

Attachment 3 – Manual

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US DCP

Digital Communication Platform

Installation Guide

Ref No MU7756XAV10A-US

Part numbers:

Single SIM card (RS232): AC-4CM10-640-F-20-000



PRODUCT DESCRIPTION

The Digital Communications Platform (DCP) provides an information gateway between all compatible connected Avire devices in the hoistway and our online monitoring platform, the Avire Hub. The product is installed as a stand-alone device and doesn't require connection to the elevator controller panel.

In the Box

- + 4G DCP
- + Antenna
- + P-5 H-2V connector (x1)
- + P-3.5 H-4V connector (x1)
- + P-10 H-2V connector (x1)
- + Gray clamp (x2)
- + Installation guide

Not Included

- + Screwdriver
- + SIM card

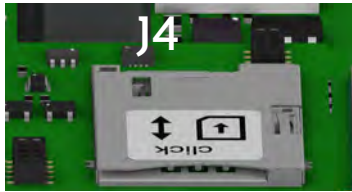
ELEVATOR SAFETY

Please follow all Health and Safety rules and take all necessary precautions before and during installation.

SETTING UP THE DCP

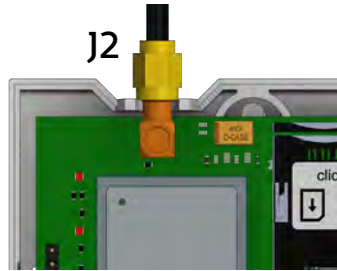
Avire SIM cards come activated and ready to be installed. If a non-Avire SIM card is used, please make sure that the SIM card is activated and unlocked.

1. Open the DCP with a PZ1 screwdriver.
2. Insert SIM into the J4, pushing the SIM until it clicks.

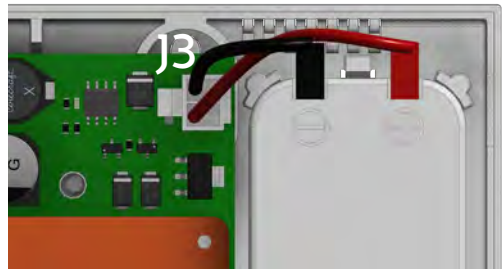


3. Connect the antenna on the DCP to J2 and ensure it is completely tightened.

NOTE: Only use antennas authorized by Avire.

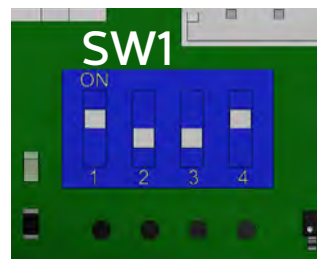


4. Connect the battery to J3.
5. Wait for the LED lights to turn on. Check the SIM LED to make sure it is green or amber (check step 10). If it's flashing red check it's been inserted correctly and then unlock the SIM card using instructions on page 4.



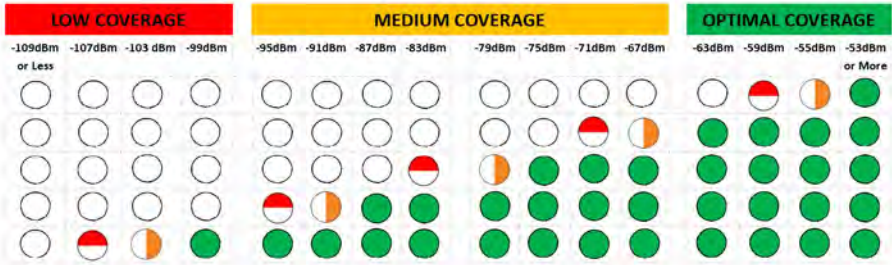
6. Check the signal strength by using the built-in network signal strength scanner. To use the signal scanner function:

- + Turn SW1 dipswitch 1 to ON (check dipswitch 4 is also ON)



Please refer to pages 12 and 13 for the full picture and connector information

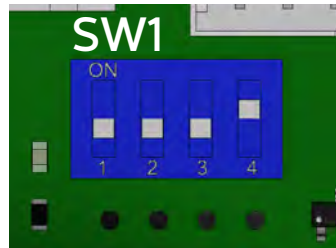
- + LEDs on the front of the DCP unit will show the network signal level



Note: The signal scanner will indicate the best location for the device to receive signal, Network coverage will vary based on local conditions.

