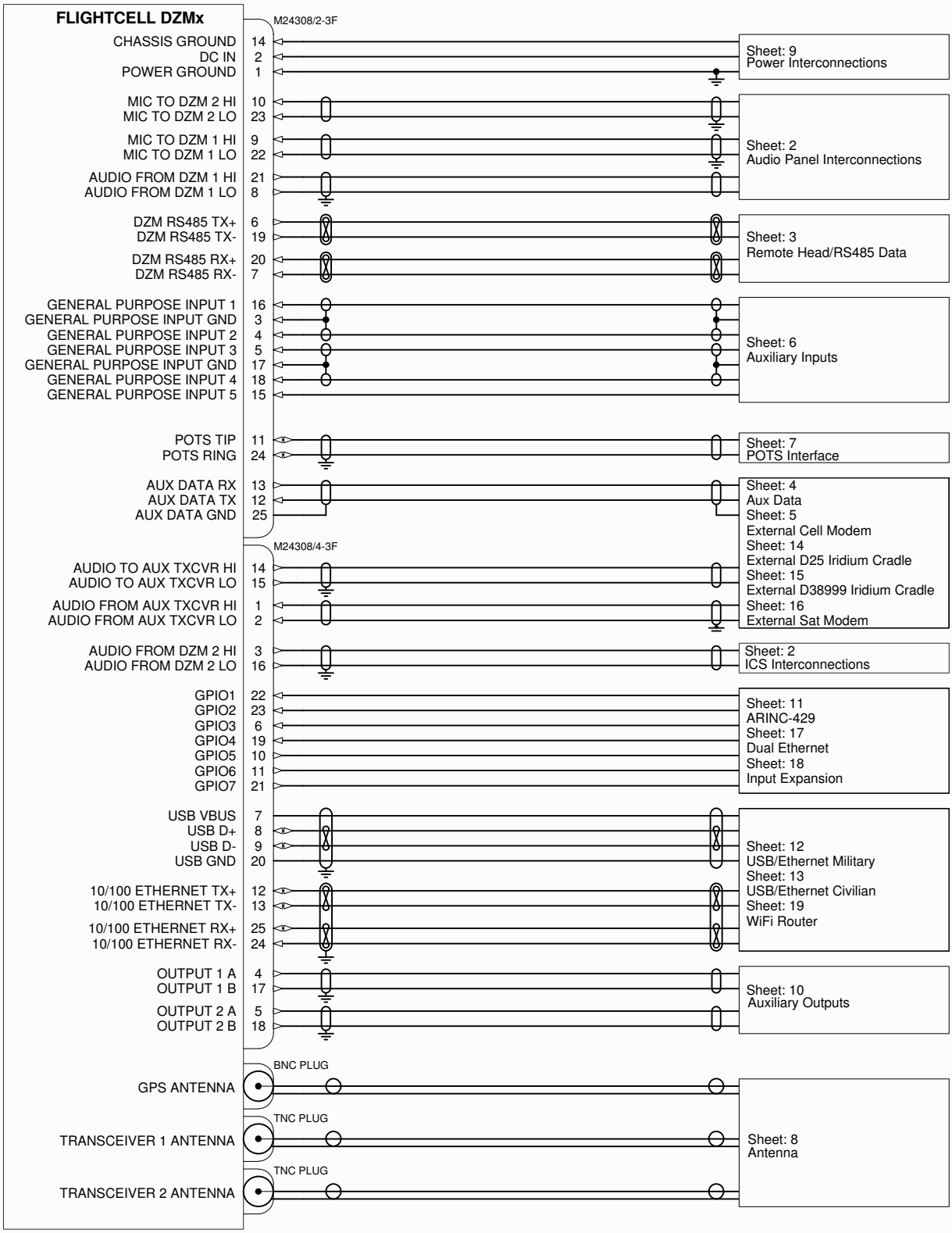
DZMx Civilian Interconnect Drawings
Sheet 1 - DZMx



NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. UNIT GROUND IS INTERNALLY CONNECTED TO UNIT CHASSIS
3. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN

SHIELDED PAIR
SHIELD FLOATING

TWISTED PAIR

UNIT GROUND

COAXIAL CABLE

WIRE SPLICE CONNECTION

Flightcell™

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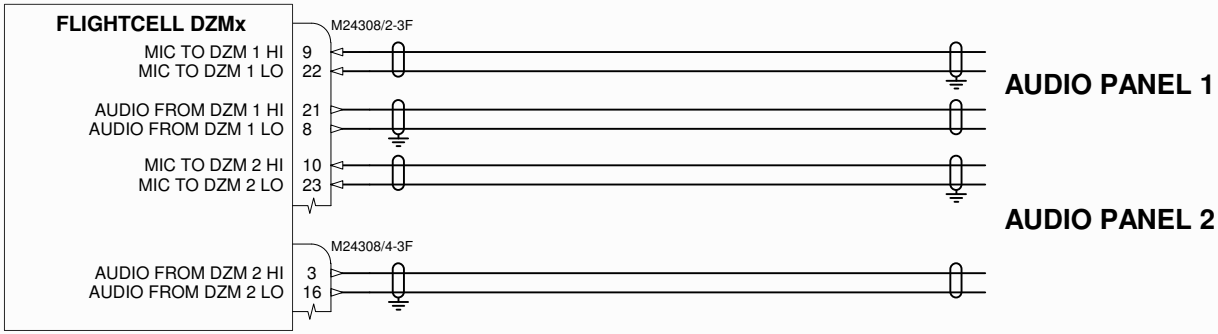
REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

Product: Flightcell DZMx
Sheet: Interconnect Drawings 1 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: Top Level.SchDoc
Date: 28/01/2016 Drawing No: WRL_DZ4_001

DZMx Civilian Interconnect Drawings

Sheet 2 - Audio Panel Interconnections



NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. IT IS RECOMMENDED THAT THE POWER GROUND CONNECTIONS BE RUN
   SEPARATELY TO A SINGLE EARTHING POINT, SO AS TO MINIMISE GROUND LOOPS
3. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

UNIT GROUND

Notes on connection to Aircraft Audio System:

The preferred method of connection is where the Aircraft Audio System provides a Cellphone port or similar. In this case the audio input should be configured as unbiased.

Alternatively, connection may be made to an unused radio port. For high-impedance systems it may be neccessary to use the biased voltage on the DZM input (if the system expects mic bias from the radio); otherwise the input should be configured as unbiased.

The DZM may otherwise be connected to a headset port - in this case the input bias voltage should be enabled for high-impedance systems and disabled for low-impedance systems. In either case it is advisable to set the headset port to be "hot mic".

