



# Software Release Documentation MasterIV 04.02, 04.03

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9.7	Released at October 7 <sup>st</sup> 2020	Firmware 04.03.15.07	DatafoxStudioIV 04.03.15.07	DFCom 04.03.15.07 .....	33
9.8	Released at October 14 <sup>st</sup> 2020	Firmware 04.03.15.08	DatafoxStudioIV 04.03.15.08	DFCom 04.03.15.08 .....	34
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10.3	Released at January 26 <sup>th</sup> 2021	Firmware 04.03.16.03	DatafoxStudioIV 04.03.17.03	DFCom 04.03.17.02 .....	38
10.4	Released at February 10 <sup>th</sup> 2021	Firmware 04.03.16.04	DatafoxStudioIV 04.03.17.04	DFCom 04.03.17.02 .....	39
10.5	Released at March 3 <sup>rd</sup> 2021	Firmware 04.03.16.05	DatafoxStudioIV 04.03.17.04	DFCom 04.03.17.02 .....	39
10.6	Released at March 18 <sup>th</sup> 2021	Firmware 04.03.16.06	DatafoxStudioIV 04.03.17.05	DFCom 04.03.17.05 .....	39
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11.2	Released at March 18 <sup>th</sup> 2021	Firmware 04.03.17.02	DatafoxStudioIV 04.03.17.05	DFCom 04.03.17.05 .....	40
11.3	Released at March 24 <sup>th</sup> 2021	Firmware 04.03.17.03	DatafoxStudioIV 04.03.17.05	DFCom 04.03.17.05 .....	41
11.4	Released at March 31 <sup>st</sup> 2021	Firmware 04.03.17.04	DatafoxStudioIV 04.03.17.05	DFCom 04.03.17.05 .....	41
11.5	Released at April 14 <sup>th</sup> 2021	Firmware 04.03.17.05	DatafoxStudioIV 04.03.17.05	DFCom 04.03.17.05 .....	42
11.6	Released at April 21 <sup>th</sup> 2021	Firmware 04.03.17.06	DatafoxStudioIV 04.03.17.05	DFCom 04.03.17.05 .....	42
11.7	Released at April 28 <sup>th</sup> 2021	Firmware 04.03.17.07	DatafoxStudioIV 04.03.17.05	DFCom 04.03.17.05 .....	43



11.8	Released at May 6 <sup>th</sup> 2021	Firmware 04.03.17.08	DatafoxStudioIV 04.03.17.05	DFCom 04.03.17.05 .....	43
11.9	Released at May 19 <sup>th</sup> 2021	Firmware 04.03.17.09	DatafoxStudioIV 04.03.17.05	DFCom 04.03.17.05 .....	43
11.10	Released at June 10 <sup>th</sup> 2021	Firmware 04.03.17.10	DatafoxStudioIV 04.03.17.06	DFCom 04.03.17.06 .....	43
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11.12	Released at July 14 <sup>th</sup> 2021	Firmware 04.03.17.12	DatafoxStudioIV 04.03.17.06	DFCom 04.03.17.06 .....	44
11.13	Released at July 21 <sup>th</sup> 2021	Firmware 04.03.17.13	DatafoxStudioIV 04.03.17.06	DFCom 04.03.17.06 .....	45
11.14	Released at July 28 <sup>th</sup> 2021	Firmware 04.03.17.14	DatafoxStudioIV 04.03.17.06	DFCom 04.03.17.06 .....	45
11.15	Released at August 4 <sup>th</sup> 2021	Firmware 04.03.17.15	DatafoxStudioIV 04.03.17.06	DFCom 04.03.17.06 .....	46
11.16	Released at August 12 <sup>th</sup> 2021	Firmware 04.03.17.16	DatafoxStudioIV 04.03.17.06	DFCom 04.03.17.06 .....	46
11.17	Released at August 25 <sup>th</sup> 2021	Firmware 04.03.17.17	DatafoxStudioIV 04.03.17.06	DFCom 04.03.17.06 .....	47
11.18	Released at September 16 <sup>th</sup> 2021	Firmware 04.03.17.18	DatafoxStudioIV 04.03.17.06	DFCom 04.03.17.06 .....	47
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## 1 Compatibility of Hardware, Software and Firmware Versions

### 1.1 Scheme for enumerating MasterIV versions

The configuration tool DatafoxStudioIV uses a version scheme 04.yy.zz.  
The system is put to use starting with the 4<sup>th</sup> software generation.

### 1.2 Structure of the version number

The version number is structured into the following sections:

Product name	XX.	YY.	ZZ.	Build
	Software generation release number	Compatibility	Release number	Patch Level

#### Note:



The quadruple of software generation, compatibility, release number and patch level are identifying a unique release version number. The build- and version number may be different between Firmware, DatafoxStudioIV and DFCom – compatibility is still guaranteed.  
Example: Firmware 04.03.00.23 is compatible to DatafoxStudioIV 04.03.01.03 and DFCom 04.03.01.03.

- The SOFTWARE GENERATION identifies all versions of software for a specific hardware series.
- The COMPATIBILITY collects versions with equivalent features in functionality. In case of very basic hardware or software changes, this number is increased, e.g. when enhancing access control from version 1 to version 2 or when changing the hardware from V2 to V3 devices.
- The RELEASE NUMBER separates planned functionality upgrades. A feature enhancement creates a new version number, e.g. adding http Level 1 functionality changed 04.03.09.xx to 04.03.10.xx.
- A change in patch level represents an update version corresponding to a bug fix release.

#### Attention:



When using DatafoxStudioIV, the release number of the Studio and the DFCom must match. Using DatafoxStudioIV 04.03.01.xx requires using DFCom 04.03.01.xx as well, DatafoxStudioIV 04.03.02.xx would require DFCom 04.03.02.xx.

DatafoxStudioIV and the DFCom can be used to handle firmware version up to their release number. This means, if you are using firmware releases 04.03.01.xx, 04.03.02.xx and 04.03.03.xx you will need at least DatafoxStudioIV and DFCom 04.03.03.xx

### 1.3 Compatibility between DatafoxStudioIV – DFCom – Firmware

DatafoxStudioIV	DFCom	Firmware
04.03.00	04.03.00	04.03.00
04.03.01	04.03.01	04.03.00 – 04.03.01
04.03.02	04.03.02	04.03.00 – 04.03.02
04.03.03	04.03.03	04.03.00 – 04.03.03

Please interpret the table above in the following way:

If you are using DatafoxStudioIV version 04.03.02.01 the DFCom version has to be 04.03.02.01. You may process Firmware releases 04.03.00.xx up to 04.03.02.xx.

### 1.4 Compatibility of Hardware versions

This section shows, which firmware versions may be used with hardware versions. The hardware version is included from software release 04.01.xx into the devices and may be accessed using the BIOS dialog from DatafoxStudioIV.

Hardwareversion	Flash Memory	Controller	Firmware version
1.1	ATMEL (AT45DB161)	ATmega128	04.00
1.2 – 1.4	ATMEL (AT45DB161)	ATmega128	04.00 – 04.01
2.0 – 2.1	ATMEL (AT45DB321C/D)	ATmega128	04.01
3.0	ATMEL (AT45DB642D)	ATmega2560	04.02
4.0		ARM Cortex M4	04.03



#### Attention:

For Hardware revision V4, you may only use firmware versions 04.03. Hardware revision 3.x may not use firmware release 04.03.



#### Note:

- If an enhancement/change affects both firmware and software, it is categorized as a firmware topic.
- The manual is amended for enhancements and functional changes. Please note, that these changes will be described in a software amendment as well.
- With hardware revision (also called EVO-Line devices), the devices come with a vast set of functions and combinations thereof. Thus not every combination can be tested during the release test – especially not all combinations used by our customers in setups, we do not know. Therefore it is required that every setup is tested prior using it with an updated version of the firmware. Downward compatibility cannot be guaranteed fully. Please inform us should you encounter any problems linked to a firmware update.



## 2 Release Version 04.02.05

### 2.1 Released at January 29<sup>th</sup> 2018 Firmware 04.02.05.58 DatafoxStudioIV 04.03.10.12 DFCom 04.03.10.12

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	TimeboyIV	FW	.58	When showing a message on the Timeboy's display, the last line of the message was not displayed. This error was corrected.
Bugfix	TimeboyIV	FW	.58	Correction concerning the cyclic communication during power saving mode. Diagnosing a powered Timeboy did not work properly before this change.
Bugfix	http Proxy Server	Studio	.11	The system variables assigned to the http proxy configuration was not read correctly from the INI file. This has been corrected now.
Bugfix	Setup Editor	Studio	.10	<ul style="list-style-type: none"> <li>- Copying and moving entries within the setup tree to an empty chain correct. Here, a crash could occur.</li> <li>- When renaming entries within the setup tree, the DatafoxStudioIV could experience a crash under certain conditions. This has been corrected.</li> </ul>
Bugfix	Communication	DFCom	.12	When setting a session timeout of 0 using DFComSetCommunicationPasswort, this lead to renegotiation of the communication channel every second. This behaviour has been corrected now.
Bugfix	Logging	DFCom	.12	Extracting data records from a DFCom log file now takes the Thread-ID and the Process-ID into account.
Enhancement	Bluetooth for Timeboy	FW	.58	Bluetooth is now available for all Timeboys that do not include a Mifare transponder reader.

### 2.2 Released at September 10<sup>th</sup> 2018 Firmware 04.02.05.59 DatafoxStudioIV 04.03.11.11 DFCom 04.03.11.11

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	TimeboyIV	FW	.59	Some device showed the behaviour of delayed display switch-on upon the user switch on event. This behaviour could be observed at devices having main communication set to cell phone network and having been pulled from their docking station recently. This behaviour has been corrected.
Enhancement	TimeboyIV	FW	.59	The sys log entry when operating on cell phone network has been enriched by the reception signal strength (which is the current signal strength) and the minimally required signal strength (for a connection to the provider's network).

### 2.3 Released at November 11<sup>th</sup> 2018 Firmware 04.02.05.60 DatafoxStudioIV 04.03.11.11 DFCom 04.03.11.11

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Enhancement	TimeboyIV	FW	.60	Using the script function df(...) now allows to extract a substring from global variables. This is done by adding position information in brackets. ATTENTION: This function is NOT available for TimeboyIV devices equipped with a Mifare Desfire transponder reader.
Enhancement	TimeboyIV	FW	.60	Using a script function, the value of a global variable my now be converted from hexadecimal representation to binary representation and vice versa (HexToBin(...) and BinToHex(...)) ATTENTION: This function is NOT available for TimeboyIV devices equipped with a Mifare Desfire transponder reader.

**2.4 Released at June 18<sup>th</sup> 2020****Firmware 04.02.05.62****DatafoxStudioIV 04.03.15.01****DFCom 04.03.15.01**

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Enhancement	TimeboyIV	FW	.62	Using Hitag1 transponders, the transponder's ID may now be retrieved as so-called Feig-ID.
Optimization	TimeboyIV	FW	.62	If errors with the sim card occur, the modem reboots much faster.

**3 Release Version 04.03.09****3.1 Released at March 16<sup>th</sup> 2018****Firmware 04.03.09.18****DatafoxStudioIV 04.03.10.12****DFCom 04.03.10.12**

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	2D Barcode Reader	FW	.17	The 2D barcode reader sent sporadically 0xFC characters before the transmission of the barcode read. Such a character is being filtered now, additionally the timing when triggering the barcode reader has been optimized, so that the reader has more time for startup.
Bugfix	EVO 3.5	FW	.17	Corrections applied to the display timing to prevent sporadic "white screen" effect.
Bugfix	EVO ZK Leser Plus	FW	.17	The EVO ZK Leser Plus could not be set to use bus address 0. This is possible now.
Bugfix	Flash Reorder	FW	.17	Devices with Atmel Flash (shipped roughly until March 2017) sporadically experienced startup problems after formatting the flash memory. In these conditions the device showed cyclic restarts and has been corrected with the current firmware release.
Bugfix	IO	FW	.17	Computing the signal processing configuration parameter (counter divider, timeout, cycle, ...) for inputs greater than 16 yielded wrong parameters. The firmware now ensures, that these parameters are only taken directly from the setup settings (and not from the system variable section of the flash memory)
Bugfix	Sending SMS	FW	.17	Sending short text messages using a cell phone modem did not work for firmware release 04.03.09.xx for xx < 17 sometimes. The firmware was corrected to ensure that a short text message is being sent properly.
Bugfix	ZK (Access Control)	FW	.17	Changing a door's mode from blocked access to standard access using a PHG RFID reader lead to this reader not being available for access control until next restart of the master. This behaviour has been corrected in this release.
Bugfix	ZK (Access Control)	FW	.17	In rare conditions, the field function "access control with GV" using an external DataOnCard RFID reader lead to system restart. To trigger this behaviour, the master may not have an AC-bus configured and the DataOnCard RFID reader had to be the only reader in the RD485 bus. This setup is handled correctly now.
Bugfix	http Proxy Server	Studio	.11	The system variables assigned to the http proxy configuration was not read correctly from the INI file. This has been corrected now.
Bugfix	Setup Editor	Studio	.10	- Copying and moving entries within the setup tree to an empty chain correct. Here, a crash could occur. - When renaming entries within the setup tree, the DatafoxStudioIV could experience a crash under certain conditions. This has been corrected.
Bugfix	Communication	DFCom	.12	When setting a session timeout of 0 using DFComSetCommunicationPasswort, this lead to renegotiation of the communication channel every second. This behaviour has been corrected now.
Bugfix	Logging	DFCom	.12	Extracting data records from a DFCom log file now takes the Thread-ID and the Process-ID into account.



Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Enhancement	AE-MasterIV	FW	.17	Analogue input values have not been displayed on then info page of the AE-Master. This has been corrected.
Enhancement	Transponder	FW	.17	Support for the RFID reader PHG Relino B has been added. The Relino B does not provide DataOnCard-functionality currently.
PCN 2017P1	Hardware	FW	.18	Support for the updated LED Backlight module (used for Transponder, Logo, etc.) and new touch screen controller for the EVO 4.3 has been added according PCN Email from September 20 <sup>th</sup> 2017.
Bugfix	Fingerprint	Studio	.11	<ul style="list-style-type: none"> <li>- The dialog for deleting fingerprint template remotely on the device did wrong error handling. This dialog now correctly displays the cause, if removing the fingerprint templates failed.</li> <li>- Checking for fingerprints in the sensor was done wrongly during restore of a fingerprint template backup. This led to fingerprint template not being deleted in previous versions during restore.</li> <li>- The field function "Fingerprint: Finger Administration" used the global variable selected on the last page of the editor. This has been changed to the global variable on the first page of the editor.</li> </ul>

3.2 Released at March 22<sup>nd</sup> 2019

Firmware 04.03.09.20

DatafoxStudioIV 04.03.12.05

DFCom 04.03.12.05

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	Flash Driver	FW	.09.20	Wear-Levelling for the flash memory enhanced, so that flash lifetime does not deteriorate when the device is being used in http/https mode.
Enhancement	Hardware-V4 Devices	FW Studio	.09.20 .12.05	Support for new hardware components added according to <b>PCN 2018-P-02</b> excluding EVO 3.5 Universal. Please see <a href="https://www.datafox.de/dfr/index.php?dir=pcn.2018-2&amp;sort=T&amp;order=D">https://www.datafox.de/dfr/index.php?dir=pcn.2018-2&amp;sort=T&amp;order=D</a> .