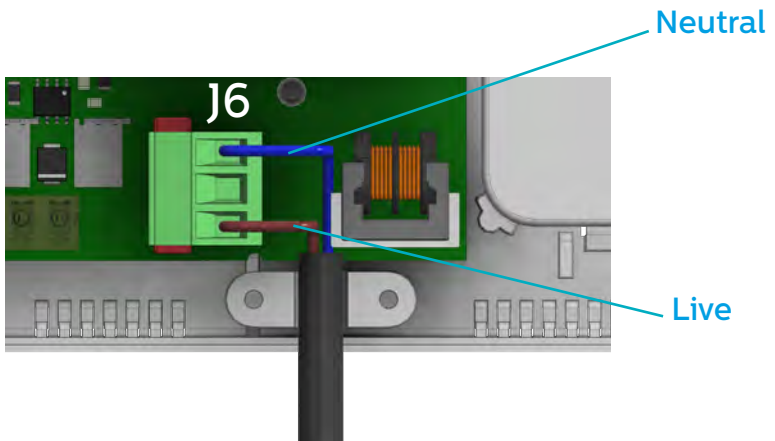


- + Once finished turn SW1 dipswitch 1 back to OFF.

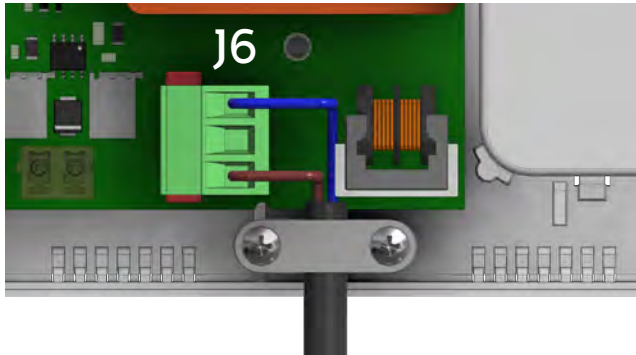


You can check the status of the power supply, battery, connection, coverage or Phone Line (SLIC) at any time by referring to the LED Indicators (page 14).

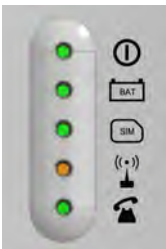
7. Connect the power supply 230VAC to J6 using the 3pin connector supplied with the unit.



- Clamp the power cable using the gray clamp provided inside the box.

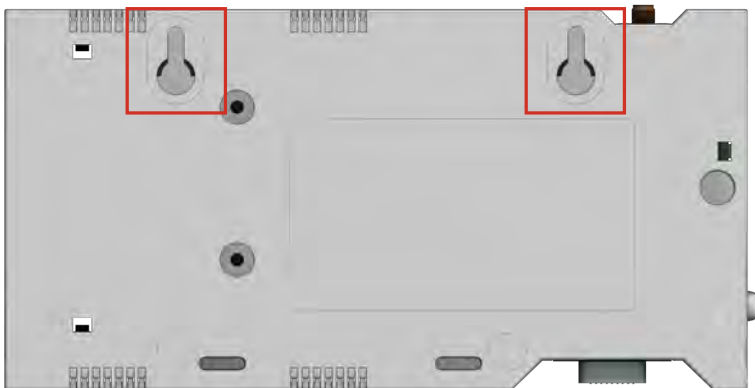


- Place the lid back on the top of the DCP and fasten the lid with the screw.
- Turn on the power to the DCP. The RUN LED on the DCP should change color from flashing amber to flashing green when the mains power connection is made. If you see any other color, please consult the LED Indication list on page 14.



