RT-2036(C) (generation 6 receiver/transmitter)
 - C-12561B
 - C-12719A
 - C-12561A
- Software application (included in kit) provides MIL-STD-1553 loading functionality for the following LRUs:
 - RT-1794(C)
 - RT-1824(C)
 - RT-1851(C)
 - RT-1851A(C)
 - RT-1939(C)
 - RT-1990(C)
 - RT-1990A(C)
 - RT-1939A(C)
- Software application provides Ethernet loading functionality for the following LRUs:
 - RT-2036(C)
 - C-12561B
 - C-12719A
- CSS Loading for RT-1939A(C), RT-1990A(C), and RT-2036(C)
- C-12561A loaded through serial interface hardware included in kit (must use software application included with C-12561A OFP disk)

Receiver-transmitter tool suite (RTTS) software

- Java® based software application that allows the user to control up to four ARC-210 receiver-transmitters over the MIL-STD-1553B bus or using SNMP
- Includes a CD-ROM with one software license, user's guide and installation instructions
- Requires Ballard Technology USB 1553 interface card (same one used in the RRS-200 reprogramming kit, can also be ordered separately from Astronics)

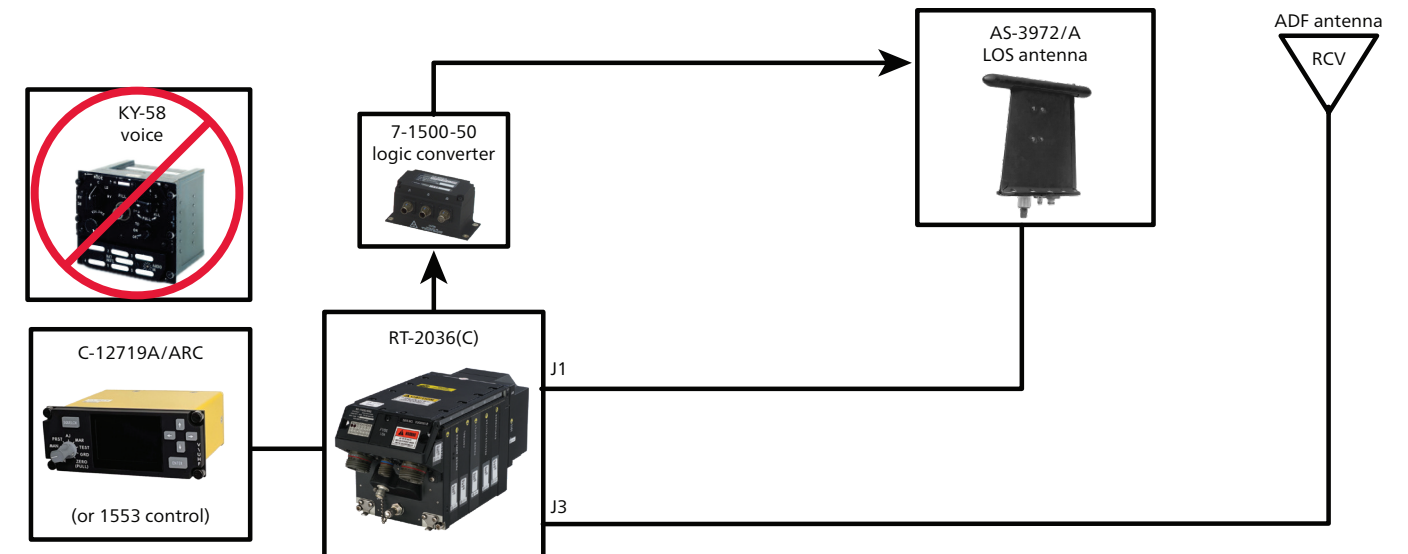