## 4 Release Version 04.03.10

4.1 Released at March 16<sup>th</sup> 2018

Firmware 04.03.10.10

DatafoxStudioIV 04.03.10.12

DFCom 04.03.10.12

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	2D Barcode Reader	FW	.07	The 2D barcode reader sent sporadically 0xFC characters before the transmission of the barcode read. Such a character is being filtered now, additionally the timing when triggering the barcode reader has been optimized, so that the reader has more time for startup.
Bugfix	Active Mode Failover	FW	.09	With activated NOTIFY option active mode failover did not work properly. The device did no not reconnect to the secondary server after a fallback, provided the primary server was not reachable. This behaviour has been corrected.
Bugfix	EVO ZK Leser Plus	FW	.07	<ul style="list-style-type: none"> <li>- The EVO ZK Leser Plus could not be set to use bus address 0. This is possible now.</li> <li>- RFID tags could not be read when a USB cable was attached to the EVO ZK Leser Plus.</li> </ul>
Bugfix	Fingerprint optical sensor	FW	.07	<ul style="list-style-type: none"> <li>- Backup and restore of fingerprint templates returned an unknown error in some cases. The error reporting has been corrected.</li> <li>- Enrolling a user with PID 0 lead to all fingerprint templates on the module being erase. Using PID 0 during enrolment is prevented now.</li> </ul>
Bugfix	http	FW	.08	With version 04.03.10.07 datasets were not reported correctly using http protocol, provided there were datasets present on the device during system

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
				startup. This behaviour has been corrected with 04.03.10.08.
Bugfix	http / Service Mode	FW	.09	Provided an active mode server is configured, this server was not used as a maintenance server in http mode if the setup is erased on the device. This behaviour has been corrected.
Bugfix	Receiving SMS	FW	.07	Short text messages triggering the service mode were not interpreted correctly if the line end style was different than expected. This was corrected.
Bugfix	USB / LAN	FW	.08	With attached USB cable and detached LAN cable starting up USB communication took up to 20 seconds after rebooting the device. This time lag was reduced, so that a device reports quicker to a present USB connection.
Bugfix	ZK (Access Control)	FW	.07	Changing a door's mode from blocked access to standard access using a PHG RFID reader lead to this reader not being available for access control until next restart of the master. This behaviour has been corrected in this release.
Bugfix	Fingerprint	Studio	.11	<ul style="list-style-type: none"> <li>- The dialog for deleting fingerprint template remotely on the device did wrong error handling. This dialog now correctly displays the cause, if removing the fingerprint templates failed.</li> <li>- Checking for fingerprints in the sensor was done wrongly during restore of a fingerprint template backup. This led to fingerprint template not being deleted in previous versions during restore.</li> <li>- The field function "Fingerprint: Finger Administration" used the global variable selected on the last page of the editor. This has been changed to the global variable on the first page of the editor.</li> </ul>
Bugfix	http Proxy Server	Studio	.11	The system variables assigned to the http proxy configuration was not read correctly from the INI file. This has been corrected now.
Bugfix	Setup Editor	Studio	.10	<ul style="list-style-type: none"> <li>- Copying and moving entries within the setup tree to an empty chain correct. Here, a crash could occur.</li> <li>- When renaming entries within the setup tree, the DatafoxStudioIV could experience a crash under certain conditions. This has been corrected.</li> </ul>
Bugfix	Communication	DFCom	.12	When setting a session timeout of 0 using DFComSetCommunicationPasswort, this lead to renegotiation of the communication channel every second. This behaviour has been corrected now.
Bugfix	Logging	DFCom	.12	Extracting data records from a DFCom log file now takes the Thread-ID and the Process-ID into account.
Enhancement	Fahrzeugdatenlogger (Vehicle Data Logger)	FW	.07	Correction concerning the cyclic communication during power saving mode. Diagnosing a powered Timeboy did not work properly before this change.
Enhancement	GPS-Navi-Mouse	FW	.07	Support for GPS Navi Mouses using a LEA 7 module has been added.
Enhancement	Logging	FW	.09	<ul style="list-style-type: none"> <li>- Logging of time slices for executing an http transaction (log switch HTTP) has been added. If enabled, the starting timestamp (OPEN, ms since system startup), the time used for establishing the connection (ESTABLISHED, ms since OPEN), time used for sending the query (SEND, ms since OPEN), time when receiving the first byte of the answer (RECV, ms since OPEN) and time when closing the connection (CLOSE, ms since OPEN) is logged along with the number of transmitted data PACKETS.</li> <li>- Logging of connection parameters for http transaction (log switch TCP/IP) has been added. Here, Source-IP-Address, Source-Port, Destination-IP-Address and Destination-Port are recorded.</li> <li>- Log texts up to 2000 characters are split into multiple lines in the log now.</li> </ul>

**4.2 Released at April 13<sup>th</sup> 2018****Firmware 04.03.10.12****DatafoxStudioIV 04.03.10.12****DFCom 04.03.10.12**

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	BIOS	FW	.12	<ul style="list-style-type: none"> <li>- Displaying the IP-Adresse of the Active-Mode Server corrected. Instead of the primary server's IP address, the address of the secondary server was display in LAN mode.</li> <li>- Fixes configuring the LAN parameters in the BIOS: <ul style="list-style-type: none"> <li>o During device startup changing of a network setting resulted in a device restart.</li> <li>o During normal operation, changing a network setting resulted in device restart if no LAN cable was connected.</li> </ul> </li> </ul>
Bugfix	Fingerprint line sensor	FW	.11	Disrupting influence on the line sensor caused by RFID readers operating at 13,56 MHz (Mifare or NFC) suppressed.

**4.3 Released at May 9<sup>th</sup> 2018****Firmware 04.03.10.13****DatafoxStudioIV 04.03.10.12****DFCom 04.03.10.12**

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	Fingerprint line sensor, Biokey	FW	.13	In versions 04.03.10.xx, the setting of the parameters of the fingerprint line sensor by the setup file was only accepted after a restart of the device. Changes to the parameters during operation therefore had no effect. Modified parameters for the fingerprint sensor are now applied each time the setup file is loaded.
Bugfix	EVO 4.3, Display	FW	.13	Due to pixel errors in the display of the Evo4.3, the control of the display has been further optimized.
Enhancement	http	FW	.13	The http-accept string has been extended by "application/x-www-form-urlencoded", it is now completely: "Accept: application/x-www-form-urlencoded, text/html\r\n".

**4.4 Released at May 18<sup>th</sup> 2018****Firmware 04.03.10.14****DatafoxStudioIV 04.03.10.12****DFCom 04.03.10.12**

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	Fingerprint optical sensor	FW	.14	Devices using the Saturn Fingerprint sensor did not start correctly using firmware 04.03.10.13.
Enhancement	http	FW	.14	The host header now includes the server's port (see RFC2616 section 14.23)

**4.5 Released at June 13<sup>th</sup> 2018****Firmware 04.03.10.15****DatafoxStudioIV 04.03.10.12****DFCom 04.03.10.12**

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	Digital inputs	FW	.15	The anti-beat threshold was roughly a factor five to large.
Bugfix	EVO 4.3	FW	.15	Pressing a touch key repetitively (e.g. during scrolling a list) could lead to a wrong touch key being reported.

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	EVO ZK Leser Plus	FW	.15	Entering a PIN is now possible fluidly again. With previous version sometimes a key press was lost.
Bugfix	WIFI	FW	.15	In active mode communication the other server configuration was used. This could lead to not establishing an active mode connection, e.g. if not alternate server was configured.
Bugfix	Product/IP protection	FW	.15	If the product / IP protection is active when a device tries to establish a connection in active mode, this is possible only when the DFCom channel was preconfigured with the password. Now the connection can be established – it is sufficient if the password is assigned after establishing the connection before the first data packet is exchanged.
Enhancement	ZK-Knoten	FW	.15	PCB Version 1.3 is now supported. A downgrade to earlier firmware releases that 04.03.10.15 is not possible
Enhancement	Hardware	FW	.15	PCB Version 4.7 is now supported. This PCB is used for devices EVO 4.3, AE-Master, PZE-Master and FlexMaster. A downgrade to earlier firmware releases that 04.03.10.15 is not possible.

4.6 Released at August 10<sup>th</sup> 2018

Firmware 04.03.10.17

DatafoxStudioIV 04.03.10.12

DFCom 04.03.10.12

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	Communication	FW	.17	A query for devices in the access control bus resulted in an error, if devices were connected that had not been configured as readers with the access control lists. Now the status is being reported correctly.
Bugfix	Docking V2	FW	.17	If the docking station V2 is operated in "V1 compatibility mode", main communication RS232 or RS485 was not possible. This is now possible with 04.03.10.17.
Bugfix	WLAN	FW	.17	A safe-guard function for restarting the WIFI communication could be triggered by day light saving and clock adjustments over the network. Now, a monolithic clock is used, so that adjustments to the clock will not trigger the safe-guard any more, which could lead to tearing down the WIFI communication temporarily.
Bugfix	EVO ZK-Leser Plus	FW	.17	The warning message shown when the transponder configuration mismatches the built-in transponder reader was truncated and only partly readable. The text has now been adjusted for the display.
Bugfix	EVO ZK-Leser Plus	FW	.17	If the BIOS was entered while a warning message was being displayed, this message was not displayed after leaving the BIOS. The device thus suggested to be operative, although the warning's reason was not seen to. Now, the warning message is reissued, should to condition still be present when leaving the BIOS menu.
Bugfix	Fingerprint optical sensor	FW	.17	Sensors running the new firmware „DG_DF_06“ had problems when providing data for the fingerprint template backup operation. The issue is now corrected.
Bugfix	Systemvariables	FW	.17	Changes to system variables are now logged into the system logfile.
Enhancement	LAN	FW	.17	Upon transfer of the network configuration settings, the settings are now applied without a reboot. Previously, the device had to be restarted in order to apply the changes to the network configuration.
Bugfix	WIFI	FW	.17	The DNS query buffer could be overrun when querying long hostnames, which lead to a reboot of the device. The buffer has now been adjusted to match the hostname's length correctly.
Bugfix	IO-Modul	FW	.17	The communication with Datafox IO modules was possible only for devices, which had internal digital inputs. With this fix, no internal IOs are required to

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
				operate the IO module.
Bugfix	Touch	FW	.17	While collecting data for the touch screen statistics, the presence of the touch screen configuration was not checked. This is now checked, so that a missing touch screen configuration will not lead to a device reboot.
Bugfix	LAN	FW	.17	If the LAN cable was unplugged during a data transaction, the connection was closed after the TCP timeout only. With release 04.03.10.17, pending connections are terminated immediately uptime removing the LAN cable.

4.7 Released at August 28<sup>th</sup> 2018

Firmware 04.03.10.18

DatafoxStudioIV 04.03.10.12

DFCom 04.03.10.12

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	BIOS	FW	.18	When leaving the BIOS menu the device restarts, provided the communication method was set to http / WIFI and these settings have not been changed.
Bugfix	Fingerprint line sensor	FW	.18	When verifying against fingerprint templates stored on an RFID transponder, the verification did not identify the first finger if two finger templates were stored on the transponder. This behaviour has now been corrected.
Bugfix	Show a message at device	FW	.18	A device with activated screen blanker did not activate the display to show a message received through SendMessage. Now the screen is activated in order to display the message.

4.8 Released at October 18<sup>th</sup> 2018

Firmware 04.03.10.19

DatafoxStudioIV 04.03.10.12

DFCom 04.03.10.12

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Enhancement	EVO IPC Startup Behaviour	FW	.19	The start-up behaviour of the IPC is now configurable by a system variable. To change the start-up behaviour, please use the BIOS dialog of a DatafoxStudioIV 04.03.12.02 or newer. This version is available for download at <a href="https://www.datafox.de/dfr/index.php?dir=studio&amp;sort=T&amp;order=D">https://www.datafox.de/dfr/index.php?dir=studio&amp;sort=T&amp;order=D</a> .
Enhancement	Logging Cell phone network	FW	.19	When activated, the log switch „communication / mobile phone parameters“ adds the state changed of the cell phone modem to the system log.
Enhancement	Logging Access Control	FW	.19	When activated, the log switch „Application / Access control“ adds state changed of the access control module to the system log.
Bugfix	EVO 4.3 / Display	FW	.19	We have received isolated observations of an EVO 4.3 showing orange areas on the screen, typically when activating a touch key. These case have been corrected by adjusting the display timing.
Bugfix	EVO Agera (former EVO ZK Leser Plus)	FW	.19	An EVO Agera access control RFID reader reading a sector from a Mifare RFID transponder returned the transponder's serial number. This behaviour has been corrected.
Bugfix	Fingerprint line sensor	FW	.19	The fingerprint implementation could leak memory, provided the sensor did store finger templates of a different size than configured in the setup. This leak has been fixed. Please remind the warning issued by the DatafoxStudioIV when changing the fingerprint template format!
Bugfix	EVO IPC	FW	.19	Sending values of global variables from the embedded processor to the PC component resulted in no data being sent. This has been corrected.

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	LAN	FW	.19	An error in the network stack could lead to a memory leak – provided DHCP was activated. This leak occurred when either unplugging the network cable or plugging the USB cable. Especially unstable network connection thus lead to loosing small portions of memory repetitively, resulting in display errors or a rebooting device. This memory leak has been corrected.
Bugfix	Cell phone network	FW	.19	The timing for accessing the SIM card has been adjusted, since we observed, that there is an increasing amount of “slow” SIM cards appearing in the market. These card need more time for starting the authentication application than specified.
Bugfix	Access control	FW	.19	<ul style="list-style-type: none"> <li>The timing for accessing access control (AC) readers on the AC bus has been adjusted. This change resulted from an increasing amount of “autobaud” readers appearing in the field, that try to guess the busses baud rate rather than having switches to set it. The observation was readers creating an AC state 18 when guessing the wrong baud rate and being reconfigured.</li> <li>The timing for cyclically accessing the AC readers in the bus has been adjusted. The timing problem was the root cause for readers disconnecting from the AC bus and blinked for roughly a minute after that. This problem was observed mainly when Legic RFID readers were attached to the bus.</li> </ul>

#### 4.9 Released at November 30<sup>th</sup> 2018 Firmware 04.03.10.20 DatafoxStudioIV 04.03.12.05 DFCom 04.03.12.05 [PCN2018P2]

Category	Aspect	Type	.XX.XX	Description of enhancement, change or bug fix
Change	Device names	Studio	.12.00	The access control devices have been rebranded as the KYO family.
Change	Initialisation	DFCom	.12.05	The order in which the DFCom.ini is located by the DFCom has been changed. Please see DFCom documentation for details.
Change	Windows Support	Studio	.12.02	Support for Windows XP has been dropped.
Enhancement	Hardware-V4 Devices	FW Studio	.10.20 .12.05	Support for new hardware components added according to <b>PCN 2018-P-02</b> . Please see <a href="https://www.datafox.de/dfrc/index.php?dir=pcn.2018-2&amp;sort=T&amp;order=D">https://www.datafox.de/dfrc/index.php?dir=pcn.2018-2&amp;sort=T&amp;order=D</a> .
Enhancement	EVO 4.3	FW	.10.20	A vertical offset for the touch screen can now be configured. This offset applies to the keyboard area of the touchscreen only. To change this offset, please use the BIOS dialog at User Settings -> Touch -> Layout -> Offset. With this option a translation resulting from operating the device at an angle different than 90° can be compensated.
Enhancement	HTTP	Studio	.12.05	The maximum length of the HTTP send string has been increased from 39 to 63 characters.
Enhancement	IPC Fingerprint	FW Studio	.10.20 .12.02	Support for the optical fingerprint sensor has been added. Configuration and field functions for using the fingerprint sensor has been added for ICPs.
Enhancement	IPC Startup Behaviour	FW Studio	.10.20 .12.02	Power-On behaviour of the IPC may now be configured.
Enhancement	2D barcode scanner	FW	.10.20	Added support for replacement type EM3296 of the 2D barcode scanner.
Bugfix	KYO Oneloc (former ZK Knoten)	FW	.10.20	When being restarted the KYO Oneloc could interfere with the bus communication during start up. This behaviour has been corrected.
Bugfix	LAN	FW	.10.20	The LAN stack is being restarted when no communication was observed for a substantial time. This mechanism did observe ARP, UDP and TCP/IPv4 traffic but did not take ICMP traffic into account. ICMP traffic was added now and will thus prevent the automatic LAN restart.



Category	Aspect	Type	.XX.XX	Description of enhancement, change or bug fix
Bugfix	RFID	FW	.10.20	There was a timeout included into the restart of the transponder module. This restart could block the user's flow of operation, so that the device reacted slowly. This timeout has been corrected.
Bugfix	Setup	Studio	.12.04	The Datafox Studio allowed to branch to 13 of the 15 possible input chains only. This has now been corrected.

**4.10 Released at January 07<sup>th</sup> 2019**

**Firmware 04.03.10.21**

**DatafoxStudioIV 04.03.12.05**

**DFCom 04.03.12.05**

Category	Aspect	Type	.XX.XX	Description of enhancement, change or bug fix
Bugfix	Barcode scanner	FW	.10.21	When integrating the EM3296 barcode scanner in 04.03.10.20, the support for 1D barcode scanners was broken. This has been corrected.
Bugfix	http	FW	.10.21	<ul style="list-style-type: none"> <li>The computation of checksums used in http API Level 0 had a defect that could lead to computation of wrong checksums. This has been corrected.</li> <li>Setting up a service mode connection with activated communication encryption did not work – this problem has been corrected.</li> </ul>

**4.11 Released at March 22<sup>nd</sup> 2019**

**Firmware 04.03.10.22**

**DatafoxStudioIV 04.03.12.05**

**DFCom 04.03.12.05**

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	Flash Driver	FW	.10.22	Wear-Levelling for the flash memory enhanced, so that flash lifetime does not deteriorate when the device is being used in http/https mode.

