

Clearview Intelligence Connex Software Image V1.22 Release Note

1A

24/07/2024

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 • **HL7692 COMPATIBILITY: HENCE HL7692 MODEM DOES NOT WORK WITH V1.21.**
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Revision History				
Rev	Date	Section	Change	Author
1A	24/07/2024	All	Created Release Notes	CB
1A	25/07/2024	All	Customer Release Notes	ML

1 Software

This section identifies the software to which these Release Notes apply:

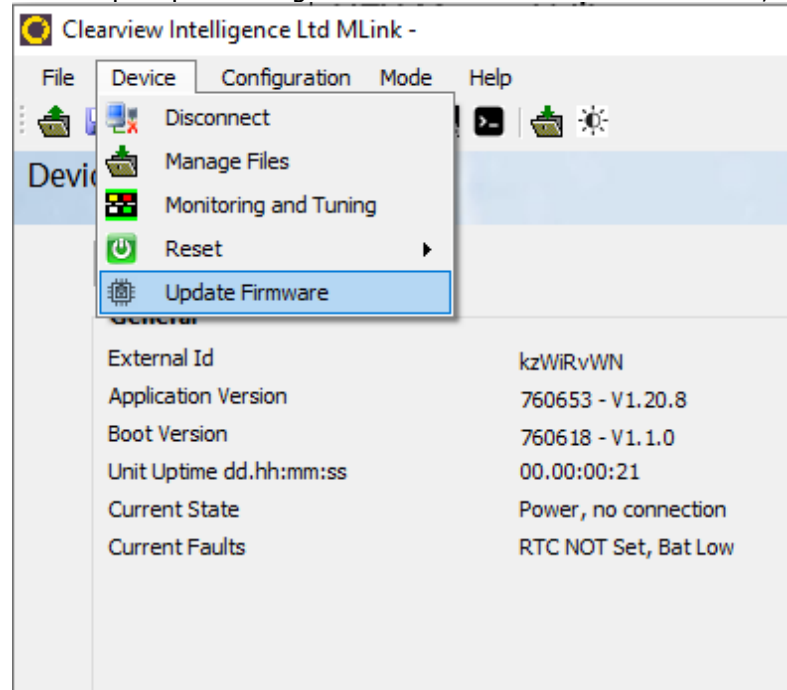
Software Release	
Number	760655 & 760653
Title	ICS U300 Software Image
Version	V1.22.6

2 Deployment

2.1 Installation

Downloadable through MLink Device > Update Firmware > Start Firmware Update

This will prompt a loading bar. Please note the Connex will reboot, disconnecting it from MLink.



Do not update the firmware if the Connex is using the HL7802 or RC7620 modems as they are not currently supported. Modem card information can be found in Device Overview under Card Type

Device Overview Clearview Intelligence Connex kzWIRvWN

General

External Id	kzWIRvWN
Application Version	760653 - V1.20.8
Boot Version	760618 - V1.1.0
Unit Uptime dd:hh:mm:ss	00:00:24:36
Current State	Power, no connection
Current Faults	RTC NOT Set, Bat Low

Modules Running

☐ eth	☐ vms
☒ ics	☐ gps
☐ ina	
☐ irs	
☐ ldr	
☒ lim	
☐ lpr	
☐ mag	
☒ mdm	
☐ plc	

Power

Power Mode	Normal
External Voltage	19.43
Charge State	N/A
Battery Voltage	0
Temperature C	26

Cards

Card Type	Firmware Version	Number Of Sensors	Status	Card Information
Loop Sensor	-	16	OK	On Board
MODEM HL7692	-		On	
Empty	-		-	

Alternatively, the BIN file is used for upgrade of units, downloading it to the flash memory with the command: **getfile ci-connex/sw/1.22.0/760653.bin**

On units with software older than 1.10.4 it is necessary to update the download host first with command:

set as3host s3-eu-west-2.amazonaws.com

2.2 Configuration

See Section 3.1.2.2 for details to configure the MODEM Radio Access Technologies used.