973F-5 lab integration test set



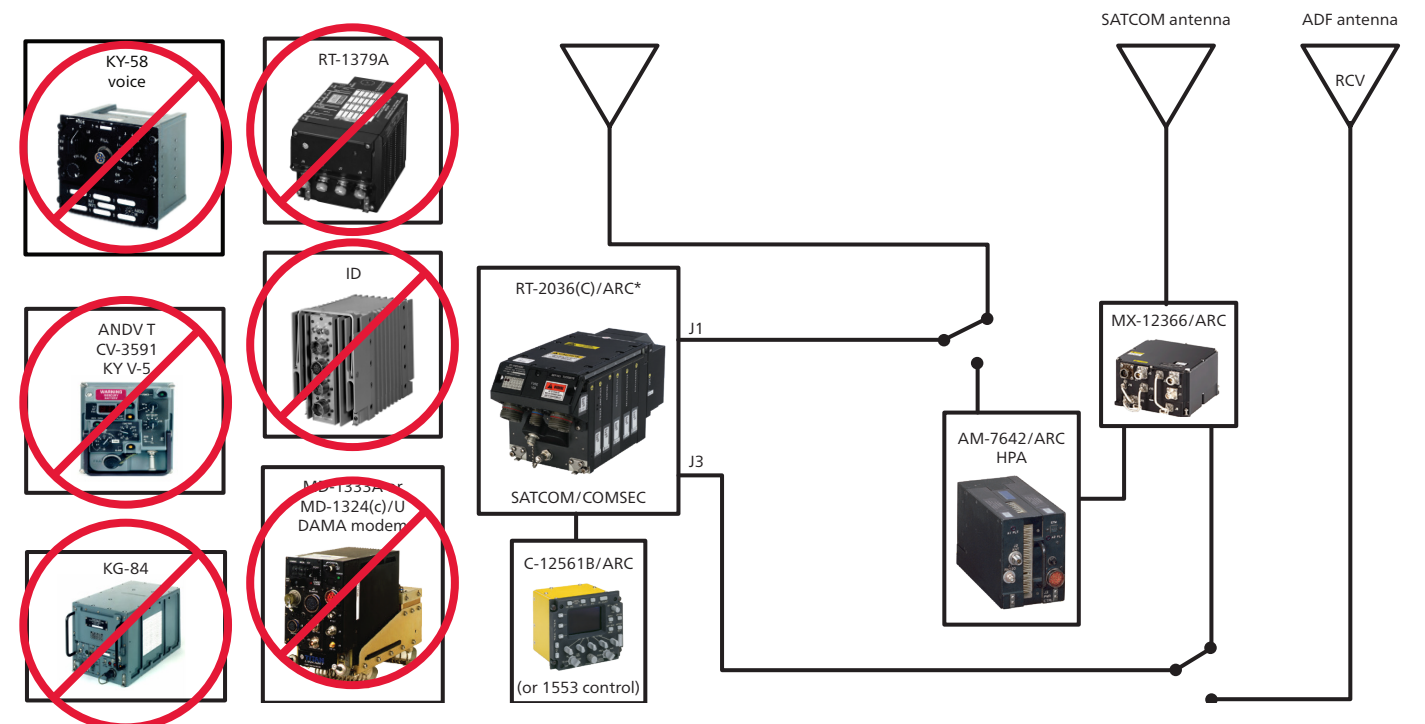
- 19-inch rack mountable
- Provides connections for the following LRUs:
 - RCU (C-12561A or C-12561B)
 - HPA (AM-7526, AM-7526A or AM-7642)
 - LNA (MX-11641, MX-11745, MX-12366)
 - RT (RT-1939(C), RT-1939A(C), RT-1990(C), RT-1990A(C) and RT-2036(C))
- Provides access to MIL-STD-1553 transformer coupled bus connections for external bus controller
- Provides access to Ethernet control and Ethernet data connections for external controller
- Provides test/connection points for various discrete inputs and outputs, data ports, fill ports and audio ports
- Fused for RT, HPA, and fixture over-current protection
- LED indicators for various discrete outputs of RT
- Take Control configuration between RCU and 1553 to allow for control/monitor from either RCU or 1553
- Reversible handles to allow for upright bench-top setting
- Operates on +28 VDC power and routes power to all connected LRUs

AN/ARC-210 TYPICAL SYSTEMS

Various antennas and logic converters that will interface with an ARC-210 are not shown in this brochure.