**5 Release Version 04.03.11**

**5.1 Released at April 27<sup>th</sup> 2018**

**Firmware 04.03.11.01**

**DatafoxStudioIV 04.03.11.02**

**DFCom 04.03.11.02**

Type	Aspect	Comp.	.XX	Description of Change or Bugfix
Enhancement	Communication	FW	.01	TLS is now available for mobile communication using GRPS (LAN was available with 04.03.11.00, WIFI is still pending)
Bugfix	Communication	FW	.01	chunked-encoding in http/https communication is now processed correctly
Bugfix	Communication	FW	.01	Main communication using WIFI and RS485 is available again. This has been disabled with 04.03.11.00.

5.2 Released at July 3<sup>rd</sup> 2018

Firmware 04.03.11.02

DatafoxStudioIV 04.03.11.09

DFCom 04.03.11.09

Type	Aspect	Comp.	.XX	Description of Change or Bugfix
Bugfix	Communication	FW	.02	Http-Request-Headers for HTTPS-Exchanges now contain „GET https://...“ instead of „GET http://...“.
Enhancement	Communication	FW	.02	HTTPS using WIFI is now available.
Enhancement	Communication	FW	.02	The http communication mode („com.http“) allows now the follow settings: 0=off, 1=http und 2=https. This mode may now be changed directly using the devices' BIOS.
Enhancement	Communication	FW	.02	To support reverse proxies using SNI, the system variables „com.http_mode[0:1].tls.sni_mode“ have been added.
Enhancement	Communication	FW	.02	The system variable „http.flags“ has been added. The decimal number stored here is interpreted bitwise: <ul style="list-style-type: none"> <li>- Bit 0: Suppress sending the Port along with the HOST-Header. If this bit is not set, the server's destination port is sent.</li> <li>- Bit 1: Actively close a http/1.1 session for a requested service mode connection.</li> </ul>
Enhancement	Communication	FW	.02	Support for sending POST requests alternatively for GET requests has been added. This can be activated by starting the „com.http_mode[0:1].send“ system variable with POST as prefix instead of GET.
Enhancement	Communication	FW	.02	Experimental support for validating a certificated validity-period added.
Enhancement	WIFI	FW	.02	The WPA-PSK2 can now be supplied directly in the BIOS using the touch screen virtual keyboard (requires a touchscreen device with HardwareIV)

5.3 Released at August 14<sup>th</sup> 2018

Firmware 04.03.11.03

DatafoxStudioIV 04.03.11.11

DFCom 04.03.11.11

Type	Aspect	Comp.	.XX	Description of Change or Bugfix
Bugfix	BIOS	FW	.03	The server port is now correctly displayed in the user section of the BIOS menu.
Bugfix	EVO 4.3 / AE Master	FW	.03	A message sent though SendMessage (or http) was shown in the wrong layout. This led to not all text lines being readable by the user.
Bugfix	Fingerprint line sensor	FW	.03	Verification with two fingers stored on an RFID tag now works correctly. Matching of the first finger templated yielded an error internally, which has been corrected.
Bugfix	Optical fingerprint sensor	FW	.03	Support for new firmware DG_DF_06 on the optical fingerprint sensor has been added. Additionally the fingerprint module firmware release DG_DF_04 was obsolete for the optical fingerprint sensor, since creating a backup of the fingerprint template data would not work reliably on sensors running this firmware. The firmware will generate a warning message if you have such a sensor in your devices at startup time and prompt you for updating the firmware on the sensor module.
Bugfix	Send-Message Delay	FW	.03	Sending a message to device (either by SendMessage (DFCom) or df_message (http)) resulted in showing the message for a duration longer than specified. It could happen, that the message was removed from the screen only by a user interaction. This behaviour has been corrected.
Bugfix	WIFI	FW	.03	Checks for buffer overruns during list data download in http mode have been added. These could occur during periods with high system load and lead to incorrect list data being available at the device – typically the list then was rejected. Should a buffer overrun happen now, the WIFI receive bandwidth is reduced for list data transfer. The WIFI processing task then is restarted and an entry (WIFI: RECEIVE BUFFER OVERFLOW) is added to the system log.





Type	Aspect	Comp.	.XX	Description of Change or Bugfix
Change	Display	FW	.03	The display did not light up again on an incoming SendMessage command, should the energy settings have activated the screen blanker before.
Enhancement	BIOS (WIFI)	FW	.03	The BIOS menu now allows entering the PSK for a WPA2 connection – a device with a touch screen is required for this. Upon successfully establishing a connection to the access point, the WIFI configuration on the device may be updated according to the connection's parameters.
Enhancement	Hardware support	FW	.03	Support for EVO 3.5 Universal has been added.  According to PCN 2018-01 support for ZK Knoten V1.3 and Kombi-PCB V4.7 (affecting the devices PZE Master, AE Master and EVO 4.3) was added.
Enhancement	List processing	FW	.03	A processing error of list data is now written to the device's system log as „LINE <Line-Number, Content read>“ always..
Enhancement	Passive mode	FW	.03	In passive mode, a service mode connection can now be established as it was possible while GRPS (Service-SMS) or http (df_service) communication only in previous firmware versions. For this, you may set the system variable com.passive_mode.service to „1[,<Host>[,<Port>]]“. Should you omit host and/or Port in this process, the settings associated to the primary active mode server are being used.
Enhancement	System variables	FW	.03	Changes to system variables are now recording and added to the device's system log.
Enhancement	Updates for WIFI module and optical fingerprint sensor module	FW	.03	Datafox devices contain modules, which typically run a special firmware version for themselves. For the WIFI module (RS9110) and the optical fingerprint sensor this firmware can now be exchanged. Datafox Studio provides the menu entry “Configuration -> Update for module (*.iff)” for this purpose – which requires at least firmware version 04.03.11.03. Should you require to use a specific firmware release on the device but want to change a module's firmware, you may downgrade the device firmware after having programmed the modules using the firmware 04.03.11.03. The module firmware is not affected by the downgrade. However, please keep in mind that we cannot guarantee that every old device firmware release works properly with every combination of module firmware. A change of (parts of) software on the device always requires your test of the system.  The following firmware module updates are available: <ul style="list-style-type: none"> <li>- Optical fingerprint sensor <ul style="list-style-type: none"> <li>o DG_DF_06 (this firmware replaces DG_DF_04 and should be used instead of the older firmware)</li> </ul> </li> <li>- WIFI Module RS9110 <ul style="list-style-type: none"> <li>o Firmware 4.5.5 (supports 802.11 b, g and 802.11n in single stream mode)</li> <li>o Firmware 4.5.6 (supports 802.11 b, g – 802.11n is not supported by this firmware release)</li> </ul> </li> </ul>
Enhancement	HTTPS	FW	.03	Experimental support for client certificates. You may use client certificates with firmware version 04.03.11.03. To enable this function, you have to upload the client's certificate as “client.cert” and the corresponding private key as “client_key.cert” into the device. The device's system logfile may include a new entry “SECURE, NO CLIENT-CERTIFICATE AVAILABLE.”, that will inform you on the client certificate being available or not: <ul style="list-style-type: none"> <li>- If the entry is present in your device's logfile, the device may not have a client.cert / client_key.cert files or they failed during evaluating them.</li> <li>- If the entry is not present, the device uses the client certificate.</li> </ul> Note: We will rename the “client_key.cert” to “client.key” with the final, non-experimental version.

5.4 Released at August 30<sup>th</sup> 2018

Firmware 04.03.11.04

DatafoxStudioIV 04.03.11.11

DFCom 04.03.11.11

Type	Aspect	Comp.	.XX	Description of Change or Bugfix
Bugfix	http Service Mode	FW	.04	Initiating a service mode connection during communication using the cell phone network and http only work, if the device's main communication has been changed temporarily to USB or active mode.



Type	Aspect	Comp.	.XX	Description of Change or Bugfix
Bugfix	http / Cell phone network	FW	.04	If the cell network modem was actively sending a dataset using http and being reset simultaneously, there have been spurious constellation when the modem did not return to service properly afterwards. A workaround for this behaviour has been added.

**5.5 Released at February 8<sup>th</sup> 2018      Firmware 04.03.11.07      DatafoxStudioIV 04.03.12.05      DFCom 04.03.12.06 [PCN2018P2]**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	http	FW	.11.07	<ul style="list-style-type: none"> <li>The computation of checksums used in http API Level 0 had a defect that could lead to wrong checksums. This has been corrected.</li> <li>Setting up a service mode connection with activated communication encryption did not work – this problem has been corrected.</li> </ul>
Bugfix	List data handling	FW	.11.07	Adding lines to an empty, sorted list caused the device to restart, or an inconsistent list, so that list lines were 'lost'. This has been corrected.
Bugfix	KYO Oneloc	FW	.11.07	Using the KYO Oneloc as a door module could lead to blocking the access control bus temporarily during a restart. This behaviour has now been corrected.
Bugfix	EVO ZK Leser Plus (EVO Agera) / Legic	FW	.11.07	If the EVO Agera was equipped with a Legic RFID reader, only the transponder's serial number could be read. Applying the configuration sent for reading and writing different transponder sections has been corrected now.
Bugfix	EVO 4.3 / Display	FW	.11.07	The headline of a SendMessage() command was displayed twice. This behaviour has been corrected, so that the headline is only show once.
Bugfix	LAN	FW	.11.07	The LAN stack is being restarted when no communication was observed for a substantial time. This mechanism did observe ARP, UDP and TCP/IPv4 traffic but did not take ICMP traffic into account. ICMP traffic was added now and will thus prevent the automatic LAN restart.
Bugfix	RFID	FW	.11.07	There was a timeout included into the restart of the transponder module. This restart could block the user's flow of operation, so that the device reacted slowly. This timeout has been corrected.
Enhancement	Barcode scanner	FW	.11.07	Integration of new 2D barcode scanner module EM3296
Enhancement	IPC Startup Behaviour	FW	.11.07	Power-On behaviour of the IPC may now be configured.
Enhancement	IPC Fingerprint	FW	.11.07	The IPCs may now be equipped with an optical fingerprint sensor. Since Datafox is currently not providing a software for enrolling fingers directly on the IPC, the template have to be created externally and then be transferred to the fingerprint sensor through the embedded device. This can be done using the DatafoxStudioIV or the communication DFCom.
Enhancement	Hardware-V4 Devices	FW Studio	.11.06 .12.05	Support for new hardware components added according to PCN 2018-P-02. Please see <a href="https://www.datafox.de/dfrc/index.php?dir=pcn.2018-2&amp;sort=T&amp;order=D">https://www.datafox.de/dfrc/index.php?dir=pcn.2018-2&amp;sort=T&amp;order=D</a> .

**5.6 Released at March 22<sup>nd</sup> 2019      Firmware 04.03.11.08      DatafoxStudioIV 04.03.12.05      DFCom 04.03.12.05**

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	Flash Driver	FW	.11.08	Wear-Levelling for the flash memory enhanced, so that flash lifetime does not deteriorate when the device is being used in http/https mode.



5.7 Released at May 20<sup>th</sup> 2019

Firmware 04.03.11.09

DatafoxStudioIV 04.03.12.09

DFCom 04.03.12.09

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Bugfix	Access Control / Mifare DESFire	FW	.11.09	Configuring transponder reader for using a public key to access a DESFire RFID transponder did not work correctly. You may access data from public applications correctly now.
Bugfix	USB Host	FW	.11.09	Reading data from some USB disc in USB host mode did not work. The implementation was enhanced accordingly.
Bugfix	IPC / Buzzer	FW	.11.09	Adjusting the buzzer volume did not work for IPC devices. This has been corrected.
Bugfix	IPC / UBS-HID	FW	.11.09	The # character was transmitted as a § character. This has been corrected.
Bugfix	Localisation	FW	.11.09	The text “Finger unbekannt” (used in the fingerprint submenu) can now be localized.
Bugfix	EVO 2.8 Pure / SendMessage	FW	.11.09	The 7th text line supplied by SendMessage to an EVO 2.8 Pure was not displayed correctly as skipped when scrolling through the message text.
Bugfix	EVO 4.3 / Access Control in the Main Menu	FW	.11.09	The information “Access granted” or “Access rejected” is now displayed again.
Bugfix	Transponder MifarePlus in combination with Access Control using the Main Menu	FW	.11.09	Using the option “Access Check in the Main Menu” or the field function “Make access check with GV” allowed accessing the serial number of a “MifarePlus (also Classic)” transponder only. Now segment data may be accessed as well.
Bugfix	Transponder / Hitag 1	FW	.11.09	When the transponder reader was inactive for a longer period of time, the RFID reader sporadically claims having detected an RFID tag with serial number “0”. These sporadic “Ghostreads” are now being filtered.
Bugfix	KYO Oneloc	FW	.11.09	An additional relay fit to the expansion board may now be controlled.
Bugfix	Display devices with WIFI	FW	.11.09	Accessing the BIOS menu during boot using the Enter key resulted in a restart of the device. Access to the WIFI section has now been removed from the BIOS menu for the duration of the start process.
Enhancement	Optical fingerprint sensor	FW Studio	.11.09 .12.09	Support for storing fingerprint template data onto a Mifare Classic RFID transponder has been added. A 1k transponder can accommodate one fingerprint template, when storing two fingerprint templates a 4k transponder has to be used. Mifare Classic transponders may thus be used for verification with the line sensor as well as the optical sensor now.

5.8 Released at July 24<sup>th</sup> 2020

Firmware 04.03.11.14

DatafoxStudioIV 04.03.12.09

DFCom 04.03.12.09

Category	Aspect	Type	.XX	Description of enhancement, change or bug fix
Enhancement	Dockingstation	FW	.11.14	The Dockingstation performs scans for and reboots with its additional slots frequently. This should help to avoid internal problems in the additional slots, so that the Timeboys are available all of the time.



## 6 Release Version 04.03.12

### 6.1 Released at June 27<sup>th</sup> 2019

Firmware 04.03.12.07

DatafoxStudioIV 04.03.12.11

DFCom 04.03.12.11

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Access Control / GIS	FW	.12.07	Communication with GIS RFID readers was broken with previous firmware version. This error has been corrected.
Bugfix	Wifi	FW	.12.06	Using server hostnames longer than 48 characters leads to a buffer overrun and a subsequent reboot. This problem has been corrected.
Bugfix	Data records	DFCom	.12.09	The functions for reading data records (DFCGetDatensatz, DFCReadRecord) did not handle the parameter on the input buffer length correctly. This could lead to a segmentation fault when providing a smaller buffer than required by the data record.
Enhancement	PHG RFID Readers	FW	.12.06	Support for new PHG Reader VOXIO-T-1570-Z-advant has been added. These RFID readers can be fit into a door frame.
Enhancement	KYO Cenloc	FW Studio	.12.06 .12.11	Support for our new access controller KYO Cenloc has been added.
Enhancement	Access Control	FW	.12.06	Assisted online/offline access control has been added.
Enhancement	Proximity Sensor / EVO 3.5 Pure	FW Studio	.12.06 .12.11	EVO 3.5 Pure devices shipped after June 24th 2019 are equipped with a proximity sensor unit. This sensor is supported by current firmware.
Enhancement	Camera / EVO 4.3	FW Studio	.12.06 .12.11	The EVO 4.3 can now use an integrated camera inside the device. This camera may be used to take sample images / snapshots of the device's operator while at the device. The images may be retrieved from the device using the Datafox Studio IV (or DFCom)
Enhancement	Signature / EVO 4.3	FW Studio	.12.07 .12.11	The EVO 4.3's touch screen can now be used to record the operator's signature. These signatures are stored as images by the device and may be transferred the same way as camera images can be retrieved.

Please consult the Datafox Companion Software Version 04.03.12 as well, which is available in English for the first time.

### 6.2 Released at July 15<sup>th</sup> 2019

Firmware 04.03.12.09

DatafoxStudioIV 04.03.12.12

DFCom 04.03.12.12

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Touch / EVO 4.3	FW	.12.09	A computation error led to the touch sensor used since 08/2017 being not usable. This error has been corrected.