RUN LED flashes green	Power supply is OK
BAT LED is always on	Battery is OK
SIM LED is green or amber	Device is connected to the network
Coverage LED is green or amber	Good coverage
SLIC LED is green	Device is in standby

- To fix the device in position, drill two holes in the wall and insert the plugs and screws provided with the device. Hang the DCP on these two points using the tear-shaped holes at the back box of the DCP (mid points of holes are 4.13in apart).



- If a non-Avire SIM card is used, APN settings must be set prior to configuring it on the Avire Hub; please refer to “Setting Parameters on non-Avire SIM cards” (page 5). If the SIM LED is flashing red, please see “SIM Card unlocking” (see page 4).

SIM CARD UNLOCKING

Important Note: An Avire SIM card doesn't have a SIM PIN code; if the SIM LED is flashing red, please make sure that the SIM card has been inserted correctly. The SIM PIN code for other network providers may vary and it can usually be found on the outer plastic case of the SIM card.

OPTION 1

Disable the blocking PIN code using a conventional mobile phone. Plug the SIM into a different mobile device and delete SIM PIN code in the device settings.

OPTION 2

You can program the PIN code of the SIM card into the DCP using an analog phone plugged into to the J1A or J9 connection (please see page 12 for more details).

Enter DCP configuration mode: *1# wait for DCP voice command

Enter SIM card PIN parameter: XXXX#

xxxx is the SIM PIN code given by the service provider for SIM.

At this point, the SIM card LED (middle LED) will stop flashing red. If it does not, make sure the SIM is correctly inserted and you have entered the correct PIN.

Important Note: Check ADDITIONAL INFORMATION FOR PROGRAMMING THE DCP on page 11 for more information.

SETTING PARAMETERS ON NON AVIRE SIMS

OPTION 1

Super settings allow quick and easy configuration of APN settings, depending on the country and network provider. Configure settings for the DCP based on the tables below.

Example:

Digit 1	Digit 2	Digit 3	Digit 4
Country	SIM Network	Type of Connection	End of Command
7 = (Americas)	1 = (Avire SIM)	1 = (Avire HUB)	0

The Digital Communications Platform comes pre-configured with factory settings of 0000 (this configuration doesn't specify any use case or country).

Digit 1	Digit 2	Digit 3	Digit 4
Continent	SIMO Network	Type of connection	End of Command (0)

Digit 1	0	1-6	7	8
Continent	Default	Europe	Americas	Australasia

Digit 2	Network
0	default
1	AvireSim
2	AT&T
3	T-Mobile
4	Verizon
5	-
6	-
7	-
8	-
9	-

Digit 3	0	1	2	3
Type	Transparent Gateway	Avire Hub	P100	P100 + Avire Hub

Digit 4 is always 0 (zero).

Once all digits are selected, the text needs to be sent to the SIM card telephone number along with the PIN code and command. Response should show:

Pin1234, P091 4310

MK-775: TRACK_GSM_MK_775
P091=4310

OPTION 2

If super settings are not used, then APN settings need to be set up manually:

Command	Description	Parameters
P060 (P zero six zero)	SIM0 configurations	APN name ; APN username ; APN password*
P061 (P zero six one)	SIM1 configurations	APN name ; APN username ; APN password*
P063 (P zero six three)	Type of connection	<i>Shared by both SIM cards</i>

* Separated by “;”

These parameters must be configured by sending an SMS to the SIM card number. Examples for various regional providers are shown below:

Carrier	APN name	APN username	APN password
AT&T	phone	(blank)	(blank)
T-Mobile	fast.t-mobile.com	(blank)	(blank)
Verizon	vzwinternet	(blank)	(blank)

P063	0	1	2	3
Type	Transparent Gateway	Avire Hub	P100	P100 + Avire Hub

Other APN settings are available on the web and can be easily found online. If an APN is incorrect for the provider or is not set up correctly, the DCP will not check into the Avire HUB.