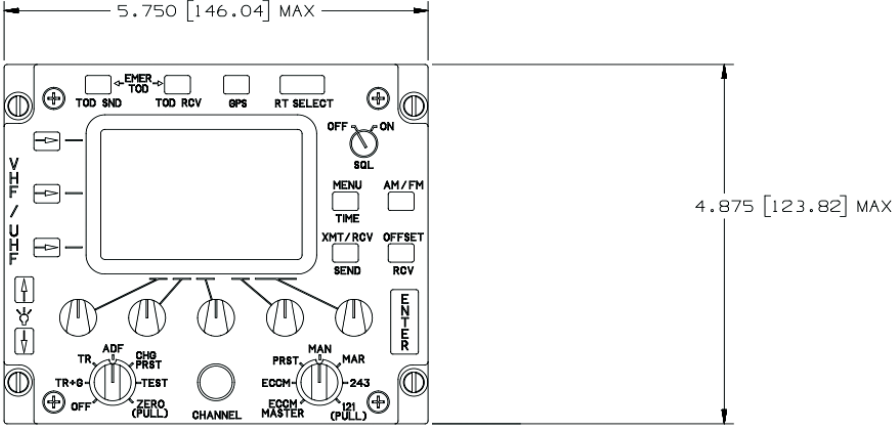
Embedded COMSEC ARC-210 los configuration



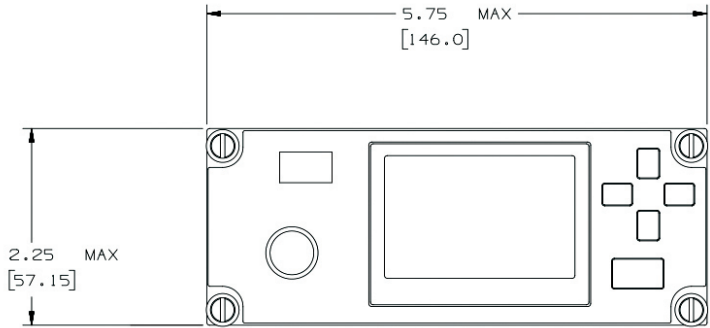
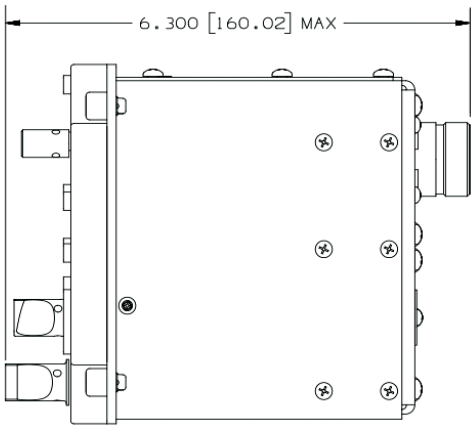
Embedded COMSEC ARC-210 DAMA/IW/MUOS SATCOM configuration

*Earlier-generation embedded COMSEC radio types can be installed instead of the RT-2036(C)