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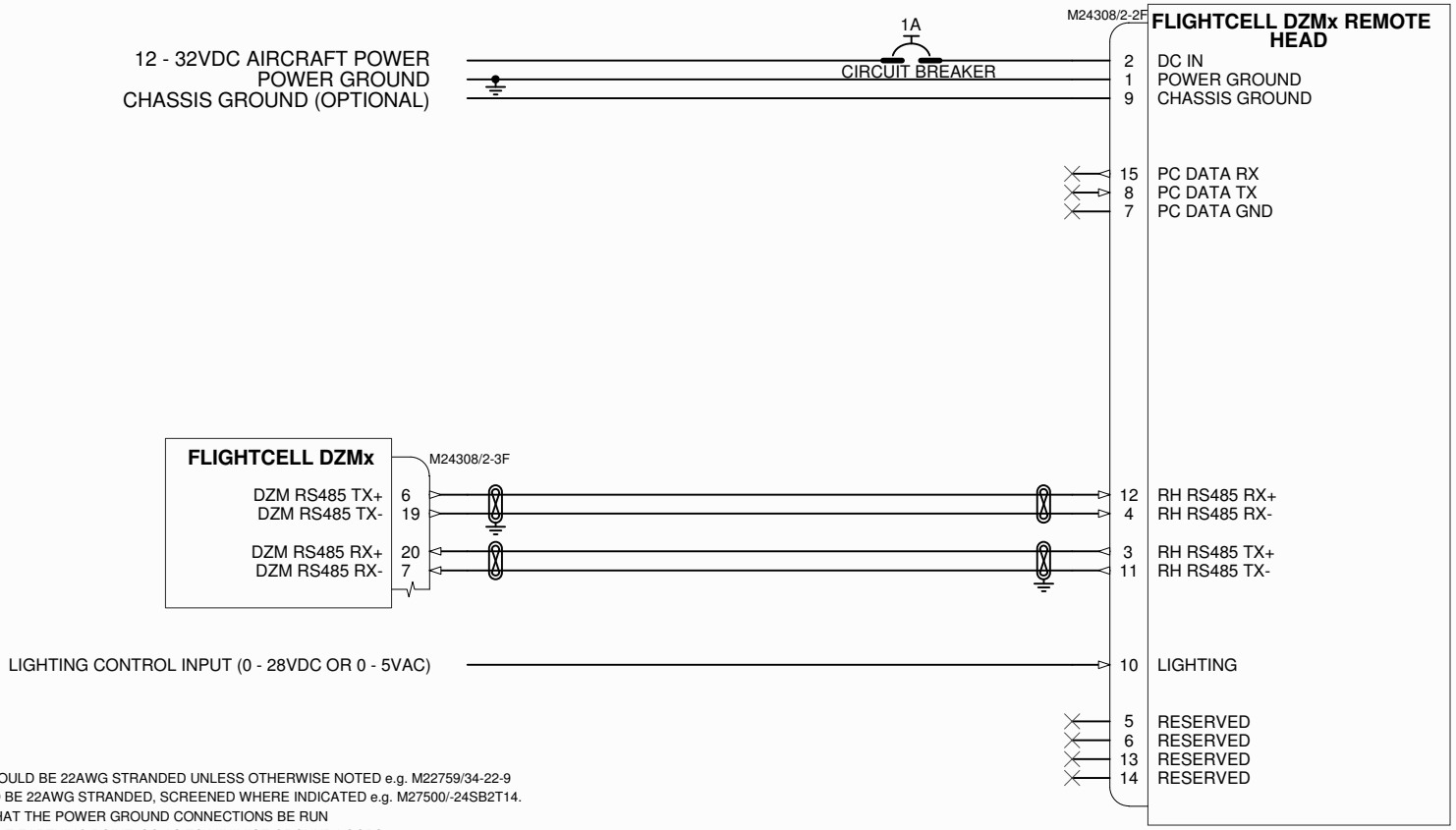
REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

Product: Flightcell DZMx
Sheet: Audio Panel Interconnections 2 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: ICS Interconnections.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 3: Remote Head/RS485 Interconnections



NOTE:

The Remote Head requires only the connections shown in this drawing.

The secondary lighting input need be fitted only if the display backlight brightness needs to be controlled externally. Otherwise the brightness can be set to a fixed level via the menus.

This drawing shows the DZMx connected to a Flightcell Remote Head. THe RS485 can also be used for other applications, contact Flightcell for details.

NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. IT IS RECOMMENDED THAT THE POWER GROUND CONNECTIONS BE RUN
   SEPARATELY TO A SINGLE EARTHING POINT, SO AS TO MINIMISE GROUND LOOPS
3. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

TWISTED PAIR

UNIT GROUND

WIRE SPLICE CONNECTION

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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Product:	Flightcell DZMx
Sheet:	Remote Head/RS485 Interconnections 3 of 19
Issue:	6.0
Drawn By:	James Glasgow
Filename:	Remote Head Interconnections.SchDoc
Date:	28/01/2016 Drawing No: WRL_DZ4_001

DZMx Civilian Interconnect Drawings

Sheet 4 - Aux Data Interconnections

Note: the diagnostic port can be fitted for in-situ maintenance purposes. If fitted it is highly advisable to locate this connector such that it is readily accessible.

It is recommended that when conecting to a PC the loopback connections on RTS, CTS, DCD, DTR and DSR are made as shown.

This port can also be used to connect to an external Transceiver.

NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN

SHIELDED PAIR
SHIELD FLOATING

WIRE SPLICE CONNECTION

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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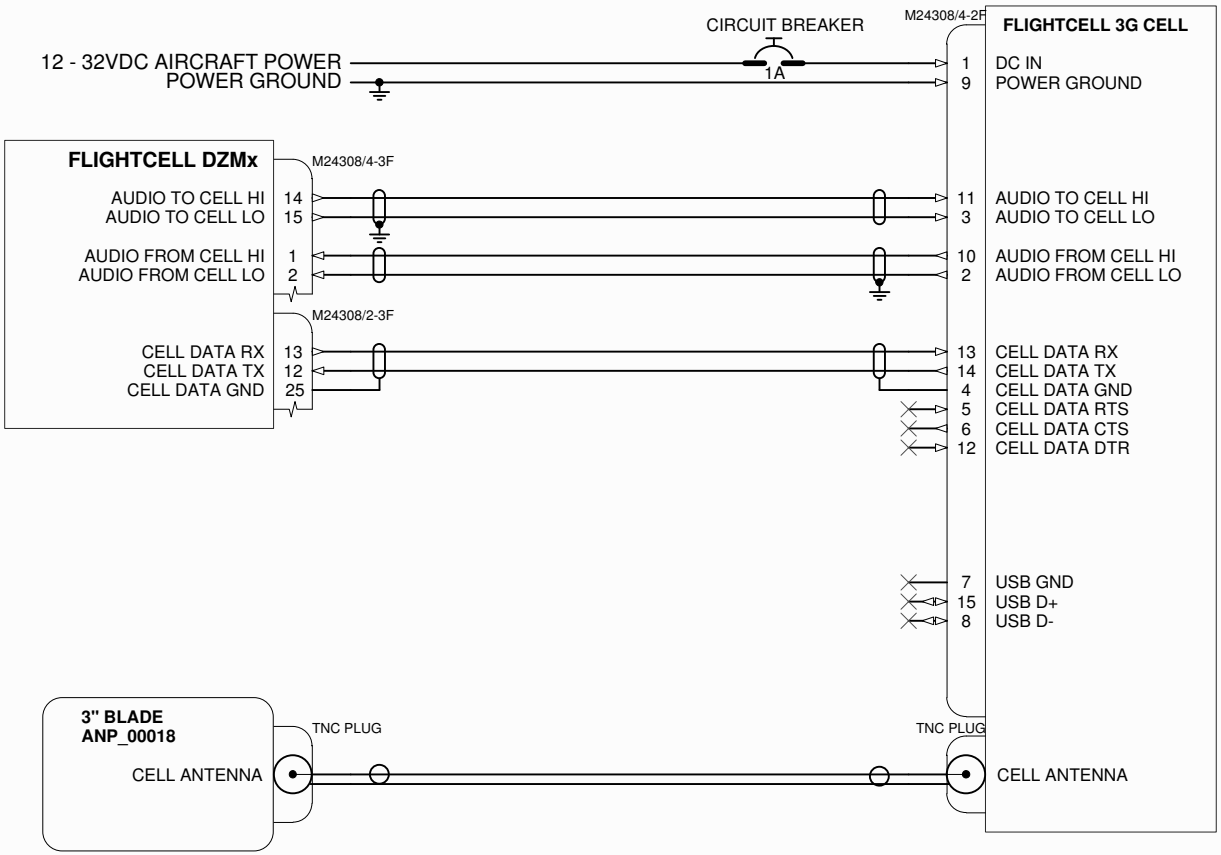
Product: Flightcell DZMx
Sheet: Aux Data Interconnections 4 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: Aux Data Interconnections.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings
Sheet 5 - Optional External Cell Module Interconnections



NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. IT IS RECOMMENDED THAT THE POWER GROUND CONNECTIONS BE RUN
   SEPARATELY TO A SINGLE EARTHING POINT, SO AS TO MINIMISE GROUND LOOPS
3. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN

SHIELDED PAIR
SHIELD FLOATING

SHIELDED SINGLE

UNIT GROUND

COAXIAL CABLE

WIRE SPLICE CONNECTION

CIRCUIT BREAKER

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REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

Product:	DZMx
Sheet:	External Cell Module ICD 5 of 19
Issue:	6.0
Drawn By:	James Glasgow
Filename:	Aux Cell Interconnections.SchDoc
Date:	28/01/2016 Drawing No: WRL_DZ4_001

DZMx Civilian Interconnect Drawings

Sheet 6 - General Purpose Inputs

Lighting input:
If there is a requirement to dim the DZM display backlight along with other cockpit lighting, a reference voltage may be fed into this input. Different aircraft typically use either a 0-28VDC or a 0-5VAC range. The DZM lighting input can be calibrated to suit the particular input requirements of the installation.

Inputs:

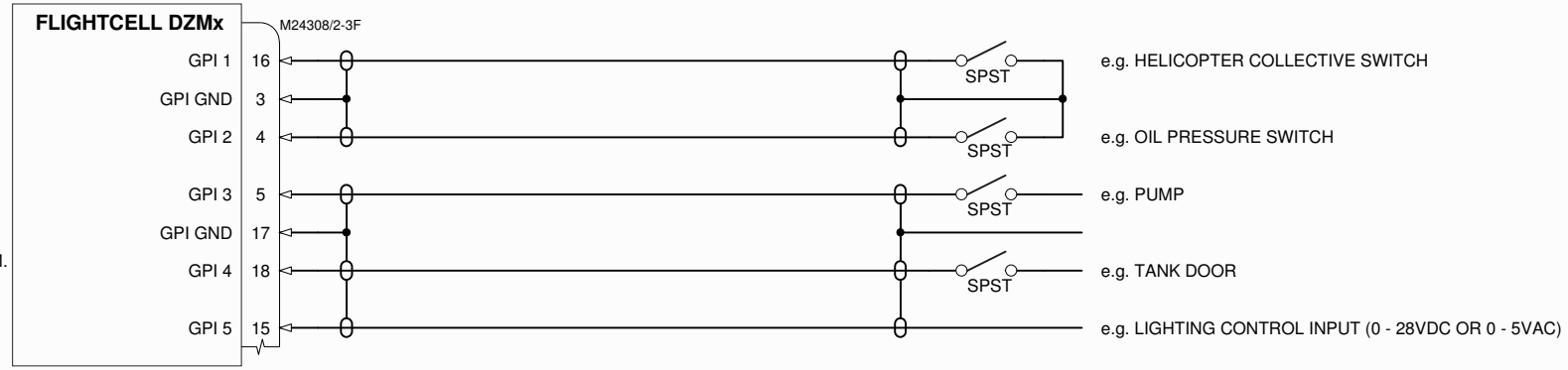
The input's are all configurable as either variable or switched with adjustable thresholds.

The inputs nominal operating range is 0-28VDC, but they will tolerate an input range of -32 to +32VDC.

If these inputs are used, they need to be enabled on the DZM.

The inputs can be used for other purposes depending on the firmware configuration; contact Flightcell for advice on any specific applications.

All inputs are referenced to a common ground which is connected internally to the DZMx to Chassis ground. Therefore the aicraft chassis ground can be used for the input return signal if required.



NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS
   SHIELDED SINGLE CONDUCTOR
   SHIELD TERMINATED TO DESIGNATED PIN
   WIRE SPLICE CONNECTION

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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Product: Flightcell DZMx
Sheet: General Purpose Inputs 6 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: Auxiliary Inputs.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 7 - POTS Interface

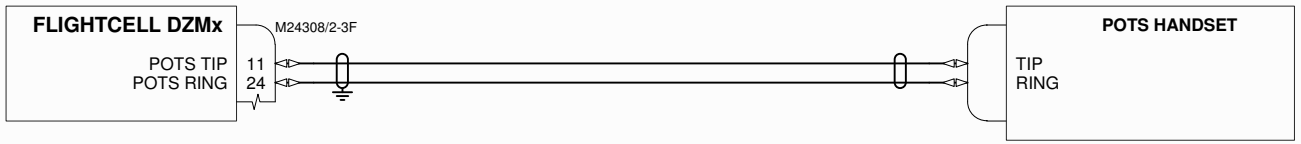
POTS Interface:

The POTS interface is designed so that a standard 2-wire telephone handset can be wired into the DZMx and used to make calls via the DZMx transceivers (if fitted).

It can also be used to communicate with the aircraft's flight crew.

Note:
It is important that the DZM is set to the appropriate 2-wire impedance setting for the phone handset that is connected. The DZM has several different impedance settings, designed to work with the impedance of most countries telephone handsets.

Failure to correctly set the 2-wire impedance can cause echo to be heard by the person at the remote end of the call from the DZM.



NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

UNIT GROUND

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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Product: Flightcell DZMx
Sheet: POTS Interface 7 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: POTS Interface.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 8 - Antennas

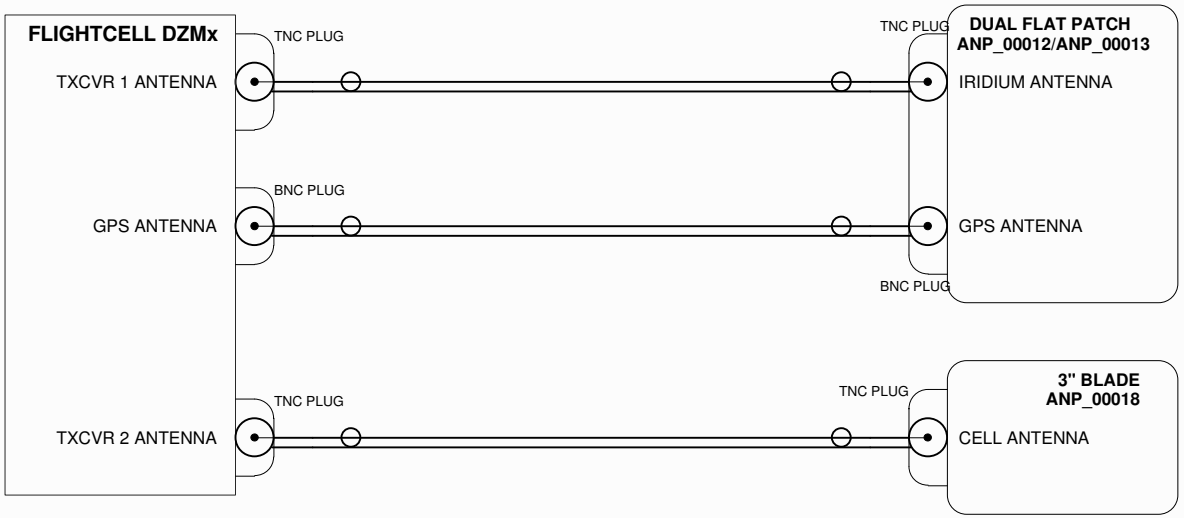
NOTES:
The Iridium/GPS antenna should be placed horizontally on the upper surface of the airframe such that it has an unobstructed view of the sky. The cell antenna should be placed on the underside of the aircraft; orientation is less critical.

Selection of coax cable depends on the lengths of the cable runs. See the Installation and Configuration manual for cable recomendations.

Where practicable the antenna should be placed well clear (at least 500mm and preferably 1000mm) from any other antenna operating at similar frequencies.

The setup shown is a typical installation with one Iridium transceiver and one Cellular transceiver.

For installations with two Iridium transceivers a dual Iridium + GPS antenna is available. Contact Flightcell for details.



NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS
   ◯ COAXIAL CABLE

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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Product: Flightcell DZMx
Sheet: Antennas 8 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: Antenna.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001

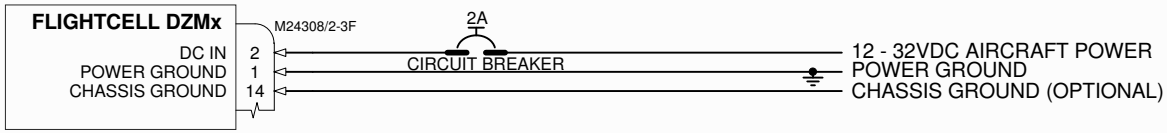
DZMx Civilian Interconnect Drawings

Sheet 9 - Power Interconnections

NOTES:

In order to minimise ground loops, it is recommended that the ground connections from the DZM, external satphone or cell modem (if fitted) are run seperately to a single grounding point, ideally the same point as used by the ICS.

It is recommended that DC power be taken from the emergency (primary) power bus, particularly if engine stop/start events need to be captured.



NOTES:
1. POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS

UNIT GROUND

CIRCUIT BREAKER

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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Product: Flightcell DZMx
Sheet: Power Interconnections 9 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: Power Interconnections.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 10 - Auxiliary Outputs

NOTES:

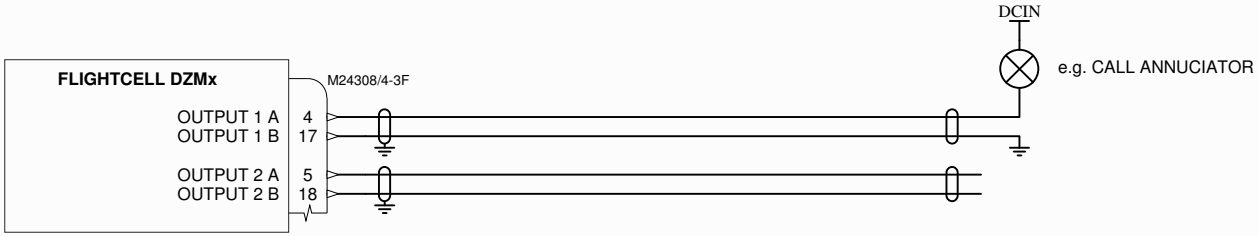
The auxiliary outputs can be used to switch external loads, e.g. annunciator panel indicator.

Each output is capable of switching a 500mA load. The voltage applied to either terminal must not exceed 60VDC.

Each output provides 1500Vrms isolation between the output terminals and the DZM internal circuitry.

When the output is on Terminal A is connected to Terminal B.

The outputs can be configured for a variety of purposes e.g. a call annunciator.



NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN

UNIT GROUND

WIRE SPLICE CONNECTION

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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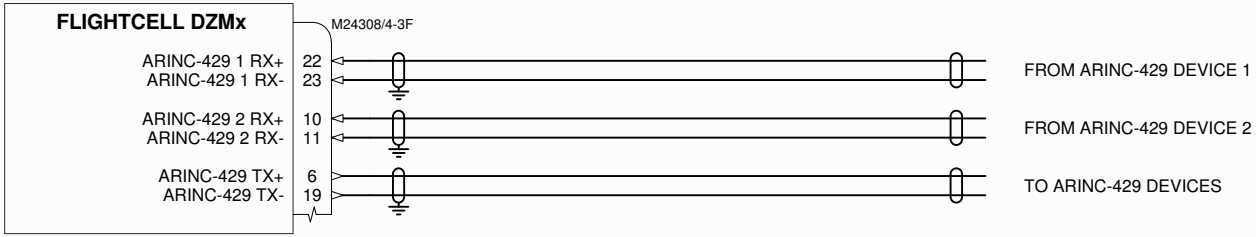
Product: Flightcell DZMx
Sheet: Auxiliary Outputs 10 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: Auxiliary Outputs.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 11 - ARINC-429 Data Interconnections

NOTES:

ARINC-429 functionality is only available if the ARINC-429 card is installed in the DZMx.



NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

UNIT GROUND

WIRE SPLICE CONNECTION

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
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3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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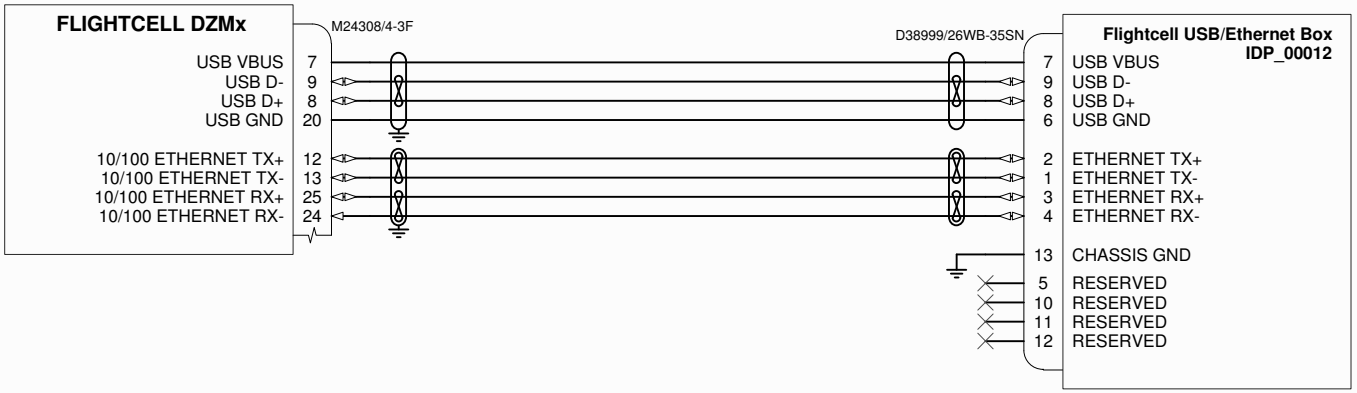
Product: Flightcell DZMx
Sheet: ARINC-429 Interconnections 11 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: ARINC-429 Interconnections.SchDoc
Date: 28/01/2016 Drawing No: WRL_DZ4_001

DZMx Civilian Interconnect Drawings

Sheet 12 - Military USB/Ethernet Connector Box Interconnections



NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. USB CABLE MUST BE COMPATIBLE WITH THE USB 2.0 SPECIFICATION e.g. PIC USB2422.
3. ETHERNET CABLE SHOULD BE TWISTED PAIR CAT-5E OR COMPATIBLE e.g. PIC E10424.
4. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

TWISTED PAIR

UNIT GROUND

WIRE SPLICE CONNECTION

NOTES:

The DZMx contains a single Ethernet port, if multiple devices are required an external Ethernet switch will be required.

Contact Flightcell for recommended Etherent switches.

TX+/- and RX+/- should be run as twisted pairs using CAT-5e or equivalent.

The USB/Ethernet box must be installed as without it the DZMx cannot have its firmware upgraded.

USB 2.0 compliant cable must be used and cable run length must be kept to less than 5m.

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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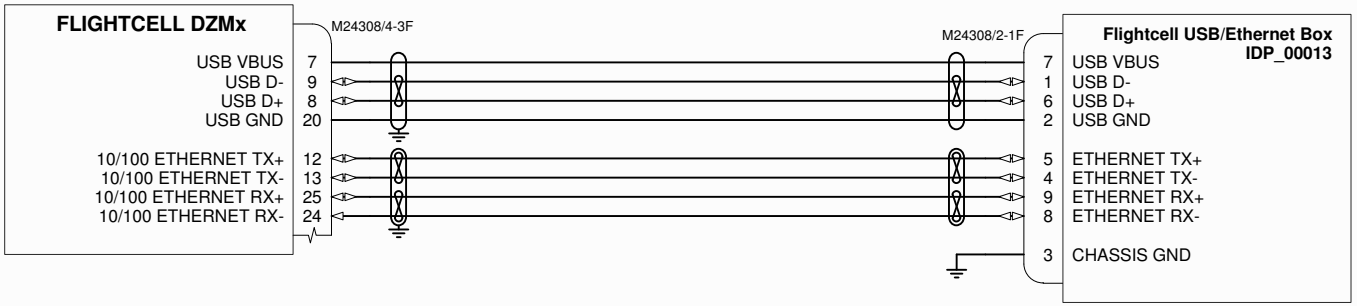
Ph:+64 3 545 8652 www.flightcell.com

Product: Flightcell DZMx
Sheet: USB/Ethernet Interconnections 12 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: USB Ethernet Mil.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 13 - Civilian USB/Ethernet Connector Box Interconnections



NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. USB CABLE MUST BE COMPATIBLE WITH THE USB 2.0 SPECIFICATION e.g. PIC USB2422.
3. ETHERNET CABLE SHOULD BE TWISTED PAIR CAT-5E OR COMPATIBLE e.g. PIC E10424.
4. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

TWISTED PAIR

UNIT GROUND

WIRE SPLICE CONNECTION

NOTES:

The DZMx contains a single Ethernet port, if multiple devices are required an external Ethernet switch will be required.

Contact Flightcell for recommended Etherent switches.

TX+/- and RX+/- should be run as twisted pairs using CAT-5e or equivalent.

The USB/Ethernet box must be installed as without it the DZMx cannot have its firmware upgraded.

USB 2.0 compliant cable must be used and cable run length must be kept to less than 5m.