Important Note: The default PIN code for DCP is always 1234.

If either the APN username and/or APN password are (blank) and the DCP is configured to be used with the Avire Hub, then the text message will be (example is for AT&T):

Pin1234, P060 phone, P063 1

If everything is configured correctly, within a few minutes you will receive text back:

Pin1234, P060 phone, P061
fast.t-mobile.com, P063 1

MK775: TRACK_GSM-MK-775
P060= phone
P063= 1

Obtaining the CCID number

AVIRE SIM CARDS

Avire SIM cards come unlocked to be used with our products immediately after plugging them in and setting correct Super settings. You will need to know the CCID number to add this information to the Avire Hub.



The CCID Number is shown on the back of the SIM card and also on the outer plastic case of the SIM card (highlighted in red on the picture below).



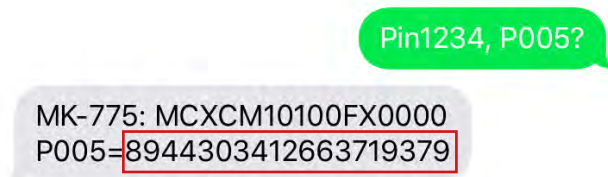
Important Note: CCID number consists of 19 digits.

NON-AVIRE SIM CARDS

It is also possible to retrieve the CCID number by sending a SMS command to a SIM card telephone number; the command needs to be separated by a comma as shown below:

Pin1234, P005?

You will receive a text with the CCID number back within a few minutes; in this example, the number shown after "P005=" is the CCID number of this SIM card.



Important note: Example CCID number is highlighted in red on picture above.

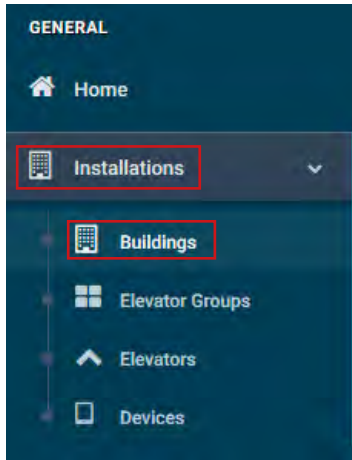
You will need to retrieve the CCID number when the DCP installation is set up on the Avire Hub online platform. Please make sure that if this installation is set up by the office, they know the details for installation.

AVIRE HUB

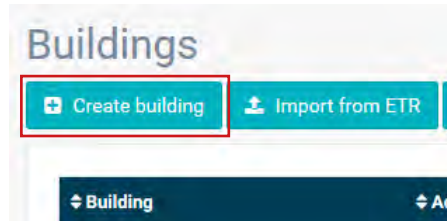
Please contact your local sales office for access to the Avire Hub.

The link to the Avire Hub is <http://avirehub.avire-global.com>

To view installation tutorial videos please go to the “Help” section of the Avire Hub.



Click on “Installations” in the menu on the side and then on “Buildings”. Inside of “Buildings” tab click on “Create Building”



Enter information relevant to your installation in General data

General data

Building *	<input type="text"/>
Address *	<input type="text"/>
City	<input type="text"/>
Province	<input type="text"/>
Latitude	<input type="text"/>
Longitude	<input type="text"/>
Postcode	<input type="text"/>
Country	Select <input type="text"/>
Comments	<input type="text"/>
Tags	add a tag <input type="text"/>
Group	ABC Ascenseurs <input type="text"/>

On the other side of the page please enter the number of elevator groups you have in this installation and how many elevators you have in each group. As an example, if this is a simplex installation the number of elevator groups will be “1” and the number of elevators will also be “1”. If it’s a duplex installation it will be “1” and “2” respectively.