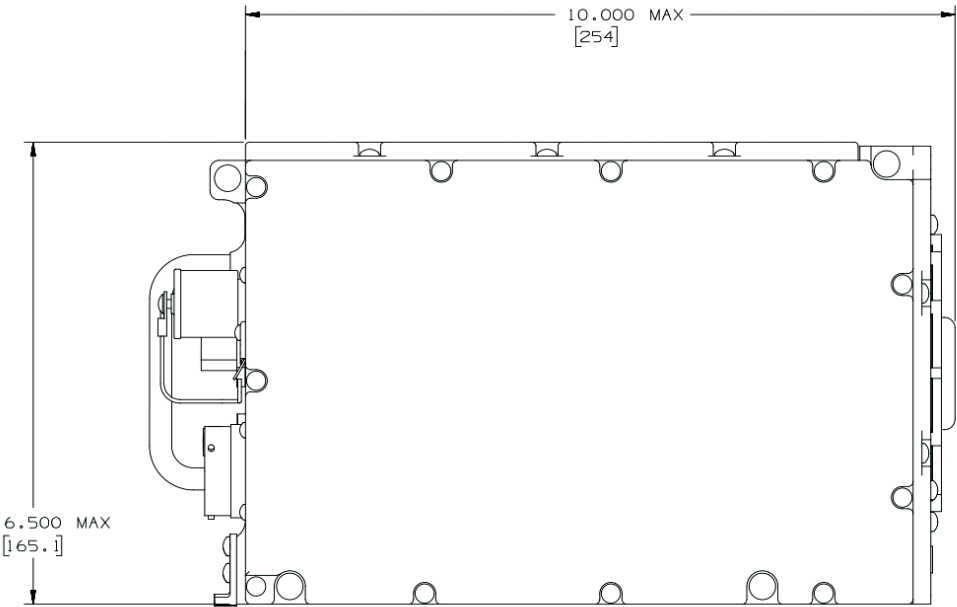
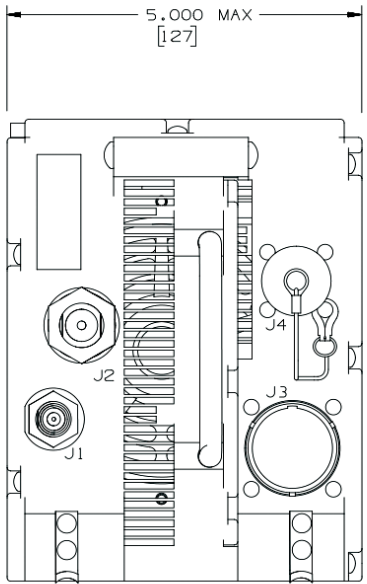
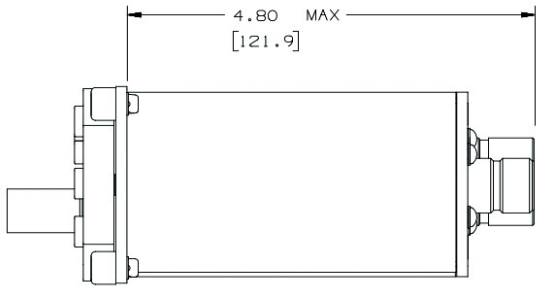
AN/ARC-210 ANCILLARY PRODUCT ENVELOPES



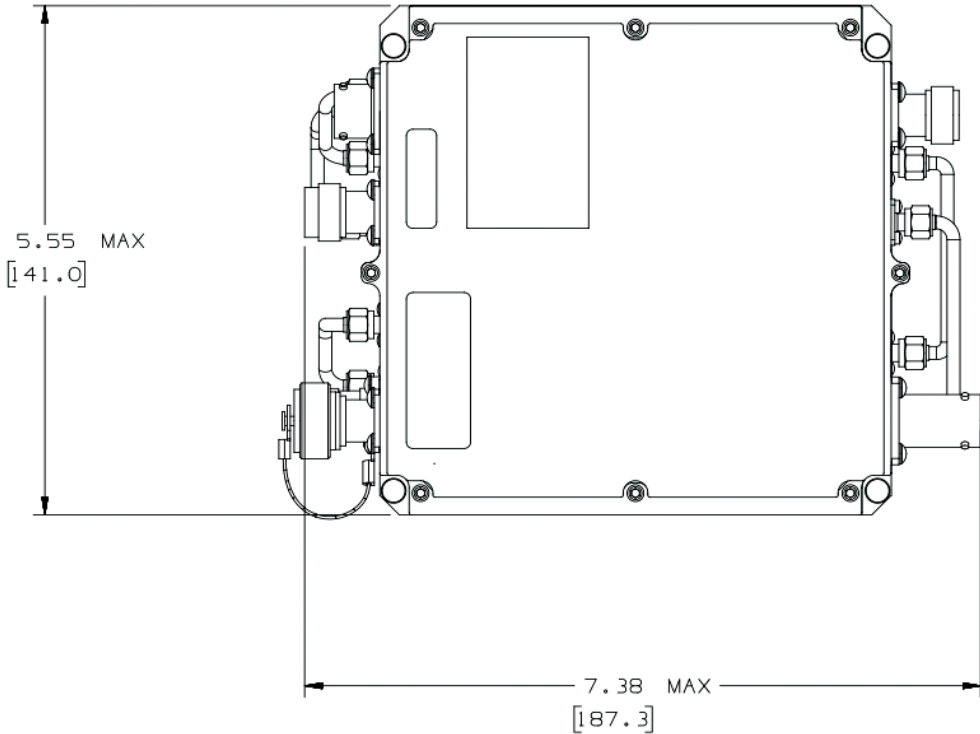
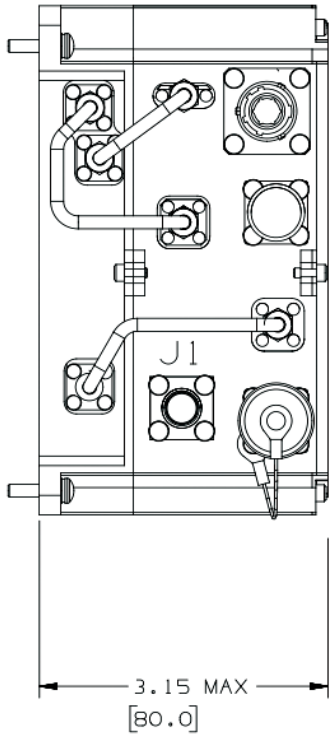
C-12561B/ARC