### 6.3 Released at August 9<sup>th</sup> 2019

Firmware 04.03.12.11

DatafoxStudioIV 04.03.12.12

DFCom 04.03.12.12

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	WLAN	FW	.12.10	WLAN configurations can be deleted again in the BIOS menu



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	WLAN	FW	.12.10	If no valid and at least one invalid configuration was stored on the device, a new connection to a previously selected network could not be created in the Bios menu.
Bugfix	WLAN	FW	.12.10	Update of the WLAN module via IFF file is possible again
Bugfix	Access Control	FW	.12.10	The command „read status messages from access control“ shows readers with status 4 again.
Bugfix	Legic	FW	.12.10	Reading Legic badges for access control in the main menu is now possible again. The output format "rotated decimal" now returns the values rotated. Previously, the outputs of decimal and decimal rotated were identical.
Bugfix	Camera	FW	.12.10	Test image in the BIOS menu is no longer rotated.
Bugfix	Access Control	FW	.12.11	The RelinoB was configured as a legic reader when "mifare Classsic/Puls" was selected in the setup. This is the default for the RelinoB. Now the RelinoB is reading Mifare.
Bugfix	Access Control	FW	.12.11	When using Gis or Idtronic as Access Control Bus, a memory loss may occur if the Reader is configured in the reader list, but not available in the bus.
Bugfix	Fingerprint	FW	.12.11	Error during initial startup of the Biokey 4000 fingerprint module fixed. Previously a second attempt was needed.
Bugfix	Systemstate	FW	.12.11	Reading system state when analogue input moduls are present on the device no longer causes a restart of the device.
Bugfix	Access control	FW	.12.11	The RelinoB (Mifare-Legic combination reader) was not configured as a Mifare reader in the setup transponder setting "Mifare Classic/Plus", but as a Legic reader. This corresponds to the standard setting for the reader. With "Mifare Classic/Plus" the reader is now configured as Mifare reader.
Bugfix	Display Notification	FW	.12.11	Notification on missing bootloader or missing MAC-Address will be displayed after communication is initialized
Enhancement	EVO Agera	FW	.12.11	Support for board revision 2.3 added

6.4 Released at August 30<sup>th</sup> 2019

Firmware 04.03.12.12

DatafoxStudioIV 04.03.12.12

DFCom 04.03.12.12

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	List data	FW	.12.12	When appending row to a sorted list a computation error could occur, that resulted in not all rows being available for subsequent access or selection.
Bugfix	Field Function "Server State"	FW	.12.12	The field function did not work properly in active mode. It only returned the server state (offline/online) correctly, if at least one data set was present on the device. If no data set was present on the device, the server state always was returned as online in active mode.
Bugfix	WIFI DNS	FW	.12.12	Potential memory leak during DNS Name Resolution fixed. Additionally a memory corruption could occur for very long DNS Names.
Bugfix	HTTP Alive	FW	.12.12	When returning from an operation stop the http alive was not sent any more. This has been corrected.
Bugfix	KYO Cenloc	FW	.12.12	A part of the system variable was sporadically overwritten when the device started. This has been corrected.
Enhancement	Backlights	FW	.12.12	A new backlight module is now supported.



6.5 Released at September 27<sup>th</sup> 2019 Firmware 04.03.12.14

DatafoxStudioIV 04.03.13.04

DFCom 04.03.13.04

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	U&Z Radio Locks	FW	.12.13	Depending on the knob active time it could happen that the radio lock signaled green (for permitted entry) but opening the door did not open. This was due to the radio communication being cut of before the radio lock received the command to engage the lock. This behavior was corrected.
Bugfix	U&Z Radio Locks	FW	.12.13	During the configuration of a radio lock, the firmware now provides firmware version, signal quality, RFID reader type and seial number of the radio lock. These properties are now shown in the Datafox Studio IV dialog "Configuration – Access Control – Configure Lock Cylinder U&Z".
Bugfix	IPC	FW	.12.13	When the IPC was cold-stated, the Windows PC did not start even if configured to. This has been corrected.
Bugfix	Fingerprint line sensor	FW	.12.14	Temperature management of the fingerprint line sensor corrected.
Enhancement	U&Z Radio Locks	FW	.12.14	A new mode for continuous opening has been introduced for the locking units - the classic mode. In classic mode, the lock of the radio escutcheon engages permanently so that the escutcheon functions as a normal door knob or door latch during the continuous opening period. Details on this can be found in the "Access control" section of the manual.



## 7 Release Version 04.03.13

### 7.1 Released at September 27<sup>th</sup> 2019 Firmware 04.03.13.04 DatafoxStudioIV 04.03.13.04 DFCom 04.03.13.04

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Change	Qt	Studio	.13.04	The Qt Framework has been update to 5.12.4 LTS. This change may result in minor changes to the windows displayed by Datafox Studio IV.
Enhancement	Transponder reader	FW	.13.03	The new transponder reader TWN4 has been added to the firmware. It replaces the TWN3 transponder reader in its variants "Multi-ISO" and "Mifare NFC" and provides the transponder IO methods for Mifare Classic, Mifare DESFire, Mifare Plus S / X, Mifare Ultralight / Ultralight C, ICode, MyD and ISO-Tags.
Enhancement	Transponder / Barcode	FW Studio DFCom	.13.03 .13.04 .13.04	A new file type "Data" has been added for data records. Fields of this type may be filled by the field function "Normal" only and may contain up to 240 bytes (ASCII or binary) of data originating from a barcode or an RFID transponder. If "Normal" is used to fill a "data" type field, the data read from barcode or transponder cannot be altered by setup mechanisms and cannot be stored into a global variable.
Enhancement	Access Control	FW	.13.03	The access control module can now react to an opened door and lock the door again immediately.
Enhancement	Communication	FW	.13.03	A device being operated in main communication RS485 may now notify that data records present. This mechanism way available previously only for devices run in active mode.
Enhancement	Device Support	Studio DFCom	.13.04	Support for detecting and firmware-update of the following devices has been added: Vario / EVO IPCs, EVO Intera 2 and EVO 4.6 FlexKey.
Enhancement	Mifare Desfire	Studio	.13.04	The maximum number of byte that can be read from or written to transponders has been increased from 220 to 240 bytes. This became necessary due to the new "Data" field type.
Enhancement	System variables	Studio	.13.04	System variables dealing with the cell phone modem's user name and password have been increased in length to take up to 32 characters.
Bugfix	Fingerprint / EVO 3.5 Universal	FW	.13.03	The EVO 3.5 Universal device currently does not offer functionality for accessing fingerprint template data from an RFID transponder. The functionality for writing fingerprint template data to an RFID transponder has been deactivated in the Fingerprint Administrator menu.
Bugfix	Fingerprint / line sensor	FW	.13.03	Scanning a finger resulted in wrong values for minutae and finger quality being computed. This problem has been corrected.
Bugfix	Transponder	FW	.13.03	Writing to a Mifare Ultralight RFID transponder could result in wrong data being computed by the setup and being written to the transponder. This has been corrected.
Bugfix	Fingerprint	FW	.13.03	Reading fingerprint data though DFCom or HTTP communication while the device was BIOS mode resulted in the device not be usable until having rebooted. Access to fingerprint data is not rejected while the device is in BIOS mode.
Bugfix	Windows	Studio	.13.04	When using multiple monitors and a virtual desktop, dialogs could appear on the main screen instead of the one containing the application window.
Bugfix	Data record export	Studio	.13.04	When extracting data records from a log file the inclusion of process id and thread id causes the extraction to fail. This function is part of the setup editor.
Bugfix	Data records	DFCom	.13.04	Reading data record field descriptions aborted after the 20th (maximum is 25 data record fields).



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Format string	Studio	.13.04	The length of the format string is restricted to 16 characters. An info button explaining this has been added.
Bugfix	Connection error message	Studio	.13.04	In case of an unsuccessful connection attempt the Datafox Studio IV always assumed, that it had been a serial connection that could not established. This resulted in wrong error messages when failing to create a connection to a device using TCP/IP.
Bugfix	Global Variables	Studio	.13.04	A gap in the definition of global variables could lead to wrong association of global variables when a global variable in the gap was activated. Having a setup with GV1, GV2 and GV8 lead to references of GV8 pointing to GV7 when activating GV7. This has been corrected.
Bugfix	Camera resolution	Studio	.13.04	Changing the camera's resolution lead to an error message being displayed despite the camera resolution having changed successfully.
Enhancement	Memory enhancement	FW	.13.04	With this version KYO Oneloc supports the bigger Flash-Memory as an option too. Also the memory enhancement is now available for EVO3.5-Universal.

**7.2 Released at October 11<sup>th</sup> 2019**

**Firmware 04.03.13.05**

**DatafoxStudioIV 04.03.13.04**

**DFCom 04.03.13.04**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	List	FW	.13.05	Adding a row of data to a list with a sort field resulted the filter functionality not being able to select this row.
Bugfix	Backlight	FW	.13.05	If the setup was used to both activate a backlight for the duration of a field function and have a colour code assigned for the outcome of the field function, the colour code for the outcome was not shown.
Enhancement	Headerline Display / EVO 4.3	FW	.13.05	The EVO 4.3 displayed a logo icon instead of the header 2. To enable showing the header 2 on a EVO 4.3, it may now be displayed in combination with header 1. The function may be activated in the device's Display BIOS settings (User settings – Display / Signals – Display-Layout – Combine Header 1+2). If activated, the content of header 1 and header 2 are displayed together as header 1.

**7.3 Released at October 30<sup>th</sup> 2019**

**Firmware 04.03.13.08**

**DatafoxStudioIV 04.03.13.06**

**DFCom 04.03.13.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	TWN4	FW	.13.06	Using the options "(read UID) Also from other Mifare ID card" and "UID with 4 byte length" together was not processed correctly. This combination is now handled correctly for Mifare DESfire configurations.
Bugfix	TWN4	FW	.13.06	Mifare DESfire transponders containing no application could not be read. This has been corrected.
Enhancement	DataOnCard	FW	.13.06	When using DataOnCard two beeps were generated – first when having checked the transponder, second when having written to the transponder. This was confusing for the operator – the first beep could be taken as confirmation to the writing process. Thus the first beep was removed.
Bugfix	EVO Agera	FW	.13.06	Error when checking encrypted PHG packets corrected.
Bugfix	Access Control	FW	.13.06	When sending a single "0" as PIN the reader status changed to status "3" (Module Found but not in list. Now the reader signals access denied (Bad Pin).
Bugfix	Field type "Data"	FW	.13.07	A buffer overflow could occur when reading more than 60 bytes of data. This has been corrected, so that the device does not restart in response to





Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
				the buffer overflow.
Enhancement	IPC	FW	.13.08	A new version of our IPC board is supported now.

**7.4 Released at November 25<sup>th</sup> 2019    Firmware 04.03.13.09    DatafoxStudioIV 04.03.13.06    DFCom 04.03.13.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	DataOnCard	FW	.13.09	Additional credential checks improve the security level when using DataOnCard.
Enhancement	Mifare-Classic/DESFire transponder	FW	.13.09	Only the UID of the Mifare classic chip was read if a combined Mifare-classic/DESFire transponder was held in front of a reader. If you uncheck the setup option "Also from other Mifare ID cards" within the Mifare DESFire configuration, the reader goes ahead searching for a Mifare DESFire transponders after reading a Mifare Classic chip now. This enables handling Mifare-Classic/DESFire transponders.
Bugfix	KYO Oneloc	FW	.13.09	If module 5 is connected, only one of both relays was operable. This is fixed now.
Bugfix	Systemlog	FW	.13.09	When editing a list, an error was written into the system log although the changes were correctly performed.

**7.5 Released at December 11<sup>th</sup> 2019    Firmware 04.03.13.11    DatafoxStudioIV 04.03.13.06    DFCom 04.03.13.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	KYO Cenloc	FW	.13.11	A bug within the firmware lead to the potentially relays changing their state when restarting the device.
Bugfix	EVO 3.5 Universal	FW	.13.11	The RS485 bus for access control was not activated correctly – the readers attached to the access control bus did not work accordingly.

**8 Release Version 04.03.14**

**8.1 Released at December 13<sup>th</sup> 2019    Firmware 04.03.14.01    DatafoxStudioIV 04.03.14.03    DFCom 04.03.14.05**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Data records	DFCom	.14.01	The functions for reading data records (DFCGetDatensatz, DFCReadRecord) did not handle the parameter on the input buffer length correctly. This could lead to a segmentation fault when providing a smaller buffer that required by the data record.
Change	Filesystem	FW	.14.01	The image partition and user partition are now combined.
Change	Restore Fingerprint Templates	DFCom	.14.04	When restoring fingerprint template data from a backup file, the first fingerprint template reporting an error on import aborted the import process. The errors while restoring are now being counted and reported through error code 110.



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	Radio network modems	FW	.14.01	The new mobile modules BG96 and EG95 are now supported. Both modules can use 4G Networks, and increase speed for data transmission, compared to the MC55. GMS is no longer available for the new modules
Enhancement	Fingerprint	FW	.14.01	The number of scan repetition prior rejecting an identification / verification may now be set configured. Finger-Templates stored on a transponder for verification are not read again if the same transponder is used as for previous verification. In order to make templates comparable between different devices, an optimisation step has been added when leaving either the fingerprint administration menu or after an identification yielded new information – this is indicated by a message at the display. Support for sensor firmware versions DG_DF_08 / DG_DF_09.

**8.2 Released at January 9<sup>th</sup> 2020**

**Firmware 04.03.14.02**

**DatafoxStudioIV 04.03.14.03**

**DFCom 04.03.14.05**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	List handing	FW	.14.02	Rows just added to a list could be shown twice. This has been corrected.
Bugfix	Main communication	FW	.14.02	When updating from firmware version 04.03.11.08 to 04.03.12 or newer it could happen that the device's main communication changed. This problem has been corrected.
Bugfix	IPC CDC/HID	FW	.14.02	In release 04.03.14.01 the transport of transponder data to the PC using CDC/HID did not work correctly. This has been corrected.
Bugfix	Flash	FW	.14.02	Finding no free flash page could result in a device reboot. This has been corrected.
Bugfix	EVO Agera / Transponder	FW	.14.02	If a transponder was presented rather long to an EVO Agera equipped with a 125 kHz RFID reader, this could lead to the reader not properly reading transponders afterwards.
Bugfix	KYO Cenloc / Relais	FW	.14.02	Relay modules attached the access control bus did work only for the first four busses reliably. Relays at the other busses did not work properly – this has been corrected.
Bugfix	KYO Cenloc / U&Z	FW	.14.02	Scanning for and reading from FSM modules did not work reliably for all 16 busses. This has been corrected.
Enhancement	EVO 4.3	FW	.14.02	The headline displayed by the EVO 4.3 has been made wider.
Enhancement	EVO 3.5 Universal	FW	.14.02	Support for new PCB version 2.0

**8.3 Released at March 19<sup>th</sup> 2020**

**Firmware 04.03.14.06**

**DatafoxStudioIV 04.03.14.11**

**DFCom 04.03.14.11**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	EVO 3.5 Universal	FW	.14.04	Wrong transponder inputs might occur, if a tag or card was present in the field, while no input chain was active
Bugfix	Radio network modems	FW	.14.04	Devices with the old MC55 module no longer stay in mobile status 4.
Bugfix	Evo 4.3 mobile	FW	.14.04	Instead of the gprs icon the gps icon was shown in the state bar.