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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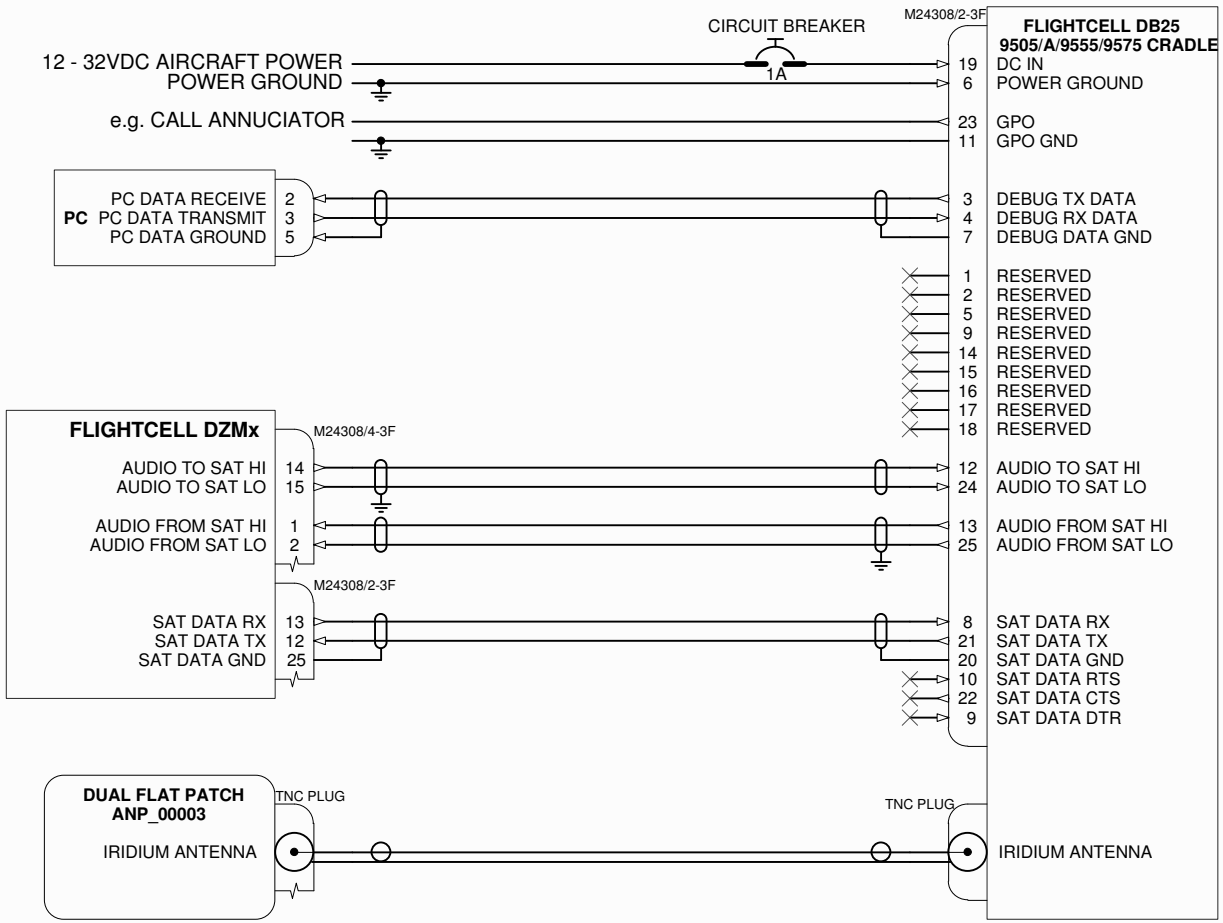
Product: Flightcell DZMx
Sheet: USB/Ethernet Interconnections 13 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: USB Ethernet Civ.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 14 - Optional External DB25 Iridium Cradle (9505/A/9555/9575) Interconnections



NOTES:

The cradle GPO can be used to switch external loads, e.g. annunciator panel indicator.

The output is capable of switching a 100mA load. The max applied voltage must not exceed 32VDC.

The output can be configured via the DZM Manager PC software.

The Debug port is not required for normal use, it can be used for firmware upgrades if required.

NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. IT IS RECOMMENDED THAT THE POWER GROUND CONNECTIONS BE RUN
   SEPARATELY TO A SINGLE EARTHING POINT, SO AS TO MINIMISE GROUND LOOPS
3. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN

SHIELDED PAIR
SHIELD FLOATING

UNIT GROUND

COAXIAL CABLE

WIRE SPLICE CONNECTION

CIRCUIT BREAKER

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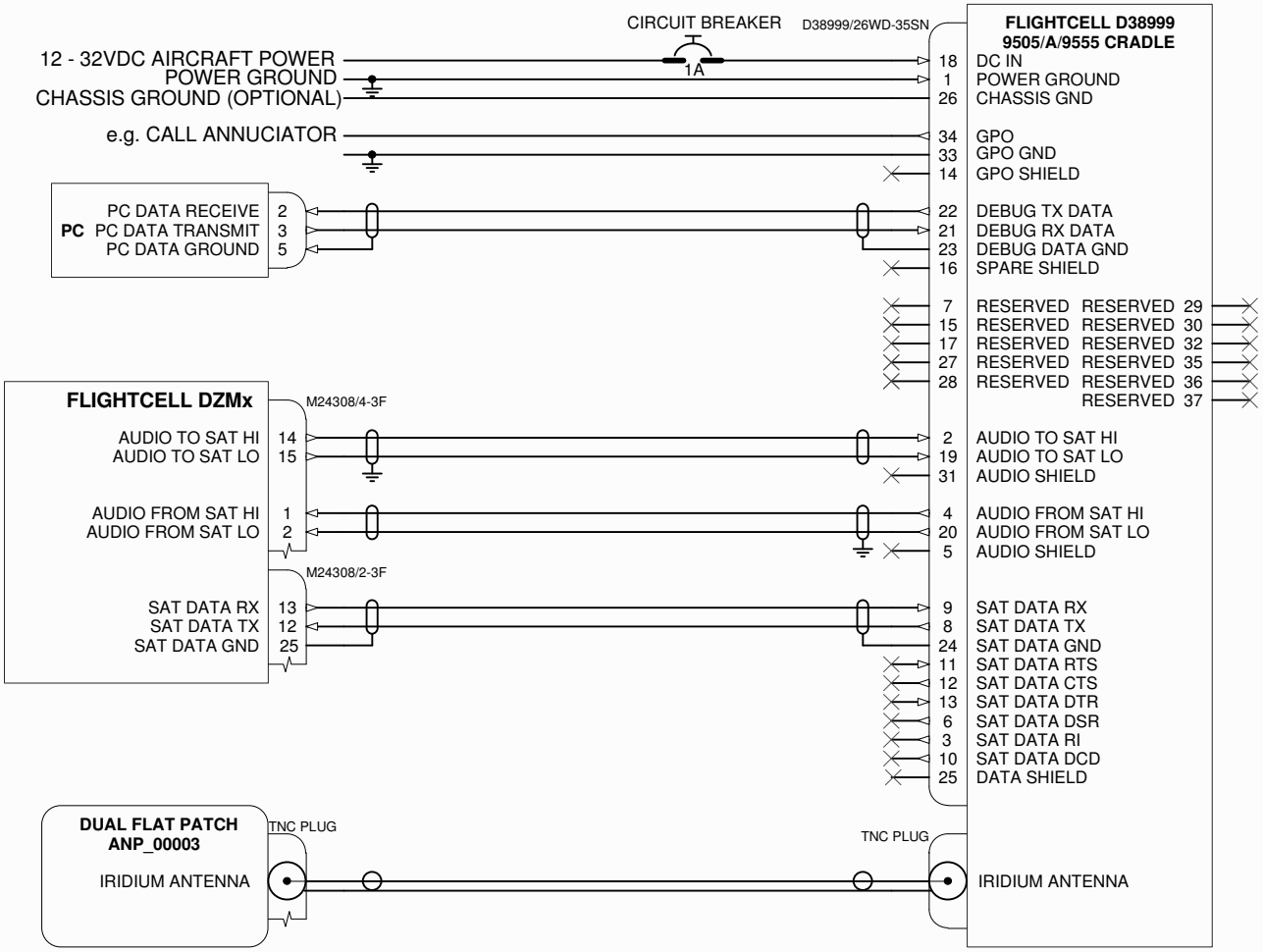
REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

Product: Flightcell DZMx
Sheet: External DB25 Iridium Cradle ICD 4 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: Aux DB25 Iridium Transceiver Interconnections.SchDoc
Date: 28/01/2016 Drawing No: WRL_DZ4_001

DZMx Civilian Interconnect Drawings

Sheet 15 - Optional External D38999 Iridium Cradle (9505/A) Interconnections



NOTES:

The GPO can be used to switch external loads, e.g. annunciator panel indicator.