3 Functionality – application code (760653)

This relates to functionality changes since version 1.20.8 (*i.e.* it includes those made in version 1.21 which only had a limited release).

3.1 New Features Added

3.1.1 Enhanced support for local and remote use of MLink.

Improvements to the loading speed of MLink when accessing remotely with Insight tokens. A new **mdmguardtime** parameter has been added. When in this mode the MODEM is not allowed to sleep between commands so that it is ready to respond to the next one instantly rather than needing to be woken up first.

When in remote MLink OSP mode, vehicles are now sent immediately they are detected regardless of the vehicle message trigger/period threshold parameters.

If the Connex is configured to use power saving by turning the MODEM off between sending messages (*i.e.* through the **sendwaittime** parameter), this is ignored when in OSP mode so that the vehicles are not delayed.

3.1.1.1 Parameters

Parameter	Description	Default	Min	Max
mdmguardtime	Guard time between AT commands (ms)	110	1	2000

3.1.1.2 Info

The “**mdm**” info response now includes an indication of when the MODEM driver is in low latency “Fast” mode.

The “**ics**” info response now includes an indication of when the unit is enabled to output OSP data, where this is being sent (“MQTT” for remote or “JSON” for local) and how long until this timeout.

3.1.2 Telit ELS62-W MODEM support

This feature enables a daughterboard containing an ELS62-W MODEM to be used to provide wide area networking over 2G or 4G mobile networks. **Version 1.22 has been tested and approved for use with the HL7692 MODEM. HL7802 or RC7620 modems are currently not supported by version 1.22.**

3.1.2.1 Commands:

“**mdm on**” enhanced command to truncate recovery period and warn if the MODEM is not required by any modules (applies to all MODEM types).

3.1.2.2 Parameters

Parameter	Description	Default	Min	Max
mdmrat	Primary Radio Access Technology: 1 = 2G 8 = 4G (LTE)	8	1	8
mdmrat2	Fallback Radio Access Technology: 0 = None 1 = 2G 8 = 4G (LTE)	1	0	8

3.1.3 Remote Vehicle/Event Monitoring via MLink

This feature allows MLink to enable “commission” mode and receive real-time vehicle and event data via MQTT remotely. Events are only really viable over Ethernet or a very good MODEM connection (*e.g.* LTE 4G).

3.1.4 Enhanced Waveform Capture

- Add vehicle direction and class to the top of the lpscan variable in the file, enabling more accurate use of the data.
- Avoid including spurious data at the end of the waveform

3.1.5 Key Minor Enhancements

- **USB: Automatically switches off usbmscmode after 30 minutes.**

3.2 Old Features Retired

None

3.3 Key Fixed Issue

- HL7692 compatibility: Hence HL7692 MODEM does NOT work with v1.21.
- Commissioning detection LEDs spuriously pulse on when commissioning mode activated
- Unit which has SVM scheme loaded (almost any as most include a straddle motorbike->car class mapping): When a carriageway with more than one lane is configured for straddle detection & is using length based classification bins (i.e. not actually using the loaded SVM model) - the classification can be corrupted by the application of the motorbike->car mapping applicable to the configured SVM class scheme.
- Issue with emergency shutdown - if the external power threshold is set lower than battery shutdown threshold then we can get into a cycle of shutting down and then powering back up, and sometimes the file system gets stuck being blocked.

3.4 Key Known Issues

- Version 1.22 is not guaranteed to be compatible with HL7802 or RC7620 MODEMs.
- Version 1.21 is NOT compatible with HL7692 MODEM.
- LiDAR speed estimate does not compensate for the change in beam spacing with distance from the sensor down to the precise alignment of the LiDARs.
- PoE detect has been disabled, workaround: you can tell from the measured/reported supply voltage when the board is running from PoE.
- There is a possibility of SD card filesystem damage if the power is disconnected/fails without first disabling the filesystem with the unmount command. This risk has been minimised as far as possible

End of Document