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Access Control	FW	.14.04	Records for relay action triggered by the time control are now generated correctly. Previously only the first action lead to a record generation.
Bugfix	Online AC	FW	.14.04	The PIN Input parameter was not present in the online access control.
Bugfix	Transponder	FW	.14.04	Devices using the TWN3 transponder module return the UID with 7 bytes, even if the option "UID as 4 Byte Value" was checked.
Bugfix	Transponder	FW	.14.04	Terminals using the TWN3 transponder module returned a different Value when using it as an access control Terminal
Bugfix	KYO Cenloc	FW	.14.04	The correct room-id will be displayed.
Bugfix	AE, list display	FW	.14.04	If only 3 (font size: large) or 4 (font size: medium) lines were displayed in a two-column list display, display errors occurred in the right column. Some entries were missing or displayed twice. Now the correct display is shown again.
Bugfix	AE and PZE	FW	.14.04	The field function "Display message or wait" did not display any text in the AE- and PZE-Master IV. This error has been corrected.
Bugfix	internal barcode	FW	.14.04	After scanning a barcode with an internal barcode reader, reading the next Legic transponder took about 10 seconds. Now the Legic reader can be used again immediately.
Bugfix	fingerprint	FW	.14.04	After reading an ID card and before scanning a finger, the switch-over to the default position did not work in both PZE modes. Now, after the timeout period has elapsed, automatic changeover is performed again.
Bugfix	analog inputs	FW	.14.04	Devices with analog inputs that were not defined in the setup constantly made a reboot during the startup process of the setup. This problem has been fixed.
Bugfix	Transponder configuration	Studio	.14.09	When using several transponder configurations and switching the transponder procedure or even deleting configurations, the already established references to the configurations e.g. in the input chain fields were not reset to the standard configuration.
Bugfix	DataOnCard	Studio	.14.09	When reading lists with binary column (for DataOnCard), only up to 125 bytes of the possible 220 were correctly transferred to the export file as hexadecimal character string due to a too small export buffer selected for the column.
Change	Read record	DFCom	.14.09	When reading data records, additional checks on the content are carried out in exceptional cases and in case of discrepancies, these are logged in a log file with the name "_DFCom_records.log". If necessary, data records that cannot be processed are automatically acknowledged in the read operation so as not to block further reading.
Enhancement	Additional modules	Studio	.14.10	Now the firmware supports module 88 (4 analogue current inputs, 0-20 mA), 65 (1 monitored input, 1 output) and 51 (4 outputs).
Bugfix	Images	FW	.14.05	Removing and restoring images can be done over Studio again successfully.
Bugfix	Access control	FW	.14.05	Sometimes access readers gave the last credential instead of the current one. Now because of another control sequence, the access readers give the current credential.
Bugfix	Display	FW	.14.06	<ul style="list-style-type: none"> <li>- After entering the wifi bios menu some unwanted letters appeared on the display.</li> <li>- If there was no active wifi connection to the access point, an invalid IP was shown in entry menu.</li> </ul>
Bugfix	Transponder	FW	.14.06	There was a delay after using legic reader. After some time legic readers weren't usable anymore. This problem has been fixed.
Bugfix	Changing lists	FW	.14.06	The terminal did not operate anymore after removing and adding rows in a list. This problem has been fixed.
Optimierung	IPC (Q7)	FW	.14.06	Since tolerances on the Intel Atom® E39xx board could lead to the IPCs sometimes not being able to be switched on, the switch-on behaviour was optimized.

8.4 Released at March 26<sup>th</sup> 2020

Firmware 04.03.14.07

DatafoxStudioIV 04.03.14.11

DFCom 04.03.14.11

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	PHG VOXIO Touch Zarge	FW	.14.07	Legic prime and advant credentials are supported by PHG VOXIO Touch Zarge. Now mifare credentials are processed in access control too.

8.5 Released at April 3<sup>rd</sup> 2020

Firmware 04.03.14.08

DatafoxStudioIV 04.03.14.11

DFCom 04.03.14.11

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Radio network modems	FW	.14.08	VPN-password: If the password contained % characters, no VPN connection was established. The correction also evaluates and passes on % characters correctly so that a connection can be established.
Optimization	LAN, Passive mode	FW	.14.08	After a connection loss, it could possibly happen that no connection could be established to the terminal. The software change means that a new connection can be established from the server even after a connection has been lost.
Bugfix	IPC (Q7)	FW	.14.08	With some IPCs it could happen that after booting the PC a built-in Mifare reader (TWN3) did not react anymore. Now the transponder readers work perfectly again.
Optimization	Optical fingerprint sensor	FW	.14.08	If an attempt was made to perform a verification with an unknown template ID, the device did not respond to any further input. Only a restart of the device brought relief. Now an error message is shown on the display in case of unknown IDs.
Enhancement	DataOnCard	FW	.14.08	DataOnCard lists can now also be transferred via http. Since this is binary data, all characters in the DataOnCard columns must be transmitted in HEX ASCII format.
Bugfix	Selection from lists	FW	.14.08	Manual entries of values in a list selection that are not contained in the list can be transferred again.

8.6 Released at May 4<sup>th</sup> 2020

Firmware 04.03.14.09

DatafoxStudioIV 04.03.14.11

DFCom 04.03.14.11

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	LTE Module	FW	.14.09	If an error occurred during the parsing of the LTE module's response, the connection to the internet sometimes could not be established.
Optimization	Access Control	FW	.14.09	If lists for access control are transferred at different times with a restart between the transfers, it could occur that entries from Action2 were not executed.
Enhancement	http Service Mode	FW	.14.09	Using a password for communication in Service mode is now available in http. The password can be selected by a parameter in the http response.  The activation of the service mode required sending the following parameters  <code>df_service=&lt;Flag&gt;,&lt;Host&gt;,&lt;Port&gt;,&lt;Key&gt;</code>



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
				The <Key> parameter defines, if the service mode connection is <ul style="list-style-type: none"> <li>- Unencrypted (parameter omitted or empty)</li> <li>- Encrypted with the first active mode server's key ("key0")</li> <li>- Encrypted with the second active mode server's key ("key1")</li> </ul>

**8.7 Released at May 28<sup>th</sup> 2020**

**Firmware 04.03.14.10**

**DatafoxStudioIV 04.03.14.12**

**DFCom 04.03.14.12**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimization	Transponder	FW	.14.10	Now TWN4 reader also supports mifare desfire transponders using 3DES-/TDES-authentication mode.
Bugfix	Setup	Studio	.14.12	The field functions for copying the Timeboy variables did not correctly retain the variable reference used.
Bugfix	Setup	Studio	.14.12	When using digital inputs as counters, the values for timeout, counter divider, cycle, cavity and stroke number can be used as headers of an input chain field as well as write target of a value assignment. In both cases, the assigned variable reference was not correctly retained.
Enhancement	Setup	Studio	.14.12	The number of usable inputs of the signal processing for the system variables of the counters was increased from maximum 8 to 32.

**8.8 Released at July 1<sup>st</sup> 2020**

**Firmware 04.03.14.12**

**DatafoxStudioIV 04.03.14.12**

**DFCom 04.03.14.12**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Design	FW	.14.12	EVO 2.8 and EVO 3.5: If no icon but only text was displayed when labelling the F keys, the text was erroneously left-aligned. Now the output is centered again.
Bugfix	Fingerprint line sensor	FW	.14.11	With repeated stop of operations, it could happen, that accessing the fingerprint sensor's template data resulted in a timeout. Thus the data transfer to the Datafox Studio timed out as well. This problem has been corrected.
Bugfix	Memory Management	FW	.14.12	Potential Buffer Overflow during a typically deactivated log function corrected.

**8.9 Released at July 17<sup>th</sup> 2020**

**Firmware 04.03.14.13**

**DatafoxStudioIV 04.03.14.12**

**DFCom 04.03.14.12**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimization	SD Card	FW	.14.13	While checking the existence of entries with a large list it could occur that some entries were not located correctly. An optimization during writing data to the SD card now ensures that all entries can be located later.
Bugfix	Erase Setup	FW	.14.13	In certain circumstances erasing a setup from the device resulted that uploading a new setup to the device did not work properly. This bug has been corrected.



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	HTTPS	FW	.14.13	In certain circumstances the device could reboot when trying to establish an HTTPS connection. This problem has been corrected.

## 9 Release Version 04.03.15

### 9.1 Released at July 7<sup>th</sup> 2020

#### Firmware 04.03.15.01

#### DatafoxStudioIV 04.03.15.01

#### DFCom 04.03.15.01

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	EVO 4.6 FlexKey	FW + Studio	.15.01	Starting with this Firmware- and Studio-Version the new device EVO 4.6 FlexKey is supported. With its configurable virtual keyboard the EVO 4.6 FlexKey is an alternative to the EVO 4.3. The keyboard is represented by an image, which may be modified individually.
Enhancement	EVO IPC - Optical fingerprint sensor	FW	.15.01	A new tool for fingerprint sensor administration (enrol, train, remove) is now available as a Microsoft Windows application. With it it's possible to manage fingerprint data on IPC devices in a convenient way.
Enhancement	Optical fingerprint sensor	FW	.15.01	The optical finger sensor option is now available for PZE- and AE-MasterIV devices as well. Managing fingerprint data with the administration menu is possible too.
Enhancement	KYO Oneloc as wiegand interface	FW	.15.01	Datafox KYO Oneloc comes with two new features. <ul style="list-style-type: none"> <li>• KYO Oneloc CWC enables connecting an access reader (with phg-crypt protocol) with a wiegand controller.</li> <li>• KYO Oneloc CWR can be used as door module or controller and enables connecting a wiegand reader with a Datafox access controller. Phg-crypt readers can be used next to them. In general wiegand readers cannot be configured through Datafox access controllers. Consequently, tag values supplied by different wiegand readers may be different too. Therefore, multiple entries may have to be added to the identification list.</li> </ul>
Enhancement	Firmware-Requirement	FW + Studio	.15.01	The conditions affecting firmware up- or downgrade have been refined. Consequently, transferring an unsuitable firmware to Datafox devices is less probable.
Enhancement	New setup format (XML)	Studio	.15.01	The DFCom now provides functionality to store and load the device setup to/from an XML encoded file. With this format it's possible to edit the configuration files easier. It's also possible to merge configuration aspects from different files and to perform faster enhancements (record tables, input sequences, ...) because of copy & paste. Only setup files, which are created by DatafoxStudio 04.01.07.00 or newer, are supported.
Enhancement	List data manipulation using http(s)	FW	.15.01	Tables/Lists stored on the device may now be modified by http commands. Thus entries may be added or removed. Please consider that the lists must be sorted, if they are configured with sort column. An unsorted list may leads to long search times.
Enhancement	Faster analogue inputs	FW	.15.01	Analogue inputs may now be sampled and recorded with up to 5 Hz. Value changes can be recognized much faster than before. However no more than ten records per second should be created, because servers may struggle with retrieving data quickly enough.
Enhancement	Transponder	FW	.15.01	Using Hitag1 transponders, the transponder's ID may now be retrieved as so-called Feig-ID. A 125kHz access reader or transponder reader is necessary (Attention: U&Z devices do not support this feature yet). This function is available for TimeboyIV starting with firmware release 04.03.05.62 as well.
Enhancement	Scan for Datafox device in the LAN	Studio	.15.01	Datafox Studio supports scanning the local area network for Datafox devices. Please consider that devices have to use LAN as main communication source and that there's no router between pc and Datafox device.



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	KYO Cenloc	FW	.15.01	The SRAM module is supported now. It serves to outsource internal data during operation.
Enhancement	Memory Management	FW	.15.01	Since it could happen in very rare cases that invalid data was stored in the data record memory, additional security mechanisms were integrated into the memory management.

9.2 Released at July 17<sup>th</sup> 2020

Firmware 04.03.15.02

DatafoxStudioIV 04.03.15.02

DFCom 04.03.15.01

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimization	SD Card	FW	.15.02	While checking the existence of entries with a large list it could occur that some entries were not located correctly. An optimization during writing data to the SD card now ensures that all entries can be located later.
Bugfix	Erase Setup	FW	.15.02	In certain circumstances erasing a setup from the device resulted that uploading a new setup to the device did not work properly. This bug has been corrected.
Bugfix	HTTPS	FW	.15.02	In certain circumstances the device could reboot when trying to establish an HTTPS connection. This problem has been corrected.
Bugfix	Touchkey configuration	Studio	.15.02	A touch key's functionality may be assigned either from the context menu or the table view of all touch keys. In certain circumstances assigning the touch key from the table view did not work correctly. This has been corrected.

9.3 Released at July 27<sup>th</sup> 2020

Firmware 04.03.15.04

DatafoxStudioIV 04.03.15.03

DFCom 04.03.15.03

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Display / EVO 4.6 FlexKey	FW	.15.03	Display refreshes on the EVO 4.6 FlexKey could render the device not responding to touch events, so that the device had to be restarted. This has been corrected.
Bugfix	WIFI	FW	.15.04	Modifying a WIFI configuration directly on the device did not result in the stored configurations to be updated. This has been corrected.
Optimization	Device Log	FW	.15.04	Intentional removing the setup from the device is now reported as an event rather than an error.
Bugfix	Touchkey Configuration	Studio	.15.03	Handling touch key configuration for EVO 4.3 devices has been corrected,

9.4 Released at August 10<sup>th</sup> 2020

Firmware 04.03.15.05

DatafoxStudioIV 04.03.15.04

DFCom 04.03.15.04

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	RFID Configuration	FW	.15.05	A Configuration with selected RFID reader type "Mifare Classic/Plus" was not applied correctly to access control readers. This has been corrected



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	RFID reader	FW	.15.05	Reading application data from Mifare Desfire transponders could result in the transponder's serial number being return instead – if certain hybrid transponders were present when reading.
Optimization	RFID reader	FW	.15.05	With some readers which are connected to the MasterIV devices using the Wiegand interface it could happen that the processing of the received data was accompanied by a short delay. This delay could be eliminated.
Bugfix	Touchkey Configuration	Studio	.15.04	When transferring the touch key area image without first loading it in the editor, the image was not correctly written to the device.
Enhancement	PZE-MasterIV AE-MasterIV	Studio	.15.04	Field function 'Switch backlight' for PZE-MasterIV and AE-MasterIV added.
Optimization	Export of list data	Studio	.15.04	With incorrectly supplied structure data, the export of list data in text format could lead to a buffer overflow.

**9.5 Released at September 11<sup>th</sup> 2020 Firmware 04.03.15.06 DatafoxStudioIV 04.03.15.05 DFCom 04.03.15.05**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimisation	Flash	FW	.15.06	Preventive measures concerning the flash communication Due to shortages when sourcing electronic components and fluctuation in the market – especially since the economical cooldown in 2018 – we saw us forced to qualify different flash memory chips to ensure our ability to deliver. In addition to this we observed batch dependent behaviour of flash memory chips. To deal with these challenges we have included enhancements and preventive measures into the new firmware release. It is important to update installations in the field in order to apply these enhancements. We recommend updating all devices of type EVO 4.3, EVO 4.6, PZE-MasterIV or AE-MasterIV delivered since February 2019 at short notice.
Bugfix	EVO 2.8, Touch screen calibration	FW	.15.06	The Calibration of the touch screen using the BIOS could not be executed. This has been corrected.
Bugfix	Proximity sensor	FW	.15.06	The Display doesn't switch on by proximity sensor. The display off timer was set at a cold start of the device if the parameter "display off after" was not zero. So the display switched off once after the configured time and did not switch on again when detecting proximity. Now the behaviour is correct.
Bugfix	Fingerprint	FW	.15.06	Store a second fingerprint template at a Mifare transponder with the RFID-Reader DF-R44 Multi-HF had a bug and has been corrected.
Enhancement	Display	FW	.15.06	If problems during data acquisition are detected by the device, the user is informed of a processing error and is asked to perform the operation once again. To do so, the device presents a red error dialog for five seconds at terminal devices.
Optimisation	RTC	FW	.15.06	Additional preventive measures were taken to ensure the plausibility of the internally processed values of the real time clock.
Optimisation	Flash	FW	.15.06	Performance enhancements when accessing data records or log data at the device have been integrated.
Bugfix	IO module	FW	.15.06	Information presented on a connected "IO module" by the device's system state reflect the actual communication state now.
Bugfix	Fingerprint	FW	.15.06	Queries for fingerprint sensor hardware to a device that can't implement this sensor (e.g. Intera II or KYO Inloc) returned a misleading value to the command. The command now returns a protocol-confirming error code.
Enhancement	Firmware Update	Studio	.15.05	The Datafox Studio is able now to transfer firmware to many devices by a single user interaction. So the effort to install an update to several devices is





Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
				significantly reduced. Using this new feature is described by a separated document: <a href="https://www.datafox.de/download/Datafox_Studio-Enhancements_Firmwareupdate_04.03.15.06.pdf">https://www.datafox.de/download/Datafox_Studio-Enhancements_Firmwareupdate_04.03.15.06.pdf</a>
Bugfix	Firmware Update / Hardware II and III	DFCom	.15.05	With DFCom version 04.03.15 the computation of the minimum required firmware version did not work for devices with Hardware II and III so far. This lead to the firmware upload to these devices not being possible. The problem has been corrected.
Optimisation	Firmware Update	DFCom	.15.05	The firmware update has been optimized for concurrent usage on multiple devices.

**9.6 Released at September 21<sup>st</sup> 2020 Firmware 04.03.15.06 DatafoxStudioIV 04.03.15.06 DFCom 04.03.15.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Description of data record or list entry	Studio, DFCom	.15.06	With version 04.03.15.04 a consistency check has been introduced that enforced data record descriptions and list entry description at least having a single field storing content. This requirement has not been enforced previously and lead to not being able to access the data record description for some setups. The consistency check now allows data record/list entry description to have no content again.