Form

Number of elevator groups: 1

Number of elevators per elevator group

Change name of elevators group: Group 1

Select number of elevators: 1

Next >

You can also edit the group names to easily identify installations. Once all information is entered click “Next”.

In the new page, you should be able to see Groups and Elevators. Click on “Add Gateway” under “Gateway” tab and select “DCP 4G”. A pop up window will appear where you can enter the SIM information (Note: Avire SIMs are (+31), but this doesn’t affect costs). Enter all required information and then click “Apply”.

Note: The Background Call Period is the frequency of test checks and 72hrs is the maximum period as per guidance from EN standards.

Group 1

Add gateway

Add elevator

Devices

- DCP
- LandLine
- GSM Link
- LAN
- DCP-4G

Gateway

Add gateway

Elevator 1

Add emergency device

Add device

Edit gateway: DCP-4G

Phone: Avire SIM +31

Phone 2: Avire SIM +31

Identifier

CCID

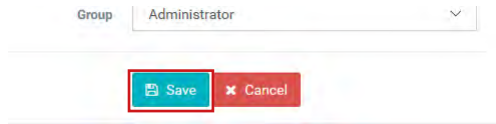
CCID 2

Background Call Period (Hours): 72

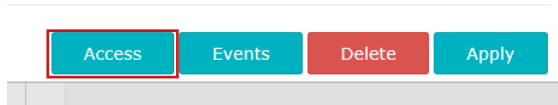
Delete Apply

Note: if you are installing a 3G DCP please select *DCP* in the menu

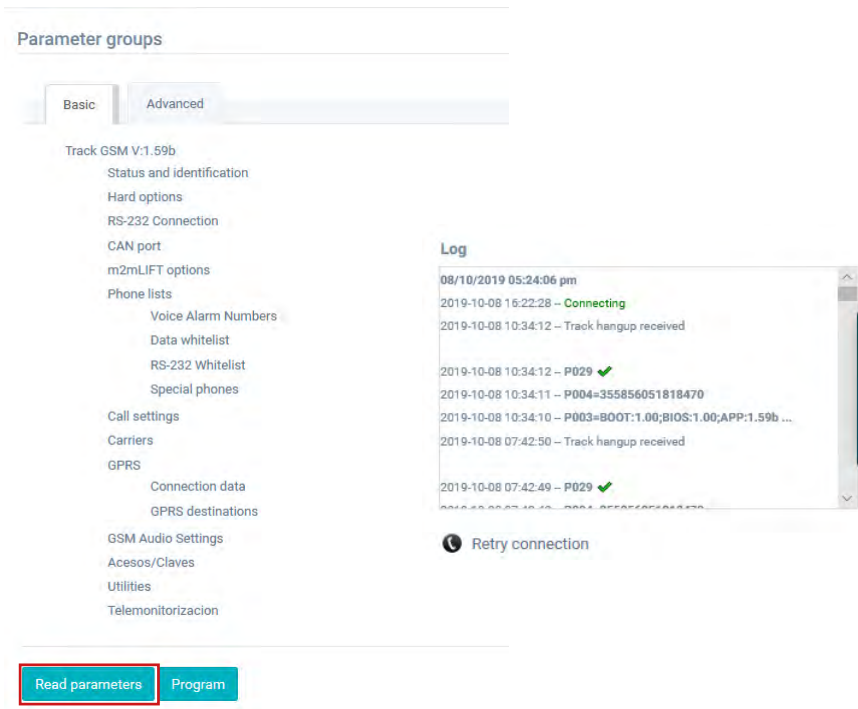
Click “Save” in the left corner under the General data column.



To make sure that everything has been set up correctly click on the green DCP button. The buttons “Access” and “Events” should now be accessible.



Click on the “Access” button.



Please click on the “Read Parameters” button. On the right hand side of the page you will see a window with time, date and the word “Connecting” shown in green. Once the DCP is connected to the Avire Hub parameters will appear. This means your DCP is ready to be connected to emergency phones and other products within our Ecosystem.