The output is capable of switching a 100mA load. The max applied voltage must not exceed 32VDC.

The output can be configured via the DZM Manager PC software.

The Debug port is not required for normal use, it can be used for firmware upgrades if required.

The additional shield connections may be used to terminate shields rather than using the common power ground point if desired.

NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. IT IS RECOMMENDED THAT THE POWER GROUND CONNECTIONS BE RUN
   SEPARATELY TO A SINGLE EARTHING POINT, SO AS TO MINIMISE GROUND LOOPS
3. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN

SHIELDED PAIR
SHIELD FLOATING

UNIT GROUND

COAXIAL CABLE

WIRE SPLICE CONNECTION

CIRCUIT BREAKER

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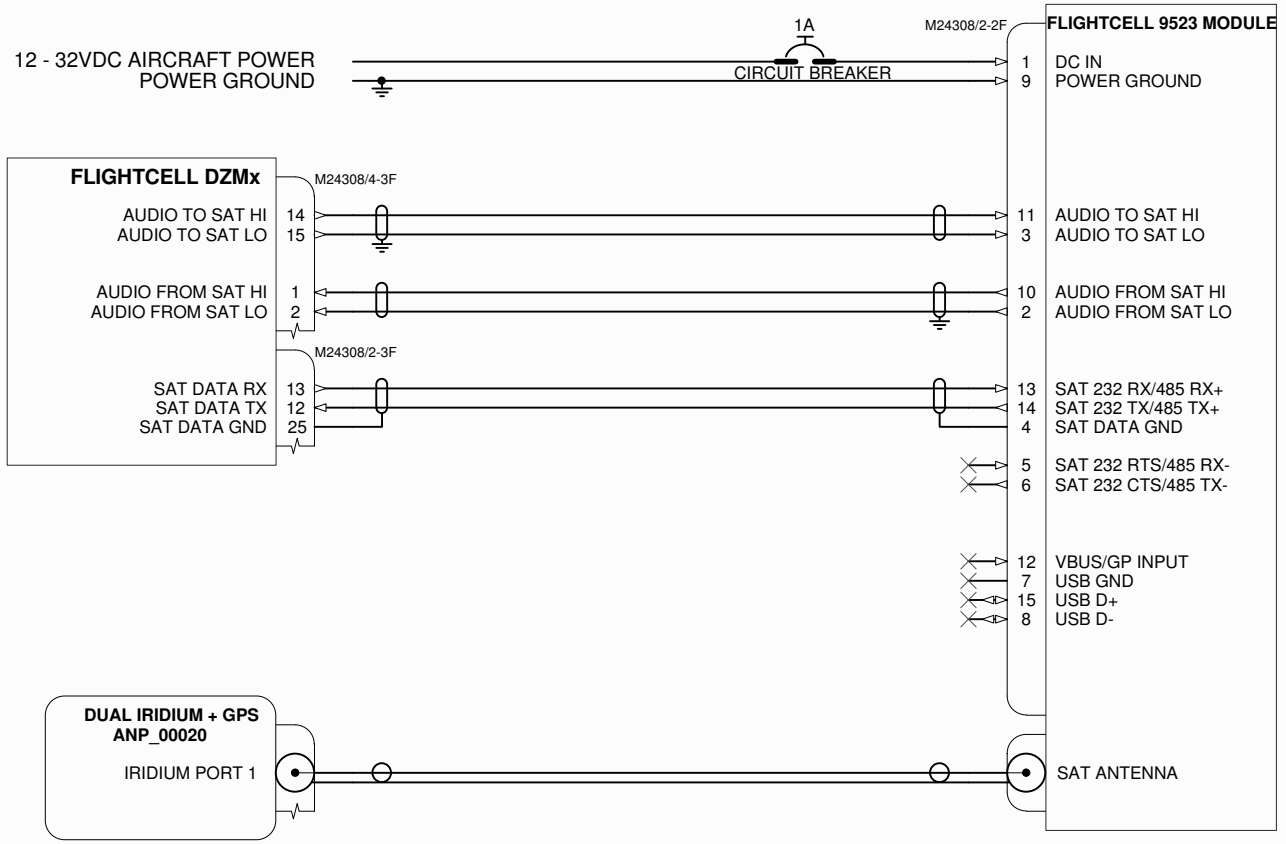
REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

Product: Flightcell DZMx
Sheet: External D38999 Iridium Txcvr IOB 15 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: Aux D38999 Iridium Transceiver Interconnections.SchDoc
Date: 28/01/2016 Drawing No: WRL_DZ4_001

DZMx Civilian Interconnect Drawings
Sheet 16 - Optional External Iridium Module Interconnections



NOTES:
The Iridium antenna should be placed horizontally on the upper surface of the airframe such that it has an unobstructed view of the sky.
The cell antenna should be placed on the underside of the aircraft; orientation is less critical.

Selection of coax cable depends on the lengths of the cable runs.

Iridium specify that the maximum signal loss in the cable should be 3dB at 1645MHz, so maximum cable lengths are as follows:

RG174 - 2m
RG58C/U - 3m
LMR200 - 6.5m
RG58-9006 cellfoil - 6.5m
RG213 - 8m
LMR400 - 17m
LMR600 - 26m

Where practicable the antenna should be placed well clear (at least 500mm and preferably 1000mm) from any other antenna operating at similar frequencies.

The antenna shown is a Dual Iridium + GPS antenna, for use in installations with internal SAT/CELL and the external Sat modem.

Single port Iridium antennas are available, contact Flightcell for details.

The Sat modem can be configured (via a switch under the SIM Slot) to communicate via either RS-232 or RS-485. When used with a DZMx this should always be set to RS-485.

NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. IT IS RECOMMENDED THAT THE POWER GROUND CONNECTIONS BE RUN
   SEPARATELY TO A SINGLE EARTHING POINT, SO AS TO MINIMISE GROUND LOOPS
3. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