**9.7 Released at October 7<sup>st</sup> 2020 Firmware 04.03.15.07 DatafoxStudioIV 04.03.15.07 DFCom 04.03.15.07**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	Radio communication	FW	.15.07	Improved monitoring on data connections to a server, to prevent connection losses.
Bugfix	Access Control	FW	.15.07	The KYO Oneloc is now able to configure 32 bus participants again.
Bugfix	Access Control	FW	.15.07	Error initialising TSR Readers on a second RS485 bus is now fixed.
Optimisation	Access Control	FW	.15.07	The alternative office mode used the relais' switch time from the lists to switch it on, although a time model was in use. As a result the office mode could still have been active after the time model was finished. In this situation the office mode couldn't be deactivated and ended after the relais' switch time. Now the duration of the office mode will be restricted to the time model, if a time model is active.
Enhancement	Transponder	FW	.15.07	Writing data in backup files of a Mifare DESFire credential is possible now with TWN4.
Bugfix	Optical fingerprint sensor	FW	.15.07	Under certain circumstances it may happen that after an update to version 04.03.15 the optical sensor does not work anymore. This bugfix solves the problem.
Bugfix	http list transfer	FW	.15.07	Too long comment lines in the list data during HTTP transmission resulted in error code 1004. The list was rejected by the device. Now the device can cope with longer comment lines.
Bugfix	Setup	Studio, DFCom	.15.07	Converted XML setup configuration created with version ≤ 04.03.15.06 may not be transferred. Reconverting with the current version solves the problem.
Optimisation	Setup	Studio	.15.07	The password for the encrypted value store is now stored as a HEX dump and no longer as a string in the XML.



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Setup	Studio	.15.07	Names and identifiers from the setup configuration are now correctly transferred to the XML configuration file.
Bugfix	Active-Mode	Studio	.15.07	Changing the configuration parameters for the active mode caused the application to crash.
Optimisation	Update-Manager	Studio	.15.07	Improved detection and management of USB connections.

**9.8 Released at October 14<sup>st</sup> 2020**

**Firmware 04.03.15.08**

**DatafoxStudioIV 04.03.15.08**

**DFCom 04.03.15.08**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimisation	FW-Update	Studio, DFCom	.15.08	Prevents the download of FW versions < 04.03.15.06 on certain not fully supported hardware devices.
Change	Display-Designer	Studio	.15.08	In the design for the EVO 4.6 FlexKey, a png is now used for the keyboard area instead of a bmp, and the selected button color is now used for the transparent areas.
Bugfix	FW-Update	FW	.15.08	During an update to version 04.03.15.06 or 04.03.15.07 the device could possibly get stuck during the boot process. Only a change into the bootloader and installing a version < 04.03.15.06 could help. This problem is solved now.
Bugfix	Access Control	FW	.15.08	The communication between a KYO Oneloc (used as door module) and an access reader could sporadically break down. Only a restart of the KYO Onloc could fix the error condition. Now the communication does not break off anymore.
Bugfix	Module update	FW	.15.08	Reading the system variable "system.updatestate" led to a reboot of the device if there were too many access modules in the bus. Now there is no more reboot and the status is displayed correctly.
Bugfix	Module update	FW	.15.08	Updating phg devices via bus communication failed in version 04.03.15.
Enhancement	Bios	FW	.15.08	In the device bios, IP and port of the 1st DNS server can now be adjusted in the "Communication" section.
Optimisation	Device log	FW	.15.08	The log output for not found list entries (selection in list) has been extended by the searched value.
Bugfix	Display	FW	.15.08	The display of the entered value may have been overwritten with 'dirty' characters when exiting the 'Normal' field function. Now this behavior has been prevented.

**9.9 Released at October 21<sup>st</sup> 2020**

**Firmware 04.03.15.09**

**DatafoxStudioIV 04.03.15.08**

**DFCom 04.03.15.08**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Access Control	FW	.15.09	Deactivating the access control when changing to the operating stop took too long for many bus participants, so that the communication to the master was interrupted with an error. Now the shutdown is done within a few seconds.
Bugfix	EVO 4.6 FlexKey Menu and list view	FW	.15.09	The position bar of the last menu or list page was calculated incorrectly, so that the display of the touch keyboard was partially removed. Now this error has been corrected and the keyboard display is no longer removed.

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	Transponder	FW	.15.09	Now TWN4 supports mifare classic 4K tags with a 7 byte uid.
Enhancement	Access Control	FW	.15.09	Improvements in the search for new GIS Devices

**9.10 Released at November 4<sup>th</sup> 2020****Firmware 04.03.15.10****DatafoxStudioIV 04.03.15.08****DFCom 04.03.15.08**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Access Control KYO Oneloc	FW	.15.10	If the baud rate of a KYO Intera, which is operated as a stitch reader on a KEY Oneloc, was not set to 19200, the change of the baud rate did not work and the reader could not be used for the access control. Now the change works and the reader can be used for access control again.
Bugfix	Access Control KYO Cenloc	FW	.15.10	The assignment of the access readers to the individual buses was faulty, so that modules stored in the reader list were not found and reported with status "3". Now the assignment is corrected and the control system is working properly again.
Bugfix	Access Control	FW	.15.10	Transactions with virtual badges via DFCom / via HTTP were always rejected with the access control status "101". Now virtual bookings are possible again without problems.
Bugfix	WLAN	FW	.15.10	Sporadically it can happen that a connection setup to the device is rejected by the WLAN module, although the device is working in passive mode and no further connection exists. This problem has been fixed.

**9.11 Released at November 11<sup>th</sup> 2020****Firmware 04.03.15.11****DatafoxStudioIV 04.03.15.08****DFCom 04.03.15.08**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	Access Control KYO Cenloc	FW	.15.11	When using online access control with KYO Cenloc, it was not yet possible to control the leds and buzzer on the readers.
Enhancement	Radio Communication	FW	.15.11	Increase robustness of SIM verification.

**9.12 Released at November 25<sup>th</sup> 2020****Firmware 04.03.15.12****DatafoxStudioIV 04.03.15.08****DFCom 04.03.15.08**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	Access Control	FW	.15.12	In access control the interface to MegaAU was integrated.
Bugfix	Display design	FW	.15.12	After uploading a setup for devices with SD extension, existing images may have been deleted and the standard icons were displayed. The problem no longer exists.
Enhancement	Setup	FW	.15.12	With EVO 3.5, an image can now also be displayed instead of the text in the two field functions "Confirmation" and "Show message".

**9.13 Released at December 9<sup>th</sup> 2020      Firmware 04.03.15.13      DatafoxStudioIV 04.03.15.08      DFCom 04.03.15.08**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	EVO Agera	FW	.15.13	If activation or deactivation of the BDS requires a PIN in addition to the transponder, the EVO Agera displayed an error screen instead of the PIN enter screen. This has been corrected.

**9.14 Released at January 20<sup>th</sup> 2021      Firmware 04.03.15.15      DatafoxStudioIV 04.03.15.08      DFCom 04.03.15.08**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	Cellular	FW	.15.14	An error during startup of the module could cause the module to remain in state 5 for up to 30 seconds before the module was restarted. The error condition is now detected and a module restart is performed.
Enhancement	Bios	FW	.15.15	Entering a password inside the BIOS is automatically aborted after 10 seconds idleness now.
Bugfix	Fingerprint, optical sensor	FW	.15.15	After an incorrect teach-in attempt, the sensor LED may not have been activated during the next scan or the next teach-in.
Bugfix	IPC (Q7)	FW	.15.15	Sporadically it could happen that an IPC did not start automatically after a power failure, although its power-on mode was set to "last state".
Change	Transponder	FW	.15.15	With the transponder methods ICode, MyD and the ISO tags, the UID length was previously used for formatting the transponder value and not the output length set in the Datafox Studio. Therefore it could happen with some settings that the front digits of the transponder values were cut off and thus were not available in the data set. This misbehaviour has now been corrected.

**9.15 Released at January 26<sup>th</sup> 2021      Firmware 04.03.15.16      DatafoxStudioIV 04.03.15.08      DFCom 04.03.15.08**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimisation	Transponder	FW	.15.16	In rare cases, it could happen with the EVO 3.5 Universal that presented badges were not read. Only after removing the badge from the reading field of the transponder reader the badge was read again. This behaviour could be optimized so that the badges can now be read reliably.
Optimisation	http, list transfer	FW	.15.16	In the case of mixed transmission of setup and access lists, the transmission process was previously terminated and no list was transferred if access control was deactivated in the device. Now both types of lists can be transferred together. If the access control is deactivated, the access lists are 'ignored' with the possibly activated system message 1037 and the setup lists are accepted.



**9.16 Released at March 3<sup>rd</sup> 2021**

**Firmware 04.03.15.17**

**DatafoxStudioIV 04.03.15.08**

**DFCom 04.03.15.08**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Data on Card	FW	.15.17	Input chains with the "Data on Card" field function caused the input chain to crash. The calculation of the checksum of the data set failed and the RFID card was not written. Data on Card now works again.

**9.17 Released at March 18<sup>th</sup> 2021**

**Firmware 04.03.15.18**

**DatafoxStudioIV 04.03.17.05**

**DFCom 04.03.17.05**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Cellular	FW	.15.18	When entering the PIN in the BIOS menu, a password was requested. Now the PIN is requested directly.
Bugfix	Access Control	FW	.15.18	When reading 125 kHz RFID cards, a problem with data processing could occur in the access controller. The reader was still reported correctly in the Access Control Overview, but no tag was reported.
Bugfix	Access Control	FW	.15.18	When displaying access control in the main menu, the message was displayed too briefly. The display duration has now been increased to 2 seconds again.
Bugfix	EVO 4.3	FW	.15.18	The display of lists and menus was faulty in the EVO 4.3 when the display of the "MasterIV layout" was enabled in the bios. Now the display errors have been fixed.

**10 Release Version 04.03.16**

**10.1 Released at December 23<sup>th</sup> 2020**

**Firmware 04.03.16.01**

**DatafoxStudioIV 04.03.16.01**

**DFCom 04.03.16.01**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	HTTP(S)	FW / Studio	.16.01	The http(s) workflow "Basic Authentication" is supported, Realm, User and Password are configured as system variables. Detail concerning the workflow are described in the "Data protocol http(s)" Version 1.11, section 1.6.
Enhancement	HTTP(S)	FW / Studio	.16.01	The http(s) workflow was extended by an info telegram that may be used to see to initial device configuration as well as to check the device configuration during operation. Details on the info workflow are described in the "Data protocol http(s)" Version 1.11, appendix C.
Enhancement	Access Control	Studio	.16.01	If the KYO Oneloc is used as a door module, the access bus number used can now be assigned in the range 0 - 15 via the BIOS dialog.
Enhancement	Setup, Fever check	FW / Studio	.16.01	Support for the "Perform fever check" field function
Enhancement	Display Designer	FW / Studio	.16.01	Support of the images for the "Perform fever check" field function



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	EVO 3.5 Pure / New Display	FW	.16.01	A new replacement display is being prepared for the EVO 3.5 Pure. This display is supported starting with version 04.03.16.01.

**10.2 Released at January 13<sup>th</sup> 2021**

**Firmware 04.03.16.02**

**DatafoxStudioIV 04.03.16.01**

**DFCom 04.03.16.01**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Fever check	FW	.16.02	The two PZE modes were not supported when performing the fever check function, so that the device did not automatically return to the default position after the configured timeout. This error has been corrected. After the configured timeout, the device automatically returns to default position in PZE mode.
Bugfix	HTTP(S)	FW	.16.02	If a server failure occurred on devices that need to authenticate to the server using Basic Authentication, the connection to the server was lost. This problem has been fixed. Now after a server failure a connection to the server will be established again in conjunction with Basic Authentication.
Bugfix	EVO Intera II	FW	.16.02	When reading unique tags, the option to read 40 bits was ignored and only 32 bits were reported. Now 40 bits are reported
Optimisation	EVO Intera II	FW	.16.02	LED and Buzzer Feedback might have been misleading or out of sync when switching cards quickly.
Optimisation	EVO Intera II	FW	.16.02	The processing of touch events has been optimized.

**10.3 Released at January 26<sup>th</sup> 2021**

**Firmware 04.03.16.03**

**DatafoxStudioIV 04.03.17.03**

**DFCom 04.03.17.02**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimisation	Transponder	FW	.16.03	In rare cases, it could happen with the EVO 3.5 Universal that presented badges were not read. Only after removing the badge from the reading field of the transponder reader the badge was read again. This behaviour could be optimized so that the badges can now be read reliably.
Optimisation	http, list transfer	FW	.16.03	In the case of mixed transmission of setup and access lists, the transmission process was previously terminated and no list was transferred if access control was deactivated in the device. Now both types of lists can be transferred together. If the access control is deactivated, the access lists are 'ignored' with the possibly activated system message 1037 and the setup lists are accepted.
Optimisation	Fever check	FW	.16.03	The measuring process has been optimized, so that the resulting measuring value is more stable and more precise. Moreover after an invalid measurement and the result "fever" a protruding error tone is used, to also acoustically alert the user to the (invalid) measurement result.
Enhancement	Fever check	FW	.16.03	Now the firmware also supports fever check with PZE-Master IV.
Bugfix	Fever check	FW	.16.03	When activating the status icons by pressing the logo, all images (note, arrows and thermometer) were replaced by the status icons when the fever check function was displayed at the same time. This misbehavior has been corrected in this version.
Change	EVO 4.6 Flexkey Display	FW	.16.03	In EVO 4.6 Flexkey, the background image in the main menu is only displayed with the "big clock" if the "Add main menu page 'big clock'" checkmark is also activated in the display designer. Otherwise, the image is displayed without the "big clock" and a separate page with the "big clock" is omitted. The display of date and time in the second line is unaffected.
Optimisation	Common	Studio	.17.01	Update of the used Qt version (5.15.2).



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Firmware Update	Studio / DFCom	.17.02	In rare cases, the minimum FW version may be determined incorrectly. The query of the minimum FW version has been corrected in this version.
Bugfix	BIOS Dialog	Studio	.17.03	Extension of the interface definition in the BIOS dialog by the WLAN module Ti - CC3135.
Bugfix	Transponder Configuration Mifare/Legic	Studio / DFCom	.17.03	The RFID methods Mifare and Legic allow access to different sections of the RFID transponders using multiple configuration definitions. The configuration definition to be used for accessing data is chosen when configuring the field function "normal". An error in the Datafox Studio could lead to resetting the chosen configurations in the field functions due to editing the configuration definition. This problem has been corrected – in addition Datafox Studio will inform on usage of a configuration definition should you chose to delete it.

**10.4 Released at February 10<sup>th</sup> 2021**

**Firmware 04.03.16.04**

**DatafoxStudioIV 04.03.17.04**

**DFCom 04.03.17.02**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimisation	Fever check	FW	.16.04	If the operating sequence was executing the field function for fever control it could happen that – after the display was switched off – a measurement was performed without switching on the display first. Now the display is switched on first before the measurement.
Bugfix	Fever check	Studio	.17.04	The Datafox Studio could crash when a field function with deactivated fever check was being copied. This problem has been corrected.

**10.5 Released at March 3<sup>rd</sup> 2021**

**Firmware 04.03.16.05**

**DatafoxStudioIV 04.03.17.04**

**DFCom 04.03.17.02**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimisation	Fever check	FW	.16.05	After the integration of the fever control for the PZE-MasterIV into the Display Designer, a few optimizations regarding the display were carried out, so that the settings in the Display Designer are now also correctly displayed by the PZE-MasterIV.
Bugfix	Data on Card	FW	.16.05	Input chains with the "Data on Card" field function caused the input chain to crash. The calculation of the checksum of the data set failed and the RFID card was not written. Data on Card now works again.

**10.6 Released at March 18<sup>th</sup> 2021**

**Firmware 04.03.16.06**

**DatafoxStudioIV 04.03.17.05**

**DFCom 04.03.17.05**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Cellular	FW	.16.06	When entering the PIN in the BIOS menu, a password was requested. Now the PIN is requested directly.
Bugfix	Access Control	FW	.16.06	When reading 125 kHz RFID cards, a problem with data processing could occur in the access controller. The reader was still reported correctly in the Access Control Overview, but no tag was reported.
Bugfix	Access Control	FW	.16.06	When displaying access control in the main menu, the message was displayed too briefly. The display duration has now been increased to 2 seconds again.



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	EVO 4.3	FW	.16.06	The display of lists and menus was faulty in the EVO 4.3 when the display of the "MasterIV layout" was enabled in the bios. Now the display errors have been fixed.
Optimisation	KYO Oneloc	FW	.16.06	Optimizations for the KYO Oneloc regarding HTTPS communication. The time required for establishing the secure channel has been decreased.