ADDITIONAL INFORMATION FOR PROGRAMMING THE DCP

SMS COMMANDS

- + All DCP parameters can be remotely configured via SMS sent to the SIM card's number.
- + Each SMS message should begin with 'Pin1234' which is the access code to read or make any changes to the configuration of the DCP.
- + You can modify or check several parameters in each SMS by separating them with commas ","

To send parameter information:

Text	Description
Pin1234, Pzzz xxx (send)	<ul style="list-style-type: none"> • Pin1234 is default PIN code for DCP • Pzzz is the programming command • xxx is the parameter

To read parameter information:

Text	Description
PinXXXX, Pzzz? (send)	<ul style="list-style-type: none"> • Pin1234 is default PIN code for DCP • Pzzz is the programming command • "?" is to request a parameter read

Note: Use a question mark "?" when you are reading parameters.

Examples:

1. To program telephone number 1 in the DCP when connected to a DAU

E.g: Pin1234, P031 0123456789 (send, text message will come back with P031=0123456789)

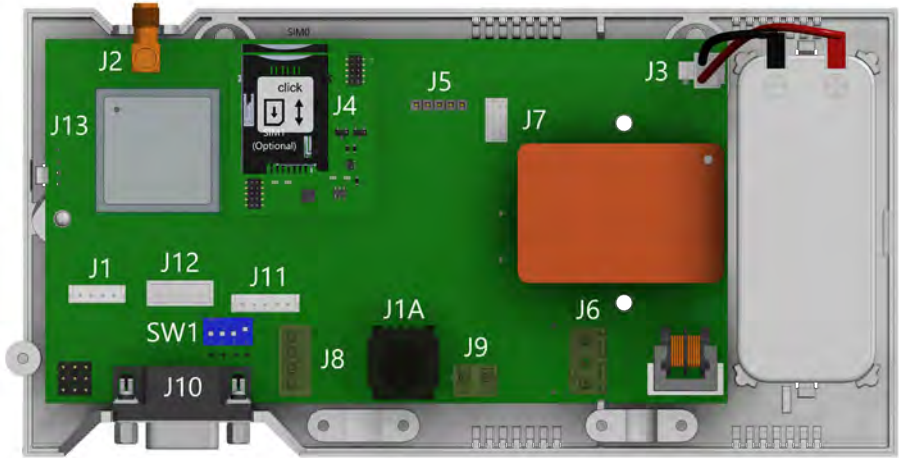
2. To retrieve telephone number 1 in the DCP when connected to a DAU

E.g: Pin1234, P031? (send, text message will come back with P031= or with the programmed number)

CMD	Description	Default value
P005	CCID- Unique Identifier of the Sim Card	(19 digits)
P020	DCP Background Call Mode P020=00 -> Transparent Protocol P020=06 -> CAN Protocol P020=21 -> P100 Protocol	21 (Autodialer's need to make Background calls in P100 Protocol)
P064	Background Call Periodicity (in Minutes)	4320 (3 days)
P030	Maintenance Alarm Number	(Blank)
P031	Alarm Number 1	(Blank – Insert your alarm number here)
P032	Alarm Number 2	(Blank)
P033	Alarm Number 3	(Blank)
P034	Alarm Number 4	(Blank)
P035	Background Number (not used with DAU)	3308084431 (must match Background Number in Autodialer, without prefixes)
P008	Enable Guidance Message *	0 (disabled)
P085	Language	4 (English)
P091	Super settings set up	000
P003	DCP information (software version, type of DCP)	As per package

Important Note: The default PIN code for DCP is always 1234.

Connector Description



	Description
J2	External antenna
J3	Battery
J6	Power Supply
J8	CANBus
J9/ J1A	Phone line
J10	Serial connector
J11	Programable I/O

To access dipswitches and connectors, open the DCP case by unfastening the front screw (using a PZ1 screwdriver) and removing the lid.