UNIT GROUND

WIRE SPLICE CONNECTION

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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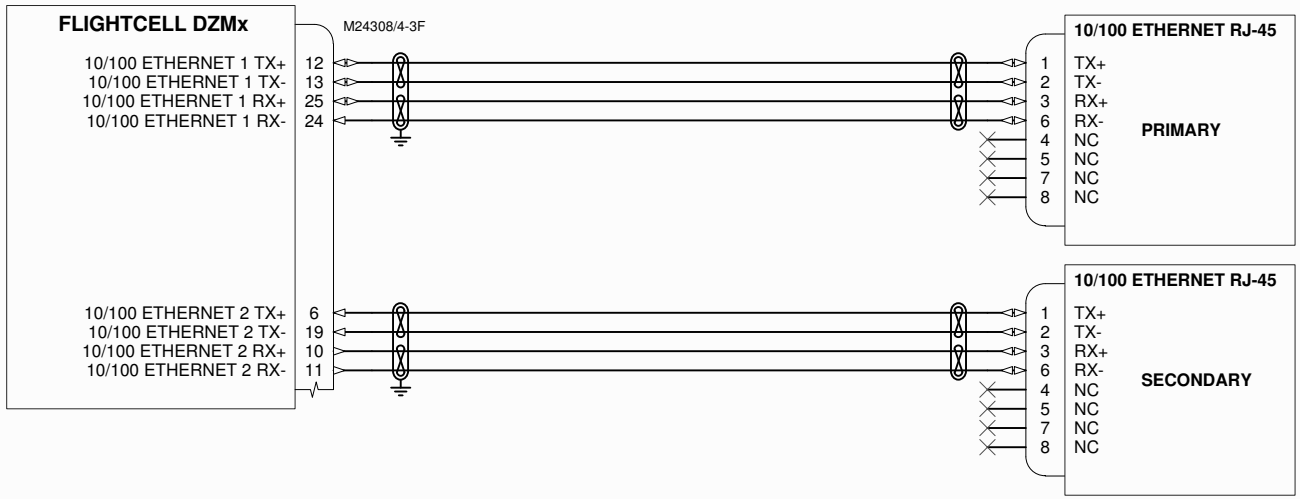
Product: Flightcell DZMx
Sheet: External Iridium Module 16 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: Aux Sat Modem Interconnections.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 17 - Dual Ethernet Interconnections



NOTES:

The second Ethernet port is only available if the secondary ethernet card is installed in the DZMx.

NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. ETHERNET CABLE SHOULD BE TWISTED PAIR CAT-5E OR COMPATIBLE e.g. PIC E10424.
3. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

TWISTED PAIR

UNIT GROUND

WIRE SPLICE CONNECTION

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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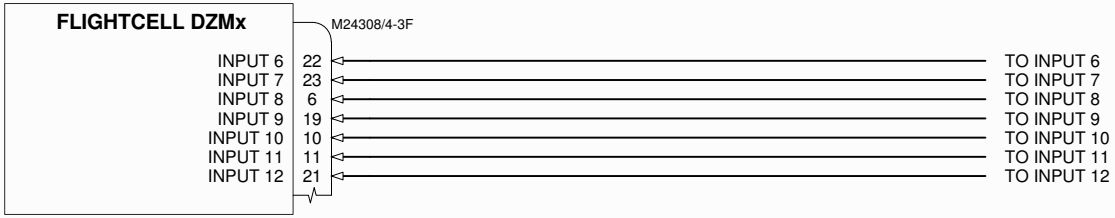
Product: Flightcell DZMx
Sheet: Dual Ethernet Interconnections 17 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: Dual Ethernet.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 18 - Input Expansion Interconnections

NOTES:

Extra inputs are only available if the input expansion card is installed in the DZMx.



NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

UNIT GROUND

WIRE SPLICE CONNECTION

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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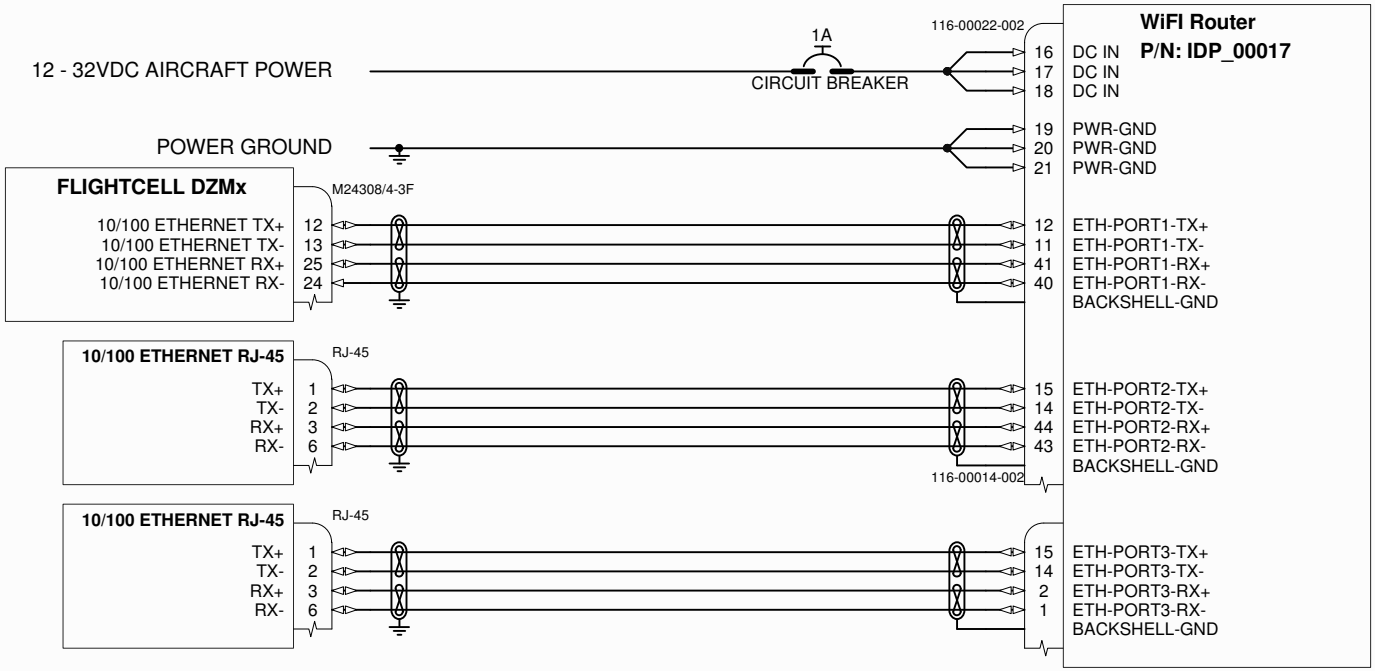
Product: Flightcell DZMx
Sheet: Input Expansion Connections 18 of 19
Issue: 5.0
Drawn By: James Glasgow
Filename: Input Expansion Interconnections.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 19 - WiFi Router Interconnections



NOTES:
1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
   OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. USB CABLE SHOULD BE TWISTED PAIR COMPATIBLE WITH THE USB 2.0 SPECIFICATION e.g. PIC USB2422.
3. ETHERNET CABLE SHOULD BE TWISTED PAIR CAT-5E OR COMPATIBLE e.g. PIC E10424.
4. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

TWISTED PAIR

UNIT GROUND

WIRE SPLICE CONNECTION

REV	DESCRIPTION	DATE	APPD
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG
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3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG
2.0	See FCN for details. (C/N FCN0529).	23/09/13	JG

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Product: Flightcell DZMx
Sheet: WiFi Router Interconnections 19 of 19
Issue: 6.0
Drawn By: James Glasgow
Filename: WiFI Router.SchDoc
Date: 28/01/2016 Drawing No: WRL DZ4 001