## 11 Release Version 04.03.17

### 11.1 Released at March 3<sup>rd</sup> 2021

#### Firmware 04.03.17.01

#### DatafoxStudioIV 04.03.17.05

#### DFCom 04.03.17.05

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	Fever check	FW	.17.01	The new WLAN module now supports 5 GHz WLAN networks in addition to the 2.4 GHz. It is available in the devices currently supplied by us, with the exception of the EVO 3.5 Universal and the Timeboy IV. The implementation for these devices is in preparation. The module supports the 802.11 a/b/g/n standards.
Enhancement	RFID reader EVO Intera II with PIN function	FW	.17.01	The PIN keypad for the EVO Intera II is now available. This can be used in all variants:
Enhancement	HTTP(S) data communication - BA	FW	.17.01	The HTTP(S) communication interface has been extended by Basic Authentication as well as functions for initial parameterization (bootstrapping) of devices.
Enhancement	Barcode reader	FW	.17.01	Datafox devices can use both internal and externally connected barcode readers. However, both variants could not be used simultaneously in one device until now. This restriction no longer applies as of the new firmware version 04.03.17. As of version 04.03.17, both the internally installed and the externally connected barcode reader can be used by the user as desired.
Enhancement	Setup	Studio	.17.05	The field function for "fever control" has been made available for the PZE-MasterIV.
Enhancement	Display designer	Studio	.17.05	The images for "fever control" are supported for the PZE-MasterIV.
Enhancement	Display designer	Studio	.17.05	With the EVO 4.6 FlexKey, the main menu image can be activated in the layout as a main page, in addition, the large clock can optionally be displayed in the main menu image.
Change	Timer	FW	.17.01	The timers have been changed to 64 bit structures.

### 11.2 Released at March 18<sup>th</sup> 2021

#### Firmware 04.03.17.02

#### DatafoxStudioIV 04.03.17.05

#### DFCom 04.03.17.05

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Cellular	FW	.17.02	When entering the PIN in the BIOS menu, a password was requested. Now the PIN is requested directly.



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Access Control	FW	.17.02	When reading 125 kHz RFID cards, a problem with data processing could occur in the access controller. The reader was still reported correctly in the Access Control Overview, but no tag was reported.
Bugfix	Access Control	FW	.17.02	When displaying access control in the main menu, the message was displayed too briefly. The display duration has now been increased to 2 seconds again.
Bugfix	EVO 4.3	FW	.17.02	The display of lists and menus was faulty in the EVO 4.3 when the display of the "MasterIV layout" was enabled in the bios. Now the display errors have been fixed.
Enhancement	EVO Intera II	FW	.17.02	When reading Hitag badge, multiple bookings could occur even though the card was still in the field. Now a timeout of 3 seconds has to pass before a new card in the field is reported to the controller.
Optimisation	KYO Oneloc	FW	.17.02	Optimizations for the KYO Oneloc regarding HTTPS communication. The time required for establishing the secure channel has been decreased.

11.3 Released at March 24<sup>th</sup> 2021

Firmware 04.03.17.03

DatafoxStudioIV 04.03.17.05

DFCom 04.03.17.05

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	Display-Designer	FW	.17.03	EVO 4.6 FlexKey as well as EVO 4.3 can now display the main screen with or without the "big clock".
Bugfix	Network	FW	.17.03	The network mask was not set correctly when DHCP was disabled, so that the devices possibly did not integrate correctly into the LAN/WLAN.
Enhancement	WLAN	FW	.17.03	The input of SSID and passphrase is now also enabled for devices without touch (AE- and PZE-MasterIV).
Optimisation	WLAN	FW	.17.03	General stability improvements with the new WLAN module.
Change	EVO Intera II	FW	.16.03	Due to not yet solved sporadic communication problems in the access control bus with version 04.03.17, this firmware release contains revision 04.03.16.03 for the EVO Intera II. This version does not show the communication problems.

11.4 Released at March 31<sup>st</sup> 2021

Firmware 04.03.17.04

DatafoxStudioIV 04.03.17.05

DFCom 04.03.17.05

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	EVO 2.8 operation	FW	.17.04	The EVO 2.8 no longer responded to keystrokes in certain circumstances. This misbehavior has been corrected.
Bugfix	KYO Oneloc, Data On Card	FW	.17.04	In previous revisions of 04.03.17, errors could occur when writing RFID-Tags using the field function "Data On Card". This only affected the KYO Oneloc. The error has been corrected and the KYO Oneloc writes correctly to the tag again.
Bugfix	Legic	FW	.17.04	An error in the configuration of the Legic badges was reported when the device was started. A new configuration was not accepted in this state. With the update, the configuration is executed correctly again.
Bugfix	EVO Intera II	FW	.17.04	Due to an error in the packet evaluation, the EVO Intera II did not answer all requests from the access controller. As a result, the reader could be marked as "not available on the bus" (status 4). With version 04.03.17.04 this error has been fixed.



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Door Module	FW	.17.04	With previous revisions of 04.03.17, the KYO Oneloc did not forward data correctly to a detached reader. With this version, the communication between door module and detached reader is fixed.
Enhancement	Access Control	FW	.17.04	The controller recognizes the EVO Intera II as a Datafox Device on the bus. Therefore a Firmware Update can be disturbed using the bus by the controller.
Bugfix	Access Control	FW	.17.04	The Controller might reboot when updating Access Lists. This is now fixed.

11.5 Released at April 14<sup>th</sup> 2021

Firmware 04.03.17.05

DatafoxStudioIV 04.03.17.05

DFCom 04.03.17.05

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Proximity sensor	FW	.17.05	The parameter "Display off after" could no longer be changed in the BIOS menu. The proximity sensor was deactivated when selecting it. Now the value can also be changed via the device bios again.
Bugfix	IPC – Q7	FW	.17.05	Under certain circumstances, when starting the setup, it could happen that the adapter board permanently restarted and no more transponders could be processed.
Bugfix	Legic	FW	.17.05	In rare cases, the device restarted when reading Legic badges. This could only occur when quickly switching between two input chains that were both supposed to read a badge. The restart is now prevented.
Bugfix	EVO Intera II Data on Card	FW	.17.05	When using the EVO Intera II as an internal transponder reader, the reader could get stuck when writing to badges if the badge to be written to was removed from the reader during the writing process. Only a restart of the EVO Intera II could solve the problem. This error has been corrected.

11.6 Released at April 21<sup>th</sup> 2021

Firmware 04.03.17.06

DatafoxStudioIV 04.03.17.05

DFCom 04.03.17.05

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	HID or SimonsVoss	FW	.17.06	Depending on the device equipment, it could happen that after an update to version 04.03.17 the HID or SimonsVoss transponder reader did not work anymore. The following devices may be affected: EVO 4.3, EVO 4.6, AE- and PZE-MasterIV. The problem has been fixed and the transponders can now be read again.
Optimisation	Fever check	FW	.17.06	During fever control, after a measurement in which the repeat question was displayed, there was a permanent wait for the user's input. If this did not occur before the display was automatically switched off, the device was in a state that could not be recognized by the user. To achieve a defined state, the query is automatically ended after the repetition after approx. one minute and the measured temperature value is transferred to the data record.
Enhancement	TWN4	FW	.17.06	SmartMX badges emulating a Mifare Classic chip can now also be processed with the TWN4. These badge types are now accepted in the transponder setup for Mifare Classic.



**11.7 Released at April 28<sup>th</sup> 2021**

**Firmware 04.03.17.07**

**DatafoxStudioIV 04.03.17.05**

**DFCom 04.03.17.05**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Salto transponder reader	FW	.17.07	The terminal did not correctly process the data received via the clock data interface. This misbehavior has been corrected.
Optimization	Mobile (MC55i-W)	FW	.17.07	Optimisations when restarting the mobile modem and display of the mobile status icon.

**11.8 Released at May 6<sup>th</sup> 2021**

**Firmware 04.03.17.08**

**DatafoxStudioIV 04.03.17.05**

**DFCom 04.03.17.05**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Access Control	FW	.17.08	If the EVO Intera II is used as a pure PIN reader without built-in transponder method, this was reported in the access control with status "7" (Module RFID reader type is wrong). The reader is now correctly recognized and pin entries are evaluated.
Bugfix	EVO Intera II	FW	.17.08	When initializing the touch controller for the EVO Intera II, an error could occur during startup, which meant that touch inputs could no longer be evaluated. The startup process has been adjusted so that the touch controller is now initialized correctly.
Enhancement	Systemlog	FW	.17.08	The output of the regular twelve-hour system log was expanded to include the access control statistics.

**11.9 Released at May 19<sup>th</sup> 2021**

**Firmware 04.03.17.09**

**DatafoxStudioIV 04.03.17.05**

**DFCom 04.03.17.05**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	KYO Cenloc	FW	.17.09	Support for board revision 1.2 added.
Bugfix	KYO Cenloc	FW	.17.09	In the bios menu of the KYO Cenloc, the menu for setting the display orientation was no longer displayed. This has been corrected.
Bugfix	EVO 3.5 Universal	FW	.17.09	After a setup was transferred to the EVO 3.5 Universal, no RFID tag value could be read. After a restart, the correct value was then read. This has been corrected.
Change	Access Control	FW	.17.09	EVO Intera II access readers signaled the detection of a card in the field by flashing of the white backlight. In case of a successful clocking, the flashing was still displayed after the clocking. Since the status LED already signaled the card's presence, the flashing of the backlight was removed.

**11.10 Released at June 10<sup>th</sup> 2021**

**Firmware 04.03.17.10**

**DatafoxStudioIV 04.03.17.06**

**DFCom 04.03.17.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimization	KYO Cenloc	FW	.17.10	By optimizing the processing of data from the access control, the response time of the KYO Cenloc could be improved.



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	KYO Cenloc	FW	.17.10	When using radio locking cylinders on buses 5 to 16, it could happen that readers were lost in all buses if bookings were made at the radio locking cylinders by badge. The reaction time of the KYO Cenloc was very long in this case for a short time, because the affected readers had to be searched and configured again. This problem could be solved.
Bugfix	KYO Cenloc	FW	.17.10	In some cases it could happen that the KYO Cenloc performed a restart if several signalizations were to be performed by a ZK reader. This misbehavior has been corrected.
Optimization	Access Control	FW	.17.10	In rare cases, the evaluation of incorrect received data caused an invalid assignment to be assumed in an access bus (PHG together with U&Z). The check for the received data was made more robust to eliminate this problem.
Bugfix	Access Control	FW	.17.10	When reading out the status of the access modules, modules were not displayed that were in the list and were not found in the bus. Now the devices are reported correctly with status 4 again.
Enhancement	Access Control	FW	.17.10	The baud rate of the EVO Intera II can be changed by the system variable "com.access_control.baudrate".
Bugfix	LAN, Passive-Mode	FW	.17.10	Under certain circumstances, the devices are no longer accessible from the server. This error behavior has been corrected.
Bugfix	HID in EVO2.8 / EVO3.5	FW	.17.10	Depending on the device equipment it could happen that after an update to version 04.03.17 the HID transponder reader did not work anymore. The problem has been fixed and the transponders can now be read again.
Enhancement	Firmware	Studio / DFCom	.17.06	Support of firmware version 04.02.06 (specifically TimeboyIV).

11.11 Released at June 21<sup>th</sup> 2021

Firmware 04.03.17.11

DatafoxStudioIV 04.03.17.06

DFCom 04.03.17.06

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	New WiFi module	FW	.17.11	After manually entering the passphrase in the device bios, the new WiFi module may not connect to the network. This error has been corrected.
Bugfix	LAN (device bios)	FW	.17.11	The listen port associated the LAN configuration could not be changed in the device bios. Despite entering a different value, it ended up back at 8000.
Bugfix	Fingerprint	FW	.17.11	Under certain circumstances the fingerprint module could no longer function in the EVO 2.8 or EVO 3.5. This error has been corrected.
Change	LAN (device bios)	FW	.17.11	If a device was set to a LAN communication, used a static IP address and no LAN cable was plugged or no link was present, IP address, netmask and gateway were not displayed in the device BIOS – the link status was displayed as "no link" instead. The link state is shown as a separate entry in the BIOS menu now not hiding the static network configuration anymore. In addition the activate transmission mode (full or half duplex) as well as the active transmission speed (10 or 100 Mbit) are shown.

11.12 Released at July 14<sup>th</sup> 2021

Firmware 04.03.17.12

DatafoxStudioIV 04.03.17.06

DFCom 04.03.17.06

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Access Control	FW	.17.12	After a data check in the access control, the memory required for the comparison was not released again under certain circumstances. This resulted



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
				in the internal memory running out with increasing operating time and the device no longer being accessible via communication and access bookings also being rejected. This is now corrected.
Bugfix	Access Control	FW	.17.12	If more than one bus was connected to the controller. An Update might abort, before every reader was updated. This is now fixed.
Bugfix	Access Control	FW	.17.12	During the search for new readers, a bad Packet might be returned on the bus by a reader attached to a KYO Oneloc. This can lead to communication errors on the bus.
Bugfix	Access Control	FW	.17.12	The http command "df_trigger_ac2" did not work and sporadically caused the device to restart. Now the virtual booking is executed correctly.
Bugfix	Fingerprint line sensor	FW	.17.12	When reading a finger template from an RFID card with subsequent verification, the scan of the finger was sporadically skipped. The comparison was then made with the last finger scanned. This error has now been corrected.
Bugfix	http file upload	FW	.17.12	Due to a processing error, a device restart occurred after a file upload via HTTP. The error has now been corrected and the unit no longer restarts.
Optimization	New WiFi module	FW	.17.12	Optimizations in the WLAN area to maintain a more stable connection to the access point.

11.13 Released at July 21<sup>th</sup> 2021

Firmware 04.03.17.13

DatafoxStudioIV 04.03.17.06

DFCom 04.03.17.06

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Fingerprint, optical sensor	FW	.17.13	Reading finger templates from a badge, as well as writing finger templates to a badge could fail in some constellations. The problem has been fixed and the templates are now reliably read and written.
Change	Bios, lan parameters	FW	.17.13	Since the LAN must be active to configure the LAN parameters, settings could not be adjusted in the Start BIOS menu. The option has now been removed from the Start BIOS. This safely avoids operating errors.
Bugfix	EVO 3.5 Universal	FW	.17.13	With the EVO 3.5 Universal, connection problems could occur when using the WIFI interface. This is now corrected.
Optimization	EVO Intera II	FW	.17.13	Switching the baud rate in EVO Intera II by means of DFCom could fail with non-configured readers. This has been improved so that switching the baud rate works reliably regardless of the state of the readers.
Bugfix	http	FW	.17.13	When sending http messages, an error could occur when checking the configured timeout. If this occurred, a timeout error was reported immediately and the message was resent. This version fixes this behavior.

11.14 Released at July 28<sup>th</sup> 2021

Firmware 04.03.17.14

DatafoxStudioIV 04.03.17.06

DFCom 04.03.17.06

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	Bootloader-Update	FW	.17.14	The Datafox devices have a bootloader, which can run as a separate firmware on the device. With this extension it is now possible to update the bootloader via the release firmware with a special update file, which can be requested via Datafox support. However, this update is only really necessary in individual cases where there are, for example, problems in connection with the startup behavior of the device. Updating the bootloader is not always necessary.



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	WIFI	FW	.17.14	When switching the main communication to WLAN via the BIOS Menu on the Device, a reboot could occur. This only affected the WIFI Module RS9110. This version corrects the behavior and no reboot occurs.
Optimization	Cellular (BG96)	FW	.17.14	When using data-only SIM cards, errors could occur when connecting to 4G networks. With this version the connection is established correctly.

**11.15 Released at August 4<sup>th</sup> 2021**

**Firmware 04.03.17.15**

**DatafoxStudioIV 04.03.17.06**

**DFCom 04.03.17.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimization	Image storage	FW	.17.15	In some cases, it could happen that camera images could not be read out from the device when they were searched for by their names. The readout of all images was not affected by this. In this case, optimizations were made when searching for the images, so that all existing images in the image memory can now also be found.
Optimization	List processing	FW	.17.15	In long, sorted lists, the search for an entry could take different lengths of time when a sort column was applied to the list - depending on the position of the entry in the list. With the help of the implemented optimizations, the times for searching for entries could be reduced, in some cases significantly.
Optimization	Access Control	FW	.17.15	The communication of the readers or door modules with the controller has been optimized. The sporadic errors during transmission no longer occur.
Bugfix	Fingerprint	FW	.17.15	The Saturn fingerprint module could sporadically cause communication errors, so that fingers could no longer be identified. With the version 04.03.17.15 this is now fixed.