J2 - External antenna - Connect the external antenna delivered with the kit to the J2 connector. Only antennas approved by Avire should be used in the installation, otherwise the device might not function properly and may be damaged.

J3 - Battery

Pin	Function	Signal
1	+12	Positive
2	GND	Negative

J6 - Power Supply

Pin	Function	Signal
1	L	Live
2	N	Neutral

Supply voltage: 100-240 VAC, 50/60 Hz

J8 - CANBus

Pin	Function	Signal
1	VCC	Unregulated output
2	CANH	Bus CAN H
3	CANL	Bus CAN L
4	GND	Ground

VCC is an unregulated output 10-21 VDC + battery support 10-14 VDC

J9/ J1A - Phone line (SLIC)

Pin	Function	Signal
1	L1	Tip
2	L2	Ring

J10 CONNECTOR - RS-232 or 422/485 Serial Connector

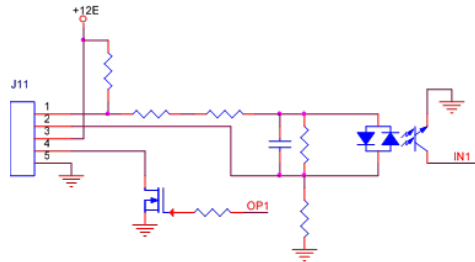
The J10 connector is a standard serial communication port that allows the connection of computers, controls or any other device that needs remote communication through a reliable wireless data channel. The connectivity provided by the port is in real time and acts as a point to point transmitter.

Pin	Signal		Pin	Signal	
2	TX	Out	7	RTS	Out
3	RX	In	8	CTS	In
5	Ground	Ground	RS-232		

Pin	Signal		Pin	Signal	
2	T+	T+ RS422	7	T-	T- RS422
3	R-	R- RS422	8	R+	R+ RS422
5	Ground	Ground	RS-422		

J11 - Digital Input/ Output

Pin	Function	Signal
1	AK1	Input Outo-Coupler
2	AK2	Input Outo-Coupler
3	VCC	Output 10-21 VDC
4	OP1	Open collector Mosfet N
5	GND	Ground



LED INDICATORS



The DCP has five indicator LEDs that constantly report the device status. The indicators will be either red, amber or green.

Each indicator will be fully on, fully off or flashing. On startup, you should see the following within 60 seconds:





RUN LED flashes in green.	Power supply is OK
BAT LED is always on	Battery is OK
SIM LED is green or amber	Device is connected to the network
Coverage LED is green or amber	Good coverage
SLIC LED is green	Device is in standby


The below tables provides an overview for what each LED color means:

RUN LED	OFF	ON			FLASHING		
		Green	Amber	Red	Green	Amber	Red
		CRITICAL SYSTEM ERROR			Proper Operation (AC)	Proper Operation (BAT)	Restarting System
BATTERY	OFF	ON				FLASHING	
		Green	Amber	Red	Orange	Red	
		OK	Charging	Low	DAU battery failure	Error	

Important Note: DCP shows battery status of DCP or battery failure of any attached DAU units as per EN81-28:2018.

SIM	OFF	ON			Flashing		
		Green	Amber	Red	Green	Amber	Red
	AT modem	Available GSM and GPRS	GSM available GPRS not available	Out of Service / Initializing	Ongoing Data Transmission	Ongoing voice call	Sim error or missing pin
		Amber/Red Missing PUK					

COVERAGE	OFF	ON		
		Green	Amber	Red
	AT modem	OK	Medium	Low

SLIC	OFF	ON			Flashing
		Green	Amber	Red	Green
	RS-232 local configuration	Local line ready	Initializing local line	Local line out of service	Local line in use