C-12719A/ARC



AM-7642/ARC



MX-12366/ARC

AN/ARC-210 ANCILLARY EQUIPMENT

Ancillary equipment part number listing

NOMENCLATURE	COLLINS PART NUMBER	DESCRIPTION
C-12561B/ARC	822-1276-006	Full-size Remote Control Unit (RCU)
C-12719A/ARC	822-2092-002	Half-size RCU
AM-7642/ARC	822-2852-001	UHF high power amplifier (HPA)
MX-12366/ARC	822-2857-001	Low noise amplifier (LNA)/triplexer
MT-4935/ARC	622-4934-001	RT mount with isolators
MT-6567/ARC	622-8766-001	RT low profile mount (semi-isolated)
994M-16	822-3455-001	RT low profile mount (semi-isolated, aluminum)
994M-4/-4A	822-1708-001/-002	RT mount with Link 11 interface (solid/isolated)
MT-7006/ARC	622-9465-001	HPA mount
CS-2000**	822-2725-001	Cooling shroud
RRS-200	822-3614-001*/-002	RT/RCU reprogramming kit
RTTS	984-6059-001	Receiver-transmitter tool suite software
973F-5	822-2990-002	Lab integration test set

*Includes a Ballard Technology MIL-STD-1553B Interface Card (UA1120)

**For use with MT-6567/ARC and 994M-16 mounts only

Equipment weights and power requirements (maximum)

NOMENCLATURE	FOOTPRINT DIMENSIONS (W X L X H, INCHES)	WEIGHT (POUNDS)	POWER (WATTS)
C-12561B/ARC	5.75 x 6.30 x 4.875	5.0	50
C-12719A/ARC	5.75 x 4.80 x 2.25	1.85	20
AM-7642/ARC	5.0 x 10.0 x 6.5	15.0	700
MX-12366/ARC	5.55 x 7.38 x 3.15	3.75	0.580
MT-4935/ARC	6.25 x 8.90 x 2.63	1.6	N/A
MT-6567/ARC	5.31 x 8.95 x 1.53	1.9	N/A
994M-16	5.31 x 8.95 x 1.53	1.9	N/A
994M-4	5.42 x 7.91 x 2.75	2.7	3
994M-4A	6.00 x 8.65 x 3.88	2.7	3
MT-7006/ARC	5.02 x 10.25 x 1.47	1.5	N/A
CS-2000	6.85 x 13.75 x 7.0	3.0	23



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