**11.16 Released at August 12<sup>th</sup> 2021**

**Firmware 04.03.17.16**

**DatafoxStudioIV 04.03.17.06**

**DFCom 04.03.17.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimization	Access Control	FW	.17.16	During communication with a detached reader, individual data was sporadically lost and then resent. These losses no longer occur.
Optimization	Cellular (BG96)	FW	.17.16	In rare instances, there could be a delay in the startup phase when restarting with the BG96 mobile radio module. Adjustments to the restart procedure ensure a faster restart.
Bugfix	Setup	FW	.17.16	Setting the clock could in some cases cause timers not to trigger correctly. This has now been fixed.
Bugfix	Setup	FW	.17.16	With the PZE and AE MasterIV, the stored confirmation field texts were not displayed. The problem has been solved, the texts are displayed again.
Enhancement	Lists	FW	.17.16	The list functions could previously handle a maximum of 65535 list lines. This limit no longer exists. Larger lists, provided they fit in the memory, could now also be processed.
Bugfix	Fever control	FW	.17.16	After starting a device with the fever control option, it could happen that the sensor for fever control could not be found and therefore could not be used. The search for the sensor for fever control has been improved so that it is now always found.



**11.17 Released at August 25<sup>th</sup> 2021**

**Firmware 04.03.17.17**

**DatafoxStudioIV 04.03.17.06**

**DFCom 04.03.17.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Timeboy-Processing	FW	.17.17	With devices to which an external docking station may be attached, it could happen that the docking station was not found using the RS232 interface. Accordingly, the Timeboys in the slots could not be accessed. With this bugfix finding the externally connected docking station was corrected.
Optimization	Cellular (BG96)	FW	.17.17	The network registration behavior with SIM cards supporting multiple operators has been improved.
Bugfix	Fingerprint/http	FW	.17.17	When transmitting fingerprint templates using http, errors could occur, which resulted in the cancellation of the data transfer. With this version, the errors are fixed.
Optimization	Fingerprint	FW	.17.17	When performing the first fingerprint identification after a reboot, there could be a delay of a few seconds. With this release, this delay no longer occurs.

**11.18 Released at September 16<sup>th</sup> 2021**

**Firmware 04.03.17.18**

**DatafoxStudioIV 04.03.17.06**

**DFCom 04.03.17.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	WIFI BIOS Menu	FW	.17.18	Under certain circumstances devices with built-in RS9110 module could restart when searching for WIFI networks in the BIOS menu. These restarts don't occur anymore with this version.
Bugfix	LAN	FW	.17.18	After 50 days of operation it could occur that commands being sent using the Ethernet interface were not processed by the device any more. This behavior was corrected.
Bugfix	Access Control	FW	.17.18	Errors during the communication between a door module and its detached RFID reader could result in transponder data not being transferred to the access controller correctly. This has been corrected.
Optimization	Proximity sensor	FW	.17.18	Interaction with the touch screen could lead to delayed operation on devices with proximity sensor. This behavior has been optimized.
Bugfix	Access Control	FW	.17.18	With the KYO Oneloc – if operating as a door module – the assignment of the access control status codes to level changes of digital inputs was not correct. The assignment has been corrected so that the appropriate status messages are now created.

**11.19 Released at October 6<sup>th</sup> 2021**

**Firmware 04.03.17.19**

**DatafoxStudioIV 04.03.17.06**

**DFCom 04.03.17.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	Fingerprint	FW	.17.19	The administration menu for the Saturn fingerprint is now also available for the AE-Master (colour display only).
Optimization	Transponder reader	FW	.17.19	Sensitivity against external interference while using the TS-R32 has been increased so that incorrectly recognized badges are no longer evaluated.
Bugfix	Cellular, BG96	FW	.17.19	With certain SIM cards it could happen that the device stopped while querying the PIN code. With this version this was corrected.
Bugfix	USB	FW	.17.19	During communication via USB, transmission errors could occur. Only a restart of the device fixed this error. This has now been corrected.



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	Setup	FW	.17.19	The script function "Reverse" has been added. This rotates a string, e.g. calling <code>Reverse ("%V1")</code> rotates the content of the global variable 1 ("1234" -> "4321").

**11.20 Released at October 13<sup>th</sup> 2021**

**Firmware 04.03.17.20**

**DatafoxStudioIV 04.03.17.06**

**DFCom 04.03.17.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	KYO Cenloc	FW	.17.20	With the KYO Cenloc, a device restart could occur under certain circumstances if a door module was removed from a bus. The cause for the device restart could be eliminated.
Bugfix	Cellular, BG96	FW	.17.20	With certain SIM cards with deactivated PIN it could happen that the device stopped in status 8. With this version, this is now fixed.
Optimization	WIFI	FW	.17.20	The device was very slow when switching the main communication from WIFI to another communication method. Touch inputs were sometimes not processed. This slow behavior no longer occurs with this version.
Enhancement	Cellular	FW	.17.20	The system variable "mobile.rssi" has been added. This can be used to query the signal quality of the device. The value is given in decibel milliwatts (dBm). If the value cannot be determined, "unknown" is returned.

**11.21 Released at October 27<sup>th</sup> 2021**

**Firmware 04.03.17.21**

**DatafoxStudioIV 04.03.17.06**

**DFCom 04.03.17.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	KYO Cenloc	FW	.17.21	Support for hardware revision 1.2.
Enhancement	Hitag 1 - Feig transponder method	FW	.17.21	The Hitag 1 - Feig transponder method has been added to the two access variants "Access check possible in the main menu" and "Perform access check before processing the input sequence", which enable access checking via the terminal.

**11.22 Released at November 12<sup>th</sup> 2021**

**Firmware 04.03.17.22**

**DatafoxStudioIV 04.03.17.06**

**DFCom 04.03.17.06**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimization	U&Z locking units	FW	.17.22	Optimization of the control of U&Z locking units in the event of a badge not being authorized for access. In this specific case, the radio connection was terminated automatically by the locking unit if it did not receive the corresponding command to terminate the connection via the radio module.
Bugfix	Setup	FW	.17.22	In the script function "BinToHex", errors could occur when converting strings with more than 32 characters. This error is now corrected.
Bugfix	Access Control	FW	.17.22	In the PHG bus transmission errors could occur trigger a reboot of the controller. These communication errors have now been fixed.





11.23 Released at November 17<sup>th</sup> 2021

Firmware 04.03.17.23

DatafoxStudioIV 04.03.17.06

DFCom 04.03.17.06

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Access Control	FW	.17.23	In the access control, errors could occur in the bus communication in the controller, as a result of which the readers no longer responded to badge data. The behavior could be corrected by a restart only prior this version. With this version, this error is now corrected.
Bugfix	RFID	FW	.17.23	An error could occur during the processing of the internal transponder reader, as a consequence transponder data was no longer read. The problem could only be solved by a restart. With this version this is fixed.
Enhancement	Access Control	FW	.17.23	When the Controller in an access bus is rebooted, a restart command is sent to all devices defined in the reader list.
Enhancement	Access Control	FW	.17.23	When connected in an access bus, the EVO Intera II restarts if the data are not retrieved by the controller within 15 seconds in access control mode.
Optimization	Access Control	FW	.17.23	Under certain circumstances it could happen that the internal memory used by the access controllers ran out and thus the device executed a deliberate restart. This problem could be eliminated.

11.24 Released at December 21<sup>st</sup> 2021

Firmware 04.03.17.25

DatafoxStudioIV 04.03.17.06

DFCom 04.03.17.06

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	KYO Cenloc	FW	.17.24	Under certain circumstances, it could occur with the KYO Cenloc that its door module was specified instead of the stitch reader in status data records that referred to the inputs. This incorrect information could be corrected.
Enhancement	Access Control	FW	.17.24	The access control settings can be used to define a time from which an alarm status record is triggered if a door is open for longer than specified. This feature has previously only been used with ZK bus participants. With this version, alarm status data records are also generated when the inputs are located at the ZK controller.
Bugfix	Access Control	FW	.17.25	Reverting “Blocked Access (BLA)” was – despite a privileged RFID card – not possible. This has been corrected and the RFID card is not rejected with reason 19 anymore.
Enhancement	Main communication	FW	.17.25	Extensions to the device log were made in order to have the changeover of the main communication on the devices traceable.
Enhancement	Transponder method Hitag1 - Feig	FW	.17.25	When checking for the company code, until now only those badges were supported whose company code was located from the first position of the Feig data. With this extension it is now possible that the company code can also be in the middle of the Feig data.
Bugfix	Access Control	FW	.17.25	With the GIS readers, authentication with an ID card and an additional pin entry was no longer possible. This error has been corrected.

## 12 Release Version 04.03.18

12.1 Released at November 26<sup>th</sup> 2021      Firmware 04.03.18.01      DatafoxStudioIV 04.03.18.02      DFCom 04.03.18.02

A detailed description of the functional enhancements can be found in our [software companion booklet](#).

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	Transponder reader	FW / Studio	.18.01	RFID combination reader with Mifare + Legic + 125 kHz, which supports very many RFID processes (also simultaneously). This is preconfigured to the RFID processes to be read and represented in DatafoxStudioIV by the transponder type "Preconfigured reader". Further information can be taken from the associated <a href="#">info sheet</a> .
Enhancement	Multi-Input	FW / Studio	.18.01	Input possibility of personalized data via different sources / methods (keyboard, transponder reader, fingerprint and barcode) enabled. This enables the simultaneous use of different input and identification methods via the "Multi-Input" field function, without selecting the method via a keystroke.
Enhancement	Booking possible at any time	FW	.18.01	Fixed waiting times often lead to a message being shown on the display longer than the user of the terminal is present. The next user either had to wait until the message disappeared from the display or "push it away". With the extension "Booking possible at any time", the terminal accepts an identification even if the feedback for the previous user is still shown on the display. This significantly speeds up the booking process at the terminal, especially at peak times. The prerequisite here is the use of a single input chain that enables fast booking at the device.
Enhancement	Large barcode data	FW / Studio	.18.01	In order to be able to capture larger barcode data, such as the current corona vaccination certificate, the new "Read long barcode" option and field function have been added. These allow barcodes with a maximum size of 1000 characters to be read and saved in the device as a data file.
Enhancement	Permanent opening for U&Z components	FW	.18.01	When using U&Z radio door components, two options are now available for the (time-limited) permanent opening of doors - this is typically used during office hours to realize a familiar, transponder less opening behavior with the door fitting. You can now choose between the "online" mode, in which the permanent opening is first checked online when the door fitting is actuated, or the "locked" mode, in which the door fitting opens immediately like a mechanical fitting.
Enhancement	KYO Inloc as door module	FW	.18.01	The KYO Inloc can now also be used in the access bus as a door module - like the KYO Oneloc. Door module means that the KYO Inloc is used as a slave in the access bus. By the possibility to select the modules freely, the user can determine the number of inputs and outputs, as well as a possible stub reader. Details can be found in the corresponding <a href="#">info sheet</a> . New application scenarios, such as the control of locker locks, can thus be realized.
Enhancement	Proximity and ambient light sensor	FW	.18.01	Proximity and ambient light sensor support on the EVO 4.3 and EVO 4.6. The extension serves to protect the display and save power at the same time.
Enhancement	Datafox-Active-Light (DAL)	FW / Studio	.18.01	Firmware support for lighting settings and Datafox-Active-Light on EVO Intera II. The DatafoxStudioIV offers a configurator to define the device behavior and the lighting settings for the EVO Intera II. This allows the customer-specific parameterization of the access reader.
Enhancement	EVO Intera II with integrated barcode scanner	FW	.18.01	The EVO Intera II with integrated barcode scanner for scanning 2D barcodes (maximum 20 characters) for access control is now supported.
Enhancement	Digital output modules (4x)	FW / Studio	.18.01	Two digital output modules are now supported. One allows switching its four outputs to GND (module 105) and the other to +12V (module 51) - e.g. for connecting electric locks or a signal lamp.
Enhancement	Datafox-specific phg_crypt protocol extensions	FW	.18.01	This extension serves our customers who use their own ZK controllers and have implemented the phg_crypt protocol themselves. The extensions offer the possibility to control e.g. significantly more outputs or the Datafox-Active-Light (DAL).



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Enhancement	EVO 5.0 Pure	FW / Studio	.18.01	Support for the new EVO 5.0 Pure device.
Bugfix	WLAN-Config	Studio	.18.02	Loading faulty WLAN configuration files could cause the application to crash.

12.2 Released at December 10<sup>th</sup> 2021

Firmware 04.03.18.01

DatafoxStudioIV 04.03.18.03

DFCom 04.03.18.03

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	Setup	Studio	.18.03	When changing the configuration pages of the field functions, a changed ESC jump marker of the extension page was reset.
Bugfix	Setup	Studio	.18.03	A cropping function that was set, led to the file name being cropped, when the field function was changed to "Read long barcode". As the extension page is not available for this field function, the cropping function cannot be deactivated and is now automatically reset.

12.3 Released at January 11<sup>th</sup> 2022

Firmware 04.03.18.02

DatafoxStudioIV 04.03.18.04

DFCom 04.03.18.04

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Bugfix	KYO Cenloc	FW	.18.02	Under certain circumstances, it could occur with the KYO Cenloc that its door module was specified instead of the attached reader in status data records that referred to the inputs. This incorrect information could be corrected.
Enhancement	Access Control	FW	.18.02	The access control settings can specify a duration for creating an alarm status record if a door's opening period exceeded the duration. This feature could be used only with access control bus participants previously. With this version, alarm status records are also generated when the inputs are located at the access controller.
Bugfix	Access Control	FW	.18.02	Reverting "Blocked Access (BLA)" was – despite a privileged RFID card – not possible. This has been corrected and the RFID card is not rejected with reason 19 anymore.
Enhancement	Main communication	FW	.18.02	Extensions to the device log were made in order to document changes to the main communication.
Enhancement	Transponder method Hitag1 - Feig	FW	.18.02	When checking for the company code, until now only those badges were supported whose company code was located from the first position of the Feig data. With this extension it is now possible that the company code can also be in the middle of the Feig data.
Bugfix	Access Control	FW	.18.02	With the GIS readers, authentication with an ID card and an additional pin was no longer possible. This error has been corrected.
Bugfix	Barcode	FW	.18.02	When reading barcodes with the internally installed barcode reader EM3296, delays could occur when starting the reading process. This is now fixed.
Bugfix	Communication Cellular BG96	FW	.18.02	When opening a socket in mobile communications, an error could occur so that no connection could be established. The problem could only be solved by restarting. In this version the problem has been fixed.
Bugfix	Legic	FW	.18.02	Reading Legic badges could cause the device to crash in rare cases. With this version, the behavior is now fixed.



Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Optimization	Setup	Studio	.18.04	In the setup dialogue the segment with the UID is marked with a corresponding label for the 125 kHz transponders.
Bugfix	Device update	DFCom	.18.04	When updating the docking station / vehicle data logger, a wrong firmware version was transferred for older circuit boards, which led to a non-functional device.

**12.4 Released at January 24<sup>th</sup> 2022**

**Firmware 04.03.18.03**

**DatafoxStudioIV 04.03.18.05**

**DFCom 04.03.18.05**

Type	Aspect	Comp.	.XX.XX	Description of Change or Bugfix
Change	Main communication	FW	.18.03	In case of an incorrect configuration of the devices regarding the main communication, this was previously reset to USB. Now the device is scanned for other communication options. The priorities are as follows: LAN, WLAN, mobile radio, RS485, USB.
Bugfix	Cellular	FW	.18.03	When connecting in active mode, mobile devices could be disconnected. With this version these aborts have been fixed.
Bugfix	Cellular, MC55	FW	.18.03	Problems could occur with the MC55 cellular module when dialing into the cellular network. In this case, the device could not connect to the Internet and then stopped in status 41. With this version, the misbehavior has been corrected.
Change	Access control	FW	.18.03	When reading the serial number of a Mifare Ultralight badge, the value was reported in rotated order. With this version, the reported barcode matches that of the terminal.
Enhancement	Barcode	FW	.18.03	During barcode reading, delays occurred when starting the internal barcode reader. This delay time has now been reduced.
Bugfix	Access control	Studio	.18.05	The setting of the master ID via the access control settings dialogue was not carried out correctly.
Enhancement	Communication	Studio	.18.05	The system variables COM.HTTP_MODE[0:1].SEND_IFF for determining the storage location of data files have been included in the dialogue of the communication variables.