System Architectures



DCP



Lift HAWK



Connex-01



NavBox



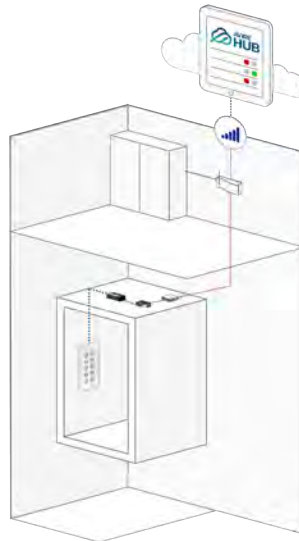
Display

Detector

Panachrome
Controller

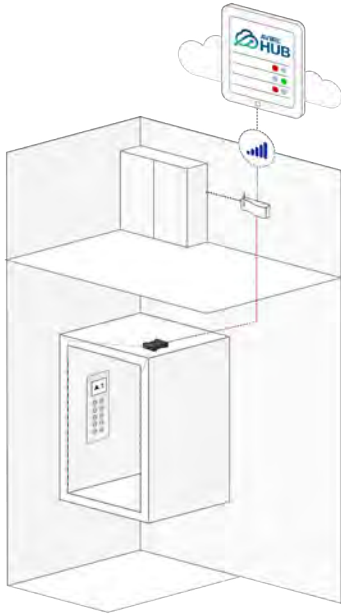


Elevator system architecture with DCP and elevator monitoring (Lift HAWK, Connex-01, NavBox)

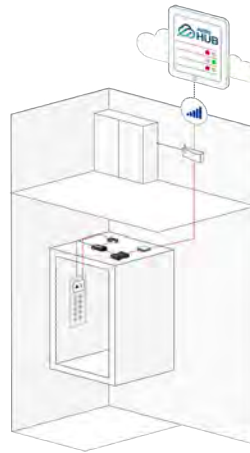


- DC Input
- RS232 or RS444/ RS485
- CAT5
- 4- Wire CAN Bus
- Mains Power Connection
- Cellular link to Hub

Elevator system architecture with DCP and door detector equipment.



Elevator system with DCP, display, door detector and elevator monitoring equipment (Lift HAWK, Connex-01, NavBox).



INSTALLATION

The equipment is intended for installation in restricted areas by qualified personnel.

ENVIRONMENT CONDITIONS

This device is designed to be used indoors (-10°C to 65°C with relative humidity between 20% to 80% not condensing). Sudden changes of temperature and humidity should be avoided.

CLEANING AND MAINTENANCE

Use a soft dry cloth. Do not use solvent or abrasive products.

SAFETY

Please read these safety instructions before starting the device.

- + Do not expose this device to liquids or excessive humidity. The DCP is an indoor device and is not waterproof.
- + Do not expose the device to fire.
- + Do not try to modify the device.
- + Do not use the device in potentially hazardous areas or where there is risk of explosion.

The DCP emits low levels of radio frequency when in operation.

BATTERY

The DCP includes a NiCd 12 V/600 mAh battery that allows it to keep functioning in the event of a mains power failure.

This battery should be replaced every 4 years. Only install batteries authorized by Avire, and only allow qualified personnel to replace the battery.

This battery should be properly recycled and not disposed of with unsorted household waste. Please take all necessary precautions when changing the battery.

DISPOSAL

The device complies with regulations 2002/95/CE and 2003/108/CE regarding the use and disposal of hazardous substances in electric appliances.

Do not dispose of this device with unsorted household waste. Disposing of the device in an unauthorized way could result in a fine in line with local regulations.

ENVIRONMENTAL REGULATIONS

RoHS - Avire certifies that its production process complies with the 2011/65/EU European Directive of 03 January 2013 regarding the restriction of use of hazardous substances in electric and electronic appliances.

GENERAL NOTE

Any wiring or plug used together with the equipment must be certified in line with relevant product standards. The wiring insulation must comply with the applicable IEC 60332 or IEC 60695/11/21 standards.

Manufacturer: Avire
Model name/ number:
DCP Digital Communication Platform 4G 1 Sim/ AC-4CM10-640-F-20